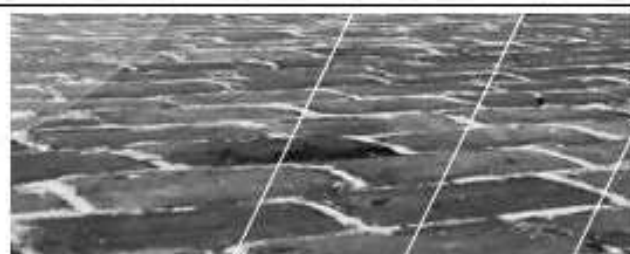


INTEGRATED TOURISM
MASTER PLAN
[DRAFT]

PREPARATION OF MASTER PLAN & DETAILED STRATEGY FOR
TAMIL NADU INTEGRATED TOURISM PROMOTION PROJECT

FEEDBACK INFRA (P) LIMITED
TOWNLAND CONSULTANTS LIMITED



VOL

B

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This volume captures 69 master plans. Sites have been clustered into 4 Tourism Trails – which denote the central theme of the sites.

- I. Divya Desam Sites – Total 50 master plans | merged into ~ 40 sites (out of 295 sites)
- II. Navgraha Sites – Total 8 master plans (out of 295 sites)
- III. Panchabhootha Sites – Total 4 master plans | merged into ~3 sites (out of 295 sites)
- IV. Arupadai Veedu Sites – Total 7 master plans | merged into ~6 sites (out of 295 sites)

Before going deeper into master plan for each site, a summary of the central theme on the Tourism Trail is presented. The sequence of Tourism Trails and Master Plans comprised herein is presented below.

S. No.	Site Name	District	Page no.
Divya Desam Sites			
1	Arulmigu Sri Parthasarathyswamy Temple, Thiruvallikeni	Chennai	I-1
2	Arulmigu Bhaktavatsala Perumal Temple, Thiruninravur	Tiruvallur	I-17
3	Arulmigu Veeraraghava Swamy Temple, Tiruvallur	Tiruvallur	I-31
4	Nityakalyana Perumal Temple, Thiruvudanthai	Chengalpattu	I-45
5	Sthalasayana Perumal Temple (Also Called Thirukadalmalai), Mamallapuram	Chengalpattu	I-61
6	Vaikunda Perumal Temple (Thiru Parameswara Vinnagaram)	Kanchipuram	I-81
7	Sri Varadharaja Perumal Temple, Tirukkachi	Kanchipuram	I-97
8	Sri Neervannaperumal Temple (Ranganatha Temple), Thiruneermalai	Kanchipuram	I-115
9	Pilgrim Recreation Centre	Kanchipuram	I-129
10	Ulagalandha Perumal Temple	Kanchipuram	I-141
11	Ulagalantha Perumal Temple, Tirukoyilur	Villupuram	I-157
12	Devanatha Swamy Temple, Thiruvanthipuram	Cuddalore	I-169
13	Parimala Ranganathar Perumal Temple, Thiruindalur	Mayiladuthurai	I-183
14	Thirunangur Temples	Mayiladuthurai	I-199
15	Sowriraja Perumal Temple, Thirukannapuram	Nagapattinam	I-221
16	Jagath Rakshaka Perumal Temple, Thirukkoodaloor	Thanjavur	I-237

S. No.	Site Name	District	Page no.
17	Gajendra Varadha Perumal Temple In Thirukkavithalam	Thanjavur	I-251
18	Thiru Aadanoor Temple	Thanjavur	I-265
19	Thirupullabhoothangudi Temple	Thanjavur	I-275
20	Sri Sarangapani Perumal Temple, Kumbakonam	Thanjavur	I-285
21	Uppiliappan Temple (Also Known As Thiruvinnagar), Thirunageswaram	Thanjavur	I-301
22	Thiruccherai - Sri Saranathan Perumal Temple	Thanjavur	I-315
23	Thirunarayur Nambi Temple In Thirunarayur	Thiruvavarur	I-329
24	Sthalasayana Perumal Temple, Tirusirupuliyur	Thiruvavarur	I-341
25	Sri Ranganatha Swamy Temple, Srirangam	Tiruchirappalli	I-353
26	Pundarikakshan Perumal Temple, Thiruvellarai	Tiruchirappalli	I-377
27	Sundararaja Perumal Temple, Anbil	Tiruchirappalli	I-391
28	Azhagiya Manavala Perumal Temple, Uraiyur	Tiruchirappalli	I-405
29	Uthamar Kovil, Uthamarkoil	Tiruchirappalli	I-419
30	Kallazhagar Temple, Azhagar Kovil	Madurai	I-431
31	Koodal Azhagar Temple	Madurai	I-447
32	Thirumohoor Kalamegaperumal Temple	Madurai	I-463
33	Sathyamurthi Perumal Temple	Pudukottai	I-475

S. No.	Site Name	District	Page no.
34	Thirukoshtiyur – Sowmya Narayana Perumal Temple	Sivagangai	I-491
35	Srivilliputhur Andal Temple	Virudhunagar	I-505
36	Ninra Narayana Perumal Temple, Thiruthangal	Virudhunagar	I-521
37	Adi Jagannatha Perumal Temple, Thirupullani	Ramanathapuram	I-533
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1	Kailasanathar Temple, Thingalur	Thanjavur	II-1

S. No.	Site Name	District	Page no.
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3	Shri Suryanar Kovil, Thirumangalakudi	Thanjavur	II-29
4	Agneeswarar Shukran Temple, Kanjanur	Thanjavur	II-43
5	Vaitheeswaran Koil, Mayiladuthurai	Mayiladuthurai	II-55
6	Swetharanyeswarar Temple, Thiruvengadu	Mayiladuthurai	II-71
7	Nagnathaswamy Temple, Keezhaperumpallam, Ketu Sthalam	Mayiladuthurai	II-87
8	Abathsahaswarar Temple (Guru), Alangudi	Thiruvarur	II-103
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2	Jambukeswarar Temple, Thiruvanaikoil	Tiruchirappalli	III-17
3	Arunachaleswarar Temple	Tiruvannamalai	III-33
4	Natarajar Temple, Chidambaram	Cuddalore	III-49
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3	Sikkal Singaravelar Temple, Nagapattinam	Nagapattinam	IV-37
4	Arulmigu Shri Dhandayuthapani Temple, Palani	Dindigul	IV-51
5	Pazhamudircholai Murugan Temple, Alagar Koil	Madurai	IV-67
6	Thirupparankundram Murugan Temple	Madurai	IV-79
7	Tiruchendur Murugan Temple, Thoothukudi	Thoothukudi	IV-93

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 - Coastal Regulation Zones
 - Forest Regulations
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 - Tamil Nadu Forest Act 1882
 - Tamil Nadu Hill Area (PT) Act 1955
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 - The Indian Forest Act, 1927
 - Wildlife Protection Act, 1972 (Wildlife Protection Rules)
 - Forest Conservation Act, 1980 (Forest Conservation Rules)

- Environment Protection Act 1986 (Environment Protection Rules), including ESA Notification
- Biological Diversity Act 2002 (Biological Diversity Rules)
- The Scheduled Tribes and Other Traditional Forest Dwellers Act, 2006
- **Heritage Regulations**
 - Ancient Monuments, Archaeological Sites and Remains Act
 - TN Ancient and Historical Monument and Archaeological sites and remains Act and Rules, 1971
 - TNHRCE Rules, 1959
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 - Tamil Nadu Combined Development and Building Rules, 2019
 - Tamil Nadu Hilly Areas Special Building Rules, 1981
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- Guidelines of Adopt A Heritage Project
- Guidelines for the Promotion of Wellness and Medical as Niche Tourism Products
- Policy for development and promotion of Caravan and Caravan camping parks
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- COVID-19 Guidelines
 - WTTC Global Protocols for the New Normal
 - System for Assessment, Awareness & Training for Hospitality Industry Guidelines by MoT, GoI

Schemes & Programmes

Tourism Initiatives in Tamil Nadu

- **Central Government Tourism Schemes**
 - PRASAD (Pilgrimage Rejuvenation and Spiritual Augmentation Drive)
 - Swadesh Darshan Scheme

- Other Central Financial Assistance
- Promotion of Less Known Tourist Destinations
- **State Government Tourism Projects**
 - Special Tourism Zone – Madurai
 - Rural Tourism Hub - Karaikudi
 - Culture Tourism Hub - Mahabalipuram
 - Tourism and Hospitality Training Centre - Nilgiris
 - Development of Heritage locations and destinations
 - Infrastructure Development Investment Program for Tourism (IDIPT)
- **Human Resource Development**
 - Hunar se Rozgaar Yojana
 - Capacity Building
 - Guide Training
- **Tourism Products**
 - Eco Tourism
 - Rural Tourism
 - Medical Tourism
 - Heritage Tourism
 - Adventure Tourism
- **Activities of Departments of Art & Culture, Museums & Archaeology**

Other Central Schemes and Programs

- Viability Gap Scheme for Revenue Generating Tourism Project
- Support to Public Private Partnerships in Infrastructure (Viability Gap Funding)
- Central Financial Assistance to Information Technology (IT)
- Scheme for Organizing Fair & Festival and Tourism Related Events
- Adopt a Heritage: “Apni Dharohar, Apni Pehchaan” project development of tourist friendly destinations
- Development of Way-side Amenities / Toilet Development
- Champion Sectors in Services Scheme
- Market Research- Professional Services Scheme
- Scheme of Capacity Building for Service Providers (CBSP)
- Green Skill Development Program
- Central Financial Assistance to Institutes

- Overseas Promotion and Publicity including Marketing Development Assistance
- MDA Scheme for Medical Tourism/Wellness Tourism Service Providers
- Financial Assistance to Institutes / Central Universities for Organizing research related events
- National Handicrafts Development Programme (NHDP)
 - Ambedkar Hastshilp Vikas Yojana
 - Mega Cluster Scheme
 - Marketing Support & Services
 - Research & Development
- Craftsmen Training Scheme
- Crafts Instructor Training Scheme (CITS)
- Scheme of Financial Assistance for Promotion of Art and Culture
- Scheme of Scholarship and Fellowship for Promotion of Art and Culture
- Museum Grant Scheme
- Scheme for “Safeguarding the Intangible Cultural Heritage and Diverse Cultural Traditions of India”

Case Studies

Case Studies of Organization Structure

- Hampi World Heritage Area Management Authority (HWHAMA)
- Jaipur Smart City Limited (JSCL)
- Singapore Tourism Board (STB)

Case Studies of Other State Tourism Policies and Initiatives

- Madhya Pradesh Tourism
- Kerala Tourism
- Rajasthan Tourism
- Odisha Tourism
- Karnataka Tourism

Glossary

ALOS	Average Length of Stay
AR	Augmented Reality
ASEAN	Association of Southeast Asian Nations
bn	Billion
CAGR	Compound Annual Growth Rate
CSR	Corporate Social Responsibilities
CY	Current Year
Cr	Crore
DoT	Department of Tourism, Culture and Religious Endowments, Govt. of Tamil Nadu
DBFOT	Design Build Finance Operate Transfer
EPC	Engineering, Procurement and Construction
F&B	Food and Beverages
FAITH	Federation of Associations in Indian Tourism & Hospitality
FAR	Floor Area Ratio
FTAs	Foreign Tourist Arrivals
FY	Financial year
G2G	Government to Government
GDP	Gross Domestic Product
GoI	Government of India
GoTN	Government of Tamil Nadu
ICCA	International Congress and Convention Association
HVT	High Value Tourist
ICT	Information and Communications Technology
ITAs	International Tourist Arrivals
KPI	Key Performance Indicator
L	Lakh
LCCs	Low-Cost Carriers
LTC	Leave Travel Concession
MICE	Meetings Incentives Conferences Events
m	Meter

mn	Million
MoT	Ministry of Tourism
MoU	Memorandum of Understanding
NRI	Non-Resident Indians
OEM	original Equipment Manufacturer
OTAs	Online Travel Agents
OMT	Operate Maintain Transfer
PPP	Public Private Partnership
TN	Tamil Nadu
tn	Trillion
ROMT	Refurbish Operate Maintain Transfer
Sqft	Square Feet
Sqm	Square Meters
TTDC	Tamil Nadu Tourism Development Corporation
TNIDB	Tamil Nadu Infrastructure Development Board
TNIFMC	Tamil Nadu Infrastructure Fund Management Corporation
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNWTO	United Nations World Tourism Organization
VFR	Visiting Friends Relatives
VR	Virtual Reality
WEF	World Economic Forum
WTTC	World Travel and Tourism Council
ZD	Zero Date

INTRODUCTION & CONTEXT-SETTING

1 Introduction & Context-Setting

1.1 About the Mandate

The state of Tamil Nadu is endowed with rich natural and cultural attractions, ranging from its temple towns and heritage sites to hill stations, waterfalls, and national parks. The state also boasts of some of the grandest examples of Dravidian architecture, such as the famous Shore Temple of Mamallapuram, the Brihadeeswarar Temple of Thanjavur, the Madurai Meenakshi Amman Temple, and the Srirangam Ranganathaswamy Temple. Today, Tamil Nadu is the second largest economy in the country, with a GSDP of ~USD 250 billion and is also India's most urbanized state, with almost 50% of its population living in urban areas.

Tourism as a service sector is a key contributor to the growth story of Tamil Nadu. The geographical, cultural, and environmental diversity of Tamil Nadu have positioned it as the most visited state in India by both domestic and foreign tourists. Nevertheless, tourist expectations are constantly changing. Tamil Nadu should benchmark its growth not just with India but other leading tourism destinations in the region. To retain and further its leading status in India, it is imperative that Tamil Nadu Tourism evolve, in order to adequately cater to the next generation of tourists.

In this context, the Government of Tamil Nadu (GoTN) wishes to harness the plentiful tourism resources of the State and provide a tourism-led thrust to the local economy. Development of the tourism sector was specifically identified as one of the goals of the "Vision Tamil Nadu 2023", a programme outlining the road map for growth in all major sectors of the state economy. The Government of Tamil Nadu has also envisioned a Tamil Nadu Integrated Tourism Promotion Project (TNITPP) to integrate all the tourism destinations of the State into an integrated network, to further enable convergence of all tourism products and services into a well-knit framework capable of competing at international platform. Tamil Nadu Infrastructure Fund Management Corporation (TNIFMC) and Department of Tourism have, on behalf of Government of Tamil Nadu and with support from other departments of the GoTN, taken lead to conceptualize and implement the TNITPP programme.

Further, TNIFMC (**"the Client"**) has, through a competitive bidding process, appointed a consortium of **Feedback Infra (P) Limited** and **Townland Consultants (P) Limited** as the 'Consultant' / 'Advisor' for preparation of detailed strategy for and master plan for Tamil Nadu Integrated Tourism Promotion Project (**"the Project"**).

1.2 Consultants' Scope of Work

To achieve the above objectives, the Consultant is tasked with the following:

A. Preliminary Analysis

- Appraisal of available documents and plans.
- Benchmarking of Tamil Nadu on the global tourism map.
- Categorization and prioritization of sites.
- Appraisal of the ongoing government schemes.

B. Baseline Analysis

- Spatial analysis including mapping of physical characteristics of sites.
- Theme-based categorization of sites.
- Qualitative and quantitative analysis of development potential at sites.

C. Strategy Formulation

- Overall vision for development.
- Regulatory framework.
- Marketing and Branding.
- Prioritization of all 295 sites for phased development and selection of sites for Phase-I development.

D. Master Planning

- Tourism master plan, including concept plan, project structuring and implementation plan, for each of the 295 sites;
- To be taken up as per Tourism Trails for ease of implementation.
- Planning of 295 sites shall be done in 6 phases – each with 45-50 sites.

Note – In addition to the tourism-related interventions at the individual sites, it is important for the local government to undertake civic and urban development at the sites and the larger towns. Such civic and urban development entails utility management (waste disposal, electrification, covered drainage), cleanliness, hygiene, urban design improvements, urban beautification, improvement in mobility of key tourist zones, etc. This might not get sufficient focus under the scope of TNITPP but are significant for comprehensive development of the sites and improvement of overall tourism quality.

E. Financial Viability Assessment and Project Structuring

- Preliminary financial viability assessment for the sites;
- Recommendation on viable implementation model;
- Project structuring to ensure project viability (via cross-subsidisation of high-viability projects with low-viability projects) and involvement of private sector interest.

1.3 Timelines & Deliverables

Sl. No.	Deliverables	Pertaining to	Status
1.	Inception Report	295 sites	Completed on 18 th June 2020
2.	Baseline Analysis Report-1	157 sites	Completed on 7 th Sept 2020
3.	Baseline Analysis Report - 2	138 sites	Completed on 23 rd Oct 2020
4.	Draft Detailed Strategy Report	295 sites	Completed on 12 th Dec 2020
5.	Final Detailed Strategy Report	295 sites	Completed on 12 th Feb 2021
6.	Tourism Master Plan Phase IA	50 Sites	Submitted
7.	Tourism Master Plan Phase IB	50 Sites	This Report
8.	Tourism Master Plan Phase IIA	50 Sites	Submitted
9.	Tourism Master Plan Phase IIB	50 Sites	Draft due by 29 th May 2021

Sl. No.	Deliverables	Pertaining to	Status
10.	Tourism Master Plan Phase IIIA	50 Sites	Draft due by 23 rd June 2021
11.	Tourism Master Plan Phase IIIB	45 Sites	Draft due by 18 th July 2021

This deliverable is the output for Tourism Master Plan Phase 1B.

1.4 Recap of Tourism Strategy

A detailed strategy has already been prepared for the Tamil Nadu Integrated Tourism Promotion Project.

The vision outlined in the tourism strategy is **to evolve Tamil Nadu into the most desirable experiential destination in Asia**, by leveraging its people, vibrant living cultures, diverse natural locations, ancient traditions and history.

Tamil Nadu has so far been sold on its ancient history – its temples and monuments. However, unlike other destinations, history is not a thing of the past here – it is alive in the Tamil people, traditions, arts & crafts, and festivals. Tamil Nadu, therefore, has all the necessary ingredients to develop into the most **attractive and diverse experiential destination**.

Tamil Nadu could position itself as “**The land where Stories never end**”, with unique tourism offerings articulated around the following:

- Diverse natural locations
- A long unbroken history, kept alive by ancient traditions
- Unforgettable experiences
- Many undiscovered spots
- Vibrant living cultures
- Assortment of cuisines

Essentially, need is to highlight the memories a Tourist can create and live-in rather than what the Tourist can just see.

1.4.1 Key Objectives of TNITPP

With the above backdrop, the strategic objectives of the TNITPP programme have been outlined as below:

- To position Tamil Nadu as a unique tourism brand on the global map.
- To create tourism-led socio-economic growth in the State.
- To attract High Value Tourists (both foreign and domestic), who are:
 - Long-stay tourists
 - High-spending tourists
 - Expect high quality and service levels and are willing to pay a premium for these.
- To enable longer stay of tourists within Tamil Nadu, which further translates into higher spending by tourists in Tamil Nadu.
- To create memory-worthy tourist experiences in Tamil Nadu.
- To attract private investment and FDI in tourism.
- To create employment opportunities for community / locals in tourism sector.
- To improve livelihood of communities by involving them in tourism value chain.
- To mitigate the impact of (mass) tourism on the natural environment and the built cultural heritage.
- To showcase Tamil Nadu's diverse historic, natural and cultural assets in a sustainable manner.
- To achieve a greater variety in tourism attractions, facilities and accommodation.
- To leverage technology and new media to enhance tourists' experience of Tamil Nadu.

1.4.2 Target Tourists

Today, global destinations are becoming resistant to mass tourism. The aim of promoting tourism is primarily the downstream socio-economic benefits it endows on the destination, in terms of revenues and employment in the local economy, rather than the tourist numbers it is able to attract.

For this reason, destinations today are targeting the growth of tourism sector earning, not tourist footfalls. Tamil Nadu should similarly target the high-paying, low-volume segment of the market, or the **High Value Tourist (HVT)**.

Such High Value Tourists are:

- **Long-stay tourists**
- **High-spending tourists**
- **Expect high quality and service levels and are willing to pay a premium for these.**

High Value Tourists can be segmented into 3 broad buckets:

- **Foreign tourists** – Strategy Report has outlined specific foreign target markets (or countries) which:
 - Are most relevant markets (in terms of sheer size of their outbound tourists who visit similar tourism destinations in Asia) - China, Germany, France and Russia
 - Are markets where Tamil Nadu performs well but needs to be strengthen or sustain its position – UK, USA, Australia and Malaysia
 - Are potential markets with some strategic connection with Tamil Nadu, which can be leveraged – Korea and East European countries.
- **High spending Domestic tourists** - Indians are among the most sought-after tourist markets for South-east Asian countries. With ~26 mn Indians travelling internationally (2018), India is the 2nd largest outbound market in the Asia Pacific region. With increasing disposable incomes and international exposure, Indians' propensity to travel has grown in the last decade. These largely comprise young, urban Indians from Tier-I and Tier-II cities.
- **Niche tourists** – With prior associations with Tamil Nadu.
 - **Resident Expatriates** living in Chennai and surroundings tend to look out for weekend / holiday getaways. These are high-spending tourists and easily tappable.
 - **Tamil diaspora** like Malaysia, Singapore, USA, UAE etc. These visit Tamil Nadu once every 1-2 years and like to re-visit their roots and childhood memories. These are to a large extent repeat visitors who have propensity to spend a lot on activity / experience aspects.
 - **Business tourists** visiting Chennai and surrounding industrial areas.
 - **Medical tourists**, capitalising on Tamil Nadu's very well-developed healthcare infrastructure. A Confederation of Indian Industries (CII) study has reported around 40% of the medical tourists getting treated in Chennai for its high-quality treatment for bone marrow transplant, cardiac bypass, eye

surgery, hip replacement and alternative medicine treatments. These tourists can be tapped for regional tourism around the place of primary visit.

1.5 Key Considerations

1.5.1 Take-aways from the Tourism Strategy

The Tourism Strategy Report identified that Tamil Nadu tourism needs to work across 4 broad roadmaps:

- a) **Outreach**
- b) **Visitor Facilitation**
- c) **Interlinked Trails**
- d) **Creating experiences**

While Points a), b) and d) above have to be taken up by the GoTN as policy level programmes, Point c) has direct implication on the master planning.

Interlinked Trails

As envisaged in the tourism strategy, an integrated network of tourism sites may be created, packaged into Tourism Trails.

The sites in a Tourism Trail will have a common purpose which may be of interest to a pre-determined set of target visitors. The target visitors (tourists or pilgrims) may be attracted to travel to each of the sites covered in the trail as part of a single tour.

As suggested in the tourism strategy report, the tourism trails shall have following components:

- **Flagship Hubs:** These are existing cities / towns with available basic infrastructure to act as initiation points or halting points or end points in a tourism trail. Tourism trails will be stitched around these Flagship Hubs so as to ensure that existing infrastructure of towns can be leveraged and if needed easily upgraded to ensure seamless journey of a High Value Tourist through these trails.

These Flagship Hubs will fulfil requirement of:

- Good quality accommodation

- Connectivity (air, road, rail)
- Technology (wifi hubs)
- Tourist help desks
- Basic necessities (ATMs, Money Exchange)

Example of Flagship Hubs are Chennai, Cuddalore, Trichy, Thanjavur and Madurai.

Infrastructure in some of these flagship hubs need improvement to match the quality expectations of the proposed tourism vision. This will be taken up and suggested as part of tourism trail.

- **Anchor Sites:** These are tourism sites within the Tourism Trail and having highest potential for attracting High Value Tourists. Such Anchor Sites will be master planned in order to act as:
 - Information points for entire Trail
 - Hubs with best in class tourist amenities and highest level of tourist convenience & comfort.
 - Well designed and Instagram-able / picture-worthy sites.
- **Other Sites:** These are other tourism sites of relevance to the Tourism Trail but which might not have high potential to interest a High Value Tourist and hence need not be taken up for significant development. However, a basic standard of tourist amenities will be suggested here so as to ensure tourist convenience & comfort.
- **Transformational Projects:** 11 categories of transformational projects were suggested in the tourism strategy report. These projects are suggested as privately-led capital projects which can act as magnets to High Value Tourists and will help in improving tourist footfall as well as creating quality experiences as part of Tourist Trails.

These transformation projects may or may not be located on one of the 295 sites (being master planned as part of the TNITPP). However, a suggested location for each of these transformational project is identified as part of the integrated master plan for the Trail.

The transformational projects identified in the tourism strategy are:

- Cruise & Ferry Tourism
- Cultural / Heritage Rail Journeys
- Niche Accommodation (Destination Resorts, Homestays, Heritage Hotels etc.)
- Community-centric Parks
- Weekend Tourism Hubs/ Caravan Tourism
- Focus Tourism Hubs
- Themed Experience Circuits
- Monetization of GoTN properties
- Convention Centre
- Golf Resorts
- Niche transport (heli-tourism, sea-planes etc.)

1.5.2 Strategic considerations

As identified in the approved tourism strategy, the following considerations shall be taken for development of each master plan.

- **Privately-driven and Publicly-enabled** – To make tourism development in the state sustainable in the long-run, a pragmatic approach has been taken.
 - While tourism in TN requires push from the state govt., it is understood that undue pressure cannot be put on govt. resources.
 - Further, it has been realised that creating “experiences” and providing high level of services isn’t possible without the involvement of the private sector.
 - Thus, while basic amenities, trunk infrastructure and civil infrastructure at the sites are suggested to be developed by the public sector / government; “experiences” and commercially viable large projects are proposed to be taken up private sector participation (in any form – with or without capital investment by private sector).
- **Phased Development** – The development of tourism sites would be phased, with the aim of realizing the benefits from tourism development in shortened time frame and with less capital requirements.
 - Tourist destinations along the existing, popular Tourist Trails and high potential Standalone Tourist Attractions, would be developed foremost, leveraging on their popularity and potential to attract larger High Value Tourist footfalls.

- **Community Involvement** – Local communities would form an integral part of tourism development in Tamil Nadu, developing a mutually benefitting relationship between tourists and locals.
 - Community integration would ensure that the benefits of tourism development, economic as well as infrastructure improvements, are shared with the locals.
 - At the same time, it will enhance the tourism experience by authentically showcasing Tamil Nadu’s unique communities, lifestyles, and diverse cultural resources.
 - Thus, the community would be integrated in master plan proposals, not only as tourism features but also as enablers who provide valuable services.
- **Regulatory compliance & Stakeholder alignment** – Master planning proposals at a tourism site would be governed by various development restrictions, including regulatory and social constraints.
 - In Tamil Nadu and across India, different government departments have issued various regulations and compliance requirements. The proposed development would have to comply with the applicable regulations.
 - During the Baseline Analysis Stage, inputs from interactions with government and private stakeholders were taken. The master plan would be developed in consultation with relevant stakeholders.

1.5.3 Planning Considerations

The following planning considerations formed the base towards master planning of tourism sites:

- **Environmental sustainability** – In most places in Tamil Nadu, tourism and recreation numbers have only started to grow rapidly in the last decade and the real impact on the environment of rampant tourism development may have not yet been felt across the State. Various Hill Stations in India, like Ooty however are already buckling under the volume of traffic, piles of litter and cheap commercialization, threatening the eco-systems in the most vulnerable natural areas across the region. To avoid any more serious detrimental impact that unchecked tourism development can have on a place, all major tourism developments in Tamil Nadu will need to start following highest standards of

Sustainability and Environmentally friendly planning, design and operations & maintenance. Some of its aspects are highlighted below and will be discussed also further in this report.

- **Pedestrianisation and Traffic Calming** - Within Temple Towns, Hill Stations and other heritage areas of Tamil Nadu, it's important to bring back the quality of the original historic streetscapes. Currently, the unchecked growth of these areas over the years and traffic is detrimental to the tourist's experience. With tourists being attracted to the cultural heritage of cities and towns so often to be found in the older most congested areas, this is one of the most serious issues that needs addressing just like most tourist cities around the world have already tackled, before this will put off the international traveller from coming to India.
 - **Heritage Conservation** - With so much heritage buildings and structures being lost to rapid commercialization, it's high time that Heritage Protection is taken more seriously. This can be taken care of by improving the general Planning Guidelines of existing urban areas, including addition of more Area Specific Urban Design and Landscape Design Guidelines for historic areas with large concentrations of heritage buildings and streetscapes.
 - **Concentrating New Tourism Development in Tourism Hubs** - One important step towards development of a more sustainable approach to handling the growth in the tourism sector is to plan for large scale Tourism Nodes with a concentration of resorts, leisure and tourist attractions along the coastal and lakeside areas around the State. Focusing on concentration of development in particular Hubs, opens up the opportunity to be more restrictive of development in nearby natural countryside areas, which can then retain their natural character and stay undisturbed by haphazard tourism development.
 - **Water and Solid Waste Management** - Some destinations popular with tourists and local residents, like some of Tamil Nadu's hills station and beach areas, have not been able to keep up with the rapid growth in terms of the capacity of the local utilities and services, like power, solid waste management, water supply, etc. Not only is the local environment suffering because of it, it also seriously threatens its value as a tourist attraction.
- Increased carrying capacity of all vital services and utilities are therefore essential and can only be resolved in a smart & sustainable manner.
- **Highest Sustainability Goals for Hospitality and Leisure Industry** - All major operators in the Leisure and Hospitality industry should adhere to much higher sustainability benchmarks. The government will need to set clear goals and guidelines, about the use of more locally sourced traditional building materials and the design elements (vernacular architecture) that are more adaptable to local climatic conditions for reduced reliance on air conditioning.
 - **Elimination of Single-use Plastics** - The fight against the use of single-use plastics should be given a renewed push. The Tourism industry has an important stake in ridding the beaches, parks and roadsides of plastic waste and therefore should also be held accountable and asked to adhere to a zero-tolerance when it comes of the use of single-use plastics.
 - **Standardisation** – Many interventions would be repeated across sites that are spread throughout the state. Standardisation of such common interventions would reap the following benefits:
 - Standardised or modularised interventions would ensure that a standard in the quality of the final design, quality of materials and smooth functioning is guaranteed everywhere, from the most visited tourist destinations to the smaller, remote or less visited sites.
 - By creating a prototype or template design that can be easily replicated (with small adjustments to its size and layout, based on local site conditions and functional requirements), an effective cost saving can be made in construction costs.
 - Further, over time, these modules are also expected to become familiar landmarks for travelling tourists throughout the state.
- However, considering the varied mix of sites with differences in tourism potential, different prototypes would have to be designed to reflect:
- Varying product category – temple, natural site, cultural site, etc.
 - Varying tourism potential - high HVT potential, non HVT tourist potential, only pilgrim potential, etc.

- **Diversification** – Currently, temple heritage has been Tamil Nadu tourism's mainstay. Also, few sites like forts, beaches, hill stations, etc., are popular in Tamil Nadu. Other than this, Tamil Nadu does not really offer a diverse set of experiences. Thus, beyond catering to site-level needs, the masterplans would aim to diversify the tourism offerings in Tamil Nadu.
 - Special projects would be conceptualised and developed to grow tourism in Tamil Nadu, by tapping on new segments or creating new crowd-pulling attractions.
 - These tourism offerings would bring the less promoted aspects of Tamil Nadu to limelight.
 - Such diversified tourism products would not only attract new tourists but would also offer new experiences to repeat tourists.
 - For instance, ferry tourism could be developed and promoted in Tamil Nadu. Tamil Nadu's rich lake resources can be used to drive quality ferry and speed boat services. Further, given the many marine attractions along the coast, Tamil Nadu can also operationalise short ferry rides to feature these.
- **Integration** – For sites that are located in the same ecosystem, an integrated master planning approach would be taken. These co-located sites and their surroundings would be planned together as a cluster.
 - A holistic vision would be needed to guide the development in such clusters, as the sites within these clusters would generally be visited by the same tourists and governed by similar drivers.
 - An integrated plan would be proposed to develop the sites within the cluster and their linkages.
 - For instance, Kanchipuram has a set of Hindu temples located within a ~2km radius. Currently, the area is served by narrow streets that face congestions and roadblocks frequently, ruining tourists' experience. Hence, an integrated mobility plan could be developed for the cluster, proposing interventions like E-cycle trails, EV routes planned across core sites and pedestrianisation of key streets. Such interventions would eventually bring down the traffic of motorized vehicles on these streets and make them more tourist friendly.
- **Inclusion** – As temple heritage is one of the main offerings of Tamil Nadu Tourism, there is a need to develop the temple sites and make them more inclusive for non-religious tourists.
 - The intent is to develop and promote these sites beyond pilgrimage, showcasing TN's history, heritage and monumental architecture that these temples possess.
 - Various temples of significance have integrated tourism and led the way.
 - ASI temples, owing to their significance as nationally protected monuments, are all maintained by ASI. ASI also regulates all activities and developments in and around these sites, with an aim to preserve these monuments of national importance. National Policy for the Conservation of the Ancient Monuments, Archaeological Sites and Remains (NPC-AMASR) was recently published in 2014, acknowledging the importance of tourism at these sites and promoting infrastructure development for visitor facilitation.
 - Besakih Temple in Bali is one of the largest and holiest temples of the Hindu religion in Bali. The temple is open to visitors of all faiths who can visit the smaller temples located in the temple complex, while the inner courtyards and the main shrines are reserved for pilgrims.
 - Suggested model of inclusion – respecting the religious significance & beliefs while facilitating tourists' visits
 - Segregate core / sacred spaces from the other parts of the temple complex and restrict these to only pilgrims.
 - Permit non-pilgrim tourists to visit the peripheral / cultural spaces of the temple, keeping these spaces open outside of pooja hours as well (especially afternoon times).
 - Provide visitor amenities at or near the temple site, respecting the temple beliefs & norms and planning them accordingly.

1.6 Approach to Integrated Tourism Planning & Promotion

With the above backdrop, it is important to understand the difference between Integrated Tourism promotion, as envisaged under TNITPP for attracting High Value Tourists **v/s** Master Planning of 295 sites given under TNITPP.

- A. Integrated Tourism Promotion through identification of Tourism Trails:** It is established that Tourism in Tamil Nadu needs to be developed holistically. Anchor Sites identified with potential to attract High

Value Tourists (HVTs), both foreign and domestic, should be integrated into inviting packages or trails, which are then marketed and promoted to the HVTs.

These trails need to have the right material, right packaging, right branding, right target audience, right mix of activities and right infrastructure support to ensure that the desired effect of integrated tourism promotion is achieved.

We have attempted to create a few of such Tourism Trails which can be promoted for high-value tourism.

- B. **Master Planning of all 295 sites:** The 295 sites which need to be master planned in TNITPP include both sites packaged into Tourism Trails and other sites which are either purely pilgrim temples or are standalone sites, not necessarily capable of integration into a Tourism Trail.

Hence, for the purpose of master planning, the sites which are not part of Tourism trails are presented by putting them in other sections, like:

- Others Sites
- Hotel Sites
- Wellness Sites

- C. **Structuring of Master Plan reports:** in order to ensure that each Tourism Trail is comprehensively presented and read holistically, we have structured each report by presenting master plans packaged into Tourism Trails or other sections (as described above).

Each section will entail:

- **Executive Summary of the Tourism Trail**, showing concept of the trail, target tourists, sites covered and key highlights, tentative circuits for planning itineraries, proposed interventions, tentative CAPEX and expected socio-economic impact on communities.
- **Master Plan reports of each site covered in the Tourism Trail.**

It may be noted that some sites may be repeated across multiple Tourism Trails and are hence covered in all those trails.

Details of Tourism Trails and sites covered in this report are discussed in next chapter.

TOURISM TRAILS

2 Tourism Trails

2.1 Introduction

Tourism is a significant sector in the global economy. Around 9% of global GDP and 9% of jobs currently depend on tourism. High Value Tourism is a niche sector that primarily targets High Value Tourists (HVTs), both domestic and international, who constitute a disproportionate share of the total tourist expenditure (~2% foreign tourists in India contribute 83% of India's tourism earnings). They engage in leisure travel, spend more than the average traveller on such trips, and are primarily concerned with an overall immersive experience. These experience seekers tend to have higher stay periods and have high service expectations. Studies indicate that only ~20% of HVTs will sacrifice comfort for lower price.

The role of HVTs in the overall tourism economy, thus, needs to be identified. The key benefits are listed below:

- High contribution to local economy with minimum incremental load on infrastructure.
- Trickle-down effect, i.e., interventions meeting the high standards of HVTs will eventually pull in other segments, like domestic mass tourists, budget tourists, weekend tourists, local & regional tourists.
- Conservation of natural resources, reduced pollution, preservation of fragile cultures, etc.
- Mass tourism and crowds would have negative impact on destination attractiveness in a post-COVID tourism scenario, even for domestic tourists.

For example, Australia has successfully targeted this sector with customized packages tailored to the taste of such visitors with ~1 in every 4 visitors being a HVT and spending 2 – 3x more than an average traveller. In Queensland in Australia, HVTs account for ~35% of the interstate and intrastate travellers and contribute ~63% of the total interstate tourism spend and ~71% of the total intrastate tourism spend. They have distinct key drivers for destination choice such as food and wine,

aquatic and coastal, and nature and wildlife experiences when choosing a holiday destination.

2.2 Tourism Trails

High Value Tourists (HVTs) are mostly engaged in experiential tourism wherein they can meaningfully engage with the history, people, culture, food, and environment of the destination. Tourism trails present an attractive opportunity to create such experiences. They provide a hassle free and a well-planned itinerary of interesting popular and offbeat places to visit and thus induce the travellers to spend more time and money in the region. These trails are curated to meet the needs of the target visitors.

Development of such a trail can be achieved in three stages – Intensive planning, Construction of the trail and Ongoing maintenance, management and marketing.

The planning of the trail needs to be done keeping the following primary factors in mind.

- Identification of interesting and unique features in the area – history, food & produce, natural features, the culture, local flora and fauna, industry, recreation, adventure etc.
- Identification of the kind of trail experience to be created - multi day drives or walk trails to short around the town heritage walks. Physical activities like hiking etc can also be involved based on the characteristics of the region.
- Determination of the theme and concept of the trail and evaluate its overall feasibility.
- Identification of stakeholders – organizations to pool resources for creation, promotion and maintenance of the trail, other relevant stakeholders.

- Resource Planning – Based on the trail experience, appropriate route planning and mapping, key features and locations for activities, and learning, funding needed.

The trails would, therefore, cater to different physical abilities, time availability, budgets, activities, ages, and interests.

2.3 Need for Tourism Trail in Tamil Nadu

Tamil Nadu has great inherent potential to be developed into a high value tourism destination. With ~4000 years of continuous cultural history, Tamil Nadu is known for its remarkable temple architecture, rich tradition of music, dance, festivals, folk arts, and fine arts, and has numerous hill stations, waterfalls, national parks, local cuisine and wildlife.

Despite such a unique and versatile set of offerings, the state is still perceived as a “Land of Temples and Heritage Sites”. The tourism product it currently offers is a sub-set of what it could potentially develop. The state has the potential to benchmark itself to the most unique, exotic, and experiential destinations from across the world with unique themes and destination-based tourist trails articulated around the following:

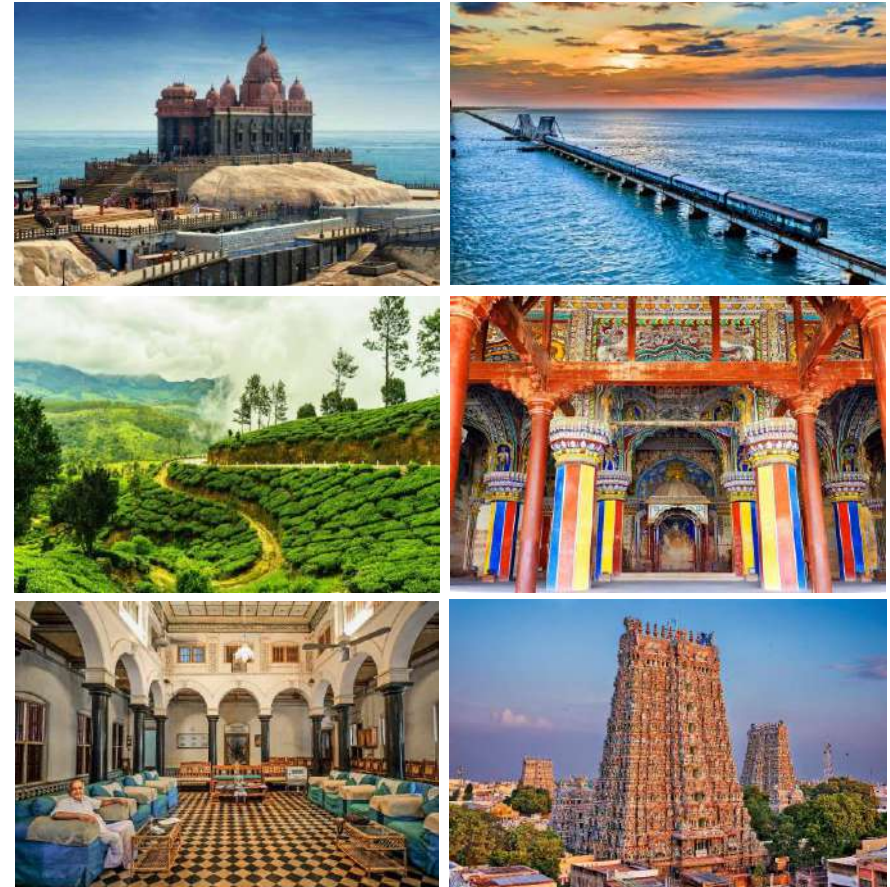
- Diverse natural locations
- A long unbroken history, kept alive by ancient traditions
- Unforgettable experiences
- Many undiscovered spots
- Vibrant living cultures
- Assortment of cuisines

2.3.1 Storyline of marketing

As reflected above, Tamil Nadu needs to be promoted as **“The Land Where Stories never End”**.

Tamil Nadu has traditionally marketed itself around its **“Sites”** – Temples, Hill Stations, Beaches. The marketing and promotion strategy now needs to be redefined to promote **“Experiences”** and **“Stories”** – City walk about temples | Ziplining in Hills | Cruises along the coast | Night in Caravan along the ECR Road etc.

Essentially, the marketing and promotions should highlight the memories a Tourist can create and live-in rather than what the Tourist can just see.



2.4 Proposed Tourism Trails

Based on our study of Tamil Nadu's tourism potential, this section proposes some of the most alluring trails which can be of interest to the High Value Tourists and Pilgrims visiting Tamil Nadu.

The vivid colours of Tamil Nadu's tourism offerings can be clubbed together into various Trails.

The following Tourism Trails were shown in Volume A submitted earlier:

- I. **The Ramayana Trail**
- II. **The Buddha Trail**
- III. **The Gopuram trail**
- IV. **The Coastal Trail**
- V. **The Chola Trail**
- VI. **The Colonial Trail**
- VII. **The Handicrafts of Tamil Nadu Trail**

In this Volume B, we have put together 4 Tourism Trails:

- I. **The Divya Desam Trail**
Featuring the Divya Desams, sacred abodes of Vishnu, in Tamil Nadu
- II. **The Navgraha Trail**
Featuring the Navgrahas, dedicated to the nine planetary elements (grahas), in Tamil Nadu
- III. **The Pancha Bhootha Trail**
Featuring the Pancha Bhootha Sthalams, Shiva temples representing manifestations of the five prime elements of nature, in Tamil Nadu
- IV. **The Arupadai Veedu Trail**
Featuring the Arupadai Veedus, six abodes of Murugan, in Tamil Nadu.

MASTER PLANS

3 Master Plan Reports

This volume captures 69 master plans. Sites have been clustered into 4 Tourism Trails – which denote the central theme of the sites.

- I. Divya Desam Sites – Total 50 master plans | merged into ~ 40 sites (out of 295 sites)
- II. Navgraha Sites – Total 8 master plans (out of 295 sites)
- III. Panchabhootha Sites – Total 4 master plans | merged into ~3 sites (out of 295 sites)
- IV. Arupadai Veedu Sites – Total 7 master plans | merged into ~6 sites (out of 295 sites)

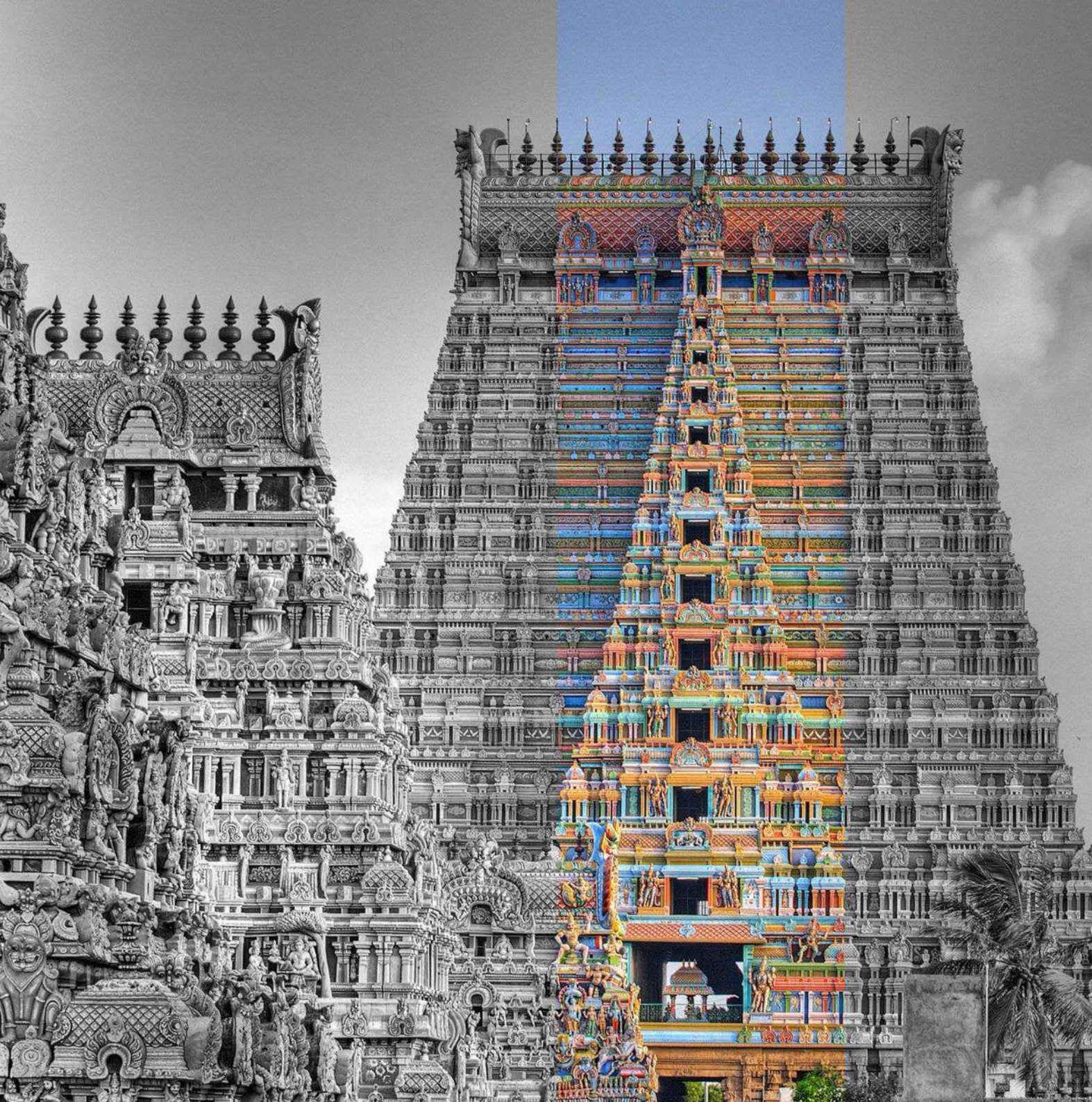
Before going deeper into master plan for each site, a summary of the central theme on the Tourism Trail is presented. The sequence of Tourism Trails and Master Plans comprised herein is presented below.

S. No.	Site Name	District	Page no.
Divya Desam Sites			
1	Arulmigu Sri Parthasarathyswamy Temple, Thiruvallikeni	Chennai	I-1
2	Arulmigu Bhaktavatsala Perumal Temple, Thiruninravur	Tiruvallur	I-17
3	Arulmigu Veeraraghava Swamy Temple, Tiruvallur	Tiruvallur	I-31
4	Nityakalyana Perumal Temple, Thiruvudanthai	Chengalpattu	I-45
5	Sthalasayana Perumal Temple (Also Called Thirukadalmalai), Mamallapuram	Chengalpattu	I-61
6	Vaikunda Perumal Temple (Thiru Parameswara Vinnagaram)	Kanchipuram	I-81
7	Sri Varadharaja Perumal Temple, Tirukkachi	Kanchipuram	I-97
8	Sri Neervannaperumal Temple (Ranganatha Temple), Thiruneermalai	Kanchipuram	I-115
9	Pilgrim Recreation Centre	Kanchipuram	I-129
10	Ulagalandha Perumal Temple	Kanchipuram	I-141
11	Ulagalantha Perumal Temple, Tirukoyilur	Villupuram	I-157
12	Devanatha Swamy Temple, Thiruvanthipuram	Cuddalore	I-169
13	Parimala Ranganathar Perumal Temple, Thiruindalur	Mayiladuthurai	I-183
14	Thirunangur Temples	Mayiladuthurai	I-199

S. No.	Site Name	District	Page no.
15	Sowriraja Perumal Temple, Thirukkannapuram	Nagapattinam	I-221
16	Jagath Rakshaka Perumal Temple, Thirukkoodaloor	Thanjavur	I-237
17	Gajendra Varadha Perumal Temple In Thirukkavithalam	Thanjavur	I-251
18	Thiru Aadanoor Temple	Thanjavur	I-265
19	Thirupullabhoothangudi Temple	Thanjavur	I-275
20	Sri Sarangapani Perumal Temple, Kumbakonam	Thanjavur	I-285
21	Uppiliappan Temple (Also Known As Thiruvinnagar), Thirunageswaram	Thanjavur	I-301
22	Thiruccherai - Sri Saranathan Perumal Temple	Thanjavur	I-315
23	Thirunarayur Nambi Temple In Thirunarayur	Thiruvavur	I-329
24	Sthalasayana Perumal Temple, Tiruvirupuliyur	Thiruvavur	I-341
25	Sri Ranganatha Swamy Temple, Srirangam	Tiruchirappalli	I-353
26	Pundarikakshan Perumal Temple, Thiruvellarai	Tiruchirappalli	I-377
27	Sundararaja Perumal Temple, Anbil	Tiruchirappalli	I-391
28	Azhagiya Manavala Perumal Temple, Uraiyur	Tiruchirappalli	I-405
29	Uthamar Kovil, Uthamarkoil	Tiruchirappalli	I-419

S. No.	Site Name	District	Page no.
30	Kallazhagar Temple, Azhagar Kovil	Madurai	I-431
31	Koodal Azhagar Temple	Madurai	I-447
32	Thirumohoor Kalamegaperumal Temple	Madurai	I-463
33	Sathyamurthi Perumal Temple	Pudukottai	I-475
34	Thirukoshtiyur – Sowmya Narayana Perumal Temple	Sivagangai	I-491
35	Srivilliputhur Andal Temple	Virudhunagar	I-505
36	Ninra Narayana Perumal Temple, Thiruthangal	Virudhunagar	I-521
37	Adi Jagannatha Perumal Temple, Thirupullani	Ramanathapuram	I-533
38	Thiru Varagunamangai Perumal Temple – Chandran Sthalam	Thoothukudi	I-545
39	Srivaikuntanathan Perumal Temple – Suryan Sthalam	Thoothukudi	I-557
40	Thirupuliangudi Perumal Temple – Bhudhan Sthalam	Thoothukudi	I-571
41	Thirutholaivillimangalam Irettai Thirupathi Sri Srinivasa Perumal Temple – Ketu Shethram	Thoothukudi	I-583
42	Thirutholaivillimangalam Irettai Thirupathi Sri Aravindalochanar Temple – Rahu Shethram	Thoothukudi	I-597
43	Tirukulandhai Sri Mayakoothar Perumal Temple – Sani Sthalam	Thoothukudi	I-609
44	Alwarthirunagari Perumal Temple – Guru Sthalam	Thoothukudi	I-623
45	Thirukkolor Sri Vaithamanidhi Perumal Temple – Sevvai Sthalam	Thoothukudi	I-635
46	Then Thirupperai Thiru Makara Nedunkulai Kaather Perumal Temple – Sukra Sthalam	Thoothukudi	I-649
47	Sri Nambi Rayar Temple, Thirukkurungudi	Tirunelveli	I-661
48	Vaanaamaamalai - Sri Thothatrinatha Perumal Temple	Tirunelveli	I-677
49	Sri Adikesavaperumal Temple, Thiruvattar	Kanyakumari	I-691
50	Thiruvanparisaaram - Sri Kuralappa Perumal Temple	Kanyakumari	I-703

S. No.	Site Name	District	Page no.
Navagraha Sites			
1	Kailasanathar Temple, Thingalur	Thanjavur	II-1
2	Thirunageswaram Temple, Thirunageswaram	Thanjavur	II-13
3	Shri Suryanar Kovil, Thirumangalakudi	Thanjavur	II-29
4	Agneeswarar Shukran Temple, Kanjanur	Thanjavur	II-43
5	Vaitheeswaran Koil, Mayiladuthurai	Mayiladuthurai	II-55
6	Swetharanyeswarar Temple, Thiruvengadu	Mayiladuthurai	II-71
7	Nagnathaswamy Temple, Keezhaperumpallam, Ketu Sthalam	Mayiladuthurai	II-87
8	Abathsahaswarar Temple (Guru), Alangudi	Thiruvarur	II-103
Panchbhootha Sites			
1	Ekambareswarar Temple	Kanchipuram	III-1
2	Jambukeswarar Temple, Thiruvanaikoil	Tiruchirappalli	III-17
3	Arunachaleswarar Temple	Tiruvannamalai	III-33
4	Natarajar Temple, Chidambaram	Cuddalore	III-49
Arupadai Veedu			
1	Arulmigu Subramaniya Swamy Temple, Thiruthani	Tiruvallur	IV-1
2	Swamimalai Swaminatha Swamy Temple, Swamimalai	Thanjavur	IV-21
3	Sikkal Singaravelar Temple, Nagapattinam	Nagapattinam	IV-37
4	Arulmigu Shri Dhandayuthapani Temple, Palani	Dindigul	IV-51
5	Pazhamudircholai Murugan Temple, Alagar Koil	Madurai	IV-67
6	Thirupparankundram Murugan Temple	Madurai	IV-79
7	Tiruchendur Murugan Temple, Thoothukudi	Thoothukudi	IV-93



THE DIVYA DESAM TRAIL

DIVYA DESAM TEMPLES

Divya Desam Temples are the 108 Vishnu temples that are mentioned in the works of the Tamil Azhvars (saints). "Divya" means "premium" and "Desam" indicates "place" (temple). Of the 108 temples, 105 are in India, one is in Nepal, and the last two are outside the Earthly realms (The last two are Thirupalkaddal and Paramapadam. Thirupalkaddal is the ocean of milk and Paramapadam is the Srivaikuntam where lord Narayana presides). In India, they are spread over states of Tamil Nadu (84), Kerala (11), Andhra Pradesh (2), Gujarat (1), Uttar Pradesh (4) and Uttarakhand (3).

In Hindu texts, these temples are often referred to as Bhooloka Vaikuntam, which in Tamil means Heaven on earth. Each of the Divya Desam has its own significance related to Shri Vaishnava legend and has separate shrines for Maha Vishnu and Maha Lakshmi. These temples are revered by the 12 Alvars in the Divya Prabandha, a collection of 4,000 Tamil verses. While most Divyadesams follow Thenkalai mode of worship, some follow Vadakalai too among others.

Target Tourist Segments

The trail could be promoted to pilgrims, across all Indian states and outside (including expats), who worship Lord Vishnu.

Trail Highlights

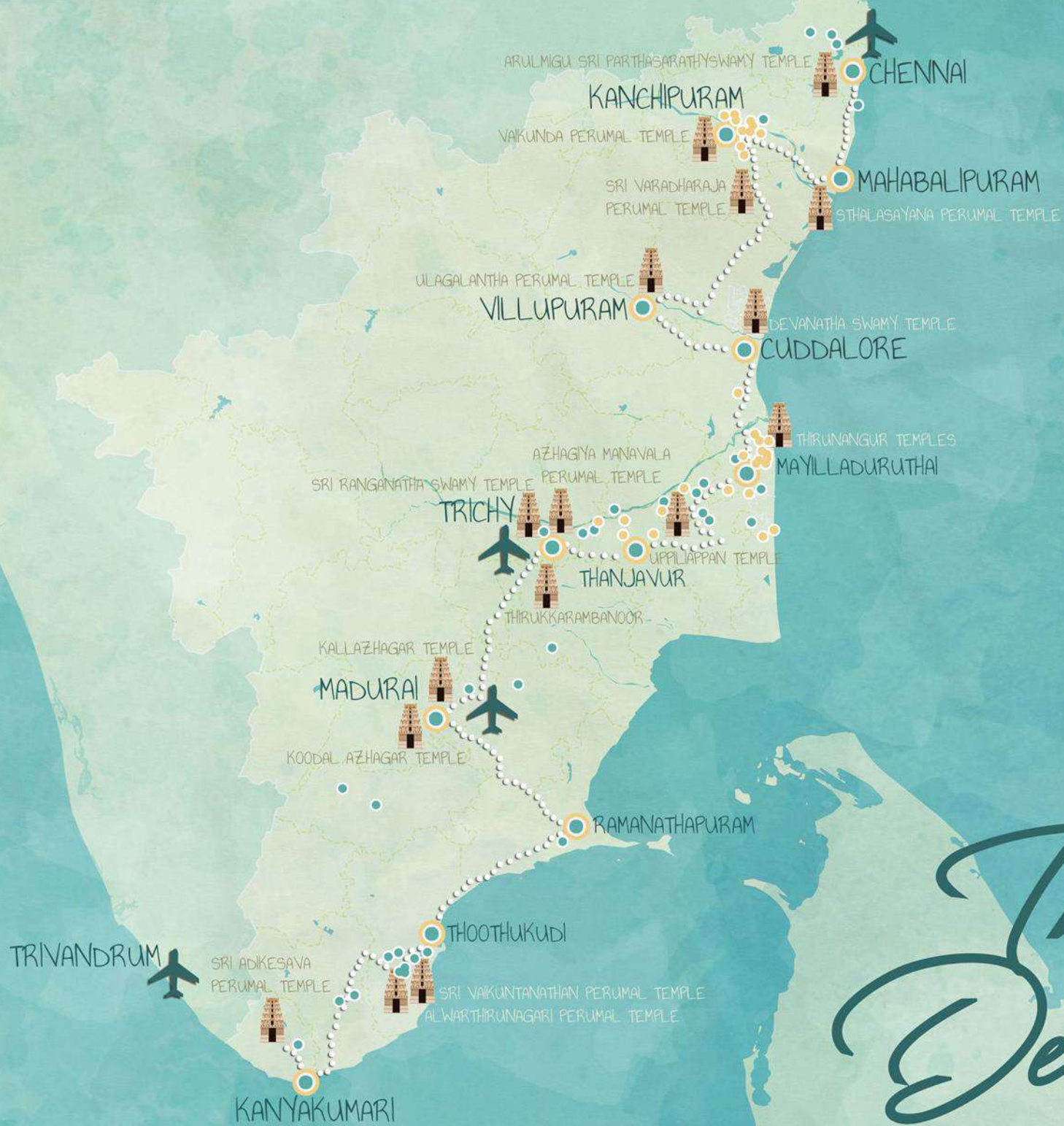
#	District	Site Name
1	Chennai	Arulmigu Sri Parthasarathyswamy Temple, Thiruvallikeni
2	Tiruvallur	Arulmigu Bhaktavatsala Perumal Temple, Thiruninravur
3		Arulmigu Veeraraghava Swamy Temple, Tiruvallur
4	Chengalpattu	Nityakalyana Perumal Temple, Thiruvudanthai
5		Sthalasayana Perumal Temple, Mamallapuram
6		Vaikunda Perumal Temple (Thiru Parameswara Vinnagaram)
7		Sri Varadharaja Perumal Temple, Tirukkachi
8		Sri Neervannaperumal Temple (Ranganatha Temple), Thiruneermalai
9		Ulagalandha Perumal Temple
10		Sri Aadhikesava Perumal Temple, Ashtabhuyakaram
11	Kanchipuram	Sri Yathothakaari Temple, Thiru Vekka
12		Sri Azhagiya Singar Perumal Temple, Thiru Velukkai
13		Sri Deepa Prakasar Perumal Temple, Thiruthanka
14		Sri Aadhi Varaha Perumal Temple, Thirukalvanoor
15		Sri Jagadeeshwarar Temple, Thiru Neeragam
16		Sri Karunakara Perumal Temple, Thiru Kaaragam
17		Sri Thirukkaara vaanar Temple, Thirukkaara Vaanam
18		Sri Pavala Vannar Temple, Thiru Pavala Vannan
19		Sri Nilathingal Thundathan Perumal Temple, Thiru Nilathingal Thundam
20		Sri Pandava Thoodhar Temple, Thiru Paadagam
21		Sri Vijayaraghava Perumal Temple, Thiruputkuzhi
22	Villupuram	Ulagalantha Perumal Temple, Tirukoyilur
23	Cuddalore	Devanatha Swamy Temple, Thiruvanthipuram
24		Sri Govindaraja Perumal Temple, Thiruchitrakootam

#	District	Site Name
25	Mayiladuthurai	Parimala Ranganathar Perumal Temple, Thiruindalur
26		Thirunangur Temple - Thiruvaiykunda Vinnagaram/ Vaikunta Nathan Temple
27		Thirunangur Temple - Thiruthevanarthogai / Madhava Perumal Temple
28		Thirunangur Temple - Thirumanimadam / Narayanan Perumal Temple
29		Sri Srinivasa Perumal Temple, Thiruvellakkulam (Annan Kovil)
30		Sri Lakshmi Narashima Perumal Temple, Thiruvai Thiunagari
31		Sri Gopala Krishna Perumal Temple, Thiru Kavalampaadi
32		Sri Varadharaja Perumal Temple, Thiru Manikkoodam
33		Sri Thamaraiyal Kelvan Perumal Temple, Thiru Paarthanpalli
34		Sri Kuda Maadu Koothan Perumal Temple, Thiru Arimeya Vinnagaram
35	Nagapattinam	Sri Seganmaal Ranganatha Perumal Temple, Thiru Thetri Aambalam
36		Sri Per Arulaalan Perumal Temple, Thiru Sempon Sei Kovil
37		Sri Purushothama Perumal Temple, Thiru Vann Purushothamam
38		Sri Vaigundha Nathan Perumal Temple, Thiru Vaikunda Vinnagaram
39		Sri Devaadi Raja Perumal Temple, Thiruvazhunthoor
40		Sri Loganatha Perumal Temple, Thirukkannankudi
41		Sri Naan Madhiya Perumal Temple, Thiru Thalaichanga Naanmathiyam
42		Sowriraja Perumal Temple, Thirukannapuram
43		Thiru Naagai - Sri Soundaryarajan Neelamega Perumal Temple
44		Jagath Rakshaka Perumal Temple, Thirukkoodaloor
45	Thanjavur	Gajendra Varadha Perumal Temple In Thirukkavithalam
46		Thiru Aadanoor Temple (Aandu Alakkum Aiyar Perumal Temple)
47		Thirupullabhoothangudi Temple
48		Sri Sarangapani Perumal Temple, Kumbakonam
49		Uppiliappan Temple (Also Known As Thiruvinnagar), Thirunageswaram
50		Thiruchcherai - Sri Saranathan Perumal Temple
51		Sri Neelamega Perumal Temple, Thiru Thanjaimaamani Koil
52		Sri Hara Saabha Vimochana Perumal Temple, Thirukkandiyur
53		Sri Bhaktavatsala Perumal Temple, Thirukkannamangai
54		Sri Jaganatha Perumal Temple, Thirunandhipura Vinnagaram (Nathan Koil)
55		Sri Kola Valvilli Ramar Perumal Temple, Thiruvelliyankudi

Trail Highlights

#	District	Site Name
56	Thiruvavur	Nachiar Kovil / Thirunarayur Nambi Temple in Thirunarayur
57		Sthalasayana Perumal Temple, Tirusirupuliyur
58	Tiruchirappalli	Sri Ranganatha Swamy Temple, Srirangam
59		Thiruvellarai Temple / Pundarikakshan Perumal Temple, Thiruvellarai
60		Thiru Anbil / Sundararaja Perumal Temple
61		Azhagiya Manavala Perumal Temple (Also Called Nachiyar Koil), Uraiyur
62		Thirukkarambanoor / Uthamar Kovil
63	Madurai	Sri Appakkudatha Perumal Temple, Thirupper Nagar
64		Kallazhagar Temple, Azhagar Kovil
65		Koodal Azhagar Temple
66	Pudukottai	Thirumohoor Kalamegaperumal Temple
67		Sathyamurthi Perumal Temple
68	Sivagangai	Thirukoshtiyur – Sowmya Narayana Perumal Temple
69	Virudhunagar	Srivilliputhur Andal Temple
70		Ninra Narayana Perumal Temple, Thiruthangal

#	District	Site Name
71	Ramanathapuram	Adi Jagannatha Perumal Temple, Thirupullani
72	Thoothukudi	Thiru Varagunamangai Perumal Temple – Chandran Sthalam
73		Srivaikuntanathan Perumal Temple – Suryan Sthalam
74		Thirupuliangudi Perumal Temple – Bhudhan Sthalam
75	Thoothukudi	Thirutholaivillimangalam Irettai Thirupathi Sri Srinivasa Temple – Ketu Shethram
76		Thirutholaivillimangalam Irettai Thirupathi Sri Aravindalochanar – Rahu Shethram
77	Thoothukudi	Tirukulandhai Sri Mayakoothar Perumal Temple – Sani Sthalam
78		Alwarthirunagari Perumal Temple – Guru Sthalam
79		Thirukkolor Sri Vaithamanidhi Perumal Temple – Sevvai Sthalam
80	Tirunelveli	Then Thirupperai Thiru Makara Nedunkulai Kaather Temple – Sukra Sthalam
81		Sri Nambi Rayar Temple, Thirukkurugudi
82	Kanyakumari	Vaanaamaalai - Sri Thothatrinatha Perumal Temple
83		Sri Adikesavaperumal Temple, Thiruvattar
84	Kanyakumari	Thiruvannariparisaaram - Sri Kuralappa Perumal Temple



The Divya Trail

Desam

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
1	1	Chennai	Arulmigu Sri Parthasarathyswamy Temple, Thiruvallikeni	Temple	3,400	200	7,910	590	13,480	1,010	15,760	High tourism site	Moderate HVT Potential
2	34	Tiruvallur	Arulmigu Bhaktavatsala Perumal Temple, Thiruninravur	Temple	400	0	950	0	1,900	0	5,910	Low tourism site	Low HVT Potential
3	36	Tiruvallur	Arulmigu Veeraraghava Swamy Temple, Tiruvallur	Temple	980	40	2,680	140	6,320	330	8,030	Medium tourism site	Moderate HVT Potential
4	10	Chengalpattu	Nityakalyana Perumal Temple, Thiruvudanthai	Temple	36	3	130	12	370	33	5,910	Low tourism site	Low HVT Potential
5	14	Chengalpattu	Sthalasayana Perumal Temple, Mamallapuram	Temple	805	13	2,210	45	5,220	110	8,030	Medium tourism site	Moderate HVT Potential
6	17	Kanchipuram	Vaikunda Perumal Temple (Thiru Parameswara Vinnagaram)	Temple	750	32	2,060	110	4,860	260	6,315	Medium tourism site	Moderate HVT Potential
7	18	Kanchipuram	Sri Varadharaja Perumal Temple, Tirukkachi	Temple	15,960	200	23,230	500	23,225	500	23,725	Very high tourism site	High HVT Potential
8	30	Kanchipuram	Sri Neervannaperumal Temple (Ranganatha Temple), Thiruneermalai	Temple	330	10	780	25	1,570	48	19,710	Low tourism site	Low HVT Potential
9	-	Kanchipuram	Pilgrim Recreational Centre	Special Project	-	-	-	-	-	-	-	High tourism site	Moderate HVT Potential
10	19A	Kanchipuram	Ulagalandha Perumal Temple	Temple	870	34	2,390	120	5,630	275	5,910	Medium tourism site	Moderate HVT Potential
11	61	Villupuram	Ulagalantha Perumal Temple, Tirukoyilur	Temple	1,150	1	1,240	1	1,320	1	19,695	Medium tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
1	Arulmigu Sri Parthasarathyswamy Temple, Thiruvallikeni	0.5 - 0.6	HR&CE Dept.	-
2	Arulmigu Bhaktavatsala Perumal Temple, Thiruninravur	0.50	HR&CE Dept.	-
3	Arulmigu Veeraraghava Swamy Temple, Tiruvallur	0.50	Temple Trust	-
4	Nityakalyana Perumal Temple, Thiruvudanthai	1	HR&CE Dept.	-
5	Sthalasayana Perumal Temple, Mamallapuram	1	HR&CE Dept.	-
6	Vaikunda Perumal Temple (Thiru Parameswara Vinnagaram)	1	ASI, HR&CE Dept.	-
7	Sri Varadharaja Perumal Temple, Tirukkachi	1.5	HR&CE Dept.	-
8	Sri Neervannaperumal Temple (Ranganatha Temple), Thiruneermalai	1	HR&CE Dept.	-
9	Pilgrim Recreational Centre	22 -23	PPP	Accommodation, Kalyana Mandapa – PPP
10	Ulagalandha Perumal Temple	1.5 – 2	HR&CE Dept.	Yatri Niwas – O&M on PPP
11	Ulagalantha Perumal Temple, Tirukoyilur	0.2 – 0.3	HR&CE Dept.	-

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
12	71A	Cuddalore	Devanatha Swamy Temple, Thiruvanthipuram	Temple	2,130	0	2,295	0	2,440	0	19,695	Medium tourism site	Low HVT Potential
13	83	Mayiladuthurai	Parimala Ranganathar Perumal Temple, Thiruvindalur	Temple	595	10	2,210	37	6,095	100	9,850	Low tourism site	Low HVT Potential
14	84	Mayiladuthurai	Thirunangur Temples	Temple	1,100	400	3,035	1,100	7,165	2,610	19,695	Medium tourism site	Low HVT Potential
15	77	Nagapattinam	Sowriraja Perumal Temple, Thirukannapuram	Temple	490	20	995	41	1,705	70	23,635	Low tourism site	Low HVT Potential
16	117	Thanjavur	Jagath Rakshaka Perumal Temple, Thirukkoodaloor	Temple	7	0	16	0	30	0	2,760	Very low tourism site	Low HVT Potential
17	118	Thanjavur	Gajendra Varadha Perumal Temple In Thirukkavithalam	Temple	70	0	160	0	300	0	1,970	Very low tourism site	Low HVT Potential
18	119	Thanjavur	Thiru Aadanoor Temple (Aandu Alakkum Aiyan Perumal Temple)	Temple	20	0	45	0	86	0	1,970	Very low tourism site	Low HVT Potential
19	120	Thanjavur	Thirupullabhoothangudi Temple	Temple	18	0	40	0	78	0	3,940	Very low tourism site	Low HVT Potential
20	121	Thanjavur	Sri Sarangapani Perumal Temple, Kumbakonam	Temple	10	0	23	0	44	0	9,850	Very low tourism site	Low HVT Potential
21	122	Thanjavur	Uppiliappan Temple, Thirunageswaram	Temple	1,410	11	3,645	36	8,160	81	15,755	Medium tourism site	Moderate HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
12	Devanatha Swamy Temple, Thiruvanthipuram	0.5	HR&CE Dept.	-
13	Parimala Ranganathar Perumal Temple, Thiruvindalur	0.3 – 0.4	HR&CE Dept.	-
14	Thirunangur Temples - Vaikunta Nathan Perumal Temple	5 – 5.5	HR&CE Dept.	Yatri Niwas – O&M on PPP
15	Sowriraja Perumal Temple, Thirukannapuram	2 – 2.1	HR&CE Dept.	Community hall (Events) – O&M on PPP
16	Jagath Rakshaka Perumal Temple, Thirukkoodaloor	0.5	HR&CE Dept.	-
17	Gajendra Varadha Perumal Temple In Thirukkavithalam	0.2 – 0.3	Venkadachalapathy Annachathiram Trust	-
18	Thiru Aadanoor Temple (Aandu Alakkum Aiyan Perumal Temple)	0.1	Ahobila Matha	-
19	Thirupullabhoothangudi Temple	0.3	Ahobila Matha	-
20	Sri Sarangapani Perumal Temple, Kumbakonam	1.6 – 1.7	HR&CE Dept.	EV/EC Stop - Shuttle operators on License
21	Uppiliappan Temple, Thirunageswaram	0.6	HR&CE Dept.	-

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

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S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
22	158	Thanjavur	Thiruchcherai - Sri Saranathan Perumal Temple	Temple	100	0	340	1	890	2	13,390	Low tourism site	Low HVT Potential
23	88	Thiruvavarur	Nachiar Kovil, Thirunarayur	Temple	570	60	1,280	135	2,460	260	31,510	Very low tourism site	Low HVT Potential
24	90	Thiruvavarur	Sthalasayana Perumal Temple, Tirusirupuliyur	Temple	500	0	1,720	0	3,940	0	3,940	Low tourism site	Low HVT Potential
25	94	Tiruchirappalli	Sri Ranganatha Swamy Temple, Srirangam	Temple	11,810	180	23,430	690	33,580	1,040	98,450	Very high tourism site	High HVT Potential
26	100	Tiruchirappalli	Pundarikakshan Perumal Temple, Thiruvellarai	Temple	230	0	540	0	1,090	1	10,830	Very low tourism site	Low HVT Potential
27	101	Tiruchirappalli	Sundararaja Perumal Temple, Anbil	Temple	44	0	105	0	210	0	4,000	Very low tourism site	Low HVT Potential
28	99A	Tiruchirappalli	Azhagiya Manavala Perumal Temple, Uraiyur	Temple	570	0	1,350	0	2,710	0	7,680	Very low tourism site	Low HVT Potential
29	99C	Tiruchirappalli	Uthamar Kovil, Uthamarkoil	Temple	590	0	1,395	0	2,800	1	9,020	Very low tourism site	Low HVT Potential
30	131	Madurai	Kallazhagar Temple, Azhagar Kovil	Temple	3,780	5	8,775	12	11,800	16	11,820	High tourism site	Low HVT Potential
31	133	Madurai	Koodal Azhagar Temple	Temple	1,750	7	3,920	16	3,920	16	3,940	Medium tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
22	Thiruchcherai - Sri Saranathan Perumal Temple	2.9 - 3	HR&CE Dept.	Yatri Niwas, Community hall – O&M on PPP
23	Nachiar Kovil, Thirunarayur	0.05	HR&CE Dept.	-
24	Sthalasayana Perumal Temple, Tirusirupuliyur	0.6 – 0.7	HR&CE Dept.	Community hall (Events) – O&M on PPP
25	Sri Ranganatha Swamy Temple, Srirangam	23.3 – 23.4	HR&CE Dept.	Yatri Niwas – O&M on PPP
26	Pundarikakshan Perumal Temple, Thiruvellarai	0.4	HR&CE Dept.	-
27	Sundararaja Perumal Temple, Anbil	0.8	HR&CE Dept.	-
28	Azhagiya Manavala Perumal Temple, Uraiyur	0.1 – 0.2	HR&CE Dept.	-
29	Uthamar Kovil, Uthamarkoil	0.5	HR&CE Dept.	-
30	Kallazhagar Temple, Azhagar Kovil	10.6 – 10.7	HR&CE Dept.	Yatri Niwas – O&M on PPP
31	Koodal Azhagar Temple	0.8 -0.9	Koodal Azhagar Temple	-

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

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S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
32	134	Madurai	Thirumohoor Kalamegaperumal Temple	Temple	95	1	225	2	445	5	19,695	Very low tourism site	Low HVT Potential
33	215A	Pudukottai	Sathyamurthi Perumal Temple	Temple	175	2	410	5	830	9	10,240	Very low tourism site	Low HVT Potential
34	227	Sivagangai	Thirukoshtiyur – Sowmya Narayana Perumal Temple	Temple	75	1	147	2	255	3	10,240	Very low tourism site	Low HVT Potential
35	235	Virudhunagar	Srivilliputhur Andal Temple	Temple	870	1	2,490	3	5,590	6	78,780	Low tourism site	Low HVT Potential
36	236	Virudhunagar	Ninra Narayana Perumal Temple, Thiruthangal	Temple	215	0	425	0	740	0	19,695	Very low tourism site	Low HVT Potential
37	250	Ramanathapuram	Adi Jagannatha Perumal Temple, Thirupullani	Temple	380	0	750	0	1,310	0	9,060	Very low tourism site	Low HVT Potential
38	261A	Thoothukudi	Thiru Varagunamangai Permual Temple – Chandran Sthalam	Temple	95	0	220	1	440	2	3,545	Very low tourism site	Low HVT Potential
39	261B	Thoothukudi	Srivaikuntanathan Perumal Temple – Suryan Sthalam	Temple	340	1	790	1	1,560	2	19,695	Very low tourism site	Low HVT Potential
40	261C	Thoothukudi	Thirupuliangudi Permual Temple – Bhudhan Sthalam	Temple	65	0	155	0	305	1	3,545	Very low tourism site	Low HVT Potential
41	262A	Thoothukudi	Thirutholaivillimangalam Irettai Thirupathi Sri Srinivasa Perumal Temple – Ketu Shethram	Temple	50	0	120	0	235	1	3,740	Very low tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
32	Thirumohoor Kalamegaperumal Temple	0.2 -0.3	HR&CE Dept.	-
33	Sathyamurthi Perumal Temple	2.3 -2.4	ASI	-
34	Thirukoshtiyur – Sowmya Narayana Perumal Temple	0.7	Sivagangai Devasthanam	-
35	Srivilliputhur Andal Temple	13	HR&CE Dept.	Yatri Niwas – O&M on PPP
36	Ninra Narayana Perumal Temple, Thiruthangal	0.01 – 0.02	HR&CE Dept.	-
37	Adi Jagannatha Perumal Temple, Thirupullani	2.5 – 2.6	Ramanathapuram Samasthanam	Yatri Niwas – O&M on PPP
38	Thiru Varagunamangai Permual Temple – Chandran Sthalam	1.7 -1.8	HR & CE Dept.	Yatri Niwas – O&M on PPP
39	Srivaikuntanathan Perumal Temple – Suryan Sthalam	0.6	HR&CE Dept.	-
40	Thirupuliangudi Permual Temple – Bhudhan Sthalam	0.8 -0.9	HR&CE Dept.	-
41	Thirutholaivillimangalam Irettai Thirupathi Sri Srinivasa Perumal Temple – Ketu Shethram	0.4 -0.5	HR&CE Dept.	-

Summary

Sites & their Tourism Potential

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S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
42	262B	Thoothukudi	Thirutholaivillimangalam Irettai Thirupathi Sri Aravindalochanar Temple – Rahu Sheththram	Temple	51	0	120	0	235	1	3,740	Very low tourism site	Low HVT Potential
43	262C	Thoothukudi	Tirukulandhai Sri Mayakoothar Permual Temple – Sani Sthalam	Temple	75	1	170	3	335	6	3,940	Very low tourism site	Low HVT Potential
44	263A	Thoothukudi	Alwarthirunagari Perumal Temple – Guru Sthalam	Temple	480	3	1,110	6	2,200	12	20,875	Very low tourism site	Low HVT Potential
45	263B	Thoothukudi	Thirukkolor Sri Vaithamanidhi Permual Temple – Sevvai Sthalam	Temple	85	0	195	1	390	2	9,650	Very low tourism site	Low HVT Potential
46	263C	Thoothukudi	Then Thirupperai Thiru Makara Nedunkulai Kaather Perumal Temple – Sukra Sthalam	Temple	285	1	660	2	1,300	4	20,875	Very low tourism site	Low HVT Potential
47	270	Tirunelveli	Sri Nambi Rayar Temple, Thirukkurugudi	Temple	260	0	360	0	470	0	54,360	Very low tourism site	Low HVT Potential
48	274	Tirunelveli	Vaanamaamalai - Sri Thothatrinatha Perumal Temple	Temple	119	2	165	3	215	4	18,710	Very low tourism site	Low HVT Potential
49	287	Kanyakumari	Sri Adikesavaperumal Temple, Thiruvattar	Temple	4,190	41	7,775	95	7,775	95	7,870	High tourism site	Moderate HVT Potential
50	294	Kanyakumari	Thiruvannarparaaram - Sri Kuralappa Perumal Temple	Temple	40	0	149	0	410	0	1,970	Low tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
42	Thirutholaivillimangalam Irettai Thirupathi Sri Aravindalochanar Temple – Rahu Sheththram	0.05	HR&CE Dept.	-
43	Tirukulandhai Sri Mayakoothar Permual Temple – Sani Sthalam	0.7-0.8	HR&CE Dept.	-
44	Alwarthirunagari Perumal Temple – Guru Sthalam	0.3	HR&CE Dept.	-
45	Thirukkolor Sri Vaithamanidhi Permual Temple – Sevvai Sthalam	0.4	HR&CE Dept.	-
46	Then Thirupperai Thiru Makara Nedunkulai Kaather Perumal Temple – Sukra Sthalam	0.2 -0.3	HR&CE Dept.	-
47	Sri Nambi Rayar Temple, Thirukkurugudi	0.4 – 0.5	Thiru Jeeyar Math	-
48	Vaanamaamalai - Sri Thothatrinatha Perumal Temple	0.1	Jeeyar Trust	-
49	Sri Adikesavaperumal Temple, Thiruvattar	0.05	HR&CE Dept.	-
50	Thiruvannarparaaram - Sri Kuralappa Perumal Temple	0.05	HR&CE Dept.	-

Impact

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment Opportunities

The proposed interventions are planned to:

- Increase visitor comfort and convenience to the tourist sites
 - Increase tourist footfalls at the sites
- Promote higher footfall of high-value tourists – thereby increasing overall spending at the sites.

This tourist spending will directly flow to the local economy and communities.



~430k man-days Construction Jobs



~640 (incremental) man-days per day during operations jobs
(Accommodation, Site maintenance & housekeeping, Activity Operators, Retail and F&B operators, hawkers, vendors etc.)



~1075k man-days Indirect & Induced Jobs
created due to multiplier impact of construction and operations jobs

Benefitted Stakeholders



Local Weavers, Craftsmen and Artisans



Security & Maintenance Staff



Temple-ware & Souvenir Vendors



Tour Guides & Operators



Transporters (Taxi/Auto)



Hospitality Staff



Temple Workers

1. Sri Parthasarathyswamy Temple, Chennai

Site Details

District:	Chennai
Name of Site:	Arulmigu Sri Parthasarathyswamy Temple
Site No:	Site 1 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.0538,80.2770
Land Area:	~1.50 acres (Temple) ~1.75 acres (Temple Tank) ~0.41 acres (Additional Land)
Peak footfalls:	~10,000 per day (April – May, September – October)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 35 lakhs (2019 – 20) For – 1 lakh (2019 – 20)
Site Revenues:	INR 80 lakhs (2019 – 20)
Site Orientation:	Pilgrim & Tourist
Site Potential:	High Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway Station:	~800 m from Thiruvallikeni railway station
b. Airport:	~19 km from Chennai International Airport
c. Highway:	~ 9 km from SH 49
Trails featured on:	Divya Desam, Siddhar

The Arulmigu Sri Parthasarathyswamy Temple is located in Chennai city and lies near major tourist attractions such as Marina Beach. The temple enjoys great connectivity and has immense popularity among the devotees in and around the neighbouring states of Tamil Nadu. The temple is especially popular amongst the Tirupati devotees and attracts high-value tourists from South Asian countries like Malaysia, Singapore, and Sri Lanka. Thus, the scope for interventions at the site includes the development of amenities and resting areas. Besides new developments, maintenance of the existing infrastructure and cleaning of the temple tank to restore it to its natural beauty will remain key objectives of the master plan.

Existing Condition

Location

Sri Parthasarathyswamy Temple is located in Triplicane, Chennai. The Thiruvallikeni railway station is ~5 km and Chennai International Airport is ~19 km away from the temple. It is situated in an Institutional Zone and is surrounded majorly by residential buildings. The site has many prominent attractions in the vicinity such as Marina Beach (~750m), Chennai Light House (~1.5 km), Santhome Basilica (~2.7 km), and Egmore Museum (~4 km).

Existing Layout

The temple premises are enclosed within a high-walled compound with two entrances, one on the eastern side and the other on the western side.

- The western side gate is opened only during peak seasons and festivals to manage the overflowing crowd.
- The walled compound houses the shrine, a kitchen, a ticketing counter, an administration office, two large halls, and a feeding room for mothers.
- The pathway for the devotees is guided using a steel barricade that runs along with the shrines of different deities hosted inside the temple premises.

- The temple has an enclosed temple tank on the eastern side. The temple tank usually remains closed and is only opened during the floating festival and other auspicious days.

Existing Uses

The Parthasarathyswamy temple is one of the oldest temples in Chennai and is used mainly for religious purposes. Apart from that, people visit the temple to celebrate Brahmotsavams (big festival) during the Tamil month of Chithirai (April–May). Several religious shows and recitals are hosted within the temple during this period. The other uses housed on the site include:

- Food outlets – 1 shop selling prasadam.
- Multipurpose hall (Mandapam) for religious shows and recitals - ~200 capacity, with light & sound system.

Other Land

Apart from ~1.50 acres of the temple complex and ~1.75 acres of the temple tank, the temple authorities also own ~0.2 acres of land just outside the temple premises which is used for parking.

- Other land parcels owned by the temple are several properties across Triplicane and Parrys that are leased out for commercial and residential uses.
- With respect to the vacant lands in 1 km vicinity, ~0.2 acres of vacant land on the Big street, located ~400 m towards the northwest of the temple. This is a compounded and gated vacant enclosure that is currently used as an alternate car parking.

Masterplanning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – As per Master Plan, the temple complex lies in an Institutional Zone as shown in **Error! Reference source not found..** The permissible uses include:

Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi-public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multilevel parking | Cinema theatres | Kalyana

mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

The local communities who are key stakeholders in the temple administration believe that the entry of non-Hindu tourists will degrade the sanctity of the temple, therefore they discourage the non-Hindu tourists within the temple premises.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The site is famous for its rich heritage which dates back 5000 years and its architecture from 3 prominent dynasties (Pallavas, Cholas, and Vijaynagara). It attracts a huge crowd from all over Tamil Nadu and nearby states during the most prominent festival of Vaikunda Ekadesi. The temple is highly popular among Thirupathi devotees as it hosts similar deities. Another major attraction of this temple is its temple tank which does not get dried up in the scorching Chennai summer and is named after white lily – ‘Kairavini’. Apart from pilgrims and religious tourists, the site is famous among tourists visiting the nearby attractions such as Marina Beach, Chennai Light House, Fort St. George, etc.

2. Accessibility – Being in Chennai and close to all the transportation facilities, the site has excellent accessibility. It is situated in central Chennai and accessible via wide urban roads. However, the last ~200 m of approach road is narrow and prone to congestion. Bus stop, cabs, and autos are easily available within ~200 m of the temple premises. The site can be accessed through Thiruvallikeni railway station which is ~800 m from the site. The major modes of transport people use to commute to the site include tour buses, public buses, autos, and taxis / private cars. However, the most optimal way to reach the temple is through auto.

3. Amenities – The condition of tourist amenities within and around the temple is average. The site includes facilities of drinking water, retail shops, and safety & security. The site lacks the following facilities.

- No washrooms within the temple.
- No ramps/lifts for divyaang pilgrims and tourists.
- Narrow and congested access road.
- No rest/seating facility.
- No designated footpaths.

Parking – A free parking space is located outside the site with a capacity of 25-30 cars, but it is usually occupied by the neighbouring resident's vehicles, making it difficult for tourists to find a parking space.

4. Awareness – The temple enjoys immense popularity among pilgrims, especially Thirupathi devotees. It is also well-known as a tourist destination in Chennai and adjoining districts. The HR&CE department maintains a temple website with relevant information. Moreover, the temple also finds mention in popular travel journals such as Lonely Planet.

5. Activities – On normal days, the temple does not offer many activities apart from daily rituals/prayers. On festive and auspicious occasions, there are activities such as feasts, dance recitals, music concerts, etc. The Sri Parthasarathyswamy Brahmotsavam attracts flocks of devotees from the surrounding areas, as this event holds a special place in the hearts of the devotees.

6. Accommodation – Being in Chennai and in close proximity to the Marina beach, the temple enjoys excellent accommodation options. There are several budget

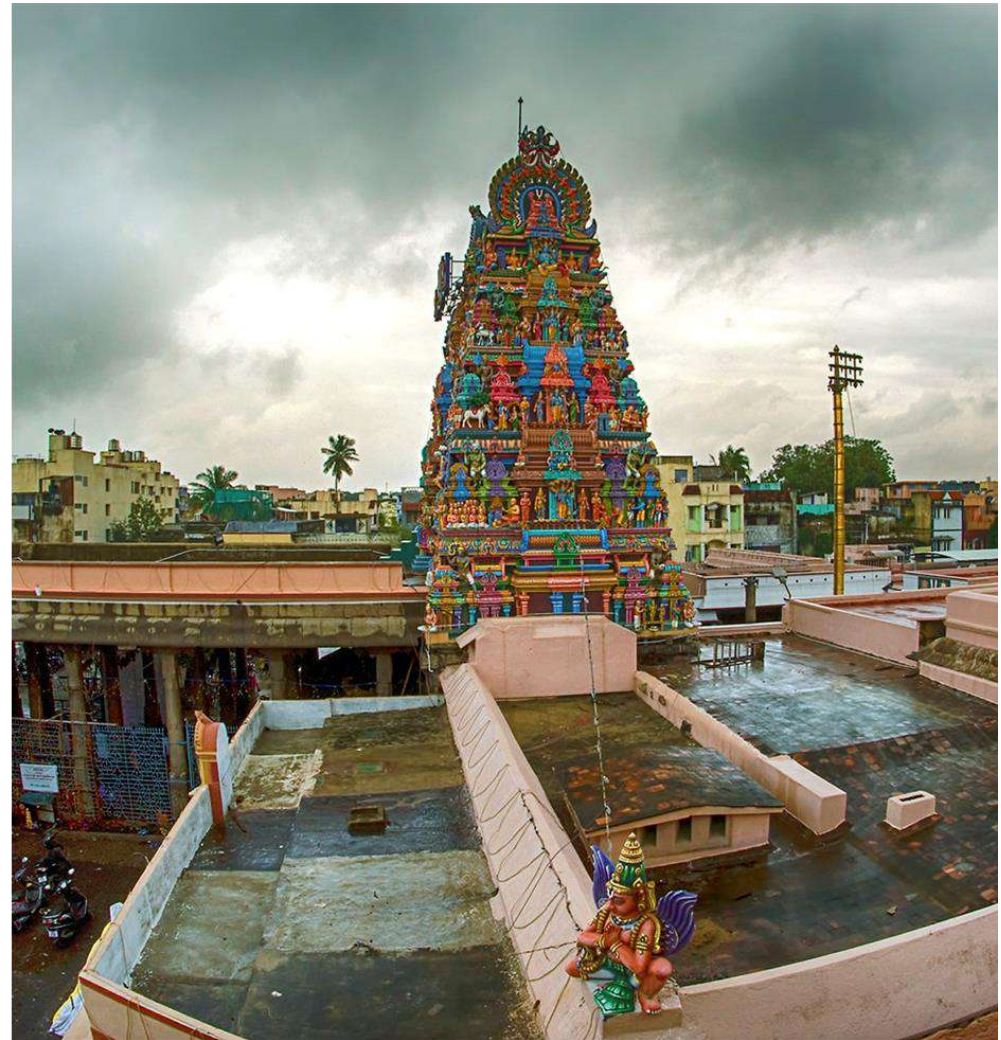
and 3-star hotels available within 5 km radius of the site. Average room charges in the area are ~INR 900 for a budget hotel and ~INR 4,800 for a 3-star hotel. The closest 4-star hotel is 2 km away from the temple with various transportation options available for visitors. A wider range of options is available on the TTK road that is 3 km away from the temple.

7. Association with Community – The local community is the key stakeholder in the temple administration and takes part in its decision-making. They are involved in all the activities of the temple. The parking area designated for the visitors is also occupied by the vehicles owned by the surrounding residential units.

Figure 1-1: Location & Existing Layout



Site Pictures



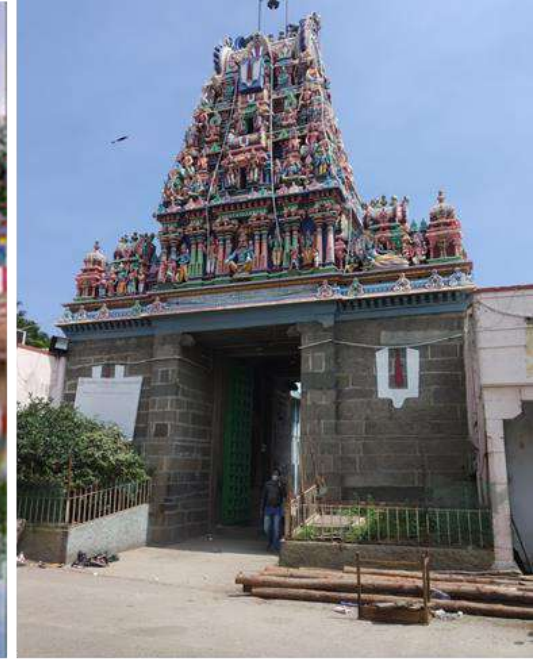
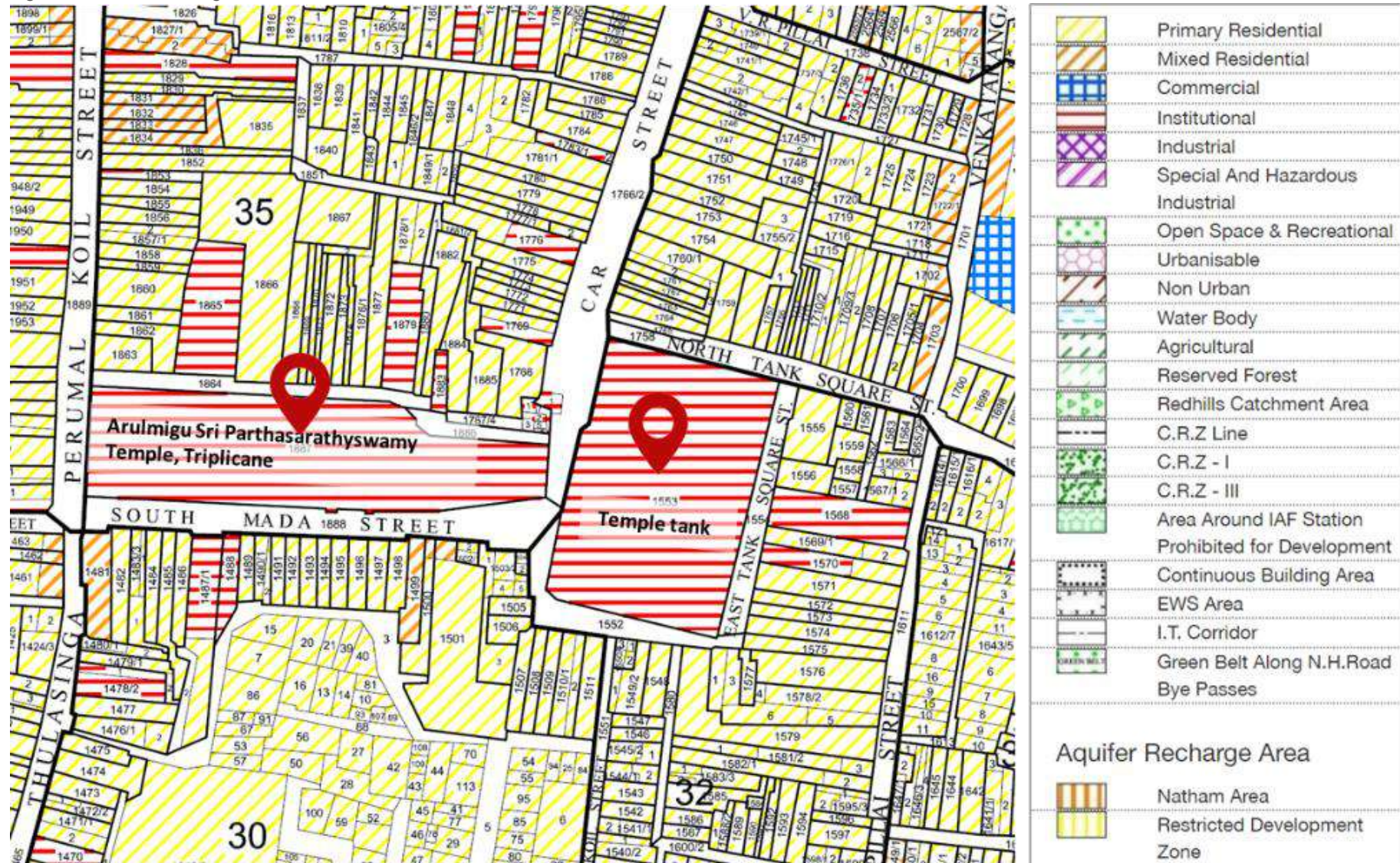


Figure 1-2: Land Use Regulation Zone at the Site



Vision for the Site

- Sri Parthasarathyswamy Temple at Triplicane is one of the two famous and oldest shrines in Chennai. It enjoys immense popularity among pilgrims and tourists alike. The site itself provides various facilities of housing kitchen, mandapams, feeding room, and parking facility. However, the site lacks basic amenities outside the temple premises.
- The temple has huge potential to enhance and improve the pilgrims' and tourists' experience by adding the missing facilities. It has a good opportunity to provide the needed amenities because of the availability of ~0.2-acre vacant land adjacent to the eastern entrance of the temple. This land is currently used for parking.
- The vision for the site is to enhance the amenities outside the temple by utilizing the vacant land to provide amenities such as washrooms, designated and regulated parking, and seating areas for the visitor's convenience. Further, the rejuvenation of the temple tank will enhance its beauty and further generate tourist engagement. Other interventions will include the beautification and maintenance of existing infrastructure within and around the temple premises.
- **Target Visitor** – The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **High Tourism Site** with **Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	3,400	7,911	13,481
High Value Tourists (HVT) (Both domestic and foreign)	200	590	1,006
Maximum Carrying Capacity	15,756		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious and architectural significance and its popularity among pilgrims and domestic tourists, the concept of the masterplan includes:

- **Improving pilgrims' experience** at the temple – through improved basic amenities of washroom, seating area, and parking.
- **Cleaning of the temple tank** to enhance its beauty.
- **Beautification and maintenance** of existing infrastructure present in and around the temple complex.
- **Improving tourist footfall** through appropriate marketing and promotion.

Hard Interventions

1. **Amenity Block** – The site lacks toilets and luggage room facilities within the temple premises. Considering significant tourist footfall coming from other neighbouring states and countries like Malaysia and Singapore, the site requires

these facilities. Therefore, for the convenience of the visitors, an amenity block is proposed which will include pay and use toilets and luggage room facility. This will be located on the eastern side of the vacant land that is currently being used for parking.

Infrastructure Created: 140 sqm of building area.

2. **Temple Tank Rejuvenation** – As observed on the site, the temple tank had garbage floating on its surface and there was a thick cover of algae on it. Moreover, wild plants can be observed on the last step of the pond, which makes it difficult to access the holy water in the tank. Therefore, to restore the beauty of this huge temple tank, cleaning of the tank is proposed. Wild plants will be removed, and trees will be retained. Littering on the site shall be prohibited and monitored by guards. To enhance the facilities inside the temple tank boundary, benches are proposed to be installed on the western periphery of the tank, for the convenience of elderly and divyaang tourists.

Infrastructure Created: Cleaning of 5400 sqm of water pond and 5 benches installed on the western periphery of the tank.

3. **Fenced Boundary Wall** – It was observed during the initial studies that the parking area was occupied by the vehicles owned by the surrounding residential units, resulting in the non-availability of parking space for visitors. Therefore, a fenced boundary wall is proposed surrounding the parking area. This will help to regulate the parking inside the temple. Standard fencing of 2 m height, typically built-in wrought iron will be provided

Infrastructure Created: 350 m long fenced boundary wall.

4. **Upgradation of Retail Shop Roof** – The retail shop selling prasadam within the temple complex is made of a tin roof which does not complement the temple architecture. Moreover, it is aesthetically not pleasing. Therefore, a permanent roof considering the architectural elements of the temple will be constructed over the retail shop.

Infrastructure Created – ~30 m of a permanent roof structure.



Amenity Block



Shaded seating area



Retail shop roof structure



Paved Pathway and Landscaping



Information signage

Soft Interventions

- 1. Marketing and Promotion** – To enhance the visibility of the temple, it must be marketed well. Its location near the prominent sites like Marina Beach, Lighthouse, etc, shall be taken into an advantage by installing signages at appropriate places and approach roads to these sites. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract high-value tourists.
- 2. Guided Tours**– A self-guided audio tour provision shall be present on the site to portray the rich history of the site. As the temple is popular among religious pilgrims and is located in the close vicinity of many prominent places. Therefore, the site shall be curated with other important sites for day tours. Licensed guides shall be deployed to guide the visitors about the history and significance of the temple.
- 3. Cleanliness of the adjacent streets** – The surrounding streets of the temple are filled with garbage and overflowing dustbins. Therefore, adequate size and number of dustbins are proposed to be installed at the appropriate position and away from the entrance gates. It is suggested to the municipality to maintain the hygiene of the place by regularly collecting the waste from the dustbins.
- 4. Community Engagement** – The local community is deeply involved in the decision-making of the temple and does not encourage non-Hindu tourists to enter the temple complex. However, it is suggested to the locals to encourage and allow the non-Hindu tourists to access the outer parts of the temple.

Amenities Plan

- 1. Shaded Seating Area** – The site lacks any rest/seating facility outside the main temple building which is why visitors go to Marina beach to relax. For the visitor's convenience and ease on the site, a shaded seating area is proposed on the Peyalwar Koil Street located on the north side of the temple complex. This area will be paved and have canopy style seating area.
Infrastructure provided- 150 sqm of the paved area with 4 canopy style structures with the seating arrangement.

- 2. Paved pathways and landscaped pockets** – The eastern entrance of the temple is re-designed with a paved pathway and landscaped pockets to make it more appealing and inviting.
Infrastructure Created: 200 sqm of paved pathway and 150 sqm of landscaped pockets.
- 3. Signage** – Signages can be installed along the approach roads and on the prominent sites within the vicinity, indicating the presence of the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines
- 4. Parking** – It was observed on the site that the parking is done on the temple-owned vacant land outside the temple complex. The existing parking area is not designed and does not have any boundary wall because of which, it is mostly occupied by the vehicles owned by surrounding residential units. Therefore, a parking area is proposed with designated entry and parking space that will be enclosed within a fenced boundary wall to regulate its use.
Infrastructure Created – 300 sqm Paved Parking areas with a total of 11 ECS.
- 5. Technology Interventions** – For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 The package shall exclude CCTV's as there is a sufficient number of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Amenity Block	140 sqm
2	Temple tank Rejuvenation (only cleaning of tank)	5400 sqm
3	Fenced Bounday Wall (standard 2m height)	350 sqm

#	Project Component	Scale
4	Permanent Retail shop roof	30 m
5	Shaded Seating Area (Tensile structures)	4
6	Paved pathway	350 sqm
7	Landscaped area	150 sqm
8	Signage Package 1	1
9	Parking (300 sqm of Paved Yard)	11 ECS
10	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Amenity Block	5
2	Amenity Block - Toilet block	20
3	Amenity Block - Drinking water station	2
4	Fenced Wall (standard 2m height)	10
5	Permanent Retail shop roof (Tensile structures)	3
6	Permanent Retail shop - seating	1
7	Paved pathway	7
8	Landscaped area	1
9	Signage Package 1	1
10	Parking	5
11	Technology Package 1	1
Total		INR 55 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 4 kiosks, each to be rented out at INR 2 Lakhs per annum.
- Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 10 per person.
- Parking** – Capturing 11 ECS at 60% occupancy per day at INR 20 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1.36 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the Amenity block.
 - b. A **security personnel** for the parking.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and

responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 30 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity Block	5	Y0 – Y2	HR&CE
2	Amenity Block - Toilet block	20	Y0 – Y2	HR&CE
3	Amenity Block - Drinking water station	2	Y0 – Y2	HR&CE
4	Fenced Wall (standard 2m height)	10	Y0 – Y2	HR&CE
5	Permanent Retail shop roof (Tensile structures)	3	Y0 – Y2	HR&CE
6	Permanent Retail shop - seating	1	Y0 – Y2	HR&CE
7	Paved pathway	7	Y0 – Y2	HR&CE
8	Landscaped area	1	Y0 – Y2	HR&CE
9	Signage Package 1	1	Y0 – Y2	HR&CE
10	Parking	5	Y0 – Y2	HR&CE
11	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 55 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

Employment opportunities during Implementation: 2,500¹ man-days of construction labour (spread across 1-1.5 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days²
- Retail and F&B spaces = 10 man-days per day³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as 6,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,700 Cr. at the site⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%

- Cumulative labour man-days = 30% * CAPEX / 700

² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

³ Assuming average 2.5 persons per kiosk / shop

⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 1-3: Proposed Master Plan – Arulmigu Sri Parthasarathyswamy Temple



2. Bhaktavatsala Perumal Temple, Thiruninravur

Site Details

District:	Tiruvallur
Name of Site	Arulmigu Bhaktavatsala Perumal Temple
Site No:	Site 34 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.1088, 80.0239
Land Area:	1.5 acres
Peak footfalls:	1,000 per day (September – October)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 4 lakhs (2019 - 20) For. – Nil (2019 - 20)
Site Revenues:	INR 18 lakhs (2019)
Site Orientation:	Pilgrim/Tourist
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~40 km (Chennai)
b. Airport:	~35 km (Chennai)
c. Highway:	~5 km from Chennai ORR
d. Other:	Nil
Trails featured on:	Divya Desam

Arulmiga Bhaktavatsala Perumal temple is one of the 108 Divya Desams dedicated to Vishnu and glorified in the Divya Prabandha. It is located in Thiruninravur. The site is secluded due to which it has less footfall and popularity. However large crowds from surrounding layouts visit the temple on daily basis to participate in daily rituals and domestic tourists visit the temple during festive seasons. Scope for interventions includes the development and maintenance of basic public amenities with enhanced tourist engagement for existing visitors. The temple can be clustered with the other temples in the surrounding and Thiruthani Lake to organize a daylong pilgrim tour for the devotees.

Existing Condition

Location

The Arulmigu Bhaktavatsala Perumal Temple is located in a small town named Thiruninravur, a western suburb of Chennai in the Tiruvallur district. It is situated ~16 km from Tiruvallur town and ~30 km from Chennai Central Railway Station and Chennai International Airport. The town comes under the Chennai Metropolitan Area and is governed by Thiruninravur Town Panchayat. The temple is situated in a dense residential mixed-use neighbourhood with Hrudayaaleeswarar Temple, ISKON temple and other landmarks in the vicinity.

Existing Layout and Uses

The temple site consists of 1.5 acres of land with ~1.33 acres of ground coverage. The complex is surrounded by granite walls, enclosing all the shrines and two water bodies. It can be accessed through ~7 m wide unpaved Mandapam Street on the east which further connects to the main arterial Mettu Street.

The temple has a rectangular east-facing plan that is approached through a five-tiered Rajagopuram (gateway tower) at the entrance. The following are the major elements of the Site:

- Temple complex – The temple has a courtyard in the front leading to the main entrance about 20 feet away. The main sanctum has Artha Mandapam and Maha Mandapam, with a Sannadhi for Yoga Narasimhar.
- The outer prakaram has small shrines of Thayara, Manavala, Mamunikal, Koorathalwar, Thirumangai Alwar Sannadhi, Andal, Senai Mudalvar, Chakkarathazhwar and Sri Ramanuja.
- Other uses – The temple has two 4-pillar mandapams, one located in front and the other located in outer Prakarama (outer circle) and a prasad stall inside the premises.
- The temple enjoys significant popularity among locals and domestic tourists. The site is visited on a daily basis by people living in the surrounding residential layout. However, the temple occasionally celebrates festivals such as Krishna Janmashtami, Chitra Pournami, Tiruadyana Utsavam, and Brahmotsavam.

Other Land Available

Besides 1.5-acre land of the temple complex, the temple owns 240 acres of land about 1 km south of the temple, which is currently leased out for farming. This land can be used for other uses.

Master Planning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – As per Chennai Metropolitan Area Master Plan, site lies in a Mixed-use Residential Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

- 2. TN HRCE Rules, 1959**

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

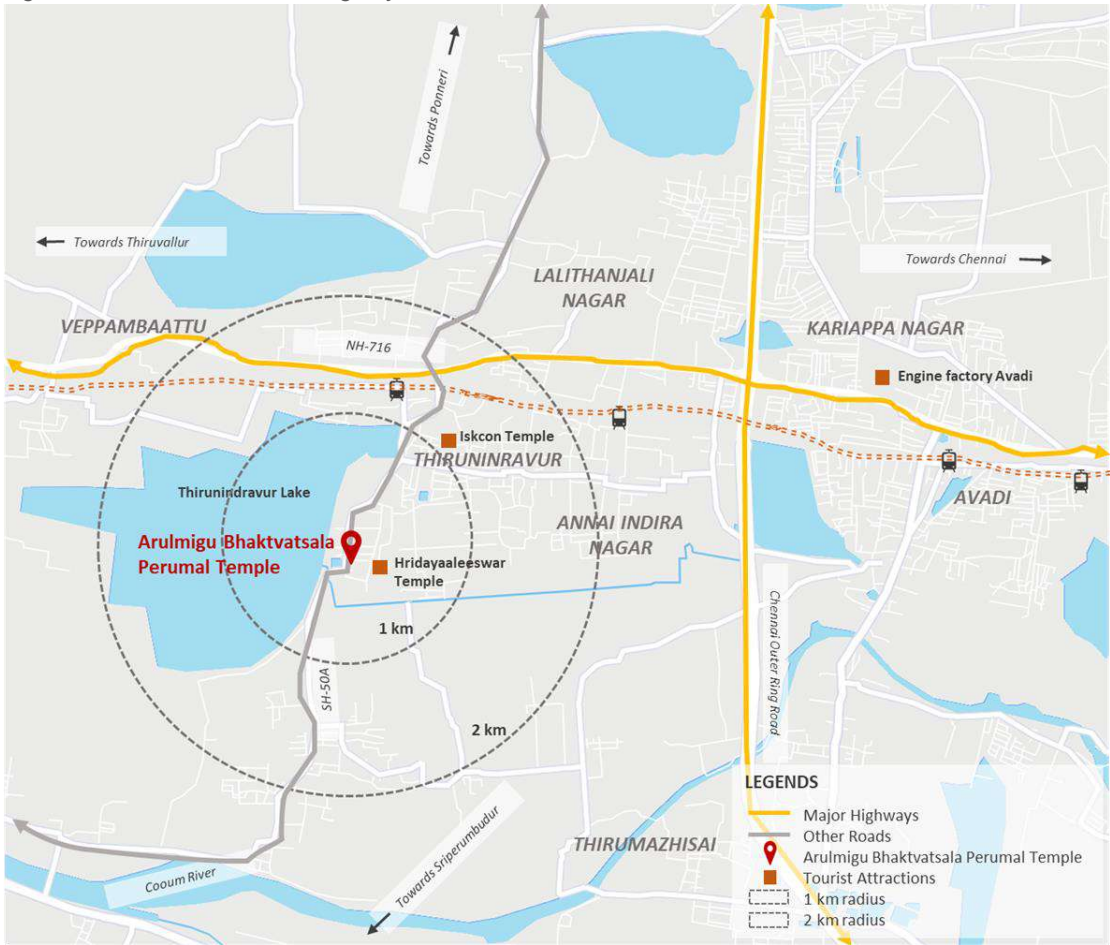
Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The temple does not have any unique attraction to offer to the tourist. It is most valued for its historic and mythological relevance. It also has monumental architecture as represented by the 5-tier Rajagopuram. Pilgrims from the region and neighbouring states visit the temple for taking blessings from Lord Vishnu and Goddess Mahalakshmi. It is often clubbed with the cluster of smaller temples located in the vicinity and Thiruninravur lake (~200 m).
- 2. Accessibility** – The temple is secluded as it is located about ~30 km away from Chennai. The town is connected via NH-205 to Chennai. The approach to the site is via a 2-lane unpaved road connected to SH 50A. It is 16 km from Tiruvallur town and has rail access 3 km away at Thiruninravur which is on the mainline connecting with Chennai Central. Auto stands, taxi stands, and bus stops are available within 500 m of the site.
- 3. Amenities** – The temple scores high on cleanliness but lacks certain amenities. Dustbins, Toilet blocks, street lighting, safety security & divyaang friendly measures are present inside the site. The site lacks the following amenities.
 - No RO Drinking water facility
 - No F&B and Retail shop present inside the temple site, though few retail outlets sell packaged food and groceries around the site.

- No amenities such as waiting hall, luggage/cloakroom, and tourist information centre present for visitors.
- 4. Parking** – The Site does not have any designated parking area inside the temple compound. The cars and tour buses park on the street surrounding the temple leading to frequent crowding and congestion during peak seasons.
 - 5. Awareness** – Temple is famous amongst devotees of Lord Vishnu and Goddess Mahalakshmi across the neighbouring districts in Tamil Nadu and the adjoining states like Karnataka, Telangana, and Andhra Pradesh. It does not find mention in online travel journals such as Lonely Planet. Very few user-generated reviews are available on TripAdvisor. The temple does not even have a dedicated website. Therefore, it has no popularity among foreign tourists.
 - 6. Activities** – The temple has its rituals which are conducted daily – including aartis, deity decoration, etc. During peak season (Sept and Oct), the temple trust also organizes various events such as Light & Sound Show, Cultural/folk performance – Dance, Songs, Audio - Visual presentation in the Tamil language. The events are organised in vacant land which is not aesthetically pleasing and lacks amenities.
 - 7. Accommodation** – There are no hotel accommodations within 500 m of the site. However, at a radius of 2 km towards the Chennai – Thiruttani highway, there are budget accommodations with an average tariff of INR 1000. People with ancestral roots in the neighbourhood usually stay at their ancestral/kin's house during the festivals held in the temple.
 - 8. Association with Community** – There are no guides at the temple. The festivals and daily rituals enjoy immense participation from the locals. Hawkers and vendors also sprawl the site to sell local goods, handicrafts, and food items creating difficulty in ease of movement for the tourists.

Figure 2-1: Location and Existing Layout



Site Pictures

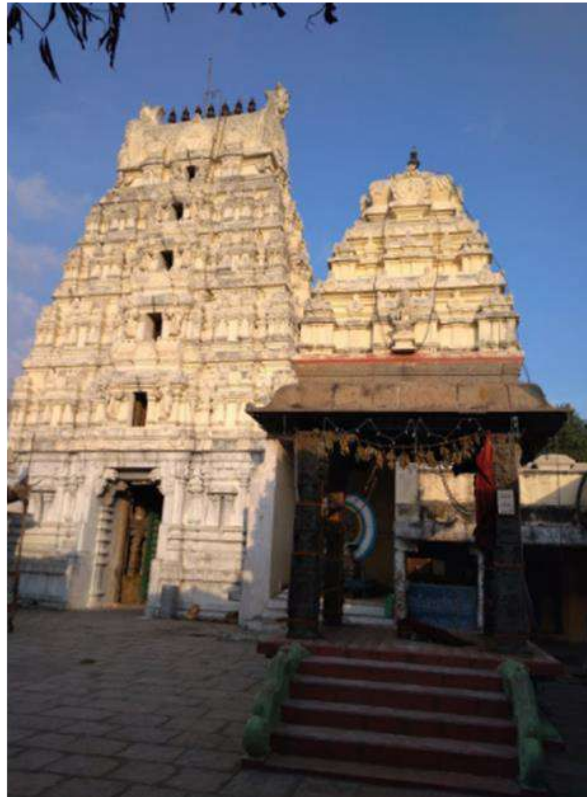




Figure 2-2: Land Uses Regulation Zone at the Site



Vision for the Site

Arulmigu Bhaktavatsala Perumal Temple has religious importance as it is one of the 108 Divya Desam temples dedicated to Vishnu and has a monumental architecture with 5 tier Rajagopuram and sculptures across each tier. However, the site is secluded due to which it has less footfall and popularity. Furthermore, the access road is narrow and there is no designated parking, leading to congestion in festive seasons. The space in and around the temple is dull and non-interactive.

The temple has potential to improve visitor experience by utilizing the vacant land in front of the temple complex to create cultural space for community engagement and incorporate other necessary amenities of toilet, parking, drinking water etc.

The vision for the site is to develop it as a domestic tourist attraction by improving basic infrastructure and developing spaces like gardens and temple souvenir shops engaging visitors in different activities. The site will target domestic tourists that will apprehend and appreciate the religious significance, architectural beauty, and cultural values of the local setup.

- **Target Visitors:** The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

The target visitor group envisioned at the site are:

- **Locals & Pilgrims:** Visiting the temple for its religious value.
- **Tourist Projections** – The site is categorized as a **Low tourism site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	400	945	1,900
High Value Tourists (HVT) (Both domestic and foreign)	-	-	-
Maximum Carrying Capacity	5,913 p.a.		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

Given that the site is popular among locals & pilgrims and being a religiously significant temple, the concept of the masterplan is:

- **Improving pilgrims' experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing **cultural spaces** at the site by providing spaces on vacant land.
- **Improving religious tourist footfall** through appropriate marketing and promotion.

Hard Interventions

1. Amenity Block – A small amenity block with an inquiry desk, cloak/luggage room, changing room, rest/waiting area, and pilgrim F&B kiosks can be developed for tourist convenience and ease at the site. It can be placed at the entrance of the temple. This will be developed as per the design guidelines. A canopy-style seating area can be designed adjacent to the facilitation centre.
Infrastructure Created: ~100 sqm of building area for amenity block and 3 tensile canopies with a temporary seating area.

2. Landscaped Garden – The vacant land at the entrance of the complex can be utilised for developing landscaped garden. Space will be used to organise cultural events and visitors can enjoy sitting under tree shades. The landscaping shall be done using native flora and paving material. Space will be developed on

the west side from the entrance and will act as a vibrant cultural space that will enhance tourist engagement.

Infrastructure Created: 1685 ~sqm of garden, 1 information board, Paver blocks, Tree planters.

- 3. Paved Shaded Pathway** – 50 m of the pathway to be paved extending from the complex entrance to the 5 tier Rajagopuram, running along the proposed landscaped area. The entire pathway will be shaded in a tensile canopy.

Infrastructure Created: 50m long and 3m wide concrete paved pathways.

Soft Interventions

- 1. Events** – The open space at the entrance of the site could be used for organizing local craft fairs, cultural events, and festivals, thereby making the place more alive and vibrant throughout the year. Day tours with nearby landmarks such as other temples and Thiruninravur Lake can be organised.
- 2. Existing Infrastructure development** – There is a chariot in the temple that has some intricate carvings from the Pallava and Chola period, it can be restored and showcased to the tourists.
- 3. Site Promotion** – Increasing temple visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites such as temples, CMBT, Chennai International Airport, and Chennai Central Railway Station.
- 4. Community involvement** – The locals around the temple are very well aware of the temple's history and significance. These local communities could be involved in various activities within and around the temple through events/activities conducted on the temple gardens.
- 5. Day Tour** – The temple can be clustered with the other temples in the surrounding and Thiruthani Lake into a daylong pilgrim tour for the devotees. Licensed guides shall be deployed to guide the visitors about the history and significance of the sites.

Amenities Plan

- 1. Signage** – Signage Package 1 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines.

- 2. Technology** – As the site is small in scale and does not attract a large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines.



Landscaped Garden



Bench in Garden



Paved-Shaded Pathways



Drinking Water Kiosk



Pilgrim Souvenir Shop

3. **Drinking-Water Station** – The drinking water station will be upgraded with RO water and a cooler. It can be replaced at the amenity block. A module of which can be referred from the design guidelines.
4. **Pilgrim Souvenir Shop** – Pilgrim souvenir kiosks can be developed that will sell temple-related souvenirs such as Pooja items, prasadam etc and may include F&B shops selling vegetarian food items. A total of 5 retail kiosks will be developed on the west side from the entrance along the landscaped area.
Infrastructure Created: 5 Retail kiosks of 3 by 3 meters each.
5. **Parking** – Visitors park their vehicles outside the temple complex leading to congestion during festive seasons. Therefore, an organised parking space of 12 cars will be designed outside the boundary wall.

Trunk Infrastructure

Although the site has direct access from the road, the approach road is unpaved. Therefore, improvement of road infrastructure can be done by the concerned development authority.

Project Identified

#	Project Component	Scale
1	Amenity block	100 sqm
2	Shading device type 1	3
3	Landscaped Garden	1685 sqm
4	Paved-Shaded Walkway (Paver block, Shading device)	45 m
5	Chariot Conservation	-
6	Signage (Package 1)	1
7	Technology (Package 1)	1
8	Drinking Water Station	1
9	Pilgrim Souvenir Shop (3 by 3 meters)	5
10	Parking (Paved Yard for 12 cars)	12 ECS

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The CAPEX of various interventions proposed at the site is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Amenity block	5
2	Shading device type 1	1
3	Landscaped Garden	11
4	Paved-Shaded Walkway (Paver block, Shading device)	1
5	Chariot Conservation	3
6	Signage (Package 1)	1
7	Technology (Package 1)	1
8	Drinking Water Station	3
9	Pilgrim Souvenir Shop (3 by 3 meters)	7
10	Parking (Paved Yard)	3
Total		~INR 35 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.

2. *The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Kiosks** – 5 leasable kiosk units each with a rental earning of ~*INR 10 Lakhs*.
2. **Parking** – About 12 parking spaces (@*INR 20* for every 2 hours) assuming a daily occupancy of 2 ECS per day, would earn the temple an estimated revenue of *INR ~2 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 12 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the Amenity block.
 - b. A **security personnel** at the proposed parking.

The projected costs incurred is estimated at *INR 4 Lakhs*.

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.

The projected costs incurred is estimated at *INR 2 Lakhs*.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks in the temple.

The projected costs incurred is estimated at *INR 1 Lakh*.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

The projected costs incurred is estimated at *INR 1 Lakh*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 9 Lakhs at Y5*.

Given that the estimated revenues (*INR 12 Lakhs.*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 9 Lakhs.*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Implementation Model and Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.

- The **kiosk units** at the temple premise can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items or operate a small F&B outlet to cater to the visitors.
- The **Parking facility** is to be undertaken by the temple body and the respective cost incurred by the management is included in the operating expenses (*Admin. & Management cost*).

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity block	5	Y0 – Y2	HR&CE
2	Shading device type 1	1	Y0 – Y2	HR&CE
3	Landscaped Garden	11	Y0 – Y2	HR&CE
4	Paved-Shaded Walkway (Paver block, Shading device)	1	Y0 – Y2	HR&CE
5	Chariot Conservation	3	Y0 – Y2	HR&CE
6	Signage (Package 1)	1	Y0 – Y2	HR&CE
7	Technology (Package 1)	1	Y0 – Y2	HR&CE
8	Drinking Water Station	3	Y0 – Y2	HR&CE
9	Pilgrim Souvenir Shop (3 by 3 meters)	7	Y0 – Y2	HR&CE
10	Parking (Paved Yard)	3	Y0 – Y2	HR&CE
Total		INR 35 L		

Impact on Communities

Employment opportunities

⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1500⁵ man-days of construction labour (*spread across 1 year of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons⁶
- Retail and F&B spaces = 13 man-days per day⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 3,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 190 Cr. at the site⁸.

- Cumulative labour man-days = 30% * CAPEX / 700

⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁷ Assuming average 2.5 persons per kiosk / shop

⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

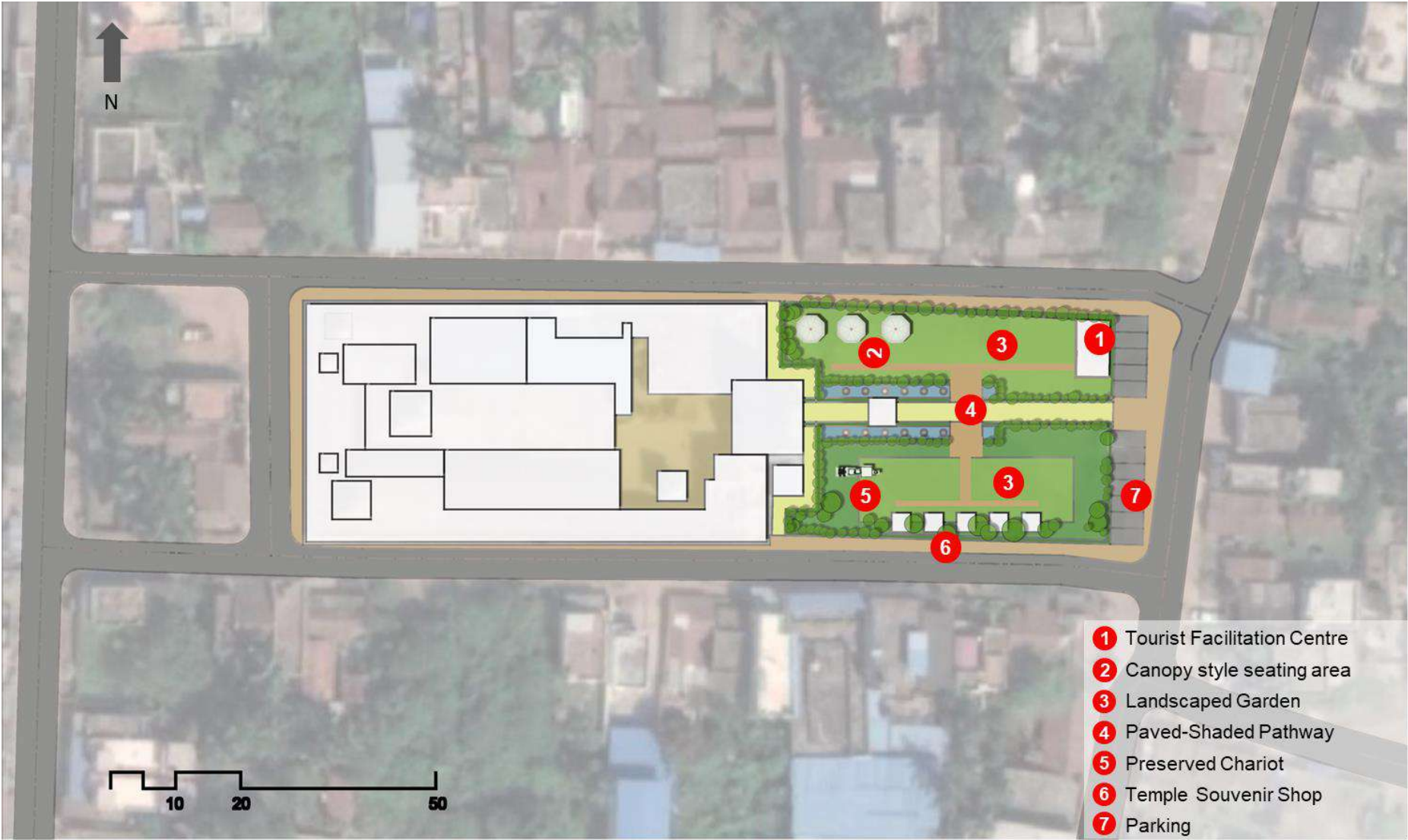
This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 2-3: Proposed Master Plan – Arulmigu Bhatkvatsala Perumal Temple, Thiruniravur



3. Veeraraghava Swamy Temple, Tiruvallur

Site Details

District:	Tiruvallur
Name of Site	Arulmigu Veeraraghava Swamy Temple
Site No:	Site 36 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.1432, 79.9050
Land Area:	2 acres (Temple) & 9 acres (Temple Tank)
Peak footfalls:	25,000 per day (March–April)
Operator:	Sri Ahobila Math
Site Ownership:	Sri Ahobila Math HR & CE Dept. (Yearly auditing)
Tourist Footfall:	Dom. – 10 lakhs (2019 – 20) For. – 20,000 (2019 – 20)
Site Revenues:	INR 2.7 crores (2019 – 20)
Site Orientation:	Pilgrim/Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~35 km (Arakkonam)
b. Airport:	~45 km (Chennai)
c. Highway:	~1 km from Chennai – Tiruvallur Highway
d. Other:	Nil
Trails featured on:	Divya Desam, Siddhar

The Arulmigu Veeraraghava Swamy Temple is one of the 108 Sri Divya Desams located in the Tiruvallur district and is well connected to the nearby towns and districts. The temple is well maintained with all the required amenities for the visitors; therefore, it has huge potential to turn into a prominent pilgrim tourist site. Scope of intervention includes rejuvenation of the temple tank, development of amenity block, maintenance of basic public amenities and landscaping to enhance tourist engagement.

Existing Condition

Location

The temple is located in Tiruvallur, ~35 km west of Chennai. It is well connected via road and rail. Tiruvallur plays an important transit point to many places in Southern parts of India and is well connected to holy places like Tiruvalangadu, Tiruttani, Tirupati, Mantralayam, and Shirdi. The temple complex is surrounded by a dense mixed-use neighbourhood, with a number of small temples located in the surrounding area. Several prominent tourist landmarks present around the site are Sri Theertheswarar Swami Devasthanam, Vaacheeswarar Temple, Arulmigu Sri Angala Parameshwari Amman Temple, and Shri Oondreeswarar Shiva Temple.

Existing Layout

The temple is spread across an area of 2 acres of rectangular complex and 9 acres of temple tank on its west side. The temple has a seven-tiered rajagopuram and is enshrined within a granite wall. Apart from rajagopuram, there are seven other Gopurams and seven over the sannidhies inside. The presiding deity Veeraraghava Swamy is in a recumbent position facing east. It has Vijayakoti Vimanam (pyramidal roof) above the sanctum. The temple also houses shrines of Azhwars, Ranganatha, and Hanuman located around the sanctum in the first precinct.

The temple tank, Hritayathabhanasini, is located to the West of the temple. Neerazhi Mandapam, situated in the centre of the tank, houses the deity during the Float Festival.

There is an ornate four-pillared black stone hall called Vellikizhamai mandapam where the festival images of the presiding deities are displayed every Friday.

Existing Uses

The temple is immensely popular and receives ~20,000-25,000 visitors a day on peak season. The devotees and tourists visit the temple for worship. The temple tank is visited by a large number of people and is bathed in for religious beliefs. The temple is also known by many for curing ailments. The other uses associated with the temple include:

- Food outlets – 1 shop selling prasadam.
- Temple Tank - believed to relieve one of their sins and have medicinal effects.
- Vellikizhamai mandapam where the festival image of the presiding deities is displayed.
- Rainwater harvesting within the temple premises.
- Goshala- earlier located inside the temple, now located 3 km from the temple on a 1.5-acre land.
- Veda Padasala- located ~800m from the temple, focusing on religious learnings and takes about 15 students on a yearly basis and has a staff of about 13 people of which 10 are teaching staffs.

Other Land Available

Apart from the 2-acre land used for the temple complex, the temple also owns about 150 acres of land leased out for farming. Some of these land parcels include:

- 13 acres of land about 5 km away in Putlur village.
- 100 acres of distributed lands along the Thiruvallur road about 4 km to the north of the temple between Sampath Nagar and Pullarambakkam.
- 3 acres of land towards the south of the temple tank about 200 meters away, adjacent to the Sri Venkateswara Matriculation Higher Secondary School is being proposed for a multi-level car parking planned and construction of Dormitories/rooms for accommodation.

Master Planning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction –** The temple has both religious as well as architectural significance. It is one of the 108 Divya Desams dedicated to Vishnu and is visited by a large number of devotees. It is believed that those suffering from incurable diseases are cured if they worship the presiding deity. The water in the tank is considered more sacred than that of river Ganga by some pilgrims. Thousands of devotees take a holy dip into the temple tank during new moon days.
- 2. Accessibility –** Though the temple is situated in the outskirts of Chennai, yet it is easily accessible via Tiruvallur Highway and Chennai-Thiruthani Highway. The major modes of transport people use to commute to the site include autos, taxis / private cars, and buses (regular and tour buses). Auto stand, taxi stand, bus stop, and parking facility for the temple are located within ~500m. The temple has good rail access, with the Tiruvallur Railway Station within a ~3.5 km radius

from the temple. The nearest airport is Chennai International Airport, located ~45 km away.

3. Amenities – The temple is well maintained and has facilities like drinking water, dustbins, safety & security, divyaang friendly measures, etc. present inside the temple. The site lacks the following amenities.

- No washrooms present inside the temple or near the temple tank.
- No amenities present for visitors to rest/sit outside the site.
- No guides available/Lack of tourist information
- No tourist information centre or reception

Parking – Designated parking space is allotted on the temple-owned 3 acres of land located ~300 m away from the main temple entrance. However, due to heavy footfall during peak seasons, it gets congested for which a multi-level car parking is proposed adjacent to the Sri Venkateshwara Matriculation Higher Secondary School. Part of the land is encroached by the school and is in talks for its retrieval.

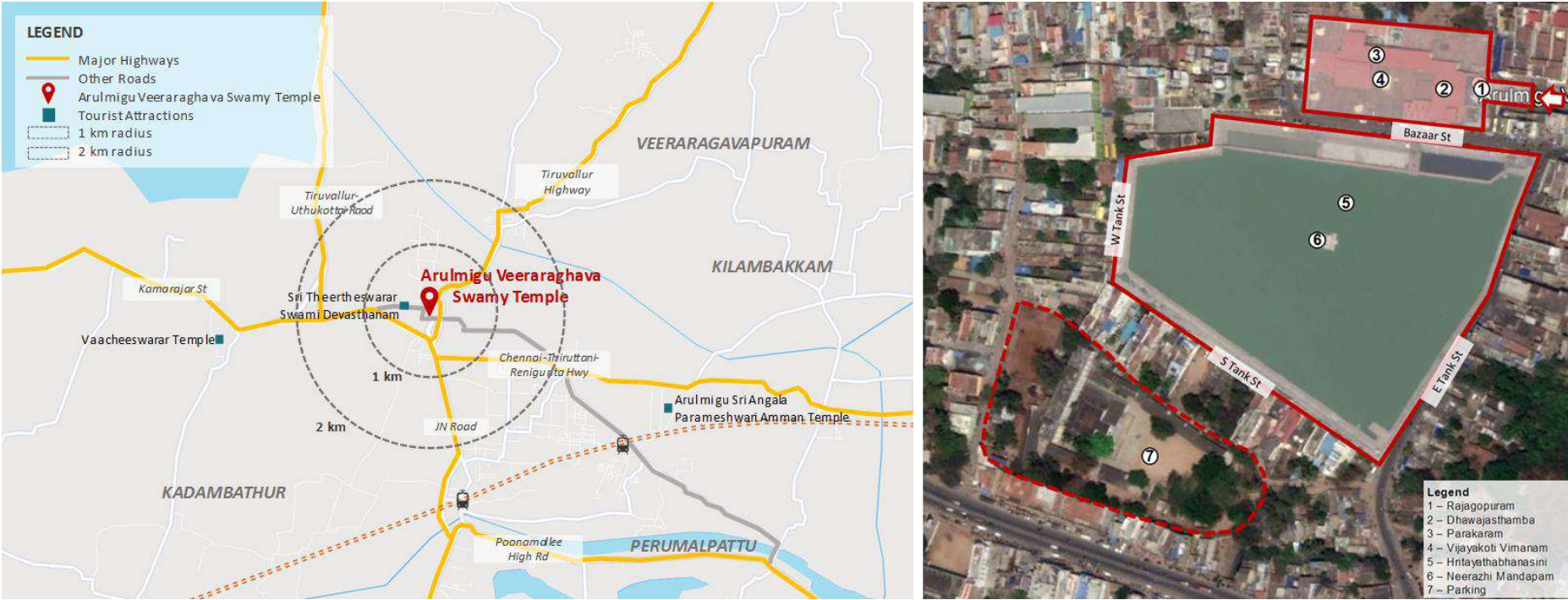
4. Awareness – This temple enjoys immense popularity among pilgrims. In 2019, the temple received ~8.4 lakhs, ~2% of whom were foreign tourists. It is recommended by renowned travel referral/review aggregators such as TripAdvisor, Tiruvallur District, etc. The hereditary temple trust maintains a temple website with relevant information.

5. Activities – On normal days, the temple does not offer many activities. However, during the Tamil month of Chittirai, Brahmotsavam, a 10-day festival is celebrated, the festival deity is taken in procession around the streets of the temple in different mounts each day and the float festival is celebrated on the last day. The other festivals associated with Vishnu temples like Krishna Jayanthi, Saturdays of Tamil month Puratassi, Navratri, Vaikunta Ekadasi, and Vijayadasami are also celebrated here.

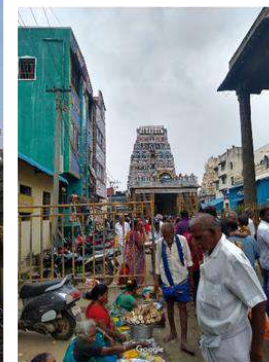
6. Accommodation – There are dormitories available inside the temple for the devotees who pre-book, but the facilities fall short during peak season and special days. While there are few budget hotels and lodges with an average tariff of INR 1000 in the site's vicinity, there is a lack of premium hotels. Dormitories/rooms for accommodation are proposed along with multi-level car parking on the temple-owned land ~300 m away from the main temple entrance.

7. Association with Community – Devotees come here for marriage, progeny, and relief from hardships. Temple tanks also act as a means for community engagement as devotees take a holy dip in the tank. It is believed that taking a dip in sacred water will relieve the devotee from sins. Visitors do not spend much time around the temple as there are no other activities than religious activities to engage them.

Figure 3-1: Location and Existing Layout



Site Pictures





Vision for the Site

The Arulmigu Veeraraghava Swamy Temple is one of the 108 Divya Desams. It has immense popularity among locals, pilgrims, and tourists alike. Along with its religious importance, the temple has good architectural elements and provides picturesque views to its visitors. The temple has high footfall, but tourists do not spend much time on the site because of inadequate amenities provided by the temple. Moreover, the temple is situated in a dense fabric, leaving lesser scope to develop many facilities.

The temple has huge potential to develop amenities on the temple-owned vacant land, inside and outside temple premises. The temple has huge, beautiful temple tank along which some open land is available. This land can be utilised to develop required facilities. There is an opportunity to rejuvenate and renovate the temple tank to initiate activities around it. A multi-level car parking and dormitories are already proposed on the additional land and thus will solve the issue of parking and accommodation on the site.

The vision for the site is to develop it as a religious tourist attraction by adding the missing necessary facilities along the temple tank. Development of pilgrim souvenir shops, relaxing areas, and amenity blocks including toilets, bathroom, drinking water kiosk, etc surrounding the temple tank will not only provide facilities to visitors taking holy dip in the tank but will also act as an engaging area resulting in improving the tourist experience.

- **Target Visitors:** The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

The target visitor group envisioned at the site are:

- **Pilgrims:** Visiting the temple for its religious value.
- **Domestic Tourists:** For the monumental and historical value of the temple.
- **High Value Tourists:** For the monumental and historical value of the temple.
- **Tourist Projections** – the site is categorized as a **Medium tourist site** with **moderate High Value Tourists (HVT) potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	980	2,676	6,319
High Value Tourists (HVT) (Both domestic and foreign)	40	138	326
Maximum Carrying Capacity	8,030 p.a.		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

Given that the site is popular among locals, pilgrims, and tourists alike, the objective is to drive tourist footfall and to adequately cater to the already captured traffic. Therefore, the concept for masterplan is:

- **Improving pilgrims' experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing **temporary cultural spaces** at the site by providing spaces on the vacant land surrounding the temple tank.
- **Rejuvenating temple tank and steps** – This will improve tourist engagement at the site.

Hard Interventions

1. **Amenity block** – A small amenity block including a drinking water station, toilet, changing room, cloakroom, and bathroom can be developed along with the temple tank for tourist convenience and ease at the site. It can be placed on the north side of the temple tank.

Infrastructure Created: ~ 50 sqm of the building area of amenity block.

2. **Temple tank Rejuvenation** – The temple has a beautiful temple tank. It can be rejuvenated, and steps can be renovated along with the tank. Previous projects have been implemented on water channelling techniques to prevent the temple tank from getting dried out during summer. This can be further enhanced by having water side recreations such as shaded sit-outs, walking pathways, lawns, etc can be developed along the temple tank to appeal to the visitors. Alternatively, it could also function as an amphitheatre, and host cultural events. The shape and size of the tank are conducive to this.

Infrastructure Created: ~700 m. of Paved and Landscaped temple tank boundary with benches for visitors.

Soft Interventions

1. **Site Promotion** – Increasing temple visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites such as CMBT, Chennai International Airport, and Chennai Central Railway Station. Licensed guides can be deployed on the site to promote awareness among the visitors.
2. **Crowd Management** – The temple receives heavy footfalls, especially during festivities, for which the following measure shall be taken to manage the crowd:
 - Limit the number of people within the main shrine by using landscaped garden near the temple tank as temporary holding areas for devotees.
 - Deploy ushers to ensure people move through the temple at a minimum pace and guide them through various areas within the complex.
 - The token system can be adopted by distributing tokens during peak seasons to regulate and control overcrowding. The tokens should be distributed both through online and offline means.



Amenity Block with toilets and drinking water kiosk



Canopy Style seating area

- 3. Community involvement** – The locals around the temple are very well aware of the temple's history and significance. These locals use the temple premises for religious rituals, marriages, and other events. Temple tank is used by locals to take a holy dip. Thus, their involvement can be enhanced through organizing various events/activities conducted on the temple tank, tank steps, and surrounding area. Locals can be engaged by training and appointing them as licensed guides.

Amenities Plan

- 1. Signage** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site's importance. All the signages at the site should be as per the design guidelines mentioned in design guidelines.
- 2. Temple Souvenir shops** – Small souvenir kiosks can be developed along the amenity block near Temple Tank. These retail kiosks will sell temple-related souvenirs such as Pooja items, prasadam and may include F&B shops serving a vegetarian meal to devotees. A total of 5 retail kiosks will be developed along with canopy style seating area.
Infrastructure Created: 5 Retail kiosks of 3 by 3 meters each with 3 shading devices for the seating area.
- 3. Monument lighting** – The temple has a beautiful Dravidian style of architecture with iconic 7 tier Rajagopuram and a huge temple tank.
 - The gopuram, vimana, and temple tank is already a visual landmark in the neighbourhood. This can be accentuated with monument lighting.
 - The temple tank can also be lit to become a congregation space at night.
- 4. Technology Interventions (Package 1)** – As the site is small in scale, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required

Project Identified

#	Project Component	Scale
1	Amenity Block	50 sqm
2	Temple tank Rejuvenation	700 m
3	Signage (Package 1)	1
4	Temple Souvenir shops (3x3m)	5
5	Shading device type 1	3
6	Monumental Lighting	1
7	Technology Intervention (Package 1)	1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Amenity Block	5
2	Temple tank Rejuvenation	14
3	Signage (Package 1)	1
4	Temple Souvenir shops (3x3m)	8
5	Shading device type 1	1
6	Monumental Lighting	20
7	Technology Intervention (Package 1)	1
Total		INR 50 L

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.)

1. *The revenues considered here are in addition to all the existing revenue currently accrued by the temple.*
2. *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Kiosks** – 5 leasable kiosk units each with a rental earning of *INR 45 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 15 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.)

1. *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the Amenity block.
The projected costs incurred is estimated at *INR 3 Lakhs*.

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
The projected costs incurred is estimated at *INR 1 Lakh*.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 1 Lakh*.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.
The projected costs incurred is estimated at *INR 1 Lakh*.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 1 Lakh*.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
The projected costs incurred is estimated at *INR 3 Lakhs*.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.
The projected costs incurred is estimated at *INR 7 Lakhs*.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.
The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated **INR 17 Lakhs at Y5**.

Though the revenues from the capital projects fall short of the estimated operational expenses, the temple being one of the prime attractions in the Thiruvallur district, the interventions proposed here are necessary to sustain the footfalls received and are envisioned to benefit the large pilgrim footfalls.

Implementation Model and Funding Agencies

The development of the projects is to be taken up by Temple trust and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items or operate a small F&B outlet to cater to the visitors.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity Block	5	Y0 – Y2	Temple Trust
2	Temple Rejuvenation tank	14	Y0 – Y2	Temple Trust
3	Signage (Package 1)	1	Y0 – Y2	Temple Trust
4	Temple Souvenir shops (3x3m)	8	Y0 – Y2	Temple Trust
5	Shading device type 1	1	Y0 – Y2	Temple Trust
6	Monumental Lighting	20	Y0 – Y2	Temple Trust
7	Technology Intervention	1	Y0 – Y2	Temple Trust
Total		INR 50 L		

⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2100⁹ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons¹⁰
- Retail and F&B spaces = 13 man-days per day¹¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 5,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹¹ Assuming average 2.5 persons per kiosk / shop

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 745 Cr. at the site¹².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 3-2: Proposed Master Plan – Arulmigu Veeraraghava Swamy Temple, Tiruvallur



4. Nityakalyana Perumal Temple, Thiruvidadanthai

Site Details

District:	Chengalpattu
Name of Site:	Nityakalyana Perumal Temple, Thiruvidadanthai
Site No:	Site 10 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.7632, 80.2421
Land Area:	~1.15 acres
Peak footfalls:	2,000 per day ¹³ (December – January, April - May)
Operator:	HR & CE Dept. Regulated by ASI
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 37,360 ¹⁴ (2019 - 20) For. – 1,560 (2019 - 20)
Site Revenues:	INR 2 Crores ¹⁵ (FY 2019 – 20)
Site Orientation:	Pilgrim & Tourist
Site Potential:	High Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway Station:	~35 km (Chengalpattu)
b. Airport:	~35 km (Chennai)
c. Highway:	~500 m from East Coast Road
d. Other:	Nil

Trails featured on: **Divya Desam**

Nityakalyana Perumal Temple is the only temple where the wedding festival is celebrated throughout the year. It is one among the 108 Divya Desams of Lord Vishnu. Basic amenities in and around the site are poorly maintained, along with dead spaces around the site. The scope of interventions for the site mainly includes developing interactive spaces around the temple and temple tank and enhancing the wedding celebration festival and its importance to the temple.

Existing Condition

Location

The temple is located in Thiruvidadandai village in the Kanchipuram district of Chennai. The temple is ~40 km south of Chennai, ~75 km east of Kanchipuram, along the coastal edge of the Bay of Bengal. The temple site is accessed via East Coast Road on the way from Chennai to Mahabalipuram and is surrounded by sparsely populated residential developments.

Existing Layout and Uses

- The main temple complex occupies an area of 1.15 acres and is approached through a sixteen-pillared sculpted mandapam/hall.
- The temple has two precincts accessible via only 1 entry from the Eastern side of the main temple. A granite wall surrounds all the shrines in the temple.
- There are three temple tanks associated with the temple. Kalyana Pushkarani is the main temple tank located right opposite the temple. Varaha Pushkarani is located near the northern compound wall of the temple, while Ranganatha Tirham is located northeast of the temple.
- The temple regularly being accessed for religious purposes, also hosts cultural dance/singing shows during the peak seasons (Once or twice a year).

¹³ Received from Site Manager

¹⁴ Received from DoT

¹⁵ Received from Site Manager

Other Land Available

Apart from 1.15 acres of the temple complex, the temple also owns 225 acres of land along the shoreline near the temple. However, the land is classified as Adheenam land (under Mutt ownership) and hence can't be used without Mutt's permission. It has hence not been considered for planning.

Master Planning Considerations

Applicable Regulations

1. **CRZ¹⁶ Regulations** – As per CZMP Map, the site lies in CRZ-III.
 - a. CRZ-III region - No construction permitted within NDZ, except for repairs or reconstruction
 - b. Only a few activities are permitted- **construction of public amenities and facilities** required by local inhabitants; **facilities required for local fishing communities** such as fish drying yards, auction halls, etc.
 - c. **Temporary tourism infrastructure** for basic amenities such as toilet blocks, change rooms, drinking water facilities, etc. are permitted in the NDZ, keeping a minimum distance of 10 m from HTL.
 - d. **Beyond NDZ**, the following activities will be permitted-
 - Development of vacant plots in designated areas for **construction of beach resorts or hotels or tourism development projects**.
 - **Airports** in wastelands and non-arable lands.
 - **Homestay** by local communities, and **other amenities** for the use of the local community.
2. **ASI¹⁷ Regulations** – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:
 - a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
 - b. Reconstruction or repairs or renovation of existing buildings within the prohibited area requires prior permission from the Competent Authority under the act.

- c. Construction of new buildings, reconstruction or renovation, or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act¹⁸.

3. **National Conservation Policy** – Monument Conservation activities can be taken up by the competent state authority (ASI Chennai Circle). It shall be permissible inside the premises of protected monuments as per the National Policy for Conservation of Ancient Monuments and Archaeological Site Remains, 2014

4. TNHRCE Rules, 1959

- a. The allowed set of modifications/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for no more than 3 years.

5. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~115 m. (up to 35 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

There are no specific environmental/social sensitivities to be addressed at the site.

¹⁶ Coastal Regulation Zone

¹⁷ Archaeological Survey of India

¹⁸ https://en.unesco.org/sites/default/files/inde_act24_1958_enorof.pdf

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

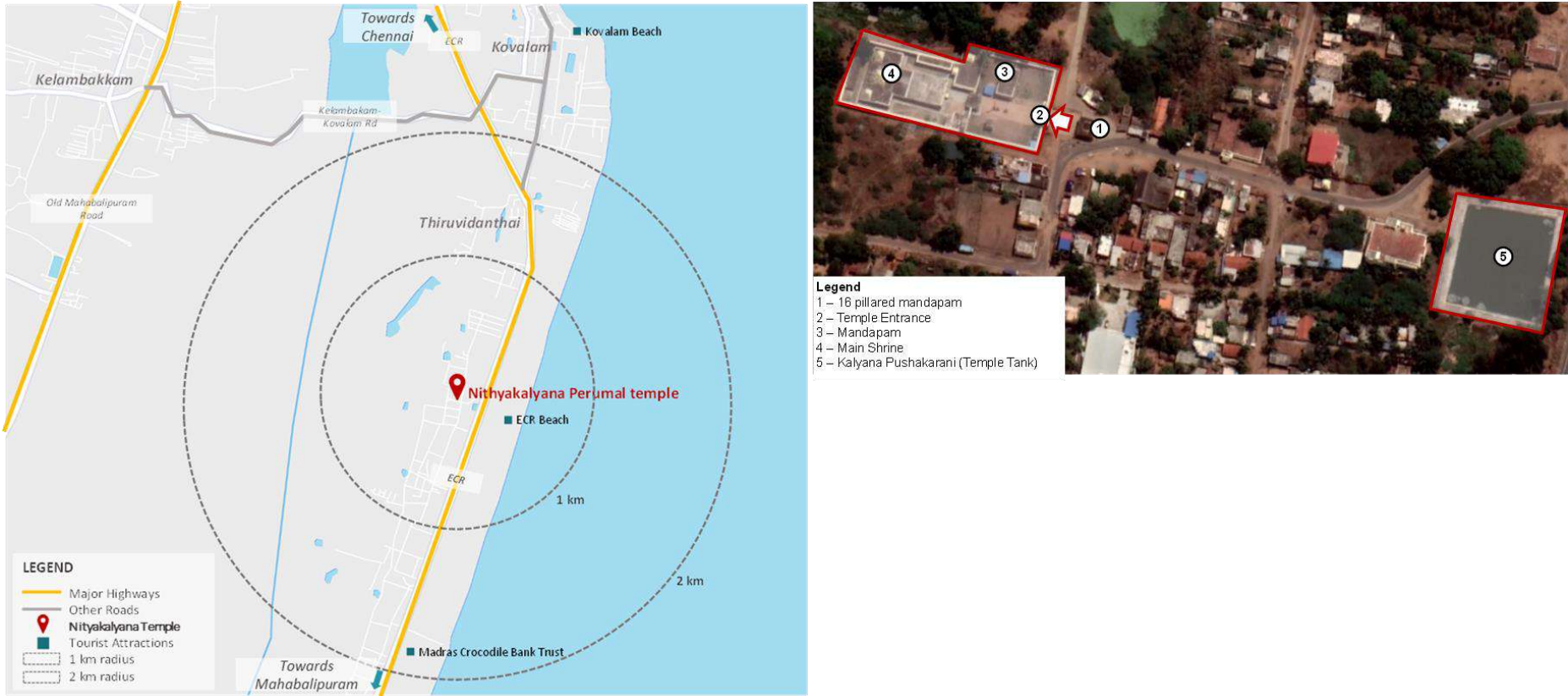
1. **Attraction** – The attraction value of the temple site in comparison to the religious beliefs attached to it is quite low. The site surrounding and the site are kept unclean. The temple tanks in the vicinity of the temple are occupied by algae and uncontrolled vegetation around it. The architectural elements in the temple interiors are also disrupted by posters, rope barricading, etc.
2. **Accessibility** – Nityakalyana Perumal Temple is situated in Thiruvidadanthal, a small village in the Kanchipuram district. The temple can be accessed via the East Coast Road (ECR). The approach road to the temple is only a single-lane paved road which results in resisted vehicular movements during peak season.

Parking – There is no designated parking spot available, vehicles are usually parked outside the temple precinct along with the available open spaces and streets.
3. **Amenities** – The basic essential tourist amenities are available within and around the temple, however, in poor condition.
 - The site lacks in the provision of a tourist facilitation/information centre
 - The 2 toilets present at the site are insufficient for the tourist population and are in dirty and poorly maintained condition.
 - The drinking water plant installed at the site is also not cleaned regularly.
 - No facilities like footwear stands, cloakrooms, etc are available at the site.
 - Temporary barricading, affecting the overall aesthetics of the place are installed at the site.
 - The site is not easily navigable by the disabled and elderly visitors due to the lack of ramps and wheelchairs
 - The number of dustbins provided at the site is also insufficient, that is overflowing most of the time with waste
4. **Awareness** – Nityakalyana Perumal Temple, because of its legend is popular among devotees who are facing marriage-related issues. The temple enjoys a good popularity among pilgrims and locals, drawing as many as 10,000 people during a festive season. The visitors at this temple largely come from the regions

of Andhra Pradesh, Karnataka, and Maharashtra. Despite its good acknowledgment, the temple lacks in terms of online presence and does not find its mention in popular travel journals such as Lonely Planet, CN Traveller, etc.

5. **Activities** – The temple has minimal planned tourist engaging activities on a normal day. Although during Brahma Utsav, cultural dance/singing shows are organized on the premise for 2-3 days. During this time, the temple witnesses around 10,000 visitors per day.
6. **Accommodation** – There are no lodging options near the temple. The current requirement is fulfilled by Kovalam (~4 km). It has few budget hotels having an average room tariff of INR 500- 700 for Non-Ac rooms and INR 1500 – 1800 for AC rooms. Kovalam also offers an option in 2-3 high-end beach resorts having an average room tariff of above INR 10,000. Towards the south of the site, there is one 4-star resort (Sheraton Grande Chennai Resort & Spa) at ~2.6 km from the temple. The tariff ranges from INR 8,000 – 11,000
7. **Association with Communities** – There are no common or regular associations of the local communities with the temple, except with those who have set up small tea and other stalls along the access road.

Figure 4-1: Location and Existing Layout



Site Pictures

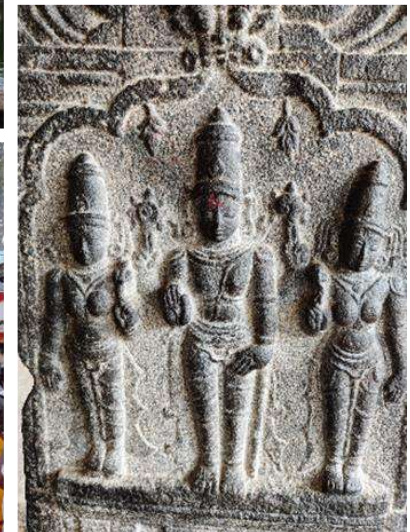


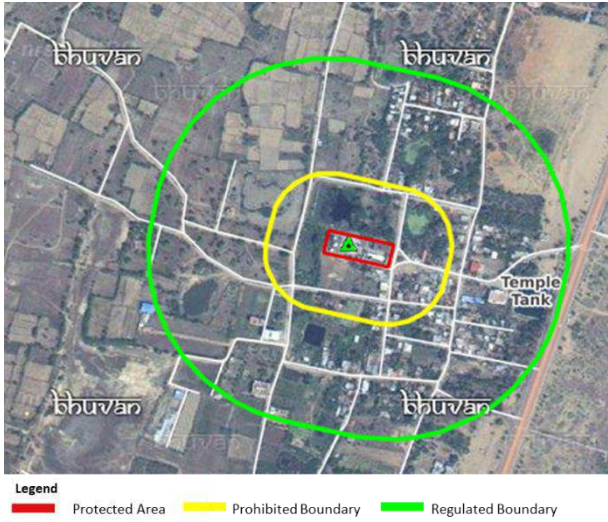
Figure 4-2: Other Land Owned by the Temple Authorities



Figure 4-3: CRZ at the Temple site



Figure 4-4: Protected, Prohibited, and Regulated areas around the monument



Vision for the Site

Considering the existing site situation and its strengths such as:

- Celebration of Wedding as a festival throughout the year
- Inscriptions in the temple (The temple is a declared monument of the Archaeological Survey of India on account of these inscriptions)
- Good site connectivity – close to Mahabalipuram, Chennai, Kanchipuram, etc.

While the development limitations and weaknesses possessed by the site such as

- Restricted development around the temple (ASI regulations - No developments allowed within 100 m of the site)
- Lack of activities and habitation, the temple surroundings giving a feel of isolation, especially during late evenings
- Poor Amenities and Cleanliness at the temple.

It can be concluded that the Nityakalyana Perumal temple is not a well-established and acknowledged tourist destination. Neither does the site is aesthetically appealing, nor does it fulfill several basic tourist requirements.

The several disjointed components of the site include the temple site and the tank associated with it, a temple tank~ km to the east of the temple, and a ~250 acres of land parcel along the ECR and the shoreline.

A big land parcel as such indicates several possibilities of tourist development along the coast, however, the ownership of the land under HR&CE limits the scope of development to religious purposes only.

One of the options for development, considered while brainstorming was:

- **Development of a Pilgrim Accommodation/Yatri Nivas** - This would turn out to be futile in the current times as the number of tourists at this site are not currently substantial, even if the number of tourists increases, there are no big festivals that encourage the overnight stay of pilgrim tourists in the village. Additionally, owing to the site's location close to Kovalam, and Mahabalipuram, the accommodation requirements are fulfilled by the hotels, lodges, etc.
- **Development of Beach Resorts along the ~250 acres of land on the coast** – The idea is to carve out land parcels for the development of beach resorts. The location is an apt location owing to only ~40 km south of Chennai. However, the

land is classified as Adheenam land (under Mutt's control) and hence, can't be used non-hindu religious uses. Hence, the proposal is not used for this planning exercise.

- **Beach-side wedding destination** - Owing to the temple's specialty with marriages and its location, a small section of land was then envisioned to be developed as a beachside marriage destination. While the rest of the parcel can be utilized for future needs.
- **Target Visitor** - The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

The target visitors to be captured here are:

- **Pilgrims and Religious Tourists** – To develop a religious site integrated into the circuit of Chennai – Tiruvallur - Kanchipuram temple sites, where visitors can visit temple attractions and witness the local culture.
- **Tourist Projections** – The site is categorized as a **Low tourism site** with **Low HVT footfall and potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	35.7	133	366
High Value Tourists (HVT) (Both domestic and foreign)	3	12	33
Maximum Carrying Capacity	5,913 p.a.		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The objectives of master planning at this site include:

- **Development of the environment around the temple and temple tank** enhances the aesthetic beauty of the space.
- Develop water retention techniques for **temple tank rejuvenation**.
- **Development of a serene beach site location** for utilization of temple purposes.

Hard Interventions

1. Temple Tank Rejuvenation –

- The temple tanks are currently either walled or dried up or filled with algae.
- The idea here is to revive these temple tanks which can be utilized for rainwater harvesting as well as celebrate local festivals.
- It can be done by adopting the following measures:
 - Cleaning and Desilting of the temple tank
 - Creation of temple tank boundary, on similar lines to that of the temple architecture. - so that it can be used during festivals areas around the temple tank can be developed into a welcoming space for the pilgrims by redesigning the cross-section of the temple tank boundary.
 - The roof of the boundary developed can be utilized to capture rainwater.
 - Development of an underground water tank connected to the roof of the temple boundary.
 - **Development of rainwater reservoirs for water storage** - The underground water tank can then further be connected to the water tank, and water can be released as and when required.
 - The underground water tank can be also connected to the local water supply systems in the village.

- Water plants that live on the surface, such as water lilies that provide large lily pads, can help reduce water reduction from evaporation. These work in ponds found in partial shade or full sun. Place several pots under the water, letting the lily pads cover up to 70 percent of the water's surface.
- Development of Landscaped areas near the temple tank.

Infrastructure Created: ~1325 sqm of the covered path around the temple tank,

2. Beachside Wedding Destination –

- Out of the large (~250 m.) of the land parcel owned by the temple administrator, a small parcel of land can be utilized for the development of a beach-side wedding destination.
- It can be accessed via ECR, equipped with a parking area, 2 cottages, and a paved area for the ceremony.
- All the parts of the site can be interconnected with the landscaping environment.

Infrastructure Created: ~3000 sqm of parking space and entrance, 45 m. of paved road, ~930 sq. m. of landscaping area, ~375 sqm of a stone pathway

3. Landscaping – The general areas towards the site entrance are quite dull and unwelcoming. Proper landscaping measures using local plants, which require minimal maintenance can be adopted for landscaping. Those landscaped areas can be turned into a small open gallery for the temple.

Infrastructure Created: ~0.38 acres of landscaped area

4. Development of Parking Spaces – Car parking, especially during the festivals and peak seasons is currently done along the side of the temple tank and on the streets, resulting in chaos on a narrow road at times. A new paved parking space must be developed along with the entrance gate of the temple.

Infrastructure Created: ~800 sqm of the paved parking area



Temple Tank Boundary and Recharge Structures



Beach Side Wedding Destinations

Soft Interventions

- 1. Local Events and Marriages** – The temple complex may remain closed after hours, but the space developed along the beachside can be utilized for conducting local events and since the temple is well known for conducting marriages all-round the year, space thus developed can be used as a Kalyana space along the beach.
- 2. Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “Own your Street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
- 3. Promotion** – The Tourism Department should promote Kailasanathar Temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes.

- 4. QR Code Audio Guide** – QR scannable Audio guide panels can be installed, upon scanning of which tourists can listen to the guide in the desired language
- 5. Temple Conservation Plan** – The temple and its surroundings are observed to be degrading with time, a proper conservation plan can be developed for the conservation of the protected monument site.

Amenities Plan

- 1. Community Toilet** – The existing community toilet near the site can be extended with increased capacity and modern amenities. It must accommodate ~3 units of the toilet block as identified in design guidelines. The location of the toilets is tentative/indicative.
- 2. Drinking-Water Station** – ~5 drinking water station is proposed to be provided along the landscaped area near the site entrance.
- 3. Dustbins** – Adequate number of dustbins, are proposed to be provided at the specific locations in the temple complex., along with the design guidelines for street furniture.
- 4. Signage (Package 1)** – Package 2 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines in Vol A.
- 5. Technology Intervention (Package 1)** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - Compatibility with TN Assist App
 - CCTV coverage at 3 locations
 - Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Projects Identified

#	Project Component	Scale
1	Covered Walkways	~1325 sqm
2	Steps around temple tank	~280 m
3	Beachside wedding destination	~50,000 sqm
4	Parking Space	~500 sqm
5	General Landscaping Area	~0.48 acres
6	Community Toilets	~3 units
7	Drinking-Water Station	~5 units
8	Dustbins	~30 units
9	Signage	Package 2
10	Technology Intervention	Package 1
11	Civic Upgradation - Cleanliness Drive	

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Temple Tank Rejuvenation	13
2	Steps around temple tank - covered walkways	1
3	Steps around temple tank	1
4	Beach side wedding destination - paved walkway	1

#	Project Component	Cost (Lakhs INR)
5	Beach side wedding destination - events area	3
6	Parking Space	48
7	General Landscaping Area	2
8	Community Toilets	5
9	Drinking-Water Station	3
10	Dustbins	1
11	Signage	1
12	Technology Intervention	1
13	Civic Upgradation - Cleanliness Drive	1
Total		INR 80 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
 1. **Parking** – About 80 parking spaces assuming a daily occupancy of 30%, would earn the temple an estimated revenue of **INR 2 Lakhs**.
 2. **Space on Hire** – Assuming an average of an event per week, renting of the Beach side – event space for private religious events/ ceremonies would earn the temple **INR 36 Lakhs**.

The total revenues to the temple from the proposed capital projects are projected at an estimated **INR 38 Lakhs at Y5**.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **security personnel** and an **Admin staff** each at for the beach side events space.

The projected costs incurred is estimated at *INR 4 Lakhs*.

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the events area

The projected costs incurred is estimated at *INR 4 Lakhs*.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakhs*.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the event space at the temple surroundings.

The projected costs incurred is estimated at *INR 1 Lakh*.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred. The projected costs incurred is estimated at *INR 2 Lakhs*.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple. The projected costs incurred is estimated at *INR 1 Lakh*.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rental kiosks and the community hall are pegged to the rental revenues earned from the respective sources. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre. The projected costs incurred is estimated at *INR 14 Lakhs*.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc. The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 30 Lakhs at Y5*.

Given that the estimated revenues (*INR 38 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 27 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Implementation Model

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) and the **cleanliness drive** as part of the Civic Upgradation in and around the site would be taken up by the SPV provisioned by the tourism department.
2. **Community hall/** event space at the Beach to be rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.
3. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).

Developmental Phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Covered Walkways	HR & CE	Y0 – Y2
2	Steps around temple tank	HR & CE	Y0 – Y2
3	Beachside wedding destination	HR & CE	Y0 – Y2
4	Parking Space	HR & CE	Y0 – Y2
5	General Landscaping Area	ASI	Y0 – Y2
6	Community Toilets	ASI	Y0 – Y2
7	Drinking-Water Station	ASI	Y0 – Y2
8	Dustbins	ASI	Y0 – Y2
9	Signage	ASI	Y0 – Y2
10	Technology Intervention	ASI	Y0 – Y2
11	Civic Upgradation - Cleanliness Drive	HR & CE	Y0 – Y2

¹⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,500¹⁹ man-days of construction labour (*spread across 1 - 2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons²⁰

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 8,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 39 Cr. at the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

²⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 4-5: Proposed Master Plan – Nityakalyana Perumal Temple



5. Sthalasayana Perumal Temple, Mahabalipuram

Site Details

District:	Chengalpattu
Name of Site	Sthalasayana Perumal Temple
Site No:	Site 14 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.6174, 80.1930
Land Area:	2 acres
Peak footfalls:	~3,000 per day
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 8.12 lakhs (2019 - 20) For. – ~6,600 (2019 - 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim/Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~30 km (Chengalpattu)
b. Airport:	~55 km (Chennai)
c. Highway:	~1.5 km from East Coast Road
d. Other:	Nil
Trails featured on:	Divya Desam

Sthalasayana Temple is an ancient Divya Desam temple located in Mahabalipuram. Its main selling point is its location – in front of Arjuna's Penance and Butter ball (UNESCO World Heritage Sites) allowing it to be visible to a large number of tourists. The temple is small and does not have any striking features apart from the deity's idol. A major source of its footfalls is those that have spilled over from the other heritage sites. Major Interventions include the development of a Mahabalipuram Experience Centre within the premises.

Existing Condition

Location

Sthalasayana Perumal Temple (also called Thirukadalmalai) is located in Mahabalipuram, ~40 kms away from Chennai. It can be reached via the ECR (East Coast Road) and enjoy good locational proximity with famous tourist landmarks of the place. It is located very close to the cluster of UNESCO World Heritage sites in Mahabalipuram like Krishna's Butter Ball, Arjuna's Penance, Mamallapuram Light House, Pancha Rathas etc. Also, the temple is only at a distance of ~700m from Mahabalipuram beaches and the famous Shore Temple.

Existing Layout and Uses

The Site consists of a 2-acre land parcel surrounded by a granite wall on all sides. It is accessed via Mada Koil Street from the north and the east.

The temple has a rectangular plan and is approached through a flat-roofed, granite gateway tower (East Gopuram). The following are the major elements of the Site:

- Temple complex – The temple complex is walled off. The complex comprises two precincts with the sanctum located axial to the main gate and approached

through a Dwajasthambam, bali peetam (sacrificial altar), Deepa Stambam (altar for lamps) and Garuda Mandapam.

- Other uses – 1 prasadam store run by private party, offices etc.
- Around the central shrine are shrines for small lords in the first precinct. There is a four pillared hall, with sculpted pillars in front of the temple, designed for Dolotsavam (swing festival).
- The temple tank is located outside the temple and is called Pundarika Pushkarani. It has a small pillared mandapam in its centre.
- The temple has reasonable popularity and is visited by people for worship. Other uses like rituals, dance recitals are occasional and rarely happen within the temple premises.
- The important festivals celebrated at the temple are Bhoothatalwar's Avathara Utsavam during Aipasi (October–November) and Maasi Makham, when thousands of devotee's bath in the sea nearby.

Other Land Available

Apart from the 2-acre complex, the temple does not own any land in the vicinity. Nevertheless, the site has lots of land around the temple within the complex.

Master Planning Considerations

Applicable Regulations

1. CRZ²¹ Regulations – As per CZMP Map, the site lies in CRZ-II.

- CRZ-II region – It includes the areas developed up to the shoreline which fall within the Municipal limits. The site lies on the landward side. Permissible Uses are Defence and Security purposes | Construction of buildings on landward side | Temporary tourism facilities.

2. Tamil Nadu Combined Development and Building Rules, 2019 – Mamallapuram New town Development Plan, site lies in a Public Semi-public use and Monument Zone of the city. The permissible uses for Public Semi-public include:

Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi-public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multi-level parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

For permissible uses under heritage zone, it is redirected to the rules and regulations of ASI under the protected, prohibited, and regulated areas.

3. ASI Regulations – The site lies adjacent to UNESCO sites which are ASI protected monuments. Therefore, the site lies in the prohibited boundary of the adjacent sites. As per Ancient Monuments, Archaeological Sites and Remains Act:

- a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
- b. Reconstruction or repairs or renovation of existing buildings within the prohibited area, requires prior permission from the Competent Authority under the act.
- c. Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

4. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

²¹ Coastal Regulation Zone

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site except architectural integrity with the stone architecture of Mamallapuram.

Mamallapuram Heritage Development Plan – The Government of India under the Ministry of Tourism has identified 17 sites in the country to be developed as Iconic tourist sites and one of them being Mamallapuram. These will be developed in a holistic manner with focus on issues concerning the connectivity to the destination, better facilities/experience for the tourists etc.

Under the same, the vacant land in the temple site is proposed to be developed as an iconic town square. Therefore, all interventions proposed should be in sync with the existing proposals at site and complement the structure so as to develop it in a holistic manner.

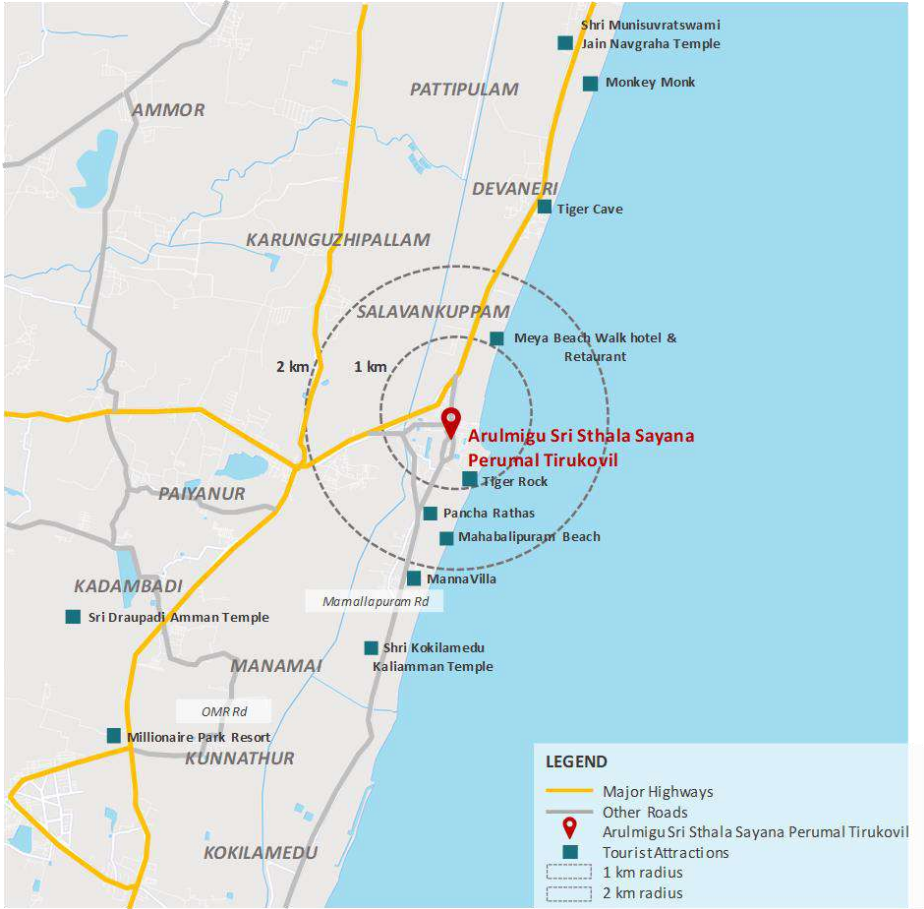
Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

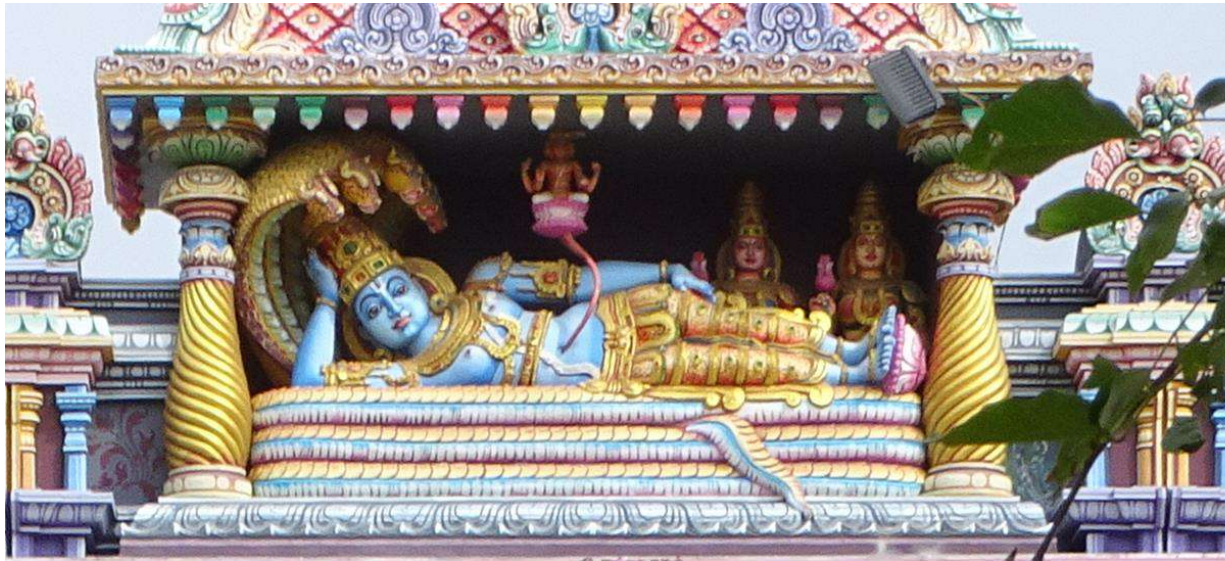
1. **Attraction** – Sthalasayana Perumal Temple is one among the 108 Divya Desams. The temple attracts a large number of tourists due to its locational attribute of being adjacent to UNESCO World Heritage sites. The temple as a standalone site does not have much to offer to the tourists. Also, the site is surrounded by an ecosystem of retail, F&B and hospitality establishments. The site also has a tourist information board, depicting all monuments in Mamallapuram, placed in front of the site.
2. **Accessibility & Mobility** – The site can be accessed from ECR and is well connected via public transport with a bus stop located just outside the site. There are frequent bus services available from Chennai to Mahabalipuram on the East Coast Road (ECR) as well as Old Mahabalipuram Road (OMR).
3. **Amenities** – The temple scored high on cleanliness but lacks certain amenities. Dustbins, information boards and streetlights are present inside the site. The site lacks the following amenities.
 - There are no washrooms present inside the temple premises.
 - No proper boundary wall around the site.
 - Drinking water is not provided on the site
 - No F&B and Retail shop present inside the temple site, though few eatery joints present outside the site.
 - No designated footpaths
 - No amenities present for visitors to rest/sit outside the site.
- Parking** – The Site has ample parking space outside the site of a capacity of 50 cars. There is also a cab stand available at the entrance of the site.
4. **Awareness** – Being in Mahabalipuram, the temple is well known to locals around. It is one among the Hindu group of monuments in Mahabalipuram, also well-known as a tourist destination in Chennai. In 2019, the temple received ~8.2 lakh visitors, ~1% of whom were foreign tourists. It is recommended by renowned travel referral / review aggregators such as TripAdvisor, ixigo, dinamalar, etc. Around 3,000 people come in a day during the peak season. Visitors hail from all over the country and abroad.
5. **Activities** – Only temple related activities are undertaken at the site with major rituals, celebrations and cultural fests celebrated in Margazhi Vaikunda Ekadasi, one of the most important festivals and Maasi Maaham. The temple is an add-on site to tourists visiting Mamallapuram for UNESCO heritage tour and beaches.
6. **Accommodation** – Mahabalipuram being a popular tourist destination, has multiple accommodation choices available from high-end luxury hotels like Radisson to Budget category hotels. The streets surrounding the temple have a well-developed ecosystem of hospitality establishments. The hotels are majorly of the budget category.

7. **Association with Community** – There are no guides at the temple. The festivals of the temple enjoy immense participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts and food items increasing congestion.

Figure 5-1: Location and Existing Layout



Site Pictures



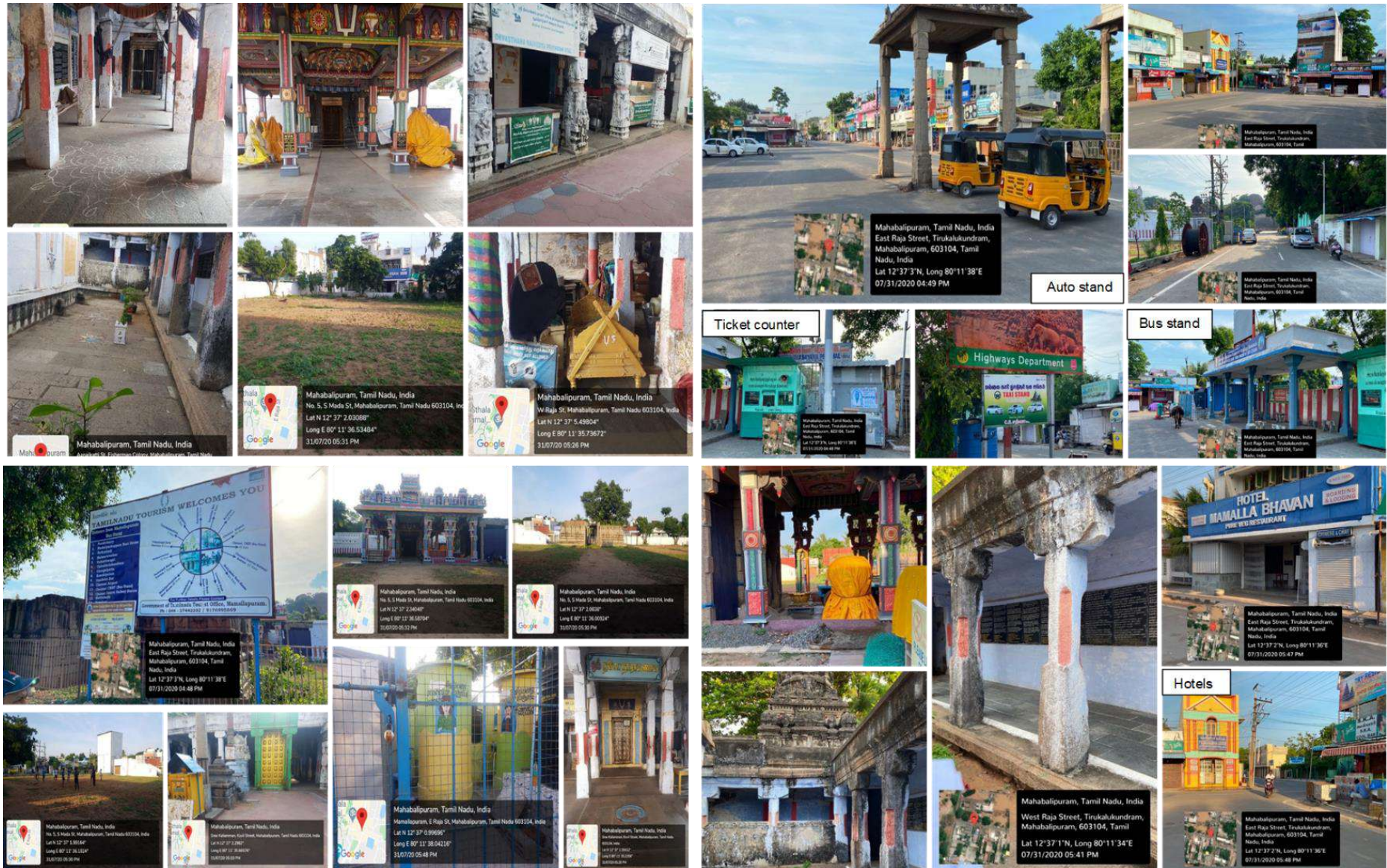


Figure 5-2: Land Uses Regulation Zone at the Site

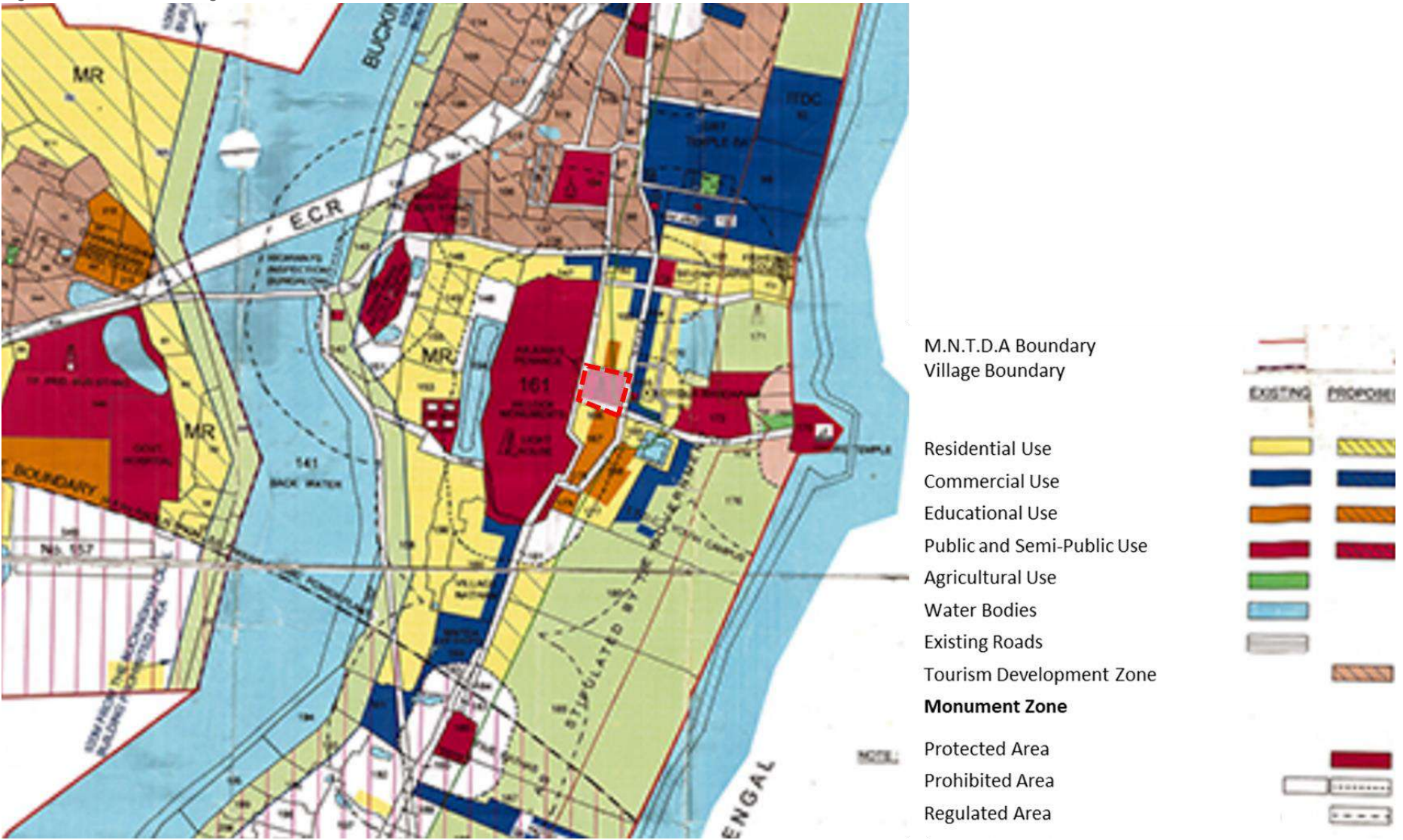
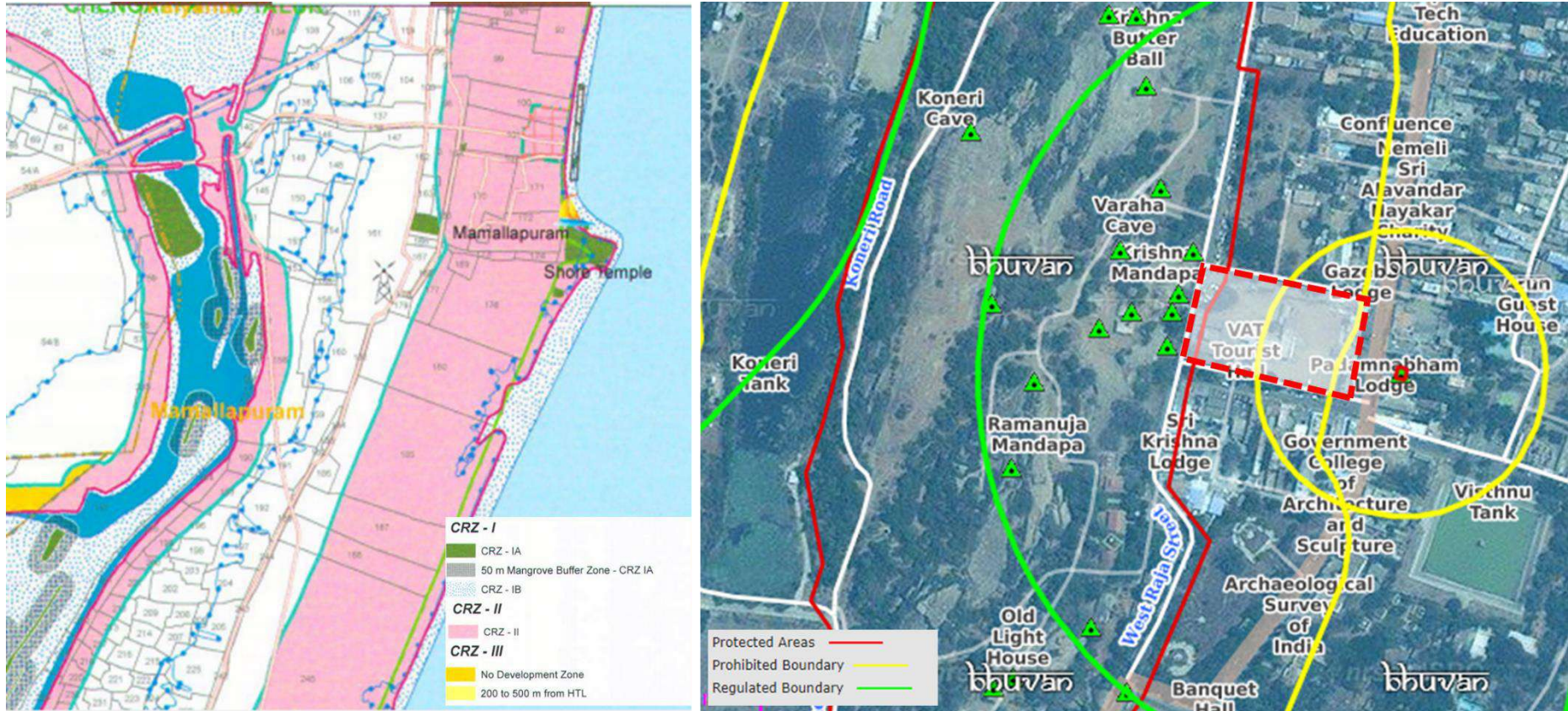


Figure 5-3: Mamallapuram Heritage Development Plan



Figure 5-4: ASI and Coastal Regulation Zones for the Site



Vision for the Site

Sthalasayana Perumal Temple is one among the 108 Divya Desam temples dedicated to Lord Vishnu. The site's location in Mahabalipuram is an attraction in itself with proximity to UNESCO world heritage sites (Arjuna's Penance and Krishna's Butter ball). The site holds good accessibility through public transport and has ample amount of vacant land available within the temple complex.

As the site is adjacent to ASI Regulated Sites, therefore it has restricted scope of development. The site lacks basic amenities and facilities within the temple complex with no enclosed boundary wall around providing access to locals for unregulated activities.

Sthalasayana Perumal Temple has the potential to be developed into a religious and heritage tourist attraction with development of a Mamallapuram experience centre

on the available land within the temple complex. This shall glorify and incorporate information regarding all the important heritage and religious sites in Mamallapuram.

The site is also incorporated in the Mamallapuram Heritage Development Plan proposed to be developed as an iconic “Town Square”. Therefore, interventions supportive of the proposed project will lead to a holistic development of the site and engage and attract large domestic as well as HVT tourist influx.

The site, being under HR&CE control, has restriction of usage for limited religious purposes only. However, given its strategic location and proximity to historical sites, it holds up immense potential to act as an experience centre for tourists.

- **Target Visitors:** The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

The target visitor group envisioned at the site are:

- **Pilgrims:** Visiting the temple for its religious value.
- **Domestic Tourists:** For the monumental and historical value of the temple and UNESCO sites.
- **High Value Tourists:** For the monumental and historical value of the temple.
- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	805	2,213	5,225
High Value Tourists	13	46	107
Maximum Carrying Capacity	8,030 <i>p.a.</i>		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of Master planning at this Site include:

- **Improving visitor' experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing **temporary cultural spaces** at the Site by providing spaces on adjacent vacant land.
- **Developing Mamallapuram Experience Centre** – This will improve tourist engagement at the site and enhance the relevance of all important sites of Mamallapuram for the visitors.

Hard Interventions

1. **Mamallapuram experience centre/ Tourist Facilitation Centre (Type 2)** – Mamallapuram has multiple historic sites in the city which attract high domestic and foreign tourist footfall. A tourist facilitation centre is proposed at the site which will showcase the historic and religious significance of the temple as well as the UNESCO sites cited around. The facilitation centre will have outdoor and indoor galleries with murals and paintings fabricating the storyline of the city. This will be complimented by library centre and information centre.

The centre will house facilities/ amenities like an information desk, ticket counter(s), information exhibits & displays, small sitting area, waiting area, Wi-Fi, elderly assistance, wheelchair facility, left luggage facility, money exchange facility (in strategic sites). The interpretation centre can integrate the sale of merchandise and local handicrafts. It will be clubbed with an amenity block that can house facilities like drinking water, locker area, F&B area, etc. (a set of facilities can be included in the same block or segregated).

Infrastructure Created: ~350 sqm Interpretation Centre Building (G+1)

- 2. Auditorium Block** – An auditorium block of 50 pax is proposed with the Tourist Information centre. This will be an organic building block for hosting cultural shows, dance recitals etc. The auditorium will also conduct VR experience shows for the tourists at regular intervals in the day. The shows shall be of a scheduled time frame and incorporate historic stories of all the UNESCO sites in Mamallapuram and the relevance of the temple. Clubbed will be the Tourist Interpretation centre, the building block will be developed on the front side of the temple on the vacant land as “Mamallapuram Experience Centre”.

Infrastructure Created: 150 sqm block

- 3. Large Recreation Plaza and multifunctional kiosks** – On the southern side of the site a large pedestrian landscaped plaza will be developed. This will house multiple kiosks functional to be used as souvenir shops or F&B stalls. The landscaping will be developed as such it houses temporary shaded areas in the form of canopy structures or gazebos, beautifully carved pathways and an OAT. These resting areas will complement the Mamallapuram Experience Centre proposed adjacent to it. This outdoor space can also be clubbed with the Experience Centre and used for conducting light and sound shows, outdoor exhibitions, dance recitals and festivals.

Infrastructure created – 1830 sqm of area

- *Multi-functional kiosks (souvenirs shops/ F&B): 8*
- *Hard Landscaping: 600 sqm*
- *Soft Landscaping: 1130 sqm*



Tourist Experience Centre



Auditorium



Public Recreational Plaza



Pilgrim Walkway

- 4. Pilgrim Walkway** – As the temple is 60m inward of the main entrance, a temple walkway is proposed from the entrance to the temple. This can be achieved by developing a shaded 3 m wide pedestrian walkway with pergola or trellis structures. This will provide a directional and beautiful entrance to the main building. It will also act as a soft divider between the proposed Experience Centre and Recreation Plaza.

Infrastructure Created: 40 m shaded pedestrian walkway

- 5. Site Boundary** – Currently, the site is not properly walled on all sides. Boundary wall will be developed around the site incorporating the experience centre and plaza. This will protect the site and the proposed development from local interference and trespassers ensuring minimum issues of loitering and waste littering. It will also ensure safety to the infrastructure created.

Infrastructure Created: 360m. of boundary to create around the site.

- 6. Pedestrian Pathway** – At the back side of the temple site, the road between UNESCO sites and the temple is proposed to be pedestrianized. This will improve accessibility between the sites and alleviate the vehicular barrier for the tourist for a to and fro movement. It will integrate the temple with the UNESCO sites thus improving tourist footfall for the temple as well as enhancing visibility to the Mamallapuram Experience centre.

Infrastructure Created: 75 m of pathway at the proposed rear entrance

- 7. Landscaped Entrance** – A new entrance is proposed at the rear side of the temple complex to provide direct accessibility to the UNESCO sites. This will ease out the movement for tourists for hopping between the sites and the proposed experience centre, thus extensively improving the overall site footfall. his can be developed with usage of soft paving with paver blocks for ease of movement, tree planters, information board and directional signages.

Infrastructure Created: 4 m of landscaped entrance at the rear side.



Paved Pedestrian Pathway



Landscaped Entrance



Landscaped Garden

Soft Interventions

- Events** – The open space and recreation plaza proposed at the site could be used for organizing local craft fairs, cultural events, festivals, which will make the place more alive and vibrant throughout the year. These can even be clubbed with the proposed experience centre at site.
- Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. and linkages with the UNESCO sites. Marketing and Advertising the site at all key sites of Chennai and Mamallapuram. The site also falls under the proposed Mamallapuram Heritage Development Plan providing scope for higher scale of promotion.
- Crowd Management** – As the temple is proposed with an experience centre for all tourist sites in Mamallapuram, it is expected to draw large tourist footfalls. Therefore, the following measures should be taken into consideration-
 - Ramps or special access for wheelchairs.
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
- Landscaped Garden** – Owing to the site available land with regulations for restricted development, theme landscaped gardens can be developed with adequate recreational spaces around. This can be complemented with paved pathways and seating arrangements for locals and tourists to spend time.
Infrastructure Created: 850 sqm of garden area
- Curation of facilitated tours** – Incorporate the site in Mamallapuram heritage tour. As Mamallapuram Experience Centre is proposed at the site, the site can also act as an initiation point for the curated tours. These will be facilitated with licensed tour guides and hop on hop off services.
- Stone Architecture** – To improve the overall experience of the visit to the historically significant Sites, the proposed buildings should reflect the architectural beauty of the sites. They should be built with stone and vernacular material and uniformly followed across all structures and interventions.

Amenities Plan

- Technology** – As the site is small in scale but is proposed to attract a large number of tourists, therefore Package 2- Basic is proposed to feature on this site, as per the design guidelines.
- Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre, a module of which can be as per the design guidelines.
- Lighting** - Installation of streetlight and monument lighting for the temple and in the surrounding areas.
- Parking Space Development** – There is designated area for parking outside the temple complex, but parking is presently done in a disorganized manner. Therefore, a regulated paved parking yard is proposed in the existing parking area. An EV stand and cab and auto stand will also be developed outside the temple complex along with the parking.
Infrastructure Created: ~900 sqm of paved parking space, where 44 cars can be parked at one single time.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Tourist Facilitation Centre (Type 2)	350 sqm
2	Auditorium Block	150 sqm
3	Large Recreation Plaza with <ul style="list-style-type: none"> Multifunctional kiosks Hard Landscaping Soft Landscaping 	1830 sqm 100 sqm (8 kiosks) 600 sqm 1130 sqm
4	Pilgrim Walkway	40 m
5	Site Boundary	360 m
6	Pedestrian Pathway	75 m
7	Landscaped Entrance	4m

#	Project Component	Scale
8	Landscaped Garden (backside)	850 sqm
9	Technology (Package 1)	1
10	Drinking-Water Station	1
11	Parking Space Development	44 ECS
12	Lighting	360m

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre	15
2	Auditorium Block	30
3	Large Recreation Plaza - 8 Kiosks	12
4	Large Recreation Plaza - Landscaping	1
5	Pilgrim Walkway	1
6	Site Boundary	19
7	Pedestrian Pathway	1
8	Landscaped Entrance	1
9	Landscaped Garden (backside)	6
10	Technology (Package 1)	1
11	Drinking-Water Station	3

#	Project Component	Cost (INR Lakhs)
12	Parking Space Development	13
13	Lighting	6
14	Tourist Facilitation Centre	15
15	Auditorium Block	30
Total		INR 110 L

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Kiosks** – 8 leasable kiosk units with a total rental revenue of *INR 24 Lakhs*.
2. **Parking** – About 44 parking spaces assuming a daily occupancy of 40% occupancy per day, would earn the temple an estimated revenue of *INR 1 Lakh*.
3. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple *INR 3 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 28 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 26 Lakhs at Y5*.

Given that the estimated revenues (*INR 28 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 26 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable

and therefore beneficial to the temple and the Mamallapuram Iconic tourism development plan.

Developmental Phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Tourist Facilitation Centre	HR & CE	Y0 – Y2
2	Auditorium Block	HR & CE	Y0 – Y2
3	Recreation Plaza - 8 Kiosks	HR & CE	Y0 – Y2
4	Recreation Plaza - Landscaping	HR & CE	Y0 – Y2
5	Pilgrim Walkway	HR & CE	Y0 – Y2
6	Site Boundary	HR & CE	Y0 – Y2
7	Pedestrian Pathway	HR & CE	Y0 – Y2
8	Landscaped Entrance	HR & CE	Y0 – Y2
9	Landscaped Garden (backside)	HR & CE	Y0 – Y2
10	Technology (Package 1)	HR & CE	Y0 – Y2
11	Drinking-Water Station	HR & CE	Y0 – Y2
12	Parking Space Development	HR & CE	Y0 – Y2
13	Lighting	HR & CE	Y0 – Y2
14	Tourist Facilitation Centre	HR & CE	Y0 – Y2
15	Auditorium Block	HR & CE	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 4,700²² man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons²³
- Retail and F&B spaces = 20 man-days per day²⁴

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 11,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 560 Cr. at the site²⁵.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%

- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

²² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

²³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

²⁴ Assuming average 2.5 persons per kiosk / shop

²⁵ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 5-5: Proposed Master Plan – Sthalasayana Perumal Temple, Mahabalipuram



6. Vaikunda Perumal Temple, Kanchipuram

Site Details

District	Kanchipuram
Name of Site	Vaikunda Perumal Temple
Site No:	Site 17 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.8371, 79.7091
Land Area:	1.6 acres + 1 acre (vacant land)
Peak footfalls:	~30,000 per day
Operator:	HR & CE Dept. Maintenance by ASI
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 7.70 lakhs (2019 - 20) For. – ~15,800 (2019 - 20)
Site Revenues:	Undisclosed
Site Orientation	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~2 km (Kanchipuram)
b. Airport:	~60 km (Chennai)
c. Highway:	~800 m from SH-58
d. Other:	Nil
Trails featured on:	Gopuram, Divya Desam

This 1,000 years old prominent Vishnu Temple in Kanchipuram is one among the 108 Divya Desam temples dedicated to Vishnu. The temple is one of the few temples in India with the Ashtanga Vimana style of architecture (3 levels of deities). The site has the potential to attract higher footfalls and facilitate increased visitor engagement at the site. Thus, scope for interventions includes enhancement of visitor amenities, addition of community & congregation spaces and restoration of site & temple tank.

Existing Condition

Location

The Vaikunda Perumal Temple is located in Kanchipuram, ~80 km away from Chennai. It is situated ~1 km away from the main bus stand and ~1.5 km away from the railway station, making it easily accessible. The temple is set amidst dense residential mixed-use neighbourhood in North-eastern part of Kanchipuram. Several prominent tourist landmarks in proximity are Kailasanathar temple, Kamakshi Amman Temple and Ulangalandha Perumal temple.

Existing Layout and Uses

The site consists of a ~1.4-acre land parcel surrounded by a granite wall on all sides. It is accessed via Vaikunda Perumal Koil Street on the west, a ~6 m wide paved road which connects to E. Raja Street, a main arterial road located ~250 m away from the site.

The temple has a rectangular plan and is approached through a flat-roofed, granite gateway tower (South Gopuram). The site also contains a large, stepped tank at the south-west corner. The tank measures ~35m x 35m but is currently dry. The following are the major elements of the site:

- Temple complex – The temple complex is walled off. The complex comprises of a main shrine at three levels and a Temple tank outside the premises. There are few small shrines surrounding the sanctorum.

- Around the central shrine are pillared corridors, with lion-shaped pillars supporting the roof. The walls are covered by sculptures depicting scenes from mythology and the times of the builders. The walls of the shrines also feature heavy relief work. This gives a visual treat to the visitors.
- Other areas – 1000 pillared hall, Ashtanga Vimanam, offices etc.

The temple has reasonable popularity and is visited by people for worship. Other uses like rituals, dance recitals are occasional and rarely happen within the temple premises.

Other Land Available

Additional to the temple complex, the temple authority also owns 1 acre of vacant land parcel, adjacent to the site backside. Other than this, the temple also owns various land parcels in other parts of the state, including two parcels of 0.5 and 0.6 acre each in other parts of Kanchipuram district. These are agricultural lands, which may be converted to other land uses for future development.

Master Planning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – As per Kanchipuram Master Plan, site lies in a Mixed-use Residential and Heritage Zone. The permissible uses include:

Residential Buildings | Parks, play grounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

- 2. Height Restrictions** - Heritage Zone height restrictions of ~13 m. (roughly up to 4 storeys) are applicable for the developments around the site.
- 3. TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair,

alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.
- 4. ASI Regulations** – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:
 - a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
 - b. Reconstruction or repairs or renovation of existing buildings within the prohibited area, requires prior permission from the Competent Authority under the act.
 - c. Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site except architectural integrity.

Key Issues to Address

The key issues at the site, identified at the Baseline Stage, are summarised below along the 7A Framework:

- 1. Attraction** – Vaikunda Perumal Temple, one of the most prominent Vishnu Temples in Kanchipuram, is over 1,000 years old. The temple is also very popular with the students and scholars of history, art and architecture for its architectural splendour and unique sculptures. The temple enjoys immense popularity among

pilgrims and locals, drawing as many as 30,000 people during the Ekadashi festivals.

- 2. Accessibility** – The site enjoys easy access from all major locations in Kanchipuram. Kanchipuram is ~70 km away from Chennai and enjoys good road connectivity. The town also has 2 railway stations and a major bus stand. The Chennai International Airport is a ~1.5-hour drive away from Kanchipuram.

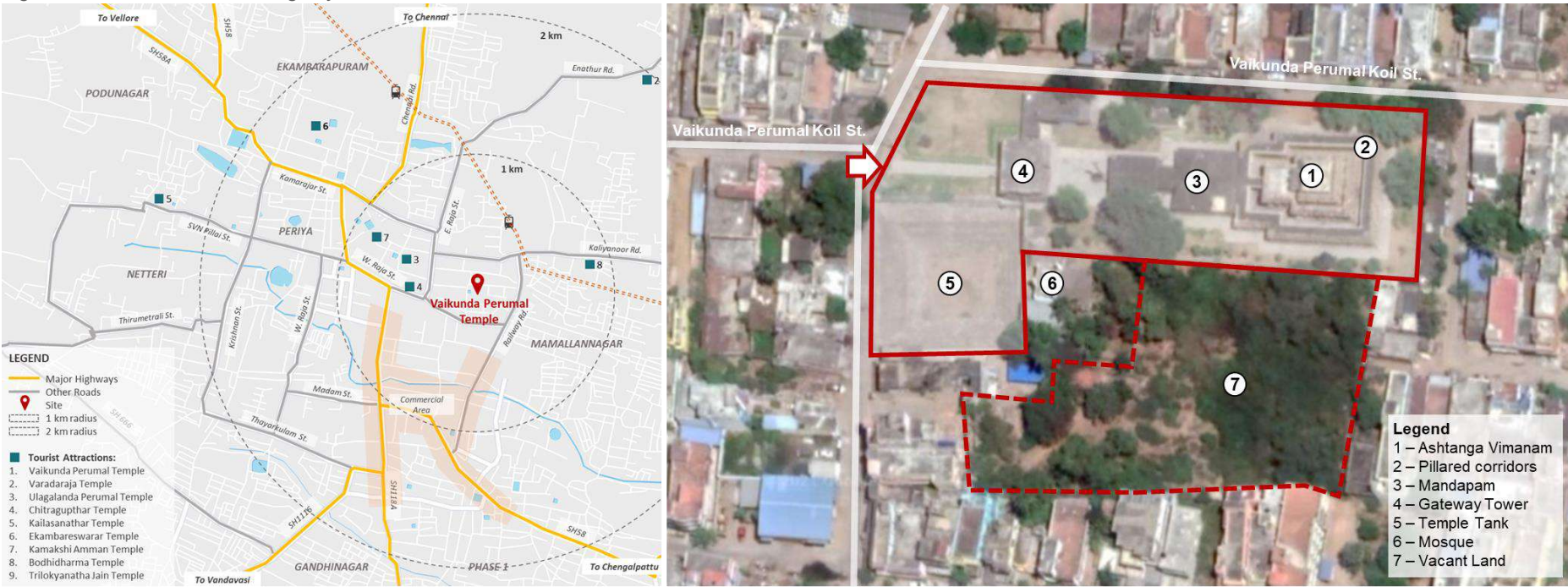
While the town is well connected to nearby towns and cities, the internal road infrastructure is characterised by narrow and congested streets which often face traffic congestion, especially during peak seasons.

- 3. Amenities** – The temple scores high on cleanliness but lacks certain amenities. Dustbins, designated footpaths, and streetlights are present inside the site. The site lacks the following amenities.
- There are no washrooms present inside the temple premises.
 - Drinking water is not provided on the site
 - No F&B and Retail shop present inside the temple site, though few eatery joints present outside the site.
 - Lack of signages/way findings on how to reach the temple.
 - No amenities present for visitors to rest/sit outside the site.
 - Temple tank is dry and not well maintained.

Parking – The Site does not have any designated parking area. The cars and tour buses park on the street surrounding the temple, leading to frequent crowding and congestion during evenings & peak hours.

- 4. Awareness** – The temple enjoys moderate popularity among tourists and pilgrims. While it does not receive as many visitors as the 4 most popular temples of the town, the Vaikunda Perumal temple received ~ 8 lakh visitors in 2019, ~2% of whom were foreign tourists. A few travel and religious referral sites mention this temple. However, it is definitely “undiscovered” and needs to be further promoted, as the footfalls here do not reflect its attractiveness.
- 5. Activities** – On normal days, the temple does not offer any activities other than temple rituals. Intermittently, there are some activities such as temple festivals, feasts, recitals, etc.
- 6. Accommodation** – The hotels here are majorly of the budget category, operated by standalone / regional players. Sriperumbudur (located ~35 km away) has a well-developed hotel ecosystem, with many reputed brands, such as Citrus, Mercure, Fairfield by Marriott, etc.
- 7. Association with Community** – The festivals of the temple enjoy immense participation among the locals. There are also many hawkers and vendors that dot the area around the site with carts and stalls – selling local goods, handicrafts and food items and increasing congestion.

Figure 6-1: Location and Existing Layout



Site Pictures





Figure 6-2: Land Use Regulation Zone at the Site



Figure 6-3: ASI Regulation Zones for the Site



Planning Inspiration

Considering the existing situation and religious importance of the site:

- One among the 108 Divya Desam temples dedicated to Vishnu.
- One of the few temples in India with the Ashtanga Vimana style of architecture (3 levels of deities).
- Availability of ~1 acre land parcel, adjacent to the site.

and understanding its limitations:

- ASI Regulated Site, therefore restricted scope of development.
- Lack of popularity amongst foreign tourists
- A secluded site with a lack of amenities in the immediate vicinity
- No designated parking and narrow access road leading to congestion
- Dull and non-interactive spaces around the temple

Vaikunda Perumal temple has the potential to be developed into a religious tourist attraction with a community-oriented space developed on the adjacent vacant land. As the site is an ASI regulated site, no permanent construction is allowed, therefore temporary outdoor cultural spaces are proposed to be developed. Thus, upgradation of several temple-associated amenities, rejuvenation of temple tank and development of community space around the main temple complex would transform the site into **an interactive magnet for religious tourists visiting Kanchipuram**.

Vision for the Site

The vision for the site is to develop it as an offsite to the temple trail of Kanchipuram. As the temple is a medium footfall and ASI maintained temple, the focus is more on provision of required infrastructure and amenities with adequate promotion.

- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value and rich architecture importance, the site draws a good number of tourists – both foreign and domestic.
Given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The target visitors to be captured here are:

- **Pilgrims and Domestic Tourists** – To develop as an intermediate tourist site in the 4 important temples of Kanchipuram, where visitors can experience the religious and architectural value of the site and increase its popularity & footfall.
- **High Value Tourists (both domestic and foreign)** – to promote the site to tourist groups who wish to experience the monumental value of temple architecture in Tamil Nadu.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **medium tourism site** with **moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	754	2,059	4,861
High Value Tourists (HVT) (Both domestic and foreign)	32	109	257
Maximum Carrying Capacity	6,315		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

While most of the tourist footfall would be received by the anchor temples such as Ekambareswarar temple, the other smaller temples within the Kanchipuram cluster would receive 1/5th of its Tourist footfall. Given all possible interventions and the projected growth as per the tourist potential of the site, the practical capacity of these

temples would be subject to 1/4th of Ekambareswarar temple's tourist footfall at any projected year.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this Site include:

- **Improving pilgrims' experience** at the temple, through improved circulation, conveniences, and amenities.
- Developing **temporary cultural spaces** at the Site by providing spaces on adjacent vacant land.
- **Rejuvenating temple tank** will help in improving tourist engagement at the site.
- **Improving tourist footfall**, through appropriate marketing and promotion.

Hard Interventions

1. **Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, luggage room, changing room, and rest/waiting area can be developed for tourist convenience and ease at the site. It can be placed at the entrance of the temple.

Infrastructure Created: ~75 sqm of building

2. **Open Air Cultural spaces** - The 1 acre open space at the backside of the temple is envisioned to be used for conducting cultural events such as dance festivals, AV laser shows depicting stories related to the temple, etc. with temporary tensile structures (rest areas) used for seating. This would make the space more vibrant and increase tourist engagement at the site for a longer period. The area can be paved and landscaped using local materials.

Infrastructure Created:

- 4 Tensile canopies and 4 Retail Kiosk
- Landscaping – 3700 sqm soft and hard landscaping
- Amenity Block – 105 sqm



Landscaped Garden / Open Air Cultural Space



Temple tank Rejuvenation



Paved Pathway

3. **Temple tank Rejuvenation** – The temple has a beautiful temple tank which could be replenished and used to attract tourists. This can be achieved through rainwater harvesting measures. Alternatively, it could also function as an gathering space and host cultural events. The shape and size of the tank is conducive to this. The floor could serve as a stage, with stepped seating all around.

Infrastructure Created: ~300 m of Paved, Landscaped, and fenced temple tank boundary with benches for visitors.

4. **Paved Pathway** – 50 m of pathway to be paved, connecting the main temple access road and the vacant land.

Soft Interventions

1. **Events** – The open space at the back of the site could be open for organizing local craft fairs, cultural events, festivals, making the site more alive and vibrant throughout the year.
2. **Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, marketing and advertising the site at all key temples of Kanchipuram and online platforms, etc.
3. **Crowd Management** – As the site receives heavy footfall during peak season and festivals, the following measures can be undertaken:
 - Ramps or special access for wheelchairs
 - Limit number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
4. **Landscaped Garden** – Owing to the vacant land available within the site, with regulations for restricted development, theme landscaped gardens can be developed. This can be complemented with paved pathways and seating arrangements for locals and tourists to spend time.

Infrastructure Created: ~1600 sqm of garden

5. **Community involvement** - The locals around the temple are very well aware of the temple's history and significance. These local communities could be incentivised to participate by involving them in various activities within and around the temple:

- Library / veda pathsala inside the temple.
- Events / activities could be conducted on the temple gardens

Amenities Plan

1. **Signage** – Signage Package 1 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
2. **Technology** – As the site is small in scale and does not attract large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines mentioned in Glossary of Interventions.
3. **Pay and Use Toilet Blocks** – ~2 units of toilets are proposed to be provided at the existing location within the temple complex. It needs to be upgraded/Renovated with additional cubicles to suffice the tourist population visiting the site, based on modern technologies and standards.
4. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre, a module of which can be as per the design guidelines.
5. **Lighting** – Installation of streetlight and monument lighting for the vinama which follows Ashtanga Vimana style of architecture (3 levels of deities).
6. **EV Stop & EC Stand** – The temple is a part of the holistic temple trail proposed in the Kanchipuram city connecting all important religious destinations. Therefore, an EV Shuttle stop and EC Stand is proposed at the site, near the parking area. This shall facilitate and ease movement across all sites for the tourists.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Tourist Facilitation Centre (Type 1)	75 sqm
2	Shading device type 1 (Outdoor Cultural Space)	4
3	Landscaping (Outdoor Cultural Space)	3700 sqm
4	Amenity Block (Outdoor Cultural Space)	105 sqm
5	Retail & F&B Kiosks	4
6	Paved Walkway (Paver block)	50 m
7	Signage (Package 1)	1
8	Temple tank Rejuvenation	300 m
9	Landscaped Garden (within temple premises)	1600 sqm
10	Technology (Package 1)	1
11	Pay and Use Toilet Blocks	1
12	Drinking-Water Station	1
13	Monumental Lighting	-
14	EC Stand	1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre (Type 1)	16
2	Shading device type 1 (Outdoor Cultural Space)	1
3	Landscaping (Outdoor Cultural Space)	3
4	Amenity Block (Outdoor Cultural Space)	2
6	Retail & F&B Kiosks	6
7	Paved Walkway (Paver block)	1
8	Signage (Package 1)	1
9	Temple tank Rejuvenation	14
10	Landscaped Garden (within temple premises)	1
11	Pay and Use Toilet Blocks	20
12	Drinking-Water Station	3
13	Monumental Lighting	20
14	Technology (Package 1)	1
15	E -Cycle stand	1
Total		INR 90 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- a) The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
- b) The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Kiosks** – 6 leasable kiosk units at the proposed Facilitation centre with a rental earning of **INR 18 Lakhs**.
2. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple **INR 68 Lakhs**.

3. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 33 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 1 CR at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the facilitation centre.
 - b. A **security personnel** for the community hall and the parking.
 - c. An **Administration staff** to overlook the operations of the community hall.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the community hall premise.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the rental kiosks and the community hall are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 60 Lakhs at Y5*.

Given that the estimated revenues (*INR 1 Cr.*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 60 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple and the Kanchipuram pilgrim/ tourist ecosystem.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department on approval from ASI authority and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items.
3. **Cultural space** is to be rented out by the temple management to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.

#	Project Component	Agencies in Charge	Phasing of Development
1	Tourist Facilitation Centre (Type 1)	HR & CE	Y0 – Y2
2	Shading device type 1	HR & CE	Y0 – Y2
3	Landscaping	HR & CE	Y0 – Y2
4	Amenity Block	HR & CE	Y0 – Y2
6	Retail & F&B Kiosks	HR & CE	Y0 – Y2
7	Paved Walkway (Paver block)	HR & CE	Y0 – Y2
8	Signage (Package 1)	HR & CE	Y0 – Y2
9	Temple tank Rejuvenation	HR & CE	Y0 – Y2
10	Landscaped Garden	HR & CE	Y0 – Y2
11	Pay and Use Toilet Blocks	HR & CE	Y0 – Y2
12	Drinking-Water Station	HR & CE	Y0 – Y2
13	Monumental Lighting	HR & CE	Y0 – Y2
14	Technology (Package 1)	HR & CE	Y0 – Y2
15	E -Cycle stand	HR & CE	Y0 – Y2

²⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,900²⁶ man-days of construction labour (*spread across 1–2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons²⁷
- Retail and F&B spaces = 15 man-days per day²⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 9,700 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

²⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

²⁸ Assuming average 2.5 persons per kiosk / shop

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 576.17 Cr. at the site²⁹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

²⁹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 6-4: Proposed Master Plan – Vaikunda Perumal Temple, Kanchipuram



7. Sri Varadaraja Perumal Temple, Kanchipuram

Site Details

District:	Kanchipuram
Name of Site:	Sri Varadaraja Perumal Temple
Site No:	Site 18 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	12.8191, 79.7243
Land Area:	~4 acres + 20 acres additional land
Peak footfalls:	600,000 per day
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 160.60 lakhs (2019 - 20) For. – 1 lakh (2019 - 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim/Tourist
Site Potential:	Very High Tourism Site
HVT Potential:	High HVT Potential
Connectivity:	
a. Railway station:	~37 km (Chengalpattu)
b. Airport:	~60 km (Chennai)
c. Highway:	~200 m from SH58
d. Other:	Nil
Trails featured on:	Divya Desam

Sri Varadaraja Perumal Temple is a Hindu temple dedicated to Lord Vishnu located in the holy city of Kanchipuram. It is one of the Divya Desams- 108 temples dedicated to Vishnu and is known as 'Perumal Koil'. This is one of the most sacred places for Vaishnavites. The fourth of the Divya Desams that completes this series is Melukote—which is known as Thirunarayanapuram. The temple belongs to a group of four important temples which hold a belief that visiting all four places without a break will guarantee one a place in paramapadam.

Scope for interventions and master planning exercise for the site include the development of pedestrian-friendly spaces with adequate parking accommodation and other tourist facilities.

Existing Condition

Location

The temple is located in Kanchipuram – this part of Kanchipuram is known as the Vishnu Kanchi as it houses many famous Vishnu temples. It is situated on the Kanchipuram – Chengalpattu Highway along with prominent tourist destinations like Punniya Kotteeswarar Koil, Uttaradhi Mutt (Raghavendra Swamy Temple), Sri Ashtabuja Perumal Temple, Nathapettai Lake. The immediate surroundings of the temple include a mixed-use society and several small temples.

Existing Layout and Uses

Out of the 24 acres of land owned by the temple administration, the temple complex covers an area of 4 acres. The temple has 2 entry points on the eastern and western side of the temple, respectively. There are 32 shrines, 19 vimanas, various pillared halls, and 2 temple tanks on the north-western and eastern sides of the temple. The temple complex has several concentric circumambulation paths ("prakarams"), important ones being Azhwar Prakaram, Madai Palli Prakaram, and Thiru Malai Prakaram.

The site is currently used for religious purposes mainly. Some of the ancillary uses housed inside the temple complex are:

- Temple office for Administrative Purposes
- Cow Sheds
- Open Spaces around the temple.
- For Celebration of famous festivals - Brahma Utsavam (May / June), Kodai Utsavam, Vasantha Utsavam, Athi Varadhar festival.

Other Land Available

Apart from the ~4-acre temple complex, the temple owns ~20-acre of vacant land around the complex.

Master Planning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. Tamil Nadu Combined Development and Building Rules 2019 - As per Kanchipuram Master Plan, the site lies in a **Mixed-use Residential and Heritage Zone**. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and

shops, Departmental stores | Taxi stands and car parking multi-level parking | Religious buildings.

3. Height Restrictions - Heritage Zone height restrictions of ~13 m. (roughly up to 4 storeys) is applicable for the developments around the site.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction – Temple's main attraction here is the 40 feet long idol of Lord Athi Varadaraja Perumal along with the Chakkarathazwar shrine on the eastern side of the temple tank. Despite many architectural intricacies, carvings present at the temple, and its religious importance amongst tourists and locals, there are certain areas inside the temple complex with uncontrolled vegetation upon 2/3rd portion of open ground surrounding the temple creating a cluttered aesthetical environment. Moreover, the less frequently visited areas around the temple are maintained in a meager way, affecting the overall character of the space.

2. Accessibility – The site enjoys easy access from all major locations in Kanchipuram. Kanchipuram is ~70 km away from Chennai and enjoys good road connectivity. The town also has 2 railway stations and a major bus stand. The Chennai International Airport is a ~1.5-hour drive away from Kanchipuram.

While the town is well connected to nearby towns and cities, the internal road infrastructure is characterised by narrow and congested streets which often face traffic congestion, especially during peak seasons.

3. Amenities – The temple is equipped with a moderate level of amenities.

- Free drinking water facilities and dustbins are provided at the temple site. However, it is insufficient in comparison to the number of tourists visiting the temple.

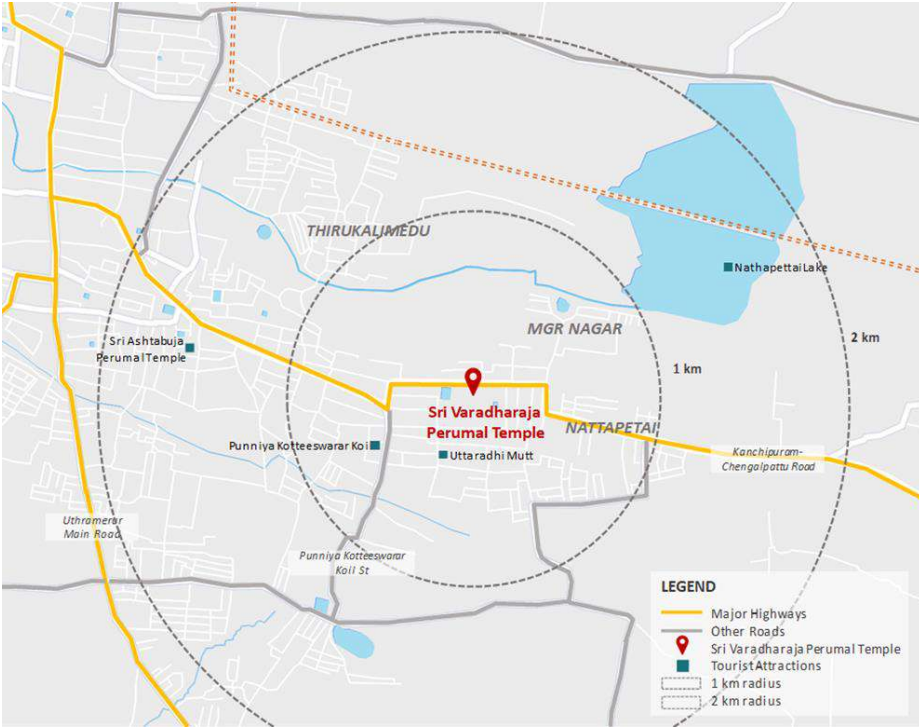
- The site premises are guarded by a compound wall, and is kept safe and lit through a network of streetlights
- The temple premises lack in the provision of certain essential amenities:
 - Toilets,
 - Luggage rooms,
 - Cloakroom,
 - Footwear Stand
- The site is additionally not universally accessible by all kinds of tourists due to lack of wheelchairs and other measures.
- Temple administration has not set up any kind of retail establishments/souvenir shops to capitalize upon the temple's vacant lands.

Parking – The temple offers a designated undeveloped parking space. However, buses and cars are often parked along the roadside. The provided parking space is realized to be insufficient during peak seasons.

- 4. Awareness** – The temple already features prominently in many tourist itineraries. Being one of the must-visit sites here, it is visited by all tourists coming to Kanchipuram, along with Kailasanathar, Kamatchi Amman, and Varadarajan temples. Well-known for its religious significance, as well as the many sculptures in the 100-pillar hall, main shrine, etc., the temple received ~45,000 domestic and ~250 foreign visitors daily on average in 2019.
- 5. Activities** – On normal days, the temple does not offer any activities other than temple rituals. Intermittently, there are some activities such as temple festivals, feasts, recitals, etc.
- 6. Accommodation** – The hotels here are majorly of the budget category, operated by standalone / regional players. Sriperumbudur (located ~35 km away) has a well-developed hotel ecosystem, with many reputed brands, such as Citrus, Mercure, Fairfield by Marriott, etc.
- 7. Association with Community** – The temple offers no association with the community. However, on a large Kanchipuram is known for its unique silk saree,

it's weaving, etc. Today, many tour operators arrange “silk trails” that allow tourists to experience the complex process of silk weaving. Most of these trails also involve interacting with silk weavers, who narrate legends related to silk in the past and introduce the tourist to the daily activities of a silk weaver.

Figure 7-1: Location and Existing Layout



Site Pictures

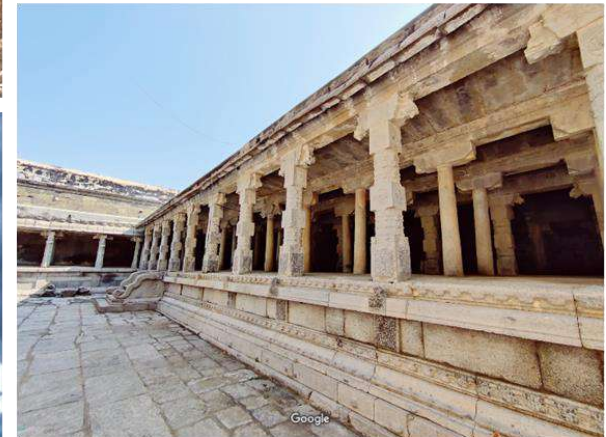
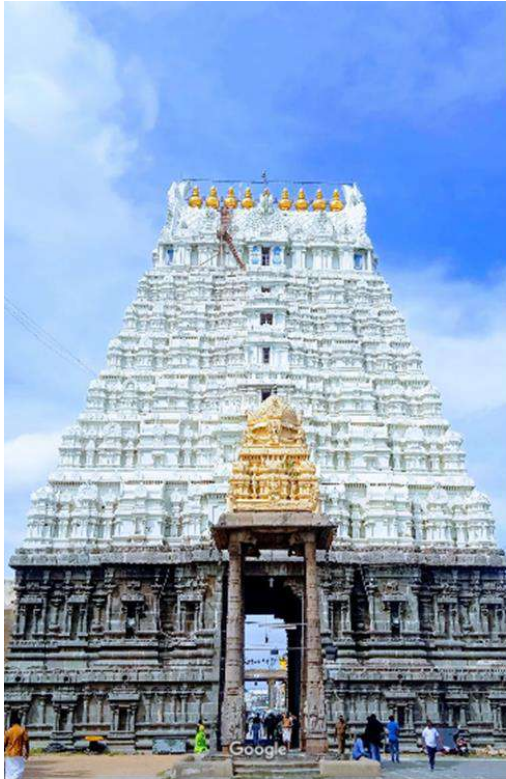
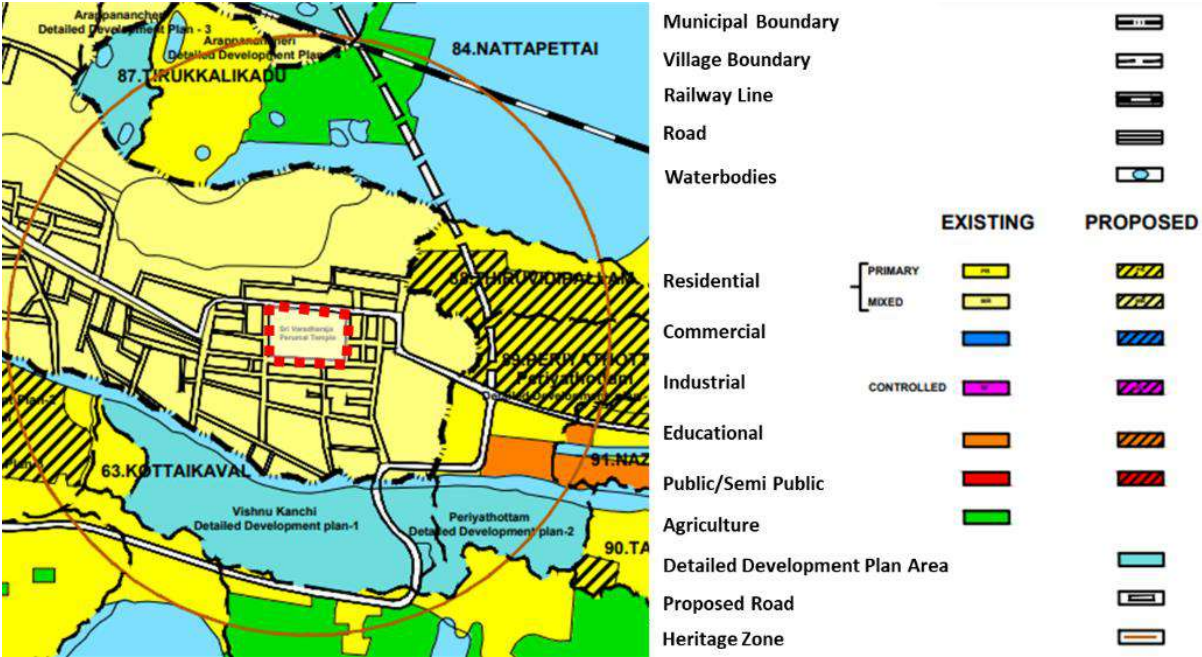




Figure 7-2: Site Land Use – Kanchipuram Master Plan



Vision for the Site

Varadharaja Perumal Temple is one of Kanchipuram's most important temples. As a prime attraction of Kanchipuram, it draws large groups of pilgrims and tourists – domestic and foreign. As a tourist magnet, the temple faces issues about crowd control and inadequate parking. Tourist-friendliness at the site can be improved by better traffic management, with dedicated parking and a Site Interpretation Centre.

- **Target Visitor** - The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

The target visitors to be captured here are:

- **Pilgrims** – Who visit for the religious value of the Kanchipuram temple sites.
- **Domestic Tourists** - Who visit the integrated Kanchipuram circuit for religious value and to witness the local culture of Kanchipuram city.
- **High Value Tourists** - Who visit to see the monumental and historical value, apart from other attractions of Kanchipuram - Silk and Matts.
- **Tourist Projections** – The site is categorized as a **Very High tourist site** with **high HVT footfall and potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	15,960	23,225	23,225
High Value Tourists (HVT) (Both domestic and foreign)	200	499	499
Maximum Carrying Capacity	23,725 <i>p.a.</i>		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall and is categorized as a high potential tourism site with high HVT projections, the temple is currently operating beyond its practical capacity with several crowd management practices in place. The projects/ interventions proposed are envisioned along similar lines with the intent to spread and manage the footfall received.

Proposed Master Plan

Approach to Masterplanning

Sannidhi Street leading up to the West entrance gopuram of Varadharaja Perumal Temple should become a much more appealing, safe experience for both Tourists and Pilgrims when walking up to the Temple. A combination of Traffic Management, Traffic Calming, and Pedestrianisation allows the creation of an important Pedestrian-Friendly public space just outside of the Temple, which will be very beneficial to the Tourists and Pilgrims' overall experience of a visit to the Temple. Instead of having tourists' and pilgrims' cars and buses randomly parked at Sannidhi Street, a plot of land owned by the Temple authorities 450 m. from the East gopuram is recommended to be developed into a car parking area.

One of the major aspects of the Tourist's experience when visiting a Temple complex that needs to be improved is the lack of proper amenities, tourist information, and engaging background information at the Temple Sites. To address all of the above, a large Site Interpretation / Tourist Facilitation Centre is proposed within the Temple's Site Boundary.

Hard Interventions

1. Traffic Calming, Pedestrianisation Improvements around the Temple. The Sannidhi Streets leading up to the West and East gopurams should become much more appealing, safe approaches for both Tourists and Pilgrims when visiting the Temple. The large gopurams at the main entrances are one of the main attractions and their impressive size can only be admired from a distance. Instead of being dropped off right in front of the gate, Traffic Calming and Pedestrianisation creates the required safe pedestrian space for Pilgrims and Tourists to walk comfortably along Sannidhi Streets. Pilgrims can buy their temples at their leisure and it makes it much more attractive for tourists to stop and frequent tourist shops and small eateries along the way. This means that the local business community will benefit more from the visitors to the Temple. All visitors can comfortably disembark their vehicle at the first part or at the end of Sannidhi Street where more pedestrian space is created. The second part of western Sannidhi Street and the entire eastern Sannidhi Street will be completely pedestrianized.

Infrastructure Created: ~3800 sq. m. of hard landscaped pedestrian space with new trees and street furniture



Pedestrianisation and Façade Beautification Sannidhi Street

2. Façade Beautification of Sannidhi Streets. To improve the overall experience of the visit to the historically significant Temple, the buildings along the pedestrianized West and East Sannidhi Street should reflect the architectural beauty of the Temple. Firstly, the disfiguring hoardings and other architecturally inappropriate structures added to the buildings over the years should be removed. Secondly, the owners of historic buildings along the street should be financially incentivized to renovate their building facades to let the original architecture shine. Thirdly, building facades nearest to the gopurams that are a real eyesore and distract from the historic beauty of the temple should be beautified in a manner that is historically more appropriate.

3. Dedicated Tourist Car/Bus Parking area, instead of having tourists' and pilgrims' cars and buses randomly parked at Sannidhi Street and other streets around the temple. A plot of land of circa 6 ha at circa 450 m. from the East gopuram is potentially available to be developed as a Parking area for the Temple. As visitors are being mostly dropped at the beginning of the West Sannidhi Streets to enter the Temple, the visitors are encouraged to leave the Temple from the East gopuram. From here they can walk along a second (200 m. long) Pedestrian Only main street, with at the end a passenger Pick Up zone. Another option is the use of an Electric Shuttle Vehicle that operates between the pick-up/drop of zones and the Parking Area.

Infrastructure Created: ~60,000 sq. m. of the hard landscaped area including trees and large public bathroom facilities

4. Varadharaja Perumal Temple Interpretation and Tourist Facilitation Centre- One of the major aspects of the Tourist's experience when visiting a Temple complex that needs to be improved is the lack of proper amenities, tourist information, and engaging display and convey of background information at the Temple Sites. To address all the above, a Site Interpretation / Tourist Facilitation Centre is proposed. Considering the large unused open space available within the Temple's outer boundaries it is recommended that one area will be used for such a facility. Development of the Interpretation Centre is aimed at tourists who do not know much about the Site. Inside the centre, the story of the Kanchipuram's history and the Varadharaja Perumal Temple will be conveyed engagingly via displays, galleries, and interactive exhibits. Considering the lack of bathroom facilities inside the Temple, those will be provided too, a small shop selling local handicrafts made by local craftsmen and weavers & other souvenirs and a small café with some alfresco seating for Tourists to take a quick

drink/lunch break: a quiet spot for Tourists to relax a bit before continuing their visit.

Infrastructure Created: Prototype A1 ~756 sq. m. of built-up area



Varadharaja Perumal Temple Interpretation and Tourist Facilitation Centre

Soft Interventions

1. EV Shuttle to/from Parking Considering that the distance to the Car Park of circa 450 m. from the East gopuram / or the end of the eastern pedestrianized zone is too far to walk and in case pick-up by the bus or car can't be arranged on a specific time, an EV Shuttle service to and from the Parking Area would be the most comfortable solution, avoiding any large traffic jams on the road near the Temples entry-exit points and end of the pedestrian zones.

2. **Local Events** – The temple complex may remain closed after hours, but the site outside the complex should remain open in the evenings. The grounds could host cultural activities after hours, such as classical music or dance performances, theatre, etc. Against the backdrop of the lit-up gopuram, this could be a unique venue for such activities.
3. **Site management** – The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.
4. **Promotion** – The Tourism Department should promote Kailasanathar Temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes.

Amenities Plan

1. **Pay and Use Toilet Block** – ~20 units of identified pay and use toilet blocks must be incorporated with the tourist facilitation center. The location of the toilets shown in the master plan is an indicative representation.
2. **Drinking-Water Station** – ~15 drinking water station is proposed to be provided at the facilitation center along the Parking area.
3. **Street Furniture** – Adequate Street furniture like benches, dustbins, bollards, etc. are proposed to be provided at the landscaped areas in the temple complex., along with the design guidelines for street furniture.
4. **Plantation and Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify open-air exhibit areas, sidewalks, open-air theatre, and other visitor zones.
5. **Signage (Package 2)** – Package 2 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.

6. **Technology Intervention (Package 2) – Being** an important tourist destination in Kanchipuram, the temple should offer all technological conveniences and employ technological tools for optimal management. These include:
 - a. Electronic visitor counters & body scanner at entry points
 - b. TN Assist App integration (internet connection, QR scanner)
 - c. CCTV coverage at key locations
 - d. Wi-Fi bollards/enclosures across the Site

Trunk Infrastructure

1. **EV & EC Stop** – The temple is a part of the holistic temple trail proposed in the Kanchipuram city connecting all important religious destinations. Therefore, an EV & EC Shuttle service stop is proposed at the site near the parking area. This shall facilitate and ease movement across all sites for the tourists avoiding traffic jams near temples.

Project Identified

#	Project Component	Scale
1	Paved Parking Area	~60,000 sqm
2	Hardscaping Space	~3800 sqm
3	Tourist Interpretation and Facilitation Centre	~756 sqm
4	Pay & Use Toilets	2 LS
5	Drinking-Water Station	1 LS
6	Signages	Package 2
7	Technology Intervention	Package 2
8	EV Stop	1 LS

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cash flows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Tourist Facilitation Centre (Type 1)	16
2	Paved Parking area	45
3	Bus/ EV stop	20
4	Signage (Package 1)	1
5	Landscaped Garden (within temple premises)	3
6	Pay and Use Toilet Blocks	40
7	Drinking-Water Station	3
8	Technology Integration	1
Total		INR 135 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
- The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
- Kiosks** – 2 leasable kiosk units at the proposed Facilitation centre with a rental earning of **INR 6 Lakhs**.
- Parking** – About 150 parking spaces assuming a daily occupancy of 20%, would earn the temple an estimated revenue of **INR 2 Lakhs**.
- Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated **INR 3.56Cr**.

The total revenues to the temple from the proposed capital projects are projected at an estimated **INR 3.5 Cr. at Y5**.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

- Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - A **Help-desk staff** each at the facilitation centre and the proposed toilet block.
 - 2 Security staff** at the parking space.
 - 2 Admin staff** to manage the operations of the facilitation centre and parking space.
The projected costs incurred is estimated at **INR 17 Lakhs**.
- Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - Maintenance of the **Building facilities** – The general cleaning and upkeep of the facilitation centre.
The projected costs incurred is estimated at **INR 8 Lakhs**.
- Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at **INR 2 Lakhs**.

- 4. Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.

The projected costs incurred is estimated at *INR 1 Lakh*.

- 5. Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percent of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 3 Lakhs*.

- 6. Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

The projected costs incurred is estimated at *INR 24 Lakhs*.

- 7. Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The utilities for the rental kiosks and the community hall are pegged to the rental revenues earned from the respective sources.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.

The projected costs incurred is estimated at *INR 90 Lakhs*.

- 8. Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lump sum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 1.5 Cr. at Y5*.

Given that the estimated revenues (*INR 3.5 Cr.*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 1.5 Cr.*) incurred, it can

be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple and the Kanchipuram pilgrim/ tourist eco-system.

Implementation Model

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) and the **cleanliness drive** as part of the Civic Upgradation in and around the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items.
3. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).
4. The **EV-hub** is to be developed and operated by private vendors by paying an annual lease to the temple management, while the provisioning of the space for operations is to be facilitated by the temple.

Development Phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Paved Parking Area	HR & CE Dept.	Y0 – Y2
2	Hardscaping Space	HR & CE Dept.	Y0 – Y2
3	Tourist Interpretation and Facilitation Centre	HR & CE Dept.	Y0 – Y2
4	Toilets	HR & CE Dept.	Y0 – Y2
5	Drinking-Water Station	HR & CE Dept.	Y0 – Y2
6	Signages	HR & CE Dept.	Y0 – Y2
7	Technology Intervention	HR & CE Dept.	Y0 – Y2
8	EV Stop	HR & CE Dept.	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 5,800³⁰ man-days of construction labour (*spread across 1 year of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons³¹
- Retail and F&B spaces = 5 man-days per day³²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 14,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 3658 Cr. at the site³³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

³⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

³¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

³² Assuming average 2.5 persons per kiosk / shop

³³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 7-3: Proposed Master Plan – Sri Varadaraja Perumal Temple, Kanchipuram



8. Sri Neervanna Perumal Temple, Thiruneermalai

Site Details

District:	Kanchipuram
Name of Site:	Sri Neervanna Perumal Temple
Site No:	Site 30 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.9625, 80.1136
Land Area:	~140 acres
Peak footfalls:	1750 per day
Operator:	HR & CE Dept. ASI (for the Hill Temple)
Site Ownership:	HR & CE Dept. ASI (for Hill Temple)
Tourist Footfall:	Dom. – 3.35 lakhs (2019 - 20) For. – 4990 (2019 - 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim/Tourist
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~27.5 km (Chennai)
b. Airport:	~8 km (Chennai)
c. Highway:	~3 km from Chennai ORR
d. Other:	Nil

Trails featured on: **Divya Desam, Siddhar**

Sri Neervanna Perumal Temple, Thiruneermalai is one of the 108 Divya Desam temples dedicated to Lord Vishnu and his various Avatars. The temple complex comprises of two temples for Perumal that form this Divya Desam – Neervanna Perumal temple at the bottom of the hill and Sri Ranganathar temple at the top of the hill. The location of this temple on a hilltop attracts tourists the most. This site is also famous for conducting marriages among locals and chariot festivals. Scope for interventions in the master plan for this site includes improving accessibility to the temple on the hilltop, crowd control, keeping cleanliness, and improve the tourist-friendly environment at the site.

Existing Condition

Location

Situated amidst a traditional high-density neighborhood, the temple is in Thiruneermalai town in Chennai suburbs ~26 km from Kanchipuram. The temple is very close to the Chennai International Airport. The temple is situated in the vicinity of several tourist attractions, which include Pammal Sastha, Pallavaram Lake, Kishkinta Theme Park, Sri Rama Anjaneya Temple.

Existing Layout

The temple complex houses two temples, one at the top of the hill and the other in the foothills, occupying an area of 140 acres with a built-up area of 6 acres including a 4800 sqft temple on the ground, 1 acre on the hilltop, and a Kolam. It can be accessed from 2 gopurams on the eastern and western side of the temple, respectively. The Temple tank situated across the road opposite the west entrance of the temple also forms an important part of the temple layout.

There are three shrines for Lord Ranganatha (Kidanthaan – in reclining posture), Trivikrama (Nadanthaan – in walking posture), Lord Narasimha (Irundhaan – sitting posture), and a Shrine for Ranaganayaki Thayar (facing East). It is a double prakaram (outer courtyard) temple.

Existing Uses

Thiruneermalai is famous for conducting marriages. Devotees bathe in the tank for health and cure from illness and for worshipping Perumal. Devotees also seek child boon by placing cradles in a tree and pray for a successful marriage. The temple complex also has ancillary uses in the form of 1 retail shop and 1 prasadam shop.

Other Land Available

The temple has ~6 acres of developable land around the site. Apart from this, it owns 140 acres in Tambaram and its surroundings and 58 acres in Andhra Pradesh.

Masterplanning Considerations

Applicable Regulations

1. **ASI Regulations** – The site is an ASI protected monument, As per Ancient Monuments, Archaeological Sites and Remains Act:
 - a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
 - b. Reconstruction or repairs or renovation of existing buildings within the prohibited area requires prior permission from the Competent Authority under the act
 - c. Construction of new buildings, reconstruction or renovation, or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.
2. **National Conservation Policy** – Monument Conservation activities can be taken up by the competent state authority. It shall be permissible inside the premises of protected monuments as per the National Policy for Conservation of Ancient Monuments and Archaeological Site Remains, 2014

3. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

4. **Tamil Nadu Combined Development and Building Rules 2019** - The site lies in the **Non-Urban Zone** as per the CMDA Master Plan 2026. The permissible uses include:

All Agriculture uses | Pottery manufacturing | Incidental residential uses.

5. **Height Restrictions** – AAI height restrictions allow the construction of buildings up to ~50 m. (up to 15 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan except for its architectural integrity.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction – Sri Neervanna Perumal Temple is one of the most famous temples of South India. Devotees need to climb steps to reach the hilltop temple (one of the two temples). The temple complex is beautifully constructed, and the architecture is greatly appreciated. The view from the hilltop is beautiful. Another main attraction of the temple is the big temple tank. Tourists visiting the temple town of Kanchipuram will not miss this twin temple of Lord Vishnu in Thiruneermalai. No interventions are required to improve the temple attraction features.

2. Accessibility – The site enjoys easy access from all major locations in Kanchipuram. Kanchipuram is ~70 km away from Chennai and enjoys good road connectivity. The town also has 2 railway stations and a major bus stand. The Chennai International Airport is a ~1.5-hour drive away from Kanchipuram.

While the town is well connected to nearby towns and cities, the internal road infrastructure is characterised by narrow and congested streets which often face traffic congestion, especially during peak seasons.

3. Amenities – Minimal amount of clean and maintained services are available at the temple.

- the temple is equipped with an adequate number of streetlights and clean drinking water plants, and safety infrastructure.
- The temple premises remain dirty despite regular cleaning.
- Washrooms are identified to be insufficient in number and poorly maintained.
- The temple site does not include of following facilities:
 - Interpretation centre,
 - Shaded seating spaces,
 - Cloakroom/luggage room.
 - Informative Signages.
 - Ramps, wheelchair, or any other mechanism for physically disabled and aged tourists to visit the temple on the hill.

Parking – Parking lots with a capacity to accommodate ~20 cars at a time are provided within the site boundary. However, the site becomes crowded and unmanageable during festivals/peak season, indicating the need to develop additional parking spaces. The Current on-street parking along the narrow access road at the time of festivals/peak season often results in congestion.

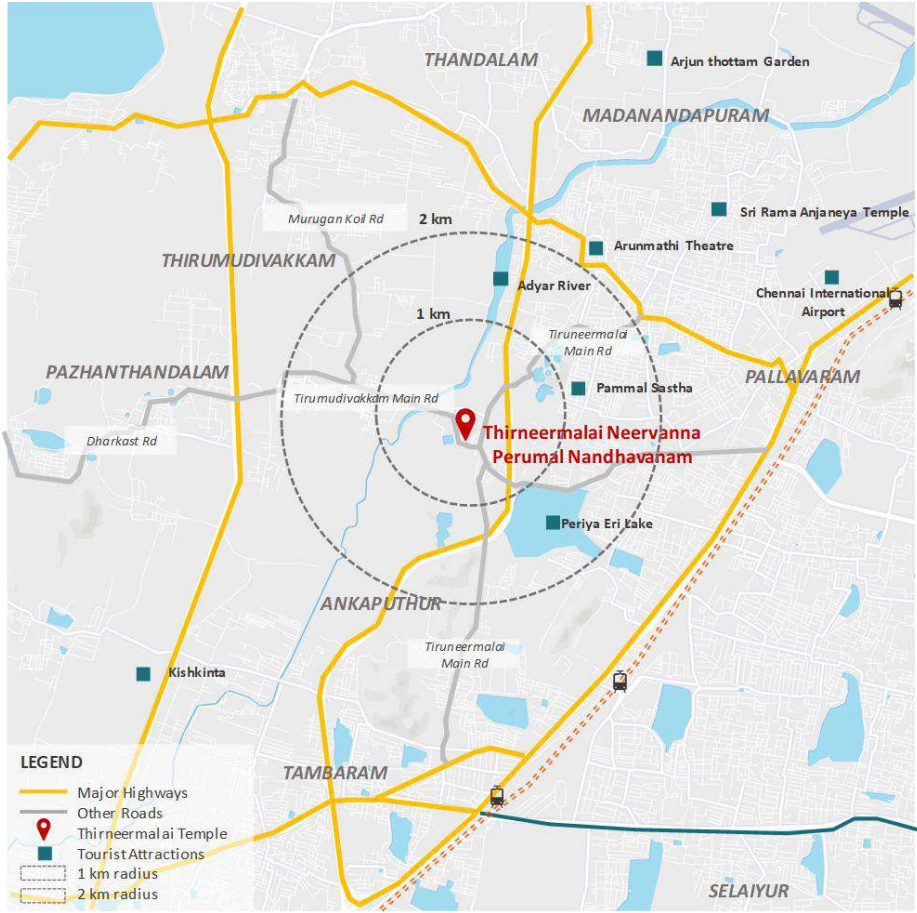
4. Awareness – This temple is one of the popular temples in Chennai and is mostly visited by local pilgrims. It covers a vast area with appropriate space utilization. In 2019, the ratio of domestic to foreign tourists at the temple is 68:1, indicating a more hold of domestic tourists as compared to foreign. The temple is also recommended highly by several travel journals, along with a digital presence in the form of the HR & CE temple website.

5. Activities – On normal days, the temple does not offer any activities other than temple rituals. Intermittently, there are some activities such as temple festivals, feasts, recitals, etc.

6. Accommodation – The hotels here are majorly of the budget category, operated by standalone / regional players. Sriperumbudur (located ~35 km away) has a well-developed hotel ecosystem, with many reputed brands, such as Citrus, Mercure, Fairfield by Marriott, etc.

7. Association with Community – The temple has an auspicious connection with the local communities. It is one of the famous temples in Chennai, considered for marriages. The locals often take a religious visit to the site. However, there is an extremely limited association with the community, in terms of tourism revenue generation.

Figure 8-1: Location and Existing Layout



Site Pictures



Figure 8-2: Other Land Holdings



Figure 8-3: Site Land Use – CMA Master Plan 2026

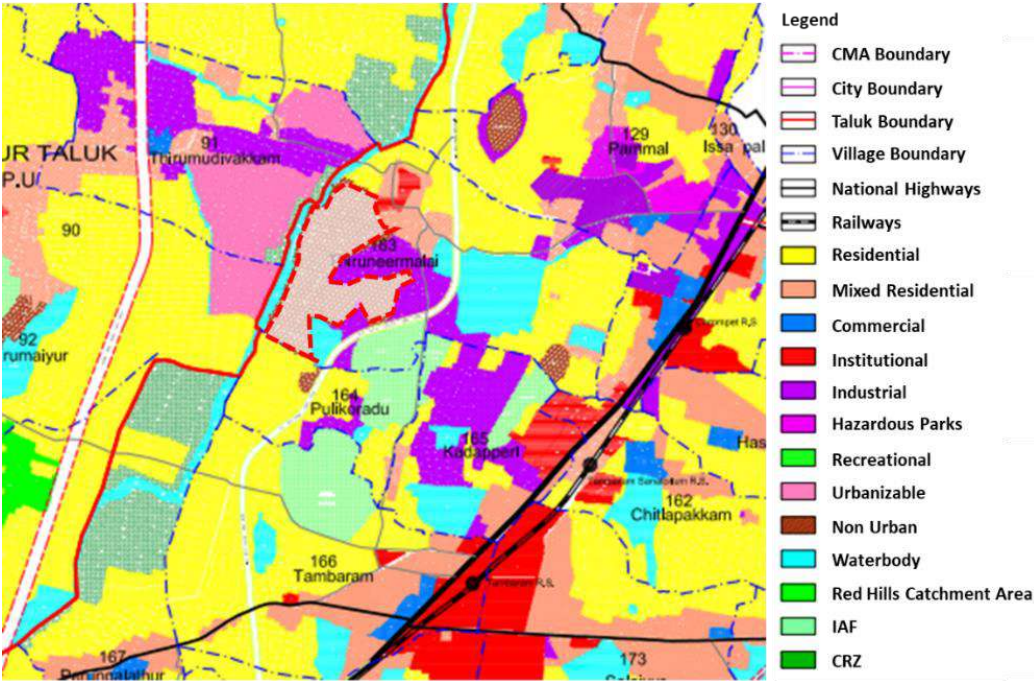
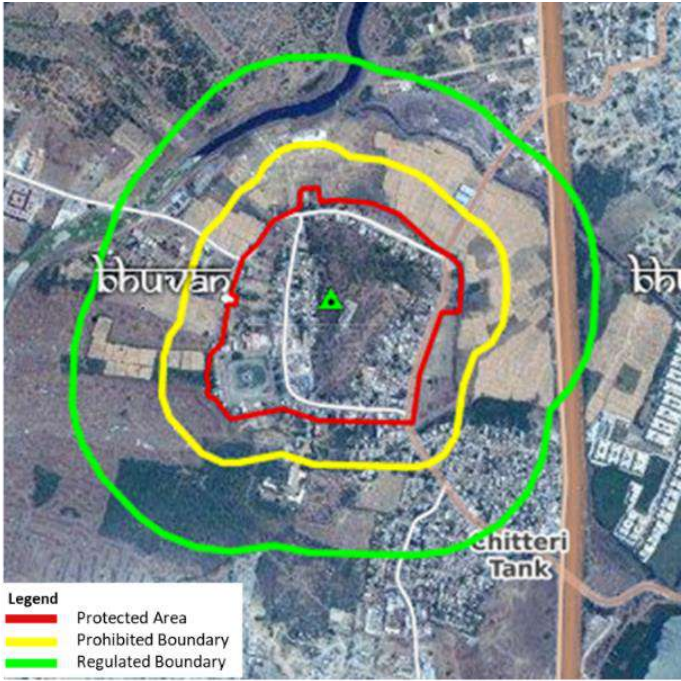


Figure 8-4: Protected, Prohibited, and Regulated areas around the monument



Vision for the Site

Being one of the 108 Divya Desam dedicated to Lord Vishnu, the temple has high religious significance. The location of this temple on a hilltop attracts tourists. This site is famous for conducting marriages among locals and chariot festivals. Scope for intervention includes improving accessibility to the hill temple, crowd control, and keeping cleanliness.

Sri Neervana Perumal Temple, Thiruneermalai Temple authorities also own an additional ~140 acres of land in Tambaram and its surroundings. The temple complex on the top of a hill is an ASI-protected site, limiting the development scope around the temple, additionally with the hard availability of any vacant and developable land parcels. Therefore, the site master planning is envisioned to be done along with the ~140-acre land parcel on the theme of a pilgrim recreation centre. The details of which are shown under special projects.

The master planning exercise for this site particularly focuses on resolving the existing issues faced by the tourists.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

The target visitors that the envisions to capture are:

- **Religious Tourists** – to develop a religious tourist destination where visitors can enjoy the religious environment of the site without disturbing the existing local communities in the town.
- **Domestic Tourists** - Who visit the temple for its associated history and monumental value.
- **Locals** – By developing a well-facilitated area, where local marriages can be conducted. This could also turn out to be a place for celebrating local cultural festivals.

- **Tourist Projections** – The site is categorized as a **Low tourism site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	330	779	1,568
High Value Tourists (HVT) (Both domestic and foreign)	10	24	48
Maximum Carrying Capacity	19,710 <i>p.a.</i>		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Masterplan

Approach to Masterplanning

The master plan for this site is developed on the idea of developing a better tourist environment and ease the pilgrim's visit to the temple. It is proposed to be fulfilled via the development of a small tourist amenity centre along with the temple site.

Hard Interventions

1. **Alternative Route to reach the temple on the hill** – In the current situation, the temple situated on the hilltop is accessible only via a flight of steps. There is no means by which a person with a walking disability climbs the hill to reach the temple. An alternative motorable route must be devised for better accessibility.
Infrastructure Created ~100 m of paved road
2. **Temple Tank Rejuvenation** – In the current times the tank water is degraded by algae accumulation. Moreover, the areas around the temple tank are unclean and non-hygienic to use. The temple tank area can be cleaned of all the

unwanted vegetation, with proper soft landscaping around the boundary, and must be opened up for pilgrim uses.

Water plants that live on the surface, such as water lilies that provide large lily pads, can help reduce water reduction from evaporation. These work in ponds found in partial shade or full sun. Place several pots under the water, letting the lily pads cover up to 70 percent of the water's surface

Creation of temple tank boundary, on similar lines to that of the temple architecture. - so that it can be used during festivals. The areas around the temple tank can be developed into a welcoming space for the pilgrims by redesigning the cross-section of the temple tank boundary.

Infrastructure Created: ~890 sqm of landscaping area, ~1332 sqm temple tank boundary



Temple Tank Boundaries

Soft Interventions

- 1. Cleanliness Initiative** – Civic initiatives, along with participation from local communities and pilgrim volunteers can be taken up to keep the temple surroundings clean.
- 2. Crowd Management** – The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.

- 3. Integration with the Pilgrim Recreation Centre** – The necessary temple requirements shall be integrated with the pilgrim recreation centre proposed as a special project near the temple. It must be done in conjunction with the temple site.

Amenities Plan

- 1. Plantation and Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify open-air exhibit areas, sidewalks, open-air theatre, and other visitor zones.
- 2. Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines in Vol A.
- 3. Technology Intervention (Package 1)** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - Compatibility with TN Assist App
 - CCTV coverage at 3 locations
 - Electronic visitor counters

Trunk Infrastructure

The site has good connectivity, no trunk infrastructure interventions are required

Projects Identified

#	Project Component	Scale
1	Paved Road	~100 m
2	General Site Landscaping	~890 sqm
3	Temple Tank Boundary	~1332 sqm
4	Signages	Package 1
5	Technology Intervention	Package 1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Paved road	30
2	Landscaping	1
3	Temple Tank boundary	4
4	Signage	1
5	Technology	1
Total		INR 35 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

There are no revenues associated with the proposed capital projects at this site since it is envisioned to be integrated with the urban(pilgrim) recreational park master planned on the ~140-acre vacant land parcel available to the south of the temple along the Adyar riverbank.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.

2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

2. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakhs*.

3. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 2.5 Lakhs at Y5*.

Though there are no revenue streams pegged to the capital projects, the basic expenditure with respect to the interventions planned account to 2.5 Lakhs. These are the minimal costs required to upkeep the basic hygiene factors followed across all the undertaken sites.

Implementation Model

The development of the projects is to be taken up by HR & CE department on approvals from the ASI authority and the implementation of these can be carried out as follows:

The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.

Developmental phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Paved Road	ASI	Y0 – Y2
2	General Site Landscaping	ASI	Y0 – Y2
3	Temple Tank Boundary	ASI	Y0 – Y2
4	Signages	ASI	Y0 – Y2
5	Technology Intervention	ASI	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,500³⁴ man-days of construction labour (*spread across 1 year of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 12 Persons³⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above

- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 3,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 161.5 Cr. at the site³⁶. As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

³⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

³⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

³⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 8-5: Proposed Master Plan – Sri Neervanna Perumal Temple, Thiruneermalai



9. Pilgrim Centre, Sri Neervanna Temple, Thiruneermalai

Site Details

District:	Kanchipuram
Name of Site:	Pilgrim Centre, Sri Neervanna Temple
Location:	12.9625, 80.1136
Land Area:	A portion of ~140 acres
Peak footfalls:	NA
Site Ownership:	HR&CE Dept.
Tourist Footfall:	NA
Site Revenues:	NA
Site Orientation:	Pilgrim
Connectivity:	
a) Railway Station:	~6.5 km (Tambaram, Chennai)
b) Airport:	~8.5 km (Chennai)
c) Highway:	200m from NH 32
Trails Featured On	Divyadesam Trail

HR&CE owns ~140 acres of land in close vicinity to the Sri Neervanna Perumal Temple, a Vishnu temple located in Thiruneermalai town in outskirts of Chennai at a distance of ~26 km from Kanchipuram. The site is located very close to the Chennai International Airport. Chennai and the surrounding areas of the metropolitan city have various religiously significant sites which attract high tourist footfalls. Additionally, Tamil Nadu being a significant Pilgrimage destination, holds a lot of potential for religious or spiritual activities.

The temple adjacent to site is one of the 108 Divya Desam temples and is situated on the hilltop, which is why it attracts large number of visitors. Therefore, taking

advantage of temple popularity and site's proximity to Chennai International Airport, a Pilgrim Centre is proposed on the temple owned additional land of 140 acres adjacent to the temple premises. Strategically located on the outskirts of Chennai, the Pilgrim centre aims to be a sanctuary for Pilgrims visiting and/or living close to the Chennai Metropolitan area.

Site & Location

The site is located in Thiruneermalai town, on the outskirts of Chennai. It is well connected by roads and rail to the other cities of Tamil Nadu. Tamil Nadu Road Transport Corporation buses also ply regularly from Chennai, Kanyakumari, Madurai, Trichy and other major cities to Thiruneermalai. The Pilgrim Centre is proposed to be developed on a portion of the ~140-acres land parcel. The site is located on S Mada St which connects to NH 32, further connecting site with other prominent cities such as Chennai. Chennai International Airport is ~7.5 km from the proposed site. The other prominent landmarks situated in the vicinity include Pammal Sastha, Pallavaram Lake, Kishkinta Theme Park, Sri Rama Anjaneya Temple.

Masterplanning Considerations

Applicable Regulations

- Tamil Nadu Combined Development and Building Rules 2019** - As per Chennai Metropolitan Area Master Plan, the site area lies in an Institutional zone. The permissible uses include:

For Institutional Zone

Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi public open spaces | Public utilities

| Residential and commercial spaces | Bus and Railway stations | Parking lots including multilevel parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

2. ASI Regulations – The site lies in ASI protected boundary, As per Ancient Monuments, Archaeological Sites and Remains Act:

- a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
- b. Reconstruction or repairs or renovation of existing buildings within the prohibited area requires prior permission from the Competent Authority under the act.
- c. Construction of new buildings, reconstruction or renovation, or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act³⁷.

3. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

The site does not have any pressing issues of sensitivity in and around the complex, which needs to be addressed while preparing the master plan except for its architectural integrity.

³⁷ https://en.unesco.org/sites/default/files/inde_act24_1958_enorof.pdf

Figure 9-1: Location and Proposed Site

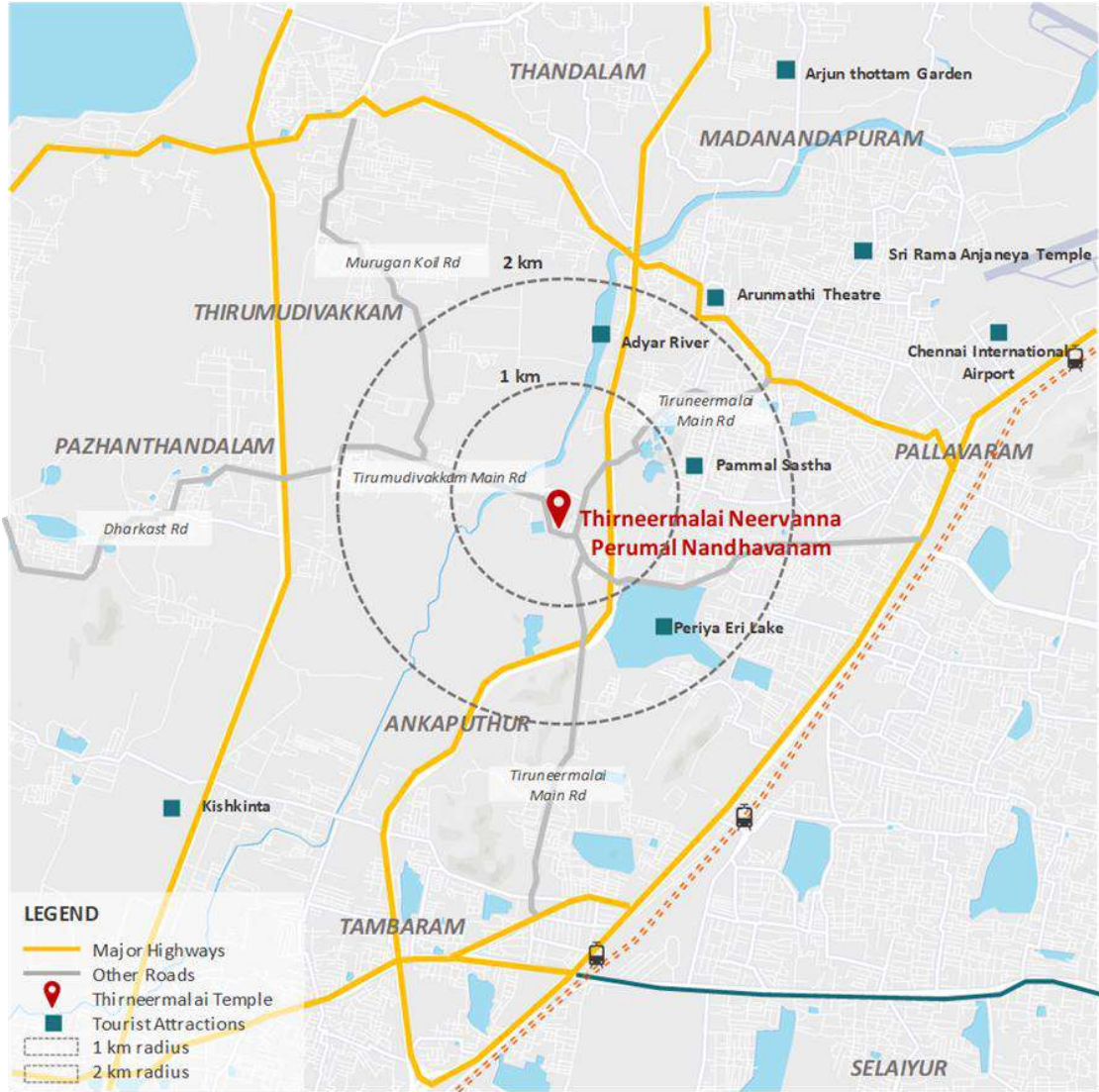
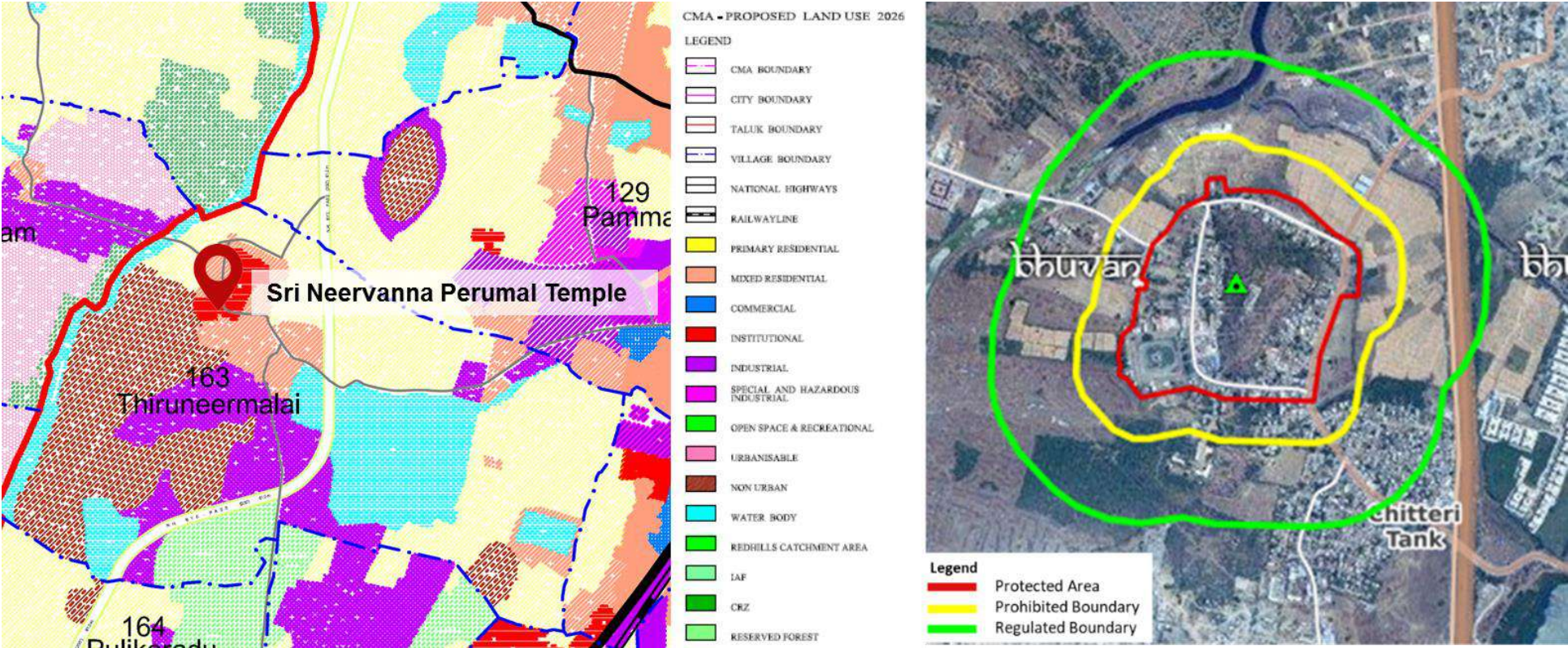


Figure 9-2: Land Use Zones at the Site as per CMA MP 2026



Site Pictures



Vision for the Site

Being one of the 108 Divya Desam dedicated to lord Vishnu, the temple has high religious significance. The temple is located on the hilltop, which is another major reason of attraction for tourists. This site is famous for conducting marriages among locals and for celebrating chariot festivals. Scope for intervention includes improving accessibility to the hill temple, crowd control and maintaining cleanliness.

The Sri Neervanna Perumal Temple authorities also own an additional 140 acres of land adjacent to the temple, which is currently vacant. The recommendation is to develop a small part of the 140-acres site into a Pilgrim Centre, Pilgrim Yatri Niwas, a Kalyana Manadapa and an area for holding religious events.

- **Target Visitor** - The target visitors to be captured here are:
 - **Pilgrims:** Pilgrims visiting the religious sites in and around Chennai, could be tapped as the site is well connected to its nearby surroundings. Additionally, Tamil Nadu hosts multiple religious circuits, which could be a potential driver for the centre.
 - **Locals:** Locals could be a key target audience considering the community offerings of the centre and areas to host religious fairs, melas, local events etc.
 - **Domestic tourists:** Domestic tourists could be tapped as the project entails various spaces to host cultural activities/events.
- **Tourist Projections –** The site envisions to tap the tourist footfalls that the Neervanna Perumal Temple is already capturing (~3.35 lakhs in 2019-2020) and attract more, with its proposed facilities for pilgrims and areas to host cultural events.

Segment	Footfalls (000s)	
	Y5 (P)	Y10 (P)
Domestic	3.35 lakhs	11,500
Foreign	4990	1,200

Proposed Masterplan

Masterplanning Concept

The temple owned 140-acre of additional land was earlier used for farming. However, since last couple of years, most of the land was left vacant and thus came to its natural state. The area chosen lies to the North of the central portion that is bisected by several high-tension lines. The development of a Pilgrim Centre will require only a small portion of the 140 acres. For easy access the Pilgrim Centre is suggested to be planned next to the Temple Tank Area.

Instead of carving out one piece of land from the site and enclose it in an unappealing boundary wall, it is recommended to plan different buildings of the Pilgrim Centre as large traditional courtyard buildings, oriented around clearly demarcated, safe and attractive courtyard spaces, which can have multiple uses. This building typology allows them to be situated right within the green agricultural/ natural landscape and become a valuable part of the countryside landscape instead of an eyesore. Throughout the open space that will be left in a natural state, designated footpath and meditation spaces will be designed for the visitors to have long walks and peaceful meditation experience.

Hard Interventions

1. **Pilgrim Accommodation (Yatri Niwas)** – To facilitate the need of accommodation, a total of five single-story or double-story buildings will be constructed. These buildings will have rooms, dormitories, bathroom facilities, canteen/restaurant, prayer room, library, back of house offices, gathering spaces such as relaxation/lounge areas, etc. *Infrastructure created – 5000 sqm built-up area and 1000 sqm hard landscaped courtyards with trees and 1000 sqm soft landscaping.*
2. **Kalyana Manadapa** – As the temple is famous for conducting marriages, therefore a Kalyana Mandapam of single/double story is proposed which will include facilities required for (semi) indoor and outdoor events. This will enhance the activities and revenue for the temple. Moreover, the Mandapam can also be used for other events such as regular dance practices, singing shows, etc. *Infrastructure created – 5000 sqm built up area and 1500 sqm hard landscaped courtyard with trees.*
3. **Footpaths** – The open space will have designated footpath for the visitors to have long walks. These footpaths will be constructed linking all the buildings and will enhance ease of movement within the site along with the experience of walking in the natural environment. *Infrastructure created – 1500 m long, 2 meter wide footpath.*

*Pilgrim Centre & Religious Event Space*

Soft Interventions

1. **Marketing & Promotion** – The Pilgrim Centre would be integrated with TN Tourism Assist App, along with photo and video documentation. This can be advertised at all nearby religious sites and online platforms.
2. **Creation of a Calendar of Events** – The local Corporation or the Tourism Department could organise various events at the Pilgrim Centre – such as religious mela, festivals, workshops, small-scale spiritual retreats, fairs, community events, etc. This would help to popularise the centre to varied segments of visitors.
 - **Annual Mela/Fair:** The Pilgrim centre could host an annual event like a religious fair or mela, to attract pilgrims. The event can be planned during a festival / peak season which witnesses large influx of pilgrims in the region.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Directional signage should be installed, as per the design guidelines mentioned in Volume A.
2. **Technology Intervention (Package 1)** – Being a special offering for pilgrims, the site should offer the following technological conveniences:
 - Electronic visitor counters at entry point
 - TN Assist App integration (internet connection, QR scanner)
 - CCTV coverage at key locations
3. **Parking** – Visitors coming to the Temple as well as proposed Pilgrim Centre, can park their vehicles at the new designated Car Park Area which will be located at the heart of the development between Temple Tank and Kalyana Mandapam. *Infrastructure created – ~2000 sqm parking area.*
4. **Safety & Security** – Fire Extinguishers, Sand Buckets, Emergency Exits, etc, should be planned and installed at the site, with a monitoring control room within the main building.
5. **Other Amenities** – Amenities like toilets and drinking water stations would be planned and developed as a part of the common amenities/office building and accommodation buildings.



Activities/events at the Pilgrim Centre

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Pilgrim Accommodation	~5,000 sqm
2	Kalyan Mandapam	~5,000sqm
3	Parking Area	~2,000 sqm
4	Footpaths (2 m wide)	150 m
5	Hard Landscape Courtyards	~1,500 sqm
6	Soft Landscape area & Tree Plantations	~1,000 sqm
7	Signage (Package 1)	1
8	Technology Intervention (Package 1)	1

Cashflows & Feasibility

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Pilgrim Accommodation	810.
2	Kalyan Mandapam	1,345

³⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

3	Parking Area	32
4	Footpaths (2 m wide)	3
5	Hard Landscape Courtyards	24
6	Soft Landscape area & Tree Plantations	1
7	Signage (Package 1)	1
8	Technology Intervention (Package 1)	1
Total		INR 2215 L

Structuring & Implementation

The development of the projects is expected to be taken up on PPP model since the Site has high revenue potential and a private party would be better equipped to monetize the said interventions. The Authority would earn revenues based on various models such as lease rental, concession fees, revenue share and/or a mix of these. The specific model can be selected based on a detailed feasibility of the Project.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 94,930³⁸ man-days of construction labour (*spread across 1 – 2 years of implementation*)

During Operations: Jobs created during operations will entail:

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- **Cumulative labour man-days = 30% * CAPEX / 700**

- Accommodation Facility = 50 man – days per day³⁹
- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days⁴⁰
- Activity Operators = 8 – 10 Persons

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 95,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending at the site⁴¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

³⁹ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁴⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁴¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 9-3: Proposed Master Plan – Pilgrim Centre, Sri Neervanna Perumal Temple



10. Ulangalandha Perumal Temple, Kanchipuram

Site Details

District:	Kanchipuram
Name of Site	Ulangalandha Perumal Temple
Site No:	Site 19A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.8371, 79.7047
Land Area:	1 acre (Temple) & 2 acres (Vacant land)
Peak Footfalls:	1,500 per day (August – October)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 8.90 lakhs (2019 – 20) For. – ~16,800 (2019 – 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim/Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~55 km (Chengalpattu)
b. Airport:	~65 km (Chennai)
c. Highway:	~1.5 km from SH58
d. Other:	Nil
Trails featured on:	Divya Desam

Ulangalandha Perumal Temple is located in the heart of Kanchipuram city. It is one of the 108 Vishnu temples identified as “Divya Desam”. The temple is small and of less architectural significance compared to other temples in Kanchipuram, therefore it does not offer anything unique and is only visited by pilgrims, for its religious significance. The temple could still reach its moderate potential by provision of basic amenities, linkages with other famous Kanchipuram temples and efficient utilization of available vacant land.

Existing Condition

Location

The Ulangalandha Perumal Temple is located in Kanchipuram, ~80 km away from Chennai via NH-48. It is also located ~1 km away from the main bus stand and ~1.5 km away from the railway station, making accessibility easy. The temple is situated in a busy mixed-use neighbourhood surrounded with high-density development on all sides. Several prominent tourist landmarks in proximity are Ekambaranathar Temple, Kailasanathar temple, Vaikunda Perumal Temple and Ulangalandha Perumal temple.

Existing Layout

The Site covers an area of 1 acre. It is surrounded by a granite wall enclosing all the shrines. The temple has a rectangular plan and is approached through the 3-tiered western gopuram. There are 3 standalone minor shrines inside the complex, along with the main shrine. The temple prakarams are paved. A temple grove stands to the eastern boundary of the complex. There is a stepped temple tank, across the road from the walled temple complex.

Existing Uses

The site premises are walled off and the main site entry is on the western side, via the Rajagopuram. The following are the major elements of the Site:

- Temple complex – The temple complex is walled off. The complex comprises 1 main shrine and consort shrine. There are few small shrines surrounding the sanctorum. The only other uses housed on the site are offices and some minor storage.
- Temple tank – The temple tank is located outside the temple on the western side and is nearly dry.
- The temple has reasonable popularity and is visited by people for worship. Other uses like rituals, dance recitals are occasional and rarely happen within the temple premises.
- The major festivals celebrated in the temple are Brahmotsavam, Pavithrautsavam and Navarathri.

Other Land Available

Additionally, to the temple complex, the temple also owns ~2 acres on the backside adjacent to the site left vacant.

Master Planning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – As per Kanchipuram Master Plan, site lies in a Mixed-use Residential and Heritage Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

- 2. Height Restrictions** - Heritage Zone height restrictions of ~13 m. (roughly up to 4 storeys) is applicable for the developments around the site.
- 3. TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – Ulangalandha Perumal Temple is ~1,000 years old and one of the most prominent Vishnu Temples in Kanchipuram. Although the temple lacks high regional or domestic footfall, it enjoys moderate popularity among pilgrims and locals, housing 4 Divya Desam temples at one location. Therefore, the temple is clearly well suited for the pilgrim market and does not offer much attraction value to tourists.
- 2. Accessibility** – The site enjoys easy access from all major locations in Kanchipuram. Kanchipuram is ~70 km away from Chennai and enjoys good road connectivity. The town also has 2 railway stations and a major bus stand. The Chennai International Airport is a ~1.5-hour drive away from Kanchipuram.

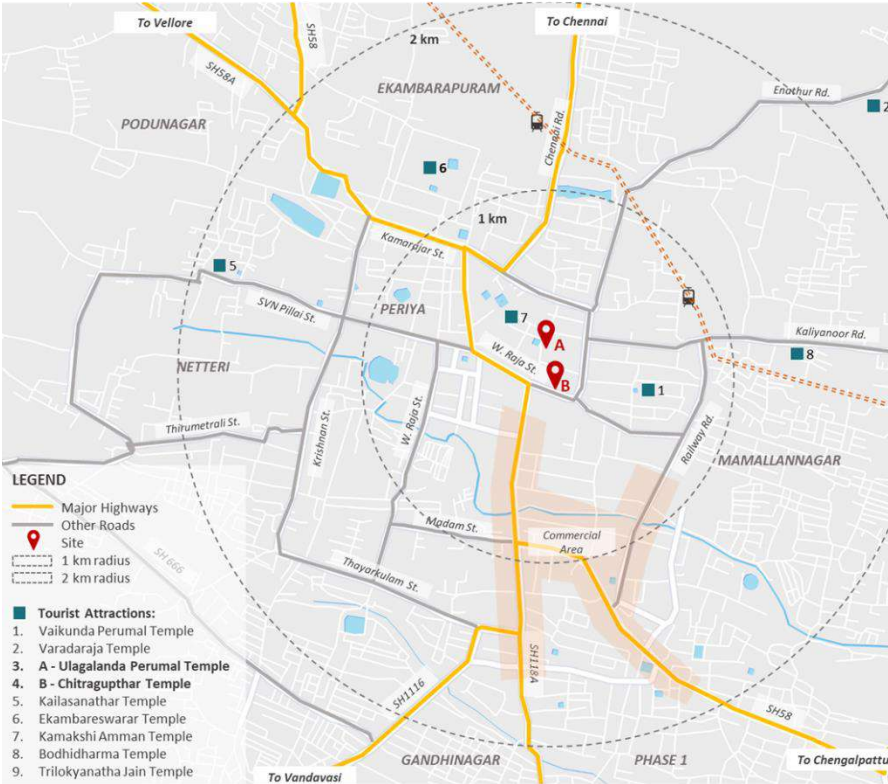
While the town is well connected to nearby towns and cities, the internal road infrastructure is characterised by narrow and congested streets which often face traffic congestion, especially during peak seasons.
- 3. Amenities** – The temple scored high on cleanliness but lacks certain amenities. Dustbins, drinking water facility, designated footpaths and streetlights present inside the site. The site lacks the following amenities.
 - There are no washrooms present inside the temple premises.

- No F&B and Retail shop present inside the temple site, though few eatery joints present outside the site.
- No proper signages/way findings on how to reach the temple.

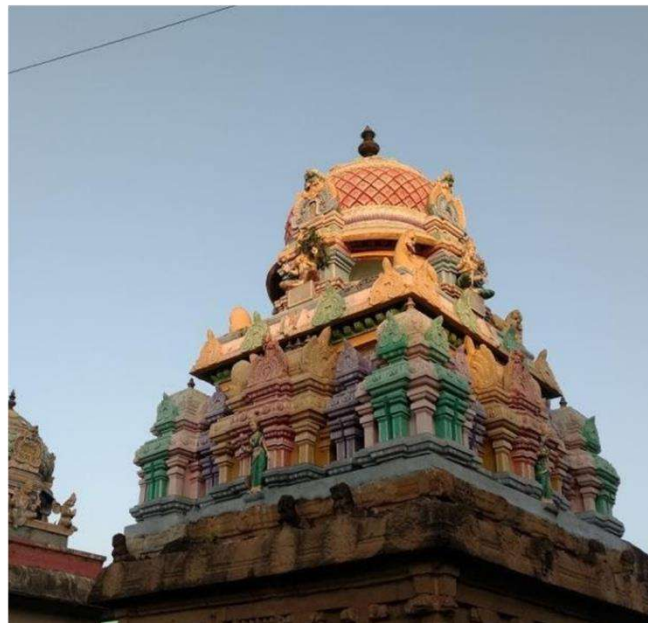
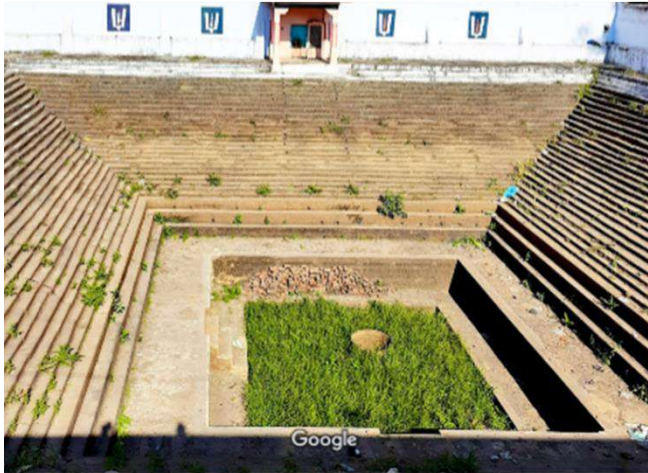
Parking – The Site does not have any designated parking area. The cars and tour buses park on the street surrounding the temple, leading to frequent crowding and congestion during evenings and peak hours.

- 4. Awareness** – The Ulangalandha Perumal Temple enjoys moderate popularity among tourists and pilgrims. While it does not receive as many visitors as the 4 most popular temples of the town, the temple received ~9 lakh visitors in 2019, ~2% of whom were foreign tourists. A few travel and religious referral sites mention this temple. However, it is one of the less-visited spots in the town and requires adequate promotion and advertisement.
- 5. Activities** – On normal days, the temple does not offer any activities other than temple rituals. Intermittently, there are some activities such as temple festivals, feasts, recitals, etc.
- 6. Accommodation** – The hotels here are majorly of the budget category, operated by standalone / regional players. Sriperumbudur (located ~35 km away) has a well-developed hotel ecosystem, with many reputed brands, such as Citrus, Mercure, Fairfield by Marriott, etc.
- 7. Association with Community** – The festivals of the temple enjoy participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts and food items and increasing congestion.

Figure 10-1: Location and Existing Layout



Site Pictures



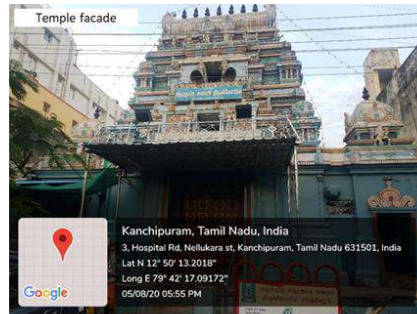
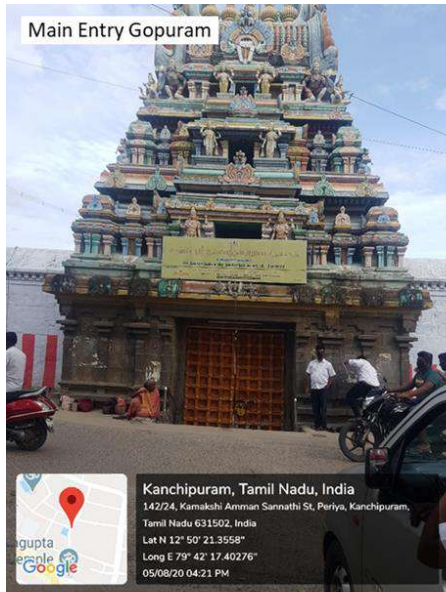


Figure 10-2: Land Uses Regulation Zone at the Site



Vision for the Site

Ulangalandha Perumal Temple has religious importance as it is one of the 108 Divya Desam temples dedicated to Vishnu and also enjoys good locational proximity to other famous temples of Kanchipuram. It holds ample amount of vacant land adjacent to the site which can be developed for facilitation of pilgrims and tourists. However, the site attracts less footfall and popularity and lacks basic amenities and tourist engagement activities.

The temple has the potential to be developed into a religious tourist attraction with leveraging on the available land and upgrading and linking it with other famous temples of Kanchipuram.

The vision for the site is to develop it as a domestic tourist attraction by improving existing infrastructure and basic amenities and developing Yatri Niwas- Pilgrim Rest house on the rear vacant land. This will position the temple as a rest stop in the exhaustive temple trail of the city and improve its overall relevance and popularity.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

The site will target domestic tourists that will apprehend and appreciate the religious significance, architectural beauty, and cultural values of the local setup. The target visitors to be captured here are:

- **Pilgrims and Domestic Tourists** – To develop as an intermediate tourist site in the 4 important temples of Kanchipuram, where visitors can enjoy the religious value of the site and increase its popularity and footfall.
- **High Value Tourists (both domestic and foreign)** - Who want to see the monumental value of the temple architecture.
- **Tourist Projections** – The site is categorized as a **Medium tourist site** with **Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	873	2,386	5,633
High Value Tourists (HVT) (Both domestic and foreign)	34	116	274
Maximum Carrying Capacity	5,913 <i>p.a.</i>		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall and is categorized as a high potential tourism site with high HVT projections, the temple is currently operating beyond its practical capacity with several crowd management practices in place. The projects/

interventions proposed are envisioned along similar lines with the intent to spread and manage the footfall received.

Proposed Master Plan

Masterplan Concept

The objectives of master planning at this Site include:

- **Improving pilgrims' experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing a **Pilgrim Rest house (Yatri Niwas)** at the available vacant land on the rear side for visitors and tourists.
- **Linking it within Kanchipuram temple trail** – Extension of the linkage between Kamakshi Amman Temple & Chitragupta Perumal temple.
- **Improving tourist footfall** through appropriate marketing and promotion.

Hard Interventions

1. **Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, luggage room, changing room, and rest/waiting area can be developed for tourist convenience and ease at the site. It can be placed near the temple tank along the proposed parking. This development will be as per the design guidelines.

Infrastructure Created: ~800 sqft. of building

2. **Yatri Niwas (Pilgrim Rest house)** – Kanchipuram lacks a designated guest house for tourists and pilgrims visiting the city. Therefore, a Yatri niwas of 8000 sqm is proposed on the available vacant land near the site. It will be accessed via a 3m wide pedestrian pathway from the main road.

The Yatri Niwas will be a G+3 structure with a **capacity of 100 keys**. There will be 2 separate blocks of Non-AC and AC rooms connected to a Facility centre via elevated skywalks on the first floor. These blocks will be developed on the lines of courtyard planning concepts for efficient lighting and ventilation in all rooms.

- a. The Non-AC block will constitute 42 Non-AC rooms with attached washrooms and 18 Dormitories with common toilets.
- b. The AC Block will have 30 AC rooms and 10 VIP/VVIP rooms. These rooms will be spacious with better inhouse amenities and facilities.

- c. The Facility centre will be a G+1 structure. It will have a dining hall on the ground floor with 80 seating capacity and a community club and hall on the first floor.
- d. The dining hall would only serve vegetarian food and would be open for tourists and visitors to the temple for dine-in on Ala-carte basis.

The site would also have a beautifully landscaped garden and lawn on the front. These will be complemented with paved pathways and seating arrangements for guests and tourists to spend time. Extensive landscaping and green areas around would create a comfortable space for the guests and enhance visual perception. Local planting will be promoted, and trees would be used to demarcate boundaries and segregate paved and unpaved areas.

Infrastructure Created:

- Non-AC Block – 990 sqm (G+3)
- AC Block – 800 sqm (G+3)
- Community Club (Dining Hall + Kitchen + Community Centre) – 720 sqm (G+1)
- Landscaping Area + Footpaths – 5,490 sqm

3. **Paved Pathway to Yatri Niwas**– The existing road connecting the vacant land and the access road is unfinished and narrow for. It can be widened, and a well-paved pedestrian connection can be established in between. It can be developed out of prefabricated grass paver concrete blocks to make it weatherproof and visually appealing.

Infrastructure Created: ~ 70m long and 3 wide concrete paved pathways

4. **Pilgrim Walkway** – As the temple is 300m north of Chitragupta temple and 300m east of Kamakshi Amman temple, it can be easily included in the temple walkway trail. This can be achieved by developing a shaded 3 m wide pedestrian walkway between the two temples on the side of the main access road. This will improve visibility and importance of the temple and hence attract higher tourist footfalls.

Infrastructure Created: 300 m out of 600 m as shaded pedestrian walkway

5. **Temple tank Rejuvenation** – The temple has a beautiful temple tank that can be replenished through sustainable measures like rainwater harvesting. The tank can also be developed into a better public space for the temple visitors through creating a stepped boundary and soft landscaping.

Infrastructure Created: ~200 m. of Paved, Landscaped, and fenced temple tank boundary



Yatri Niwas



Pilgrim Walkway



Paved Pathway connecting Rear side of the site (Yatri Niwas)

Soft Interventions

- 1. Events** – HR&CE could organise various events and pilgrim offering and food servings in the open area of Yatri Niwas during important festivals. This would help to popularise the site to other segments of visitors.
- 2. Marketing & Promotion** – The site to be Integrated with TN Tourism Assist App, along with photo and video documentation. This can be advertised at all key public locations and online platforms.
- 3. Acquisition of additional land** – It is suggested that HR&CE acquires the 600 sqm vacant land available adjacent to the temple tank on the southern side. This land can be efficiently used for developing car parking areas for visitors staying in Yatri Niwas.
- 4. Site management** – The site must be managed by the respective management authorities in the aspects of placing restrictions on waste littering at the site and tourist loitering at the site. It can be done by deploying adequate full-time security staff at the site.
- 5. Curation of facilitated tours** – Develop tours with QR codes, Self-Guided Audio Tours, etc. linking Kamakshi Amman Temple and Chitragupta temple. Community integration can be enhanced by appointing locals as Local Guides-trained and accredited.

Amenities Plan

- 1. Pay and Use Toilet Blocks** – ~2 units of toilets are proposed to be provided near the facilitation centre at the temple tank outside the temple complex.
- 2. Signages** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site's importance. All the signages at the site should be as per the design guidelines.
- 3. Parking** – Surface parking is proposed to be planned along the Sannadhi street and temple tank in front of the temple. These would be regulated and used for only temple purposes. 10 car parking bays can be created at the proposed location.

- 4. Additional Parking** – On the land proposed to be acquired by HR&CE, 12 car parking bays can be developed purposefully used for accommodating vehicles for Yatri Niwas.

- 5. Technology Interventions (Package 1)** – As the site is small in scale and does not attract a large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines.

Trunk Infrastructure

As Ulangalandha Perumal Temple is accessed via narrow roads, road widening should be proposed for better circulation to the Municipal corporation.

Project Identified

#	Project Component	Scale
1	Amenity Block	50 sqm
2	Yatri Niwas (Pilgrim Rest house) <ul style="list-style-type: none"> Non-AC Block AC Block Community Club (Dining Hall + Kitchen + Community Centre) Landscaping Area + Footpaths 	990 sqm 800 sqm 720 sqm 5490 sqm
3	Paved Pathway to Yatri Niwas	70 m
4	Shaded Pilgrim Walkway (Shading device type 1)	300 m (partly shaded)
5	Signage (Package 1)	1
6	Temple tank Rejuvenation	990 sqm
7	Parking (Paved Yard)	10 ECS
8	Parking (Paved Yard) – Additional Land	12 ECS
9	Pay and Use Toilet Blocks	2 units
10	Technology (Package 1)	1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Yatri Niwas (Pilgrim Rest house)	
	• Non-AC Block & AC Block	1,440
	• Community Club (Dining Hall + Kitchen + Community Centre)	195
	• Landscaping Area + Footpaths	5
2	Paved Pathway to Yatri Niwas	2
3	Shaded Pilgrim Walkway (Shading device type 1)	60
4	Signage (Package 1)	1
5	Temple tank Rejuvenation	15
6	Parking (Paved Yard)	5
7	Pay and Use Toilet Blocks	20
8	Technology (Package 1)	1
Total		INR 1.5 – 1.7 Cr.

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Parking** – About 22 additional parking spaces assuming a daily occupancy of 50%, would earn the temple an estimated revenue of *INR 1 Lakh*.
2. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple *INR 9 Lakhs*.
3. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 38 Lakhs*.
4. **Yatri Niwas** – Assuming an average of 60% occupancy across the year at an average tariff of *INR 2200* across the ~100 keys consisting of AC, Non-AC & dormitory categories, the temple would earn a revenue of *INR 4.63 Cr.*

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 5 CR at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the facilitation centre.
 - b. A **security personnel** at the Yatri Niwas.
 - c. An **Administration staff** to overlook the operations of the Yatri Niwas.
 The projected costs incurred is estimated at *INR 5 Lakhs*.

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the Yatri Niwas premise and the community block.
 The projected costs incurred is estimated at *INR 8 Lakhs*.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at *1.5 percentage* of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 26 Lakhs*.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at *2 percentage* of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 35 Lakhs*.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
The projected costs incurred is estimated at *INR 3 Lakhs*.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.
The projected costs incurred is estimated at *INR 35 Lakhs*.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.
The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 1 CR at Y5*.

Given that the estimated revenues (*INR 5 Cr.*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 1 Cr.*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple and the Kanchipuram pilgrim/ tourist eco-system.

Implementation Model

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. **Community hall** at the Yatri Niwas to be rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.

While the development of the **Yatri Niwas** be taken up the HR & CE dept. the operation and maintenance of the facility can be tendered out to private hotels operators on a 3-year retainer contract basis. This would help in maintaining a benchmark in the quality of the services rendered.

#	Project Component	Agencies in Charge	Phasing of Development
1	Yatri Niwas (Pilgrim Rest house)	HR & CE	Y0 – Y2
2	Paved Pathway to Yatri Niwas	HR & CE	Y0 – Y2
3	Shaded Pilgrim Walkway	HR & CE	Y0 – Y2
4	Signage (Package 1)	HR & CE	Y0 – Y2
5	Temple tank Rejuvenation	HR & CE	Y0 – Y2

#	Project Component	Agencies in Charge	Phasing of Development
6	Parking (Paved Yard)	HR & CE	Y0 – Y2
7	Pay and Use Toilet Blocks	HR & CE	Y0 – Y2
8	Technology (Package 1)	HR & CE	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 72,500⁴² man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Accommodation Facility = 72 man – days per day⁴³
- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons⁴⁴

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

⁴² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 1,81,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 660 Cr. at the site⁴⁵.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

⁴³ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁴⁴ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁴⁵ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 10-3: Proposed Master Plan – Ulangalandha Perumal Temple, Kanchipuram



11. Ulagalanda Perumal Koil, Thirukoilure

Site Details

District	Villupuram
Name of Site	Ulagalanda Perumal Koil
Site No:	Site 61 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.9669, 79.2024
Land Area:	5 acres
Peak footfalls:	10,000 per day (Vaikunta Ekadasi, Panguni Bhramoutsavam)
Operator:	Thiru Vikarama Devasathanam
Site Ownership:	Thiru Vikarama Devasathanam
Tourist Footfall:	Dom. – 11.5 Lakh (2019 - 2020) For. – 330 (2019 - 2020)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	6 km (Thirukoilure)
b. Airport:	185 km (Chennai)
c. Highway:	Abutting SH-137
d. Other:	Nil
Trails featured on:	Divya Desam, Siddhar

Ulagalanda Perumal Temple or Trivikrama Temple is a Hindu temple dedicated to Vishnu, located in Thirukoilure in Villupuram district. The temple holds a high religious significance as it is one of the 108 Divyadesam dedicated to Lord Vishnu and also one of the Panchakanna (Krishnaranya) Kshetrams - the five holy temples associated with Krishna, an avatar of Vishnu. The scope for interventions at the temple is limited to visitor facilitation and effective utilisation of spaces inside the temple complex, especially the open areas.

Existing Condition

Location

The Ulagalanda Perumal temple is located at Thirukoilure town in Villupuram district of Tamil Nadu. Other attractions located nearby are Kailasnathar Kovil - ~2 km.

- Arulmigu Veerateshwarar Temple – 1.4kms
- Sri Raghuttama Tirtha Moola Brindavana, Uttaradimath – 1.5kms

Existing Layout

The temple covers an area of 5 acres and houses residential buildings in the precincts around the temple tower. The temple has an eleven-tiered rajagopuram with a height of 192 ft (59 m), the third tallest temple tower in Tamil Nadu.

- The temple site is easily accessed via SH 9.
- There is a 40 feet tall Garuda pillar with a small temple built on it opposite the Supreme Lord's shrine. It is believed that Garuda deva is worshipping Lord from this temple.

Existing Uses

- The temple is currently used as a place of worship by the local and regional devotees and a religious tourist destination by the local, regional and some foreign tourists.

- The temple possesses an area of 5 acres which houses residential buildings in the precincts around the temple tower. There are no empty spaces around and the whole area appears congested.
- The temple holds festivals, which experiences fairly good footfall.

Other Land Available

The temple does not own any additional land in the area apart from the temple complex.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction –

- The main attraction of this temple is, one among the 3 gopurams, which is the eleven-tiered Rajagopuram with a height of 192 ft (59 m), the third tallest temple tower in Tamil Nadu
- There are two temple tanks, currently in dried state, in the temple site vicinity. The water bodies are in neglected state and has a potential to be developed as community congregation space around the temple.

2. **Accessibility** – The Perumal temple site can be accessed from Cuddalore by the Cuddalore – Sankarapuram road. This temple is easily accessible by public transport from Villupuram. The presence of retail shops, residential settlement and roadside parking in the temple surrounding shas made the last mile access congested.

3. **Amenities** – The temple lacks in adequate facilities in and around the temple.

- No cloak room, waiting area facilities are available for pilgrims.
- The temple premises are clean and equipped with dustbins, but the surrounding areas of the temple are unclean with open drainages, spit marks and waste.

4. **Awareness** – It is termed as a must-visit temple for Tamil Vaishnavites since Naalayira Divya Prabhandam (also known as Dravida Vedham) originated from here only. It draws about 10000 people during peak seasons. About 95% of people who come to this site are locals and the rest 5% are foreigners according to the temple officials. The locals who visit this site come from Maharashtra, AP, and Karnataka. The international visitors are from Malaysia and Singapore.

5. **Activities** – The temple priests perform the pooja (rituals) during festivals and six times a daily basis. As at other Vishnu temples of Tamil Nadu, the priests belong to the Vaishnavite community, a Brahmin sub-caste. Various festivals are celebrated in the temple, with the 15-day Panguni Brahmotsavam in March–April with Sri Pushpavalli Thayar Oonjal, being the most prominent one.

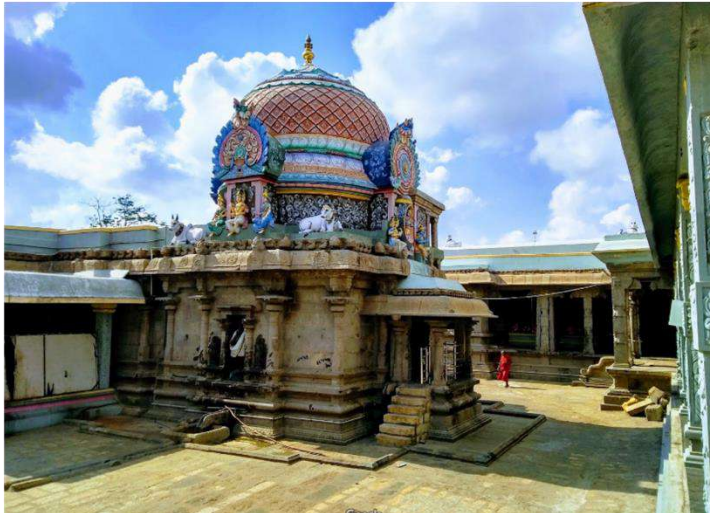
6. **Accommodation** – There are a handful of accommodation options within a 500m radius. This may not meet the needs of all visitors. The visitors that come here generally travel to this place from their home or from a nearby town. There are many other options in the town of Villupuram.

7. **Association with Community**- The temple is located in the middle of a dense residential neighbourhood. Apart from the place of worship for locals, the temple is closely knit with day-to-day activities of the people. The locals actively engage in operations and celebrations celebrated in the temple.

Figure 11-1: Location and Existing Layout



Site Pictures





Vision for the Site

Ulagalanda Perumal Koil holds a high religious value among locals and regional tourists, especially devotees of lord Vishnu. Currently, the site has uninviting entrance, due to encroachments, garbage, and congestion in the access street. The temple being one of 108 Divyadesam is of fair relevance to locals but is less known to other regional devotees. The site is envisioned as a welcoming religious pilgrim site, which engages locals with socio – cultural activities. The vision includes enhancement of visitor's experience by upgradation of existing amenities and improvement in access street layout.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu, Andhra Pradesh and Karnataka due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,150	1,239	1,318
High Value Tourists (HVT) (Both domestic and foreign)	1	1	1
Maximum Carrying Capacity	19,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality

of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – by upgradation of existing amenities and improvement in access street layout.
- Creating informal spaces for **gathering and hosting** socio-cultural events around the site.
- Creating a **clean and inviting environment** in the temple surroundings by civic improvement.

Hard Interventions

1. **Tourist Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, luggage room, changing room, and rest/waiting area can be developed for tourist convenience and ease at the site. A tourist information gallery, describing the temple's history and legends. It can be placed at the entrance of the temple. This development will be as per the design guidelines
Infrastructure Created: ~x sqm of building.

2. **Temple Tank Rejuvenation:** The temple complex houses two water tanks, in its close proximity. As an added attraction, the water tank can be developed into a landscaped garden, with additional elements of pathways, lighting fixtures along the tank. Traditionally, the tanks were used to recharge the aquifer and maintain the ecological cycle. The temple tank would be replenished through rainwater harvesting measures and revived for same purposes. Alternatively, it could also function as a Community congregation space, and host cultural events
Infrastructure Created: ~xx sqm of soft landscaped areas

3. **Rest Area: Shading Device Type 2:** The temple site is located in dense residential neighbourhood with shops leading the way unto the temple entrance. The narrow and congested area lacks in any kind of resting/ waiting facility for the tourists. Thus, a shaded resting area near the temple tank would serve tourists visiting the site.



Soft Interventions

- 1. Civic Improvement** – The entrance of the temple is through the dense neighbourhood, which are mostly illegal encroachments or makeshift shops without licenses. In addition, the open drains and garbage littered on road, makes the entrance to the temple unclean and un-welcoming. The local municipal body is encouraged to take up a cleanliness and sanitation drive, with the help of local people, to address this issue.
- 2. Linear Parking** – The temple site being approached by narrow lanes, covered with unregulated vending and on-street parking, makes the entrance to the temple uninviting. The lack of open space in close vicinity to the temple, encourages tourists to park on the street leading to temple. The local municipal body should facilitate linear park on – street parking, to avoid congestion. Also, local body should facilitate the parking for temple, where the land is available.
- 3. Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.

Amenities Plan

- 1. Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in glossary of interventions.

- 2. Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site.
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations
- 3. Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines.
- 4. Dustbins** – The entrance of the temple is through a crowded marketplace with garbage littered on roads. Thus, installation of 5 dustbins near the temple site would maintain the hygienic conditions of the surrounding areas.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions required.

Project Identified

#	Project Component	Scale
1	Tourist Facilitation Centre (Type 1)	150 Sqm
2	Shading Device Type 2	60 Sqm
3	Temple tank rejuvenation (East) <ul style="list-style-type: none"> • Cleaning of temple tank • Soft landscape 	8500 sqm 700 sqm
4	Temple tank rejuvenation (West) <ul style="list-style-type: none"> • Cleaning of temple tank • Soft landscape 	1245 sqm 290 sqm
5	Technology Intervention (Package 1)	1
6	Signage (Package 1)	1
7	Drinking Water Station	3
8	Dustbins	5

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple tank - Landscaping	1
2	Paved walkway - shade	1
3	Dustbins	1
4	Drinking water station	3
5	Signage Package 2	3
6	Technology Package 1	1
7	Tourist Facilitation Centre (Type 1)	15
Total		INR 25 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk to be rented out at INR 2 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 2 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 2 Lakhs*.

⁴⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial. The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple tank - Landscaping	1	Y0 – Y2	Temple Trust
2	Paved walkway - shade	1	Y0 – Y2	Temple Trust
3	Dustbins	1	Y0 – Y2	Temple Trust
4	Drinking water station	3	Y0 – Y2	Temple Trust
5	Signage Package 2	3	Y0 – Y2	Temple Trust
6	Technology Package 1	1	Y0 – Y2	Temple Trust
7	Tourist Facilitation Centre	15	Y0 – Y2	Temple Trust
Total		INR 25 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,100⁴⁶ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labour assumed for computation = *INR 700* per day
- Cumulative labour man-days = 30% * CAPEX / 700

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days⁴⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 2,700 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 132 Cr. at the site⁴⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%

- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

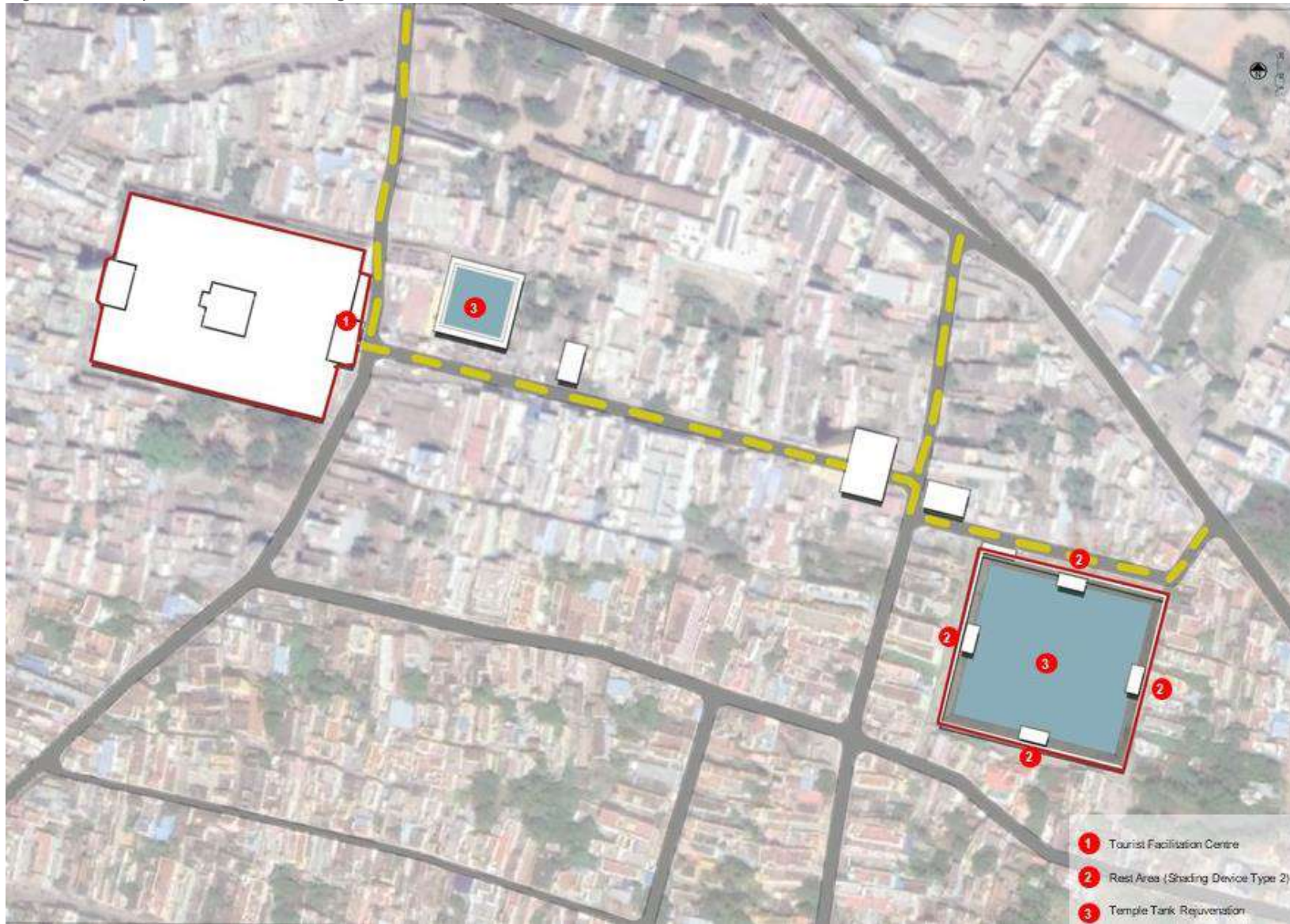
The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

⁴⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁴⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 11-2: Proposed Master Plan - Ulagalanda Perumal Koil, Thirukoilure



12.Devanatha Swamy Temple, Thiruvanthipuram

Site Details

District:	Cuddalore
Name of Site	Thiruvahindrapuram Devanatha Swamy Temple
Site No:	Site 71A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.7449, 79.7092
Land Area:	~5 acres (Temple) ~6 acres (Additional Land)
Peak footfalls:	~10,000 per day (Mid-October)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 21.3 lakhs (2019 – 20) For – 52 (2019 – 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim & Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~6 km from Tirupadripuliyur Railway Station
b. Airport:	~25 km from Pondicherry Airport
c. Highway:	~ 1.1 km from SH 68
d. Other:	Nil
Trails featured on:	Divya Desam

The temple is one of the Divya Desam and Nadu Natu temples in India. While it is very well known amongst the devotees for marriages and has a good locational advantage, it is let down in terms of its awareness and lacks some tourist amenities. It is majorly visited by the devotees from Karnataka, Telangana, AP, and few other parts of Tamil Nadu. The temple site has the potential to be developed as a religious tourist destination. Therefore, the scope of interventions includes the development of amenities such as a facilitation center, public plazas, observatory decks, a landscaped garden, and parking areas. Besides the development of new facilities, up-gradation of existing toilet block and beautification of temple entrance is envisioned along with appropriate marketing for the temple visibility.

Existing Condition

Location

Thiruvahindrapuram Devanatha Swamy Temple is located in Thiruvanthipuram, a village (~8 km) on the outskirts of Cuddalore in Tamil Nadu, India. The nearest airport is 25 km away in Pondicherry that runs charter flights. Located on a riverbank of River Kedilam, the temple is surrounded by village houses, agricultural fields, and vacant lands. The site has many prominent attractions in the vicinity such as Silver Beach (~10 km), St. Davis Fort (~7 km), Sri Vamanapuriswarar Temple (~7 km), Arulmigu Shri Lakshmi Hayagirivar Temple (~100 m)

Existing Layout

The temple is located on the foothills of Outshadagiri, a small hill, which houses the temple of Hayagriva. It occupies an area of 5 acres. The river Kedilam, located on the other side of the temple which flows from south to north and is locally called Uttaravahini. Other prominent features of the temple are:

- The temple built in Dravidian Architecture is the only Vishnu temple built on the banks of the river, while there are a few prominent Shiva temples. A granite wall surrounds the temple, enclosing all its shrines and bodies of water.

- The temples face east, but the Rajagopuram, the temple's gateway tower, is located on the western entrance which has five tiers and raises to a height of 18 m.
- The image of the presiding deity, Devanathaswamy, is housed in the central shrine.
- The sanctum also houses the image of the consort, Senkamalavalli Thayar (also called Hemabhujavalli, Vaikunta Nayagi, and Amruthavarshini) in sitting posture.
- The temple is the only historical temple in South India to have a shrine of Hayagriva. The temple houses a temple tank which is called Sesha Theertham.

Existing Uses

The temple is currently used as a place of worship by the devotees. Many architectural enthusiasts visit the place to understand its rich Dravidian architecture style. Devotees throng the temple with their kids for excellence in education. Pens, pencils, and books of children are placed at the foot of Lord Hayagriva for his blessings and are later used by children. Locals and pilgrims flock to the temple premises to celebrate festivals of Portasi Thiruvanam and 10 Day Chittirai-Brahmotsavam. The temple does not house any kind of retail shops except for 1 Prasadam stall.

Other Land

Apart from the 5 acres temple complex, the temple authority also owns additional land of about 6 acres. The additional land is located far from the temple and is leased out for agricultural purposes.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The unique feature of this temple is that it is one of the 108 Divya Desam temples. There are only 2 Nadu Naatu Tirupati all over India, and this temple is one of them. It is situated on the hillock which is believed to be a piece of the Sanjeevni mountain that dropped down when Lord Hanuman carried the mountain to Lanka. The temple is the only historical temple in South India to have a shrine of Hayagriva. The temple enjoys immense popularity among pilgrims and locals for marriages. The temple's location adjoining the Garuda / Kedilam River and being partly situated on the mountain makes it an attraction point for tourists. The adjoining river is considered to have benefits and importance equal to that of River Ganga in North India, thus attracting significant visitors.
- 2. Accessibility** – Thiruvahindrapuram Devanatha Swamy Temple is situated on the outskirts of Cuddalore. The site is accessible from Tirupadiripuliyur railway station at a distance of ~6 km. The temple is accessible via a wide road that connects with SH 68, located ~1 km away. Bus stop and auto stand are located 100 m from the main entrance of the temple. Therefore, the most optimal way to reach the temple is through an auto or bus.
- 3. Amenities** – The condition of tourist amenities within and around the temple is quite poor. The site includes facilities of drinking water, lodging, and safety & security. The site lacks the following facilities.

- Inadequate number of toilets.
- No ramps/lifts for divyaang pilgrims to climb the hilltop temple.
- No tourist Information center.
- No retail/temple souvenir shop inside the temple.
- Narrow single-lane access road (3 km long) to the hilltop temple.
- Inadequate Streetlighting.

Parking – There is no designated parking area on or near the site. On regular days, the visitors park their vehicles on the street outside the temple. The vacant land lying adjacent to the temple is made available for parking during peak season. The parking charges collected on an hourly basis from the visitors are INR 2 for Two-wheeler, INR 25 for Car and INR 20 for Van parking.

- 4. Awareness** – The temple has much popularity and belief amongst the local devotees. It is a well-known destination for conducting marriages amongst the locals. The temple is most often visited by local tourists from Karnataka, Andhra Pradesh, and Telangana. Owing to its location near Cuddalore also attracts certain foreign tourists. There are several travel bloggers and architecture enthusiasts who have written about the greatness of this temple. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc.
- 5. Activities** – The temple does not offer any special services or activities that can attract many people, except for Annadhanam. On normal days, it is open for the visitors to worship, and on a festival like 10-day Brahmotsavam, special poojas are conducted. Apart from religious activities, the temple is a preferable and popular venue for organizing marriages by the locals. The temple on average organizes around 3000 marriages per year.
- 6. Accommodation** – The temple provides accommodation options to tourists. There are 3 rooms available on the temple campus that can be rented by the visitors. The temple administration has also developed a dormitory hall and 100 room lodge near the temple to facilitate the visitors. However, visitors often prefer to stay at Cuddalore due to the availability of a wider range of accommodation options and attractions in its vicinity.

- 7. Association with Community** – The locals are well aware of the temple's history and significance. They readily participate in the everyday rituals and flock to the site in large numbers during festive seasons. Vendors and hawkers flock outside the temple premises. Beggars from the locality can be observed sitting on the steps leading to the hilltop temple.

Figure 12-1: Location & Existing Layout



Site Pictures





Vision for the Site

- The temple is one of the 108 Divya Desam temples. It has fifty inscriptions from Chola, Pandya, Vijayanagar, and Koperunjinga period, making it a religiously and historically significant temple. It enjoys immense popularity among pilgrims and tourists alike. The site itself provides various facilities of housing mandapams, Annadanam hall, and goshala. However, the site lacks some basic amenities in and around the temple premises.
- The temple has huge potential to enhance and improve the pilgrims' and tourists' experience by adding the missing facilities. It has a good opportunity to provide the needed amenities because of the availability of vacant land around the hilltop temple.
- The vision for the site is to enhance the amenities within the temple premises by utilizing the vacant land to provide amenities such as a shaded ramp for divyang & elderly visitors, facilitation center including inquiry desk, galleries, washrooms, and seating/waiting area, designated parking area for the visitor's convenience on the site. Besides the development of new amenities, existing infrastructure such as toilets will be upgraded, and beautification of temple entrance is proposed.
- Target Visitor** – The site currently draws a significant number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of domestic tourists.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	2,130	2,294	2,441
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	19,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious and architectural significance and its popularity among pilgrims and domestic tourists, the concept of the masterplan includes:

- Improving pilgrims' experience** at the temple – through improved basic amenities of toilets, seating area, and parking.
- Enhancing interactive spaces on the site** with development of Tourist Information/Facilitation center, Public Plazas and Observatory Decks.
- Beautification of temple entrance** to develop an entrance plaza for tourist engagement.
- Improving tourist footfall** through appropriate marketing and promotion.

Hard Interventions

- Tourist Facilitation Center** – A small tourist information/facilitation center with an inquiry desk, galleries, luggage room, changing room, and rest/waiting area, toilets, drinking water station, and a temple-souvenir shop will be developed for tourist convenience and ease at the site. The temple is built in Dravidian-style architecture and has 50 inscriptions from different dynasties, which will be portrayed in the galleries. The facilitation center can be placed on the southwest side of the hilltop temple. This center will also act as an engaging space for the

tourists. The development of the facilitation center will be as per the design guidelines mentioned in the Glossary of Interventions.

Infrastructure Created: ~150 sqm of building.

2. **Beautification of Temple Entrance** – The temple entrance faces Garuda / Kedilam River and thus has the potential to be developed into an engaging space. Therefore, beautification of the temple entrance by providing greens, temporary retail kiosks, shaded seating areas, and pathways connecting the temple entrance with steps to the river is proposed. This area can act as an entrance plaza where visitors will engage with the river, retail shops, and relax in a seating area with a picturesque view of the river.

Infrastructure Created: A ~200 sqm of paved area, ~30 sqm of soft landscaping, 9 sqm of 2 retail kiosks (3 by 3 m) along with 2 canopy-style seating areas.

3. **Observatory Deck/ Paved Public Plaza** – The hilltop temple has ample vacant land around it from where the picturesque view of the river, temple, and the village can be seen. Therefore, an observatory deck/paved public plaza is proposed on the north-west side of the temple. This will allow visitors to engage in different activities on the site.

Infrastructure Created: A ~630 sqm of paved observatory deck/paved public plaza.

4. **Construction of Shaded-Ramp** – The temple housing Hayagriva is accessible by climbing 74 steps, which makes it inaccessible for divyaang, elderly, and children. Therefore, a canopy-style shaded ramp of 2 m width is proposed to be constructed along with the existing steps for the convenience and ease of visitors on the site.

Infrastructure Created – ~40 m long and 2 m wide ramp construction along with canopy-style shading device.

5. **Landscaped Garden**– The vacant land on the hilltop will be utilized to develop landscaped garden which will include naturally shaded seating areas and pathways for peaceful walks. This will enhance the aesthetic appeal of the temple and will allow visitors to spend more time on the site, resulting in attracting visitors and enhancing temple revenue. The landscaping will be done using native flora and locally sourced pavers.

Infrastructure Created – A ~1800 sqm of landscaped garden with 9 number of shaded-benches.



Beautification of temple entrance-paved entrance plaza



Observatory deck



Landscaped Garden

Soft Interventions

1. **Marketing and Promotion** – To enhance the visibility of the temple, it must be marketed well. Owing to its location, ~10 km from Cuddalore Beach, Silver Beach, and other prominent historical sites, the temple could be integrated into various tourism circuits of temples and beaches. Increasing visibility with

strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract tourists.

- 2. Guided Tours** – A self-guided audio tour provision shall be present on the site to portray the rich history of the site. As the temple is popular among religious pilgrims and is located in the close vicinity of many prominent places. Therefore, the site shall be curated with other important sites for day tours. Licensed guides shall be deployed to guide the visitors about the history and significance of the temple.
- 3. Community Engagement** – The local community is involved in the everyday activities of the temple. Their involvement can be enhanced with the development of landscaped gardens, public plazas, and observatory decks on the site. Locals can also be engaged by allotting them temporary retail kiosks on a rotational basis. Moreover, locals are aware of the temple's history and thus can be trained and appointed as guides on the site.

Amenities Plan

- 1. Signage** – Signages can be installed along the approach roads and on the prominent sites within the vicinity, indicating the presence of the site. Further, signages explaining the inscriptions and history of the temple shall be erected within the site at appropriate places. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
- 2. Streetlighting** – The site is observed to have inadequate streetlights, making it dark and inaccessible at night. Therefore, streetlighting along the outer periphery of the temple complex is proposed to be positioned at appropriate distances. Sustainable means can be adopted, and the streets can be kept illuminated by deploying solar streetlights.
Infrastructure Created: ~640 m long stretch will be provided with streetlight at the appropriate distance.
- 3. Parking** – Currently, on regular days parking is practiced on-street, while during peak seasons, vehicles are parked on the vacant adjacent plot, Thus to solve the parking issue, a designated parking space along the south side of the temple

premises is proposed. This will allow 11 numbers of cars to be parked in a regulated manner, making it convenient for tourists.

Infrastructure Created – ~230 sqm Paved Parking areas with a total of 11 ECS.

- 4. Technology Interventions** – For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:

- Free WiFi
- Compatibility with TN Assist App
- The package shall exclude CCTV's as there is a sufficient number of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Tourist Facilitation Center (Type 1)	150 sqm
2	Beautification of temple entrance <ul style="list-style-type: none"> • Paved plaza • Soft landscaping • Canopy-style Seating Area • 3*3m Retail Kiosk 	200 sqm 30 sqm 2 2
3	Observatory Deck/Paved Public Plaza on Hilltop	630 sqm
4	Construction of Canopy-style shaded Ramp (2 m wide)	40 m
5	Landscaped Garden <ul style="list-style-type: none"> • Soft Landscaping • Circular seating area 	1800 sqm 9
6	Signage Package 1	1
7	Streetlighting	640 m
8	Parking (230 sqm of Paved Yard)	11 ECS
9	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre (Type 1)	16
2	Temple Entrance - paved plaza	1
3	Temple Entrance - landscaping	1
4	Seating area	1
5	Retail Kiosks	3
6	Paved Public Plaza on Hilltop	11
7	Ramp	1
8	Streetlights	10
9	Seating	1
10	Landscaped area	2
11	Signage Package 1	1
12	Parking	3
13	Technology Package 1	1
Total		INR 50 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

- Kiosks** – Captures 3 kiosks, each to be rented out at INR 1.5 Lakhs per annum.
- Parking** – Capturing 11 ECS at 40% occupancy per day with 2 rotations at INR 15 per ECS.
- Pay per view Tickets** – Assuming that ~30% of the visitors would use the observatory at INR 10 per person.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 75 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - An **Admin staff** to manage the operations of the retail space and the observatory area.

- b. A **Helpdesk staff** each at the facilitation centre and the observatory space.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
 3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
 4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
 5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
 6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
 7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
 8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 35 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple as well as the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Tourist Facilitation Centre (Type 1)	16	Y0 – Y2	HR & CE
2	Temple Entrance - paved plaza	1	Y0 – Y2	HR & CE
3	Temple Entrance - landscaping	1	Y0 – Y2	HR & CE
4	Seating area	1	Y0 – Y2	HR & CE
5	Retail Kiosks	3	Y0 – Y2	HR & CE
6	Paved Public Plaza on Hilltop	11	Y0 – Y2	HR & CE
7	Ramp	1	Y0 – Y2	HR & CE
8	Streetlights	10	Y0 – Y2	HR & CE
9	Seating	1	Y0 – Y2	HR & CE
10	Landscaped area	2	Y0 – Y2	HR & CE
11	Signage Package 1	1	Y0 – Y2	HR & CE
12	Parking	3	Y0 – Y2	HR & CE
13	Technology Package 1	1	Y0 – Y2	HR & CE

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,100⁴⁹ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days per day⁵⁰
- Retail and F&B spaces = 5 man-days per day⁵¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 5,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 250 Cr. at the site⁵².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%

- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

⁴⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

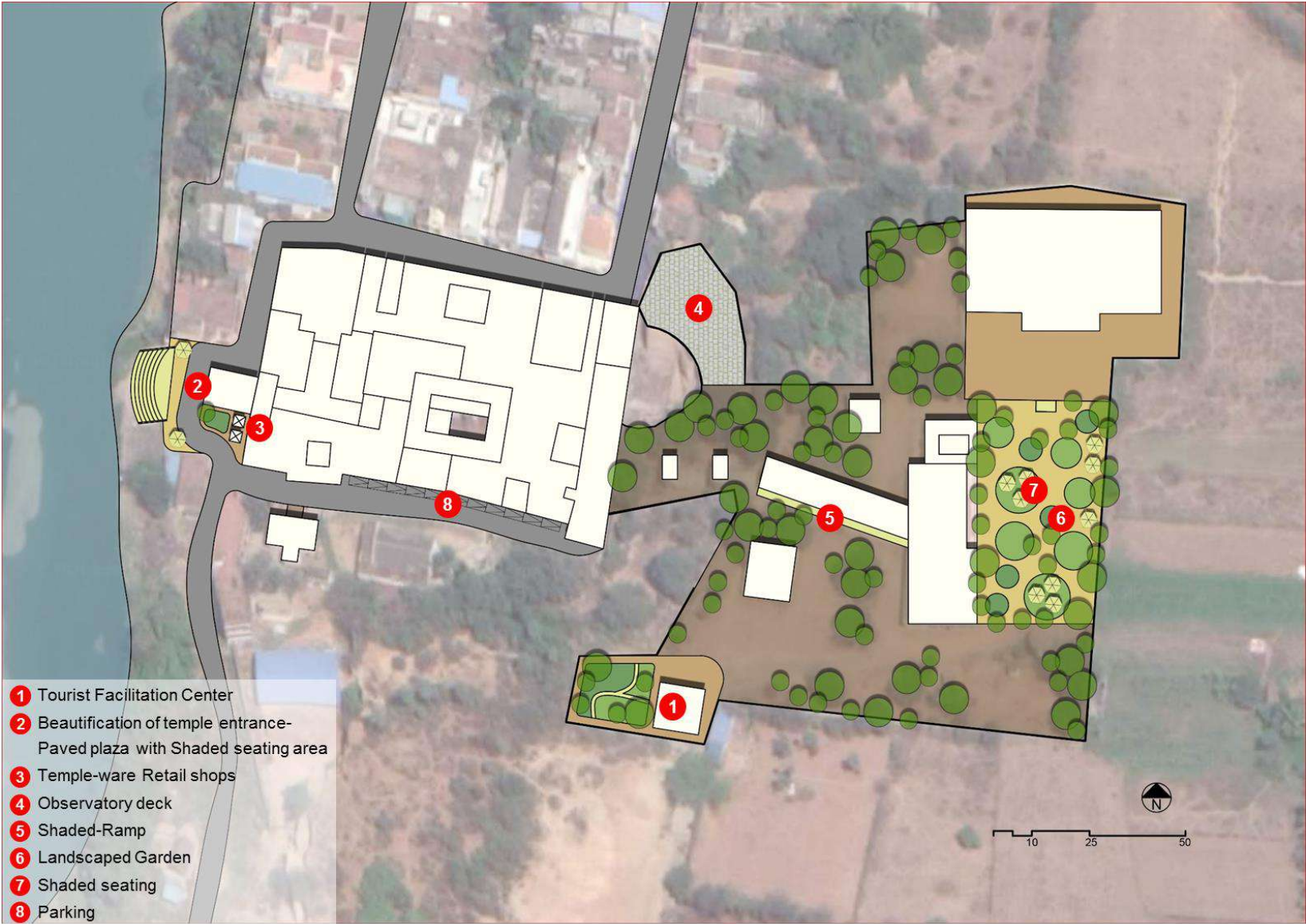
- Cumulative labour man-days = 30% * CAPEX / 700

⁵⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁵¹ Assuming average 2.5 persons per kiosk / shop

⁵² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 12-2: Proposed Master Plan – Thiruvanthipuram Devanatha Swamy Temple, Cuddalore



13. Parimala Ranganathar Perumal Temple, Thiruindalur

Site Details

District:	Mayiladuthurai
Name of Site:	Parimala Ranganathar Perumal Temple, Thiruindalur
Site No:	Site 83 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	11.1307, 78.9115
Land Area:	~2.5 acres
Peak footfalls:	20,000 per day (Saturdays, Sep – Oct, Apr, Feb)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 6 lakhs (2019 - 20) For. – 5000 (2019 - 20)
Site Revenues:	INR 55 lakhs (2019 – 2020)
Site Orientation:	Pilgrim/Tourist
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	5 km (Mayiladuthurai)
b. Airport:	135 km (Tiruchirappalli)
c. Highway:	1 km from SH 64 and SH 22
d. Other:	Nil

Trails featured on: **Divya Desam**

The Parimala Ranganathar Perumal Temple in the Thiruvilandur town of Mayiladuthurai district is one among the 16 Divya Desams present in the district. It is popular among the local crowd and has devotees visiting the temple regularly from the districts close by. It also has frequent visitors from the bordering states – Andhra Pradesh, Kerala, and Karnataka.

Scope of Interventions at the site can be planned with the intent of hosting better visitor amenities in and around the temple, along with easing of pilgrim as well as vehicular movement around the temple during peak season.

Existing Condition

Location

The Parimala Ranganathar Perumal Temple is located on the outskirts of Mayiladuthurai along the banks of river Kaveri in Tamil Nadu. ~4 km to the north of Mayiladuthurai town, the temple is situated in a peaceful calm residential neighbourhood in the small panchayat town of Thiruindalur.

Existing Layout

The temple is enshrined within a granite wall and the complex contains all the shrines of the temple covering an area of 2.5 acres. The raja gopuram in the north (the main gateway) has five tiers. The temple's administrative office is to the east of the main entrance inside the temple campus boundary. Temple Tank is situated ~73 m. along the road on the east side of the temple.

Existing Uses

The site is primarily accessed for religious visits. Being one of the Divya Desams, the temple has gained popularity and beliefs among the visitors for its Ekadashi Importance. Devotees perform Archana to the lord with Tulsi leaves. The temple is currently operated and maintained by the HR&CE. Owing to its location in a residential neighbourhood, there are small-scale retail activities around the temple like soda shops and shops for packaged snacks and water.

Other Land Available

Apart from the 2.5-acres of land used for the temple complex, the temple also owns distributed land parcels around the Kamarajar colony towards the north-western direction of the temple. The land is owned by the temple administration amount to 1,000 acres and is spread across Mayiladuthurai and Thanjavur districts.

Masterplanning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules 2019 - As per Mayiladuthurai Master Plan, the site lies in a Residential Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

2. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

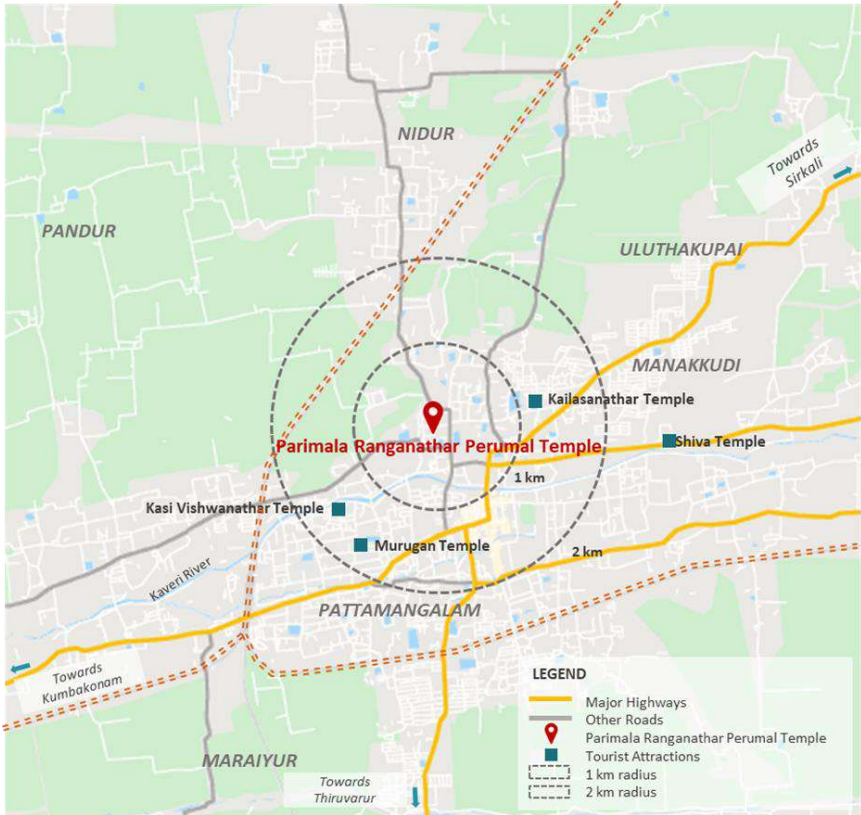
The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple is not an aesthetically appealing site, with poor façade and waste being dumped on the temple exterior as well as in the temple tank. Having said that, the temple's religious beliefs and it is a part of 108 Divya Desams, attract pilgrims and other religious tourists to the site.
2. **Accessibility** – The temple site is situated in a small town, Thiruindalur. The site accessible through a network of narrow roads (~7.5 m) which are then connected to the major roads to Mayiladuthurai. Owing to the narrow road widths, a major share of pilgrims accesses the site via public transport buses from Mayiladuthurai.

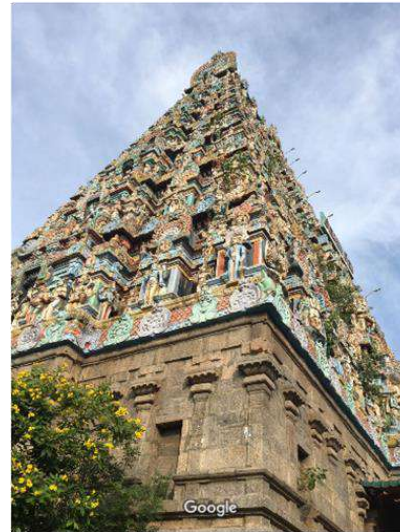
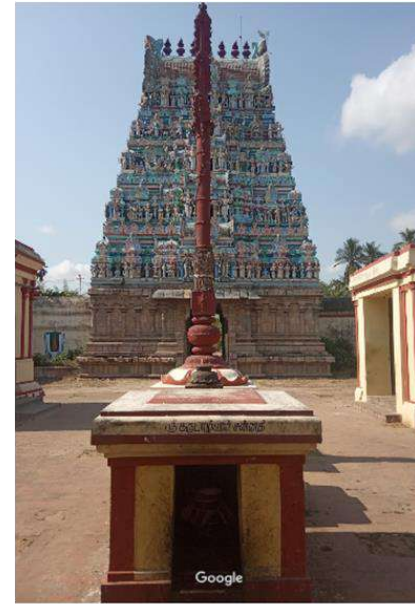
Parking – There temple administration does not provide any parking provision, the vehicles are usually parked on the adjacent street adding to the issues of traffic congestion on an already narrow, 2 lane undivided road.
3. **Amenities** – The condition of amenities present around the temple is poor. There is a need for improved infrastructure in place to hold the no of visitors it receives.
 - The existing number of toilet blocks, drinking water facilities, are limited and insufficient in comparison to the footfalls the temple receives.
 - The site is well equipped in terms of CCTV site monitoring and safeguarding its boundaries both physically and with the presence of fire safety measures.

- The site surroundings are developed with the provision of public toilets, several accommodation options, the Presence of retail establishments, adequate lighting.
4. **Awareness** – The temple enjoys popularity amongst the local and regional devotees due to its importance over the Ekadashi Vrata. It is also well-known as a religious destination to visit and seek the lord's blessing during Ekadashi. It is also very well known as one of the five sacred Hindu temples popularly known as "Pancharanga Kshetrams" with a minimal online presence and few recommendations as compared to other religious destinations in the vicinity.
 5. **Activities** – On normal days, the temple apart from Annadhanam (Food Donation) for about 50 – 100 people, organizes activities such as Light & sound shows, Cultural/folk performances, Audio-visual presentations. The temple also organizes celebrations for various religious festivals, which keep the pilgrim entertained at the site.
 6. **Accommodation** – There are accommodation options for the visitors near the temple. The available options range from small-scale lodges to budget-friendly Oyo rooms in around 80m. of the temple site area. The temple administration also offers accommodation facilities at affordable rates, combining them with available accommodation facilities in the Mayiladuthurai, which suffices the need for pilgrim accommodation.
 7. **Association with Communities** – The local community around the temple site has set up their small shops around the temple for temple-related items. The tourist footfalls at the site make sure to visit these shops at least once while they visit the site.

Figure 13-1: Location and Existing Layout



Site Pictures





Access Road to the Temple and Entrance Tower of the Temple



Are Inside the Temple



Temple Entrance Steps



Footpath near the lake



Steps to enter the main Temple area



Signage at the Temple



Fire Safety Facility at the Temple

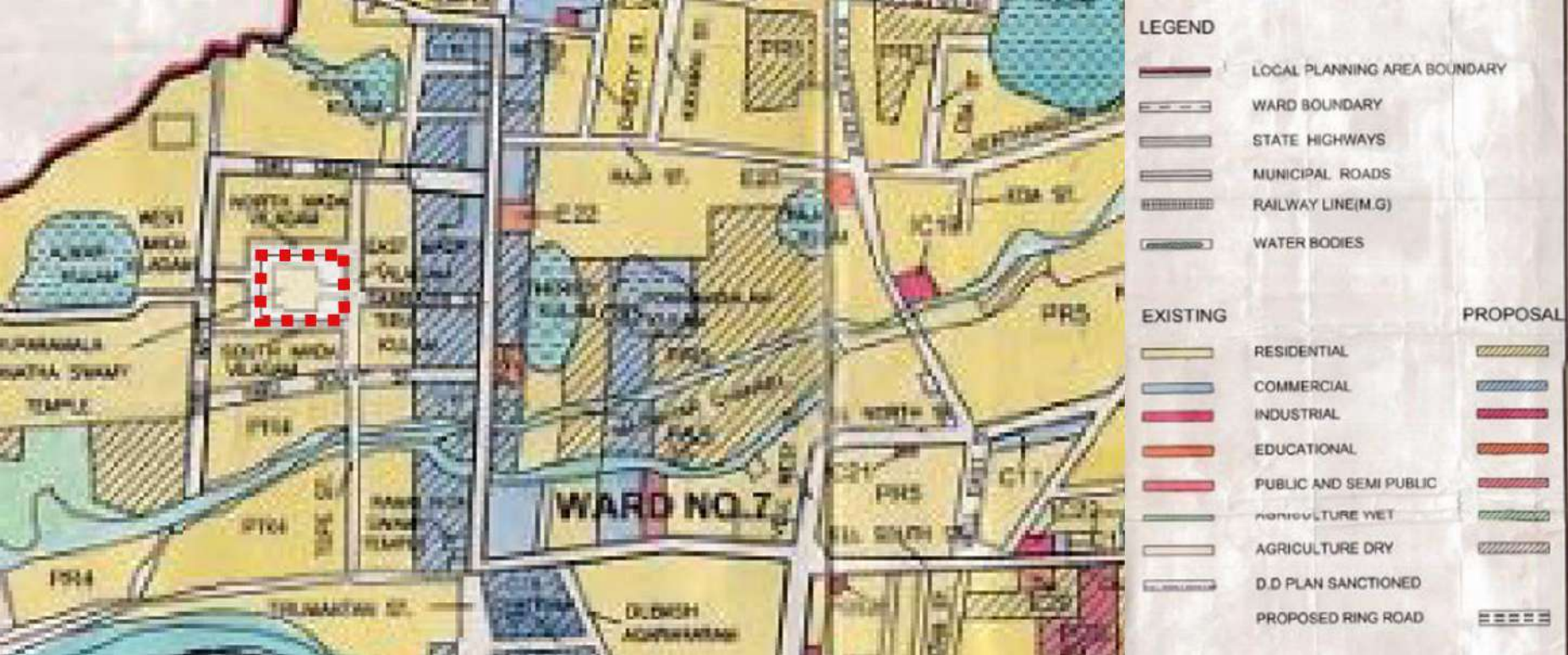


Carvings at the Temple



Food Donation Signage

Figure 13-2: Site Land Use – Mayiladuthurai Master Plan



Vision for the Site

The Parimala Ranganathar Perumal Temple in Thiruvilandur town is one among the 16 Divya Desams present in the Mayiladuthurai district. It is popular among the local crowd and has devotees visiting the temple regularly from the districts close by.

Considering the existing site situation such as:

- Its religious importance
- Proximity to other similar types of pilgrim destinations
- Good public transport connectivity
- Established organization of religious fairs and festivals every year.

And the associated weakness and development limitations such as:

- Non-Availability of any developable land parcel near the site
- Waste dumping into the temple tank
- Narrow roads abutting the site
- Lack of parking facilities

The temple site is envisioned to be developed with an idea to ease the pilgrim visit at the site, through design and regulatory interventions and enhancing the pilgrim amenities at the site.

- **Target Visitor** – The site currently draws a fair number of pilgrims due to its religious value. The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
- **Pilgrims** – Visiting the temples for their religious value. The idea of master planning will be to capture these tourists to also engage in other activities apart from a visit to the temple.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	595	2,172	5,992
High Value Tourists (HVT) (Both Domestic and Foreign)	10	74	205
Maximum Carrying Capacity	9,847		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- Foreign – All non-Indians
- High Value Tourists – A new definition proposed to capture estimated footfall of visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites. For purely pilgrim sites, HVT footfalls is taken as 10% of domestic footfalls.

Proposed Masterplan

Approach to Masterplanning

The intention behind master planning for this site is to solve the existing issues at the site and divert the crowd to additional attraction points around the site. It additionally also envisions reduction in traffic congestions around the site.

The objectives for developing the master plan for the site are:

- **Improving pilgrims' experience at the temple** – by providing conveniences and amenities for the ease of pilgrim's visit to the site
- **Developing additional attraction points** around the site for crowd management as well as to provide hangout spots for the locals.
- **Easing out vehicular movement** around the site
- **Rejuvenating temple tank** – This will improve tourist engagement at the site.
- **Improving the aesthetic environment** of the site

Hard Interventions

1. **Amenity Block** – The existing facilities at the temple are insufficient as compared to the number of pilgrims received by the site. A new amenity block would ease out pilgrim facilitation during the visit to the temple.

The block would comprise of ~4 toilet blocks for each male and, as well as ~5 drinking water stations female as identified in design guidelines.

Infrastructure Created: ~75 sqm of built-up area.

2. **Designated Parking Area** – There are no existing parking facilities available at the site. The vehicles are usually parked along the narrow streets around the temple. The streets being ~7.5 m. and preoccupied with parking often results in congestion during festivals and peak seasons.

The idea here is to demarcate a small section of the road around the temple, as a parking zone for temple visitors, in the form of a parallel parking space, with signboards.

Infrastructure Created: ~280 m of road stretch around the temple as a designated parking area

3. **Temple Tank Development** – Temple Tank in its existing condition, is underutilized, unclean, and full of unwanted and irregular vegetation growth. The area can be developed into a clean and maintained space for pilgrim visitation, where the interested pilgrims can spend some time and take a dip in the holy water.

The idea is to develop an accessible and better network of steps around the temple tank, towards the inner side of the tank boundary. A proper embankment through steps around the waterbody might help in retaining the water for a longer period, as well as make it convenient to carry out the tank cleaning process in the future.

On the outer side of the temple tank boundary, a formalized landscaping area around the entrance to make it feel welcoming and aesthetically beautiful to the pilgrims.

Infrastructure Created: ~900 sqm of area for steps around temple tank and ~160 sqm of Landscaping area

4. **Development of pedestrian pathways around the pond to the west of the temple** – The site is located in a small Panchayat Town in Mayiladuthurai district, where there are no other means of recreation for the pilgrims (who usually travel a long distance to visit the site) as well as locals.

Utilizing the presence of a pond near the site might serve a purpose for both. The development of pedestrian pathways around the pond, situated to the west of the temple, can improve avenues of public recreational spaces in the town, as well it can be a space where pilgrims can spend some time after they visit the temple.

However, the ownership of the land demarcated for the development is unknown, and therefore, it would not come under the per view of HR & CE to carry out the development around the pond. Henceforth, the components of the infrastructure are also not included while calculating the final costing for this master plan.

Infrastructure Created: ~500 m. of the paved pedestrian pathway, with occasional soft scaping

5. **Community Garden Spaces for local recreation** – The town panchayat as stated earlier, lacks the provision of adequate recreational area. Developing a waterfront garden along the pond can help in providing such space. It can also

act as a tourist diversion place during peak season and help in managing the crowd at the site.

However, the ownership of the land demarcated for the development is unknown, and therefore, it would not come under the purview of HR & CE to carry out the development around the pond. Henceforth, the components of the infrastructure are also not included while calculating the final costing for this master plan.

Infrastructure Created: ~1700 sqm of waterfront garden space

Soft Interventions

1. **Site Cleanliness** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:
 - a. **Community participation** programs or devotee volunteers.
 - b. **Providing an adequate number of dustbins at regular intervals** for disposal of segregated waste.
 - c. **Deploy more staff for maintenance of site cleanliness.**
 - d. **Cleaning of temple tank Steps** – The steps around the temple tank, overtime is occupied with algae and other uncontrolled vegetation, which is required to be cleaned up before it can be made accessible to all.
2. **Traffic Rerouting** – The 7.5 m wide road around the temple is often occupied with on-street parking. During the time of festivals and peak season, owing to heavy traffic rush at the temple site, the roads become jam-packed and congested. Traffic Rerouting as demonstrated in the diagram can help ease out the vehicular movement around the site.
3. **Adoption of different parking management strategies at the time of festivals** – Primary surveys suggest the lack of parking spaces, resulting in street parking leading to congestion on the narrow access road on the days of Ekadashi any other events. Owing to its location amidst the residential setup few of the parking strategies like **shared parking options – Residential and Visitor Parking** can be adopted for better management.



Lake Garden Spaces



Spaces around Temple Tank



Existing 2-way movement on all the roads



Proposed Traffic Re-routing 1-way movement on the roads adjacent to the temple

4. **Site management** – The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.
5. **Promotion** – The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes.

Amenities Plan

1. **Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
2. **Signages** – Package 1 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.

3. **Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1	Designated Parking Area	~280 m.
2	Amenity Block	~75 sqm
3	Garden	~1700 sqm
4	Pedestrian Pathways around the pond	~500 m
5	General Landscaping Area	~160 sqm
6	Steps around Temple Tank	~900 sqm
7	Dustbins	~10 units

#	Project Component	Scale
8	Traffic Rerouting	-
9	Signages	Package 1
10	Technology Interventions	Package 1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Designated linear Parking	NA
2	Traffic Rerouting	NA
3	Garden at the pond- West of the Temple	NA
4	Garden at the pond- pedestrian pathways	NA
5	Amenity Block - Toilets	20
6	Amenity Block - Drinking water station	3
7	Steps around Temple tank	9
8	Dustbins	1
9	General Landscaping	1
10	Signages	1
Total		INR 35 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 20 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the Amenity block.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 10 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”.

Sub-projects which can be taken out by the Town Panchayat.

The following sub-projects are beneficial to the pilgrim eco-system and may be transformed into a viable standalone project and hence recommended to be taken up by the town panchayat or the local governing body:

1. **Traffic rerouting and Designated linear parking** – Since this is outside the temple premise, it remains out of the temple's scope. However, given the strain on the traffic system and the inconvenience caused to the surrounding residents during peak season/ festivals, the local governing body can reroute the traffic appropriately and designate linear parking spaces along the adjacent roads, charging a fee for the same would make it economically viable for the facilitator to carry out the operations.
2. **Garden landscaping along the pond (west of the temple)** - Since this is outside the temple premise, it remains out of the temple's scope. However, this can be converted into a recreational space for the visiting pilgrims by hosting few

retail kiosks and by charging an entry fee, this would become a revenue source for the local governing body.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Designated linear Parking	NA	Y0 – Y2	Local Governing body/ Town Panchayat
2	Traffic Rerouting	NA	Y0 – Y2	Local Governing body/ Town Panchayat
3	Garden at the pond- West of the Temple	NA	Y0 – Y2	Local Governing body/ Town Panchayat
4	Garden at the pond- pedestrian pathways	NA	Y0 – Y2	Local Governing body/ Town Panchayat
5	Amenity Block - Toilets	20	Y0 – Y2	HR&CE
6	Amenity Block - Drinking water station	3	Y0 – Y2	HR&CE
7	Steps around Temple tank	9	Y0 – Y2	HR&CE
8	Dustbins	1	Y0 – Y2	HR&CE
9	General Landscaping	1	Y0 – Y2	HR&CE
10	Signages	1	Y0 – Y2	HR&CE
Total		INR 35 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,500⁵³ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁵⁴

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 3,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site. Thereby expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 640 Cr. at the site⁵⁵.

⁵³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁵⁴ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁵⁵ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 13-3: Proposed Master Plan – Parimala Ranganathar Perumal Temple, Thiruindalur



14. Thirunangur Temples

Site Details

District:	Mayiladuthurai
Name of Site:	Thirunangur Temples
Site No:	Site 84 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	11.1738, 79.7769
Land Area:	Vaikunthanathar Temple ~1 acre Madhava Perumal Temple ~0.3 acres Narayana Perumal Temple ~3 acres
Peak footfalls:	30,000 per day ⁵⁶ (Chithrai Festival, Aadi Masam Festival)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 13 lakhs (2019 - 20) For. –2 lakhs (2019 - 20) ⁵⁷
Site Revenues:	INR 18 lakhs ⁵⁸ (2019 - 2020)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	12 km (Sirkazhi)
b. Airport:	160 km (Tiruchirappalli)
c. Highway:	2 km from SH 32
d. Other:	Nil
Trails featured on:	Divya Desam

⁵⁶ Received from Site Manager

⁵⁷ Received from Site Manager (The existing foreign tourist footfalls at the site comprise of the NRI and South Indian (especially people from Tamil Nadu) residing overseas.

The village of Nangur is primarily famous for the temples it has. There are 11 of the 108 Divya Desam temples dedicated to Lord Vishnu at this Village. The eleven Rudras, called Ekadas Rudras and king of devas, Indra, are believed to have worshiped Vishnu at this temple. The presiding deity of Badrinath Temple, Badrinath, is believed to have visited the place at the request of Shiva. Each of the temples is located at an approximate distance of 500 m. to 1 km. from each other. These temples are small and only have local importance during the non-festival times.

The Thirunangur temples are small in area as compared to other religious pilgrim sites in the district, however, their proximity to each other and the religious beliefs make this space special. Every year large crowds visit the 11 Garuda Sewai Utsavam.

A cluster of 3 temple sites considered here are part of 11 Thirunangur Temples. These temple spaces are poorly maintained, with the non-availability of tourist facilities, dried-out temple tanks, etc. Scope of interventions at the site mainly includes activities that can be taken up to revive these temple areas, make it appealing to the pilgrim population and develop supporting common amenities for the pilgrims.

Existing Condition

Location

The Thirunangur temples are a cluster of 11 temples, located in the village of Thirunangur, outskirts of the town Sirkazhi, Tamil Nadu, India. The cluster of Divya Desams Temples are within a distance of 1 km. from each other.

Located in a rural setup, space forms a small temple village with the presence of village houses, agricultural fields, and vacant land. around them in Nangur. The

⁵⁸ Combined for all the 3 temples

temples are located at ~25 km. northeast of Mayiladuthurai, ~35 km south of Chidambaram, and ~9 km west of Bay of Bengal.

Existing Layout

Vaikunthanathar Temple:

The temple site occupies an area of ~1 acre. The site boundary mainly comprises the main temple itself, the temple tank, along with areas for pilgrim movement and landscaping area. The temple's Raja gopuram is to the east of the main temple opposite to which is located the temple tank.

Madhava Perumal Temple:

The temple site occupies an area of ~0.3 acres. The site boundary comprises the main shrine, a mandapam. All the other areas are defined for tourist circulation at the site and are paved.

Narayana Perumal Temple:

The temple site occupies an area of ~3 acres, which comprises of:

- Main Temple site to the west of the access road
 - The other ancillary elements of the main temple, apart from the shrines are: Mandapam area and kitchen facilities to the south of the main temple area
- Temple Tank to the east of the access road.

Existing Uses

The temple site areas are very small in comparison to other temples in the district and are accessed by the pilgrims for religious uses only.

Other Land Available

The Vaikunthanathar temple and Madhava Perumal Temple do not have any vacant developable land parcels present around the site for future temple-related developments.

Apart from the 5-acre temple complex of the Narayanan Perumal Temple, other lands that the temple owns include:

- ~1 acre of land parcel is available near Narayana Perumal temple with a small tourists' accommodation facility and toilet, in a share of the entire land. The remaining share of the land can be used for developing facilities which can be common to all the 3 temple sites.

- About 54 acres of distributed lands between the Nangur village and the surrounding villages – Parthanpalli and Kathiruppu.
- About 18 acres of dry land is used as a coconut farm.
- About 36 acres of land is given on lease for wet crop cultivation mostly used for rice cultivation.

Masterplanning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TNHRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR& CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The 3 Temples clustered as Thirunangur temples here, are not aesthetically attractive, with overgrown vegetation, lack of appropriate lighting, and ill-maintained temple structures. However, the religious values attached to

this place attract a good number of pilgrims to the site. The main attraction of the region is the Perumal temples and the 11 Garuda Sevai Festival. There is a grand festival organized by all the 11 temples in coordination with each other. It attracts a crowd of almost 3 lakh people during the festival. Owing to the location of the village, away from the hustle-bustle of the main city, the site overall provides an atmosphere of calmness and serenity to its visitors.

2. **Accessibility** – The Thirunangur temples are situated at Nangur Town and are accessible via wide district roads. The village is 2 km. vicinity of Tamil Nadu SH 32 and is accessible via district roads from the highway. 2 minibusses are available at the temple that runs on a scheduled time of every 1.5 hrs to Mayiladuthurai and Sirkazhi for better site accessibility.

Parking – There are no parking provisions made at any of the 3 temple sites. The vehicles are most often parked along the street outside the temple. However, no issues of traffic congestion are observed due to on-street parking at the site. During the festivals, an area of ~4km radius of each temple is mandated as a no-vehicle zone. Which reduces the parking requirement during festivals (the only peak season at these temples)

Internal Circulation – The 3 temple sites are very small and can be visited along with the paved areas and pedestrian pathways developed at the site. However, these sites do not have the provision of any wheelchairs, which makes circulation difficult for the elderly and physically disabled visitors.

3. **Amenities** – The condition of tourist amenities at all the 3 temples are observed to be minimal.

Vaikunthanathar Temple: The temple site is small and is not equipped with any sort of pilgrim amenities such as toilets, drinking water facilities, CCTV, Fire safety, etc.

Madhava Perumal Temple: The temple site is small and is not equipped with any sort of pilgrim amenities such as toilets, drinking water facilities, CCTV, Fire safety, etc.

Narayana Perumal Temple:

- The toilet block present at the site is insufficient for the pilgrims and is in dilapidated condition.
- There are no drinking water outlets available at the site, and dustbins also do not suffice with the number of tourists.
- The site area is monitored by an adequate number of CCTV cameras and is made safe both physically by a boundary wall and from fire casualties by placing an adequate number of fire safety measures.
- The site surroundings, being in a rural setup do not provide the following:
 - i. F&B outlets,
 - ii. Retail shops, and
 - iii. Adequate lighting.

4. **Awareness** – It is a well-known destination for Vishnu temples. This village comprises 11 Vishnu temples which are visited by the tourists in a single visit. The profile of visitors at this place comprises domestic visitors from Andhra Pradesh, Karnataka, and Mumbai. On a normal day, the temple attracts around 1000 to 1500 visitors, which accounts for more than 3 lakh devotees and visitors during the festival of Garuda Sevai.

There is not much-documented data that talks about the details are available for the individual temple located at this place. A trust has been set up for the day-to-day functioning and management of the 7 Thirunangur temples.

5. **Activities** – Regular Annadhanam and Occasional festival celebrations are the two activities that often engage visitors at the site. The site is an entire pilgrim destination and small do not support many activities for pilgrim engagement.
6. **Accommodation** – The small accommodation facility is available near Narayana Perumal Temple at the temple provided by the temple administration for the tourists free of cost. A wider range of options is available at Thiruvengadu (~5 km) and Sirkali (~10 km).
7. **Association with Communities** – The local communities have a stronghold over the temples. The trust formed by the villagers currently manages the day-to-day activities of the temple.

Figure 14-1: Location and Existing Layout (Narayana Perumal Temple)

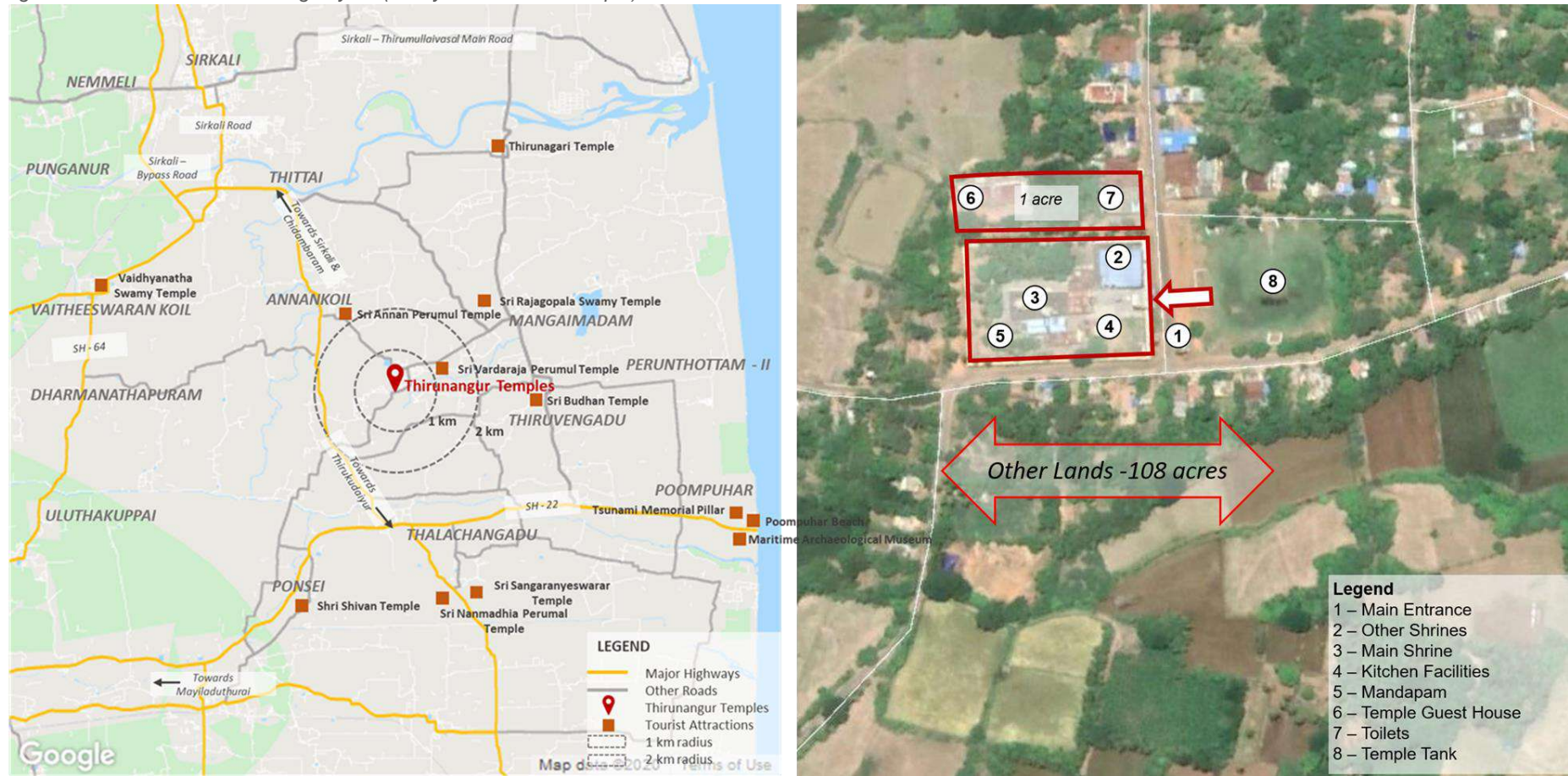
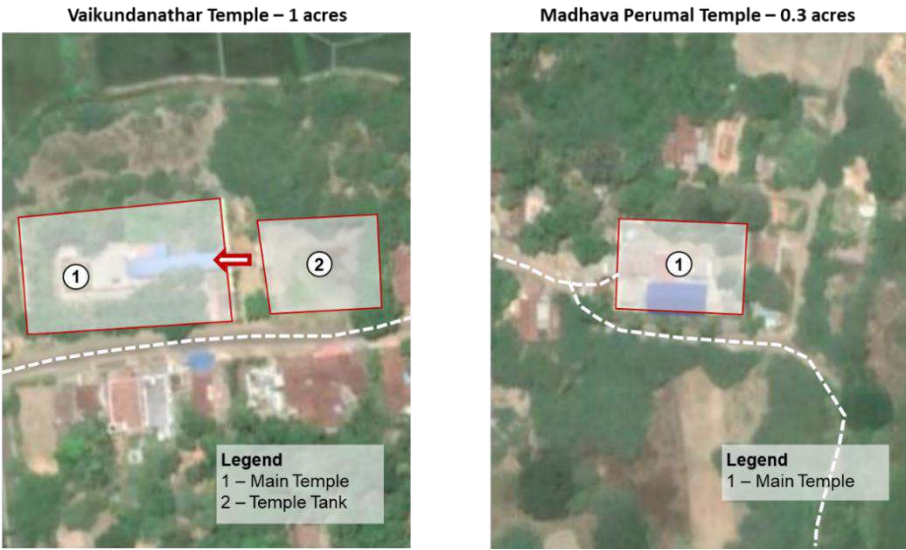


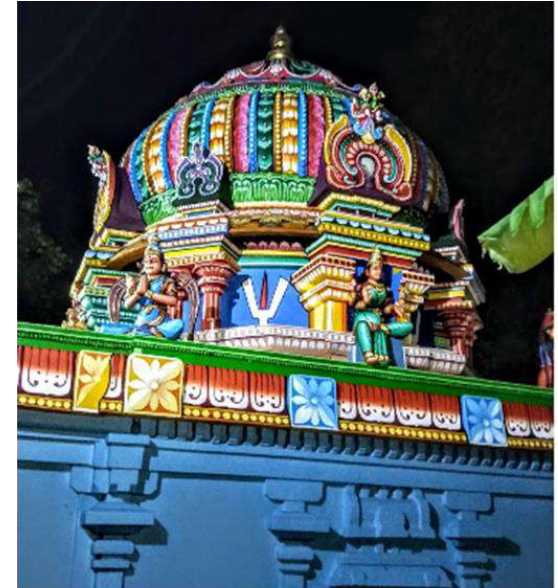
Figure 14-2: Existing Layout – Other Temples



Site Pictures – Narayana Perumal Temple



Site Pictures – Vaikundnathar Temple



Pilgrims at 11 Garuda Sevai Utsavam - Thirunangur

Vision for the Site

Thirunangur village is famous for the 11 of 108 Divya Desam temple. These Temples of Lord Vishnu are small in area and spread across different parts of the village. The 3 temples covered under this report are Sri Vaikunthanathar Temple, Narayana Perumal Temple, and Madhava Perumal Temple.

Considering the existing site situation for all the temples such as:

- The strategic location of the village, away from the hustle of the city, provides a calm and serene environment to its visitors.
- The grand celebration of the festival of 11 Garuda Sevai.
- Good public transport connectivity to the nearby towns, with additional services developed by the temple trust.
- The presence of a common trust for all the temples, making coordination amongst all the temple administration easy.

As well as the weaknesses and limitations associated with the site such as:

- Minimal and only local non-festive importance of these small temples.
- Lack of Parking Facilities
- Lack of basic amenities such as toilets, drinking water, rest house at the site during the festival season.
- An inadequate number of streetlights in the temple surroundings.
- Lack of maintenance of spaces inside as well as outside the temple
- The degrading temple flooring
- temple stone flooring at a few of the temples has also developed cracks and is occupied by unwanted and irregular vegetation.
- The temple's association with temple trust with traditional ideologies

The cluster of temple sites can be envisioned to be developed by improving the site's overall appearance and vibrancy, as well as developing some pilgrim facilitating service areas at the site while solving the existing issues faced by pilgrims and locals at the site.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian

states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience. The target visitor group envisioned to be captured at the site are:

- **Pilgrims** – Visiting the temples for their religious value. The idea of master planning will be to capture these tourists to also engage in other activities apart from a visit to the temple.
- **High-Value Tourists (Both Domestic and Foreign)** - The Localities who have shifted out or in the foreign countries (NRI) over a course of time, who visit the site, when in Tamil Nadu for the monumental, historical and religious values attached to the temple.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Low HVT potential**. Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data.

Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,100	3,034	7,165
High Value Tourists (HVT) (Both Domestic and Foreign)	400	1,103	2,606
Maximum Carrying Capacity	19,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- Foreign – All non-Indians

- **High-Value Tourists** – A new definition proposed to capture estimated footfall of visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites. For purely pilgrim sites, HVT footfalls are taken as 10% of domestic footfalls.

Proposed Masterplan

Approach to Masterplanning

The master plan activity intends to utilize ~1 acre of land available near Narayana Perumal Temple to develop several amenities which can be utilized in common amongst all the 3 temple sites.

The objectives for developing master planning interventions at this site are:

- **Improve the site surrounding and aesthetics** to make it appealing for the pilgrims
- **Provide common pilgrim amenities and accommodation facility** amongst all the 3 sites near Narayana Perumal Temple
- **Temple Tank Space Revival and Rejuvenation**

Hard Interventions

1. **Yatri Niwas** – A Yatri Niwas for pilgrim accommodation must be developed at the vacant land north of the Narayan Perumal Temple. There is already a small accommodation facility present which can be upgraded and can be included as a part of newly developed Yatri Niwas.

The Yatri Niwas can be developed with good landscaping areas around in traditional south Indian architectural style using local materials. This accommodation facility can be common to all the 3 temples. It will hold a capacity of 30 keys which will include:

- 7 VIP/VVIP AC rooms with attached washrooms - These rooms will be spacious with better in-house amenities and facilities.
- 23 non-AC rooms with attached washrooms.
- It must also have a parking capacity of ~20 ECS.

Infrastructure Created: ~1820 sqm built-up area and ~280 sqm of the paved parking area – Near Narayana Perumal Temple

2. **Landscaping** – The vacant spaces around all the 3 temples are currently underutilized, with haphazard vegetation. These spaces can be formally

landscaped, which can upgrade the look and feel of the small temple sites, making them aesthetically appealing to the pilgrims. A well-maintained landscaped area around the site will improve the overall attraction value of the site to a certain extent.

Infrastructure Created: ~1890 sqm of landscaping area at Vaikunthanathar Temple; ~780 sqm. of landscaping area at Narayana Perumal Temple

3. **Temple Tank Rejuvenation** – The temple tank at Narayana Perumal Temple and Vaikunthanathar Temple are diminishing, with low water-retaining capacity, irregular vegetation growth, and algae. Moreover, these temple tanks are currently inaccessible to the pilgrims, due to the non-availability of steps around the tank.

The temple tank at 2 of the 3 temples can be revived by developing an embankment around it, with stepped access. Recharge well structures can be created near the tank to harvest rainwater and divert it to the temple tank.

Infrastructure Created:

Narayana Perumal Temple - ~280 m of embankment around the tank; ~2,500 sqm of an area of steps around the tank.

Vaikuntha Perumal Temple: ~160 m. of embankment around the tank; ~1,440 sqm of an area of steps around the tank.

Soft Interventions

1. **Temple site cleanliness and maintenance** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:
 - a. **Community participation** programs or devotee volunteers.
 - b. **Providing adequate dustbins** for disposal of segregated waste.
 - c. Regulations for **no waste disposal into the temple tank**
2. Develop a **façade maintenance guideline** for the temple – The temple façade should be repainted with additional construction works wherever required. It must be cleaned regularly to maintain the aesthetic beauty of the site.
3. **Guidelines for Temple Tank Maintenance** – The temple tank adjacent to the temple, after its development must follow the prescribed measures, to maintain it in a good condition.

- a. Restrictions on disposal of organic matter, alternative arrangements can be made for the disposal of organic matter which can then be collected and transported to feed the animals.
- b. Awareness amongst the general public for disposal of waste at designated locations.

4. Homestays as an option for accommodation

The temple site as observed is located in a village. The development of local homestay options integrated with the local village community can help in the provision of lodging facilities for the tourists, as well as it can also help in boosting the local economy. Such an indigenous option can boost up among foreign tourists as well as it can provide them a chance to experience a rural lifestyle.

5. The guided tour walks integrating different temple

The Nangur village comprises 11 Divya Desam temples dedicated to Lord Vishnu. All of them have their importance and uniqueness. Several small, guided tour walks can be designed that include religious places of importance, and places that exhibit local art and culture can be developed with the help of the residents. The residents can also volunteer to conduct such paid guided tours, local women can exhibit handicrafts prepared by them, and can also teach the visitors if interested.

6. Promotion – The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes.

- 7. Temple Village** – Currently the sites and the village do not have adequate quality and quantity of pilgrim and tourist infrastructure to attract a large number of the crowd all around the year. Upon developing the necessary facilities like
- a. Good quality roads,
 - b. Numerous exemplary homestays, representing rural lifestyle
 - c. Public toilets
 - d. A tourist information or facilitation centre, etc.

The village, owing to the presence of 11 Divya Desam and religiously important temples can be developed on the idea of a temple village. Where visitors can witness the religious importance of the temples, the connection among all the temples while enjoying the rural lifestyle of the place.



Yatri Nivas



Spaces around Temple Tank

Amenities Plan

- 1. Pay and Use Toilet Block** – None of the 3 temple sites has good quality, hygienic toilet facilities for the pilgrims. There is already an existing toilet block present near Narayana Perumal Temple. It can be upgraded, with increased capacity and good structure. The design of the toilet block can be as per the standards defined in guidelines.

Infrastructure Created: ~4 units of pay and use toilet blocks

- 2. Street Lighting** – all of the three temple sites have minimal to no streetlights around the site to keep the area lit during the night, for pilgrim safety.

~235 m of the site boundary of Vaikuntha Perumal Temple, ~610 m of the site boundary of Narayana Perumal Temple, ~160 m of the site boundary of Madhava Perumal Temple must be equipped with working streetlights for pilgrim and visitor safety and facilitation

- 3. Planting & landscaping** – More strategic tree planting is required along with the open spaces at the site, to create an aesthetically beautiful pilgrim destination.

- 4. Signages** – Package 1 set of signages must be deployed at all the 3 temple sites. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.

- 5. Technology Interventions** – Package 1 set of technology interventions are required to be deployed at Vaikunthanathar Temple and Narayan Perumal Temple site. These include:
- a. Electronic Visitor Counter at entry points
 - b. TN Assist App integration at the site,

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
Narayana Perumal Temple		
1	Yatri Nivas (Built Area)	~1820 sqm (~30 keys)
2	Yatri Niwas (Landscaping)	~1060 sqm
3	Yatri Niwas (Parking)	~280 sqm
4	Yatri Niwas (Pathway)	~90 m
5	Temple Tank a. Embankment	~280 m ~2,500 sqm

#	Project Component	Scale
	b. Steps	
6	General Landscaping Area (Temple Tank)	~780 sqm
7	Streetlights	~610 m.
8	Signages	Package 1
9	Technology Interventions a. CCTV b. Electronic Visitor Counter at entry points c. TN Assist App integration at site	Package 1
10	Pay and Use Toilet Blocks	~4 units
Vaikunthanathar Temple		
1	Temple Tank a. Embankment b. Steps	~160 m ~1,440 sqm
2	General Landscaping Area	~1890 sqm
3	Streetlights	~235 m.
4	Signages	Package 1
5	Technology Interventions a. CCTV b. Electronic Visitor Counter at entry points c. TN Assist App integration at site	Package 1
Madhava Perumal Temple		
1	Streetlights	~160 m
2	Signages	Package 1

Feasibility Assessment - Narayana Perumal Temple

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Yatri Nivas (Built Area)	450
2	Yatri Nivas (Paved Parking)	4
3	Yatri Nivas (Landscaping)	1
4	Yatri Nivas - Pedestrian Pathway	2
5	Temple tank steps	25
6	Temple Tank - embankment	6
7	Temple Tank - General Landscaping	1
8	Signages	1
9	Technology Interventions	1
10	Streetlights	10
11	Pay per use Toilet block	20
Total		INR 520 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Parking** – Capturing 38 ECS at 30% occupancy per day at INR 15 per ECS.

- Yatri Niwas** – Capturing 10 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.

- Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1.5 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **security personnel** each for the parking and the yatri niwas.
 - An **Administration staff** to overlook the operations of the parking and yatri niwas.

2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 75 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the *Yatri Niwas* at the site to private operators for better efficiency and long-term sustainability.

Sub-projects which can be taken up by the local governing body/ Town panchayat

The last mile connectivity to the temple is poor and has been raised as a repeated concern by the local residents frequently visiting the temple and by the pilgrims alike. Since this is out of the temple's scope, it has to be taken up by the local governing body/ town panchayat to address the concerns of its constituents.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Yatri Nivas	450	Y0 – Y2	HR&CE
2	Yatri Nivas (Paved Parking)	4	Y0 – Y2	HR&CE
3	Yatri Nivas (Landscaping)	1	Y0 – Y2	HR&CE

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
4	Yatri Nivas - Pedestrian Pathway	2	Y0 – Y2	HR&CE
5	Temple tank steps	25	Y0 – Y2	HR&CE
6	Temple Tank - embankment	6	Y0 – Y2	HR&CE
7	Temple Tank - General Landscaping	1	Y0 – Y2	HR&CE
8	Signages	1	Y0 – Y2	HR&CE
9	Technology Interventions	1	Y0 – Y2	HR&CE
10	Streetlights	10	Y0 – Y2	HR&CE
Total		INR 520 L		

Feasibility Assessment - Vaikunthanathar Temple

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple Tank - embankment	3
2	Temple Tank - steps	14
3	Streetlights	3
4	General Landscaping	1
5	Signages	1
6	Technology Interventions	1
Total		INR 25 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at the temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities

3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 3 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

However, the interventions proposed here are to be seen in a holistic manner with the perspective of the entire religious circuit of the Thirunangur temples (i.e.) Thiruvaikunda Vinnagaram / Vaikunta Nathan Perumal Temple, Thiruthuvanarthogai / Madhava Perumal Temple, Thirumanimadam / Narayanan Perumal Temple (also Called Badrinarayana Perumal).

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple Tank - embankment	3	Y0 – Y2	HR&CE
2	Temple Tank - steps	14	Y0 – Y2	HR&CE
3	Streetlights	3	Y0 – Y2	HR&CE
4	General Landscaping	1	Y0 – Y2	HR&CE
5	Signages	1	Y0 – Y2	HR&CE
6	Technology Interventions	1	Y0 – Y2	HR&CE
Total		INR 25 L		

Feasibility Assessment - Madhava Perumal Temple

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Streetlights	2
2	Signages	1
Total		INR 3 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at the temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
- Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
- Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area,

toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 1 Lakh*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

However, the interventions proposed here are to be seen in a holistic manner with the perspective of the entire religious circuit of the Thirunangur temples (i.e.) Thiruvaikunda Vinnagaram / Vaikunta Nathan Perumal Temple, Thiruthevanarthogai / Madhava Perumal Temple, Thirumanimadam / Narayanan Perumal Temple (also Called Badrinarayana Perumal).

⁵⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
 - Assumed cost of labour assumed for computation = *INR 700* per day

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Streetlights	2	Y0 – Y2	HR&CE
2	Signages	1	Y0 – Y2	HR&CE
Total		INR 3 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 23,500⁵⁹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 16 man – days per day⁶⁰
- Additional personnel deployed at site (Housekeeping, management, security) = 6 man-days⁶¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

- Cumulative labour man-days = 30% * CAPEX / 700

⁶⁰ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁶¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 58,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,200 Cr. at the site⁶².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.

- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

⁶² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 14-3: Proposed Master Plan – Narayana Perumal Temple



Figure 14-4: Proposed Master Plan – Vaikunthanathar Temple



Figure 14-5: Proposed Master Plan – Madhava Perumal Temple



15. Sowriraja Perumal Temple, Thirukannapuram

Site Details

District:	Mayiladuthurai
Name of Site:	Sowriraja Perumal Temple, Thirukannapuram
Site No:	Site 77 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	10.8683, 79.7041
Land Area:	~6 acres
Peak footfalls:	10,000 per day ⁶³ (March, May, September)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 5 lakhs (2019 - 20) For. – 10,000 (2019 - 20) ⁶⁴
Site Revenues:	INR 15 lakhs (2019 – 2020)
Site Orientation:	Pilgrim/Tourist
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	7 km (Nannilam)
b. Airport:	135 km (Tiruchirappalli)
c. Highway:	1.7 km from SH 67
d. Other:	Nil
Trails featured on:	Divya Desam

The Sri Sowriraja Perumal Temple is one of the 108 Divya Desams. The 9 Navagrahas carved on the temple walls is a beautiful sight for devotees. The temple has a very ancient setting and is popular among the devotees from Andhra Pradesh, Kerala, and Karnataka. Despite being an acknowledged temple and well-developed temple site, the structures within the site are degrading.

The scope of interventions and master planning for this site includes utilization of the additional area of land available near the temple for fulfilling the requirements of the pilgrim and local temple visitors, by adding new areas for community use and recreational purposes.

Existing Condition

Location

Sri Sowriraja Perumal Temple is located in Thirukkannapuram Village, Mayiladuthurai district in Tamil Nadu, India. The village is located ~20 km northeast of Thiruvavur, and ~15 km west of the Bay of Bengal in Tamil Nadu, India. Located in the village, the temple is surrounded by small shops and village houses.

Existing Layout

The temple occupies an area of around ~6 acres covered by a huge compound wall.

- There is a 7-tiered Rajagopuram and a big tank Nithya Pushkarni is in front of the Gopuram on the east of the main temple.
- The hall preceding the sanctum is called Mahamandapa and the northern part of it is called Tirumanjana Mandapam.

⁶³ Received from Site Manager

⁶⁴ Received from Site Manager (The existing foreign tourist footfalls at the site comprise of the NRI and South Indian (especially people from Tamil Nadu) residing overseas.

- The Temple tank occupies an area of 4.5 acres located on the eastern side outside the temple complex.
- There is a marriage hall developed inside the temple site, located on the southern side of the temple campus
- To the east of the marriage hall inside the campus is situated the temple kitchen and store area
- The utility area of the temple site is located in the north-eastern corner of the site.

Existing Uses

The temple is currently used as a place of worship by the residents and a pilgrim destination by the nearby tourists. Apart from the provision of basic infrastructure and public utilities, there are no retail activities or recreational activities housed inside the temple campus. The site is occasionally used for the celebration of festivals and organizing marriage functions by the locals.

Other Land Available

Apart from the 6 acres temple complex, the temple also owns 432 acres of land. This land is used for various purposes and is located around the Thirukkannapuram village as explained below.

- 282 acres of land is spread across the Thirukkannapuram village; given on lease for agricultural uses.
- 150 acres of land is spread immediately around the temple with buildings on them that are rented out for residential and commercial uses. The ~150 acres of land parcels have several vacant lands near the temple too.

These land parcels, as per the site representatives, are distributed across the temple surrounding and the neighbouring villages.

Masterplanning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

2. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The site has immense religious attractions, however, several areas along the site are not aesthetically appealing to the pilgrims and site visitors. Some of the elements that make the site unappealing are:
 - The ~90% of the site is built
 - Worn out paints from certain areas of the other structures inside the site
 - Worn out signages and presence of temporary hoardings across the site
- 2. Accessibility** – Sri Sowriraja Perumal temple is situated in a village near Thiruvavur Town and is accessible via paved district-level roads. The temple is located on a highway; it can be accessed by a tarred road at a distance of 100 m. from the highway. The quality of access road is good, with the presence of good quality footpaths and is equipped with streetlights. However, the number of

streetlights along the road is observed to be inadequate to keep the area well-lit during the night.

Parking – There are free-of-charge parking lots with a capacity to park 100 cars is provided outside of the temple complex on the sides of the temple's access road. However, if additional facilities are being developed at the site, there will be a requirement for an additional parking space. On top of it, the parking available is insufficient. In comparison to the footfalls the site receives.

Internal Circulation – The temple site facilitate tourist circulation through pedestrian pathways. However, the pathways are not shaded, which creates issues in the peak season, with heavy crowds, and during summers.

3. Amenities – The condition of tourist amenities within and around the temple is quite meagre.

- The site is equipped with an inadequate number of toilets, drinking water facilities, and dustbins for the number of pilgrims it receives annually, as well as in a day during peak season and the site size.
- The drinking water stations, and a minimal number of dustbins present at the site are also grubby.
- The site is well equipped in terms of CCTV site monitoring and safeguarding its boundaries both physically and with the presence of fire safety measures. However, there is no frisking of visitors at the site which might be a risk.
- The site is not equipped with Ramps or wheelchairs to facilitate the movement of senior citizens and physically challenged visitors.
- The site surroundings are developed with the provision of public toilets, several accommodation options, the Presence of retail establishments, adequate lighting.

4. Awareness – The temple is a very well-acknowledged site with a good online presence amongst the Vaishnava devotees. It is a well-known destination for believers of Lord Krishna. There are ample articles that talk about the history, specialty, and structure of this temple. Various travel websites and blogs recommend visiting the place and experience the beauty of this small village.

5. Activities – On normal days, the temple does not offer any activities except for Annadhanam. The occasional events conducted at the temple are:

- **Festival Celebrations** – Festivals such as Brahmotsavam, Mahotsvama, Adhyayana Utsavam, etc. attract more than 50,000 visitors to the temple.
- **School Events** - The temple is also used as a venue for occasional events local school programs, dance competitions, and many other local events. The temple venue is provided free of cost with the provision of the essential facilities required for the event
- There are no commercial or retail activities observed on the inner or outer side of the temple complex.
- There are no food stalls or restaurants available outside the temple, except for a home mess.

6. Accommodation – There is only 1 accommodation option available opposite the temple which has a capacity of 7 rooms. Some of the decent stay options are available at Tiruvallur (17 km.), Karaikal (20 km.), and Thiruvarur (17 km.).

7. Association with Communities – The local community around the site has no association with the temple which can enhance the tourist atmosphere and experience at the site. However, the temple space is of immense religious and cultural importance for the villagers, being the venue for the celebration of festivals and other local events.

Figure 15-1: Location and Existing Layout

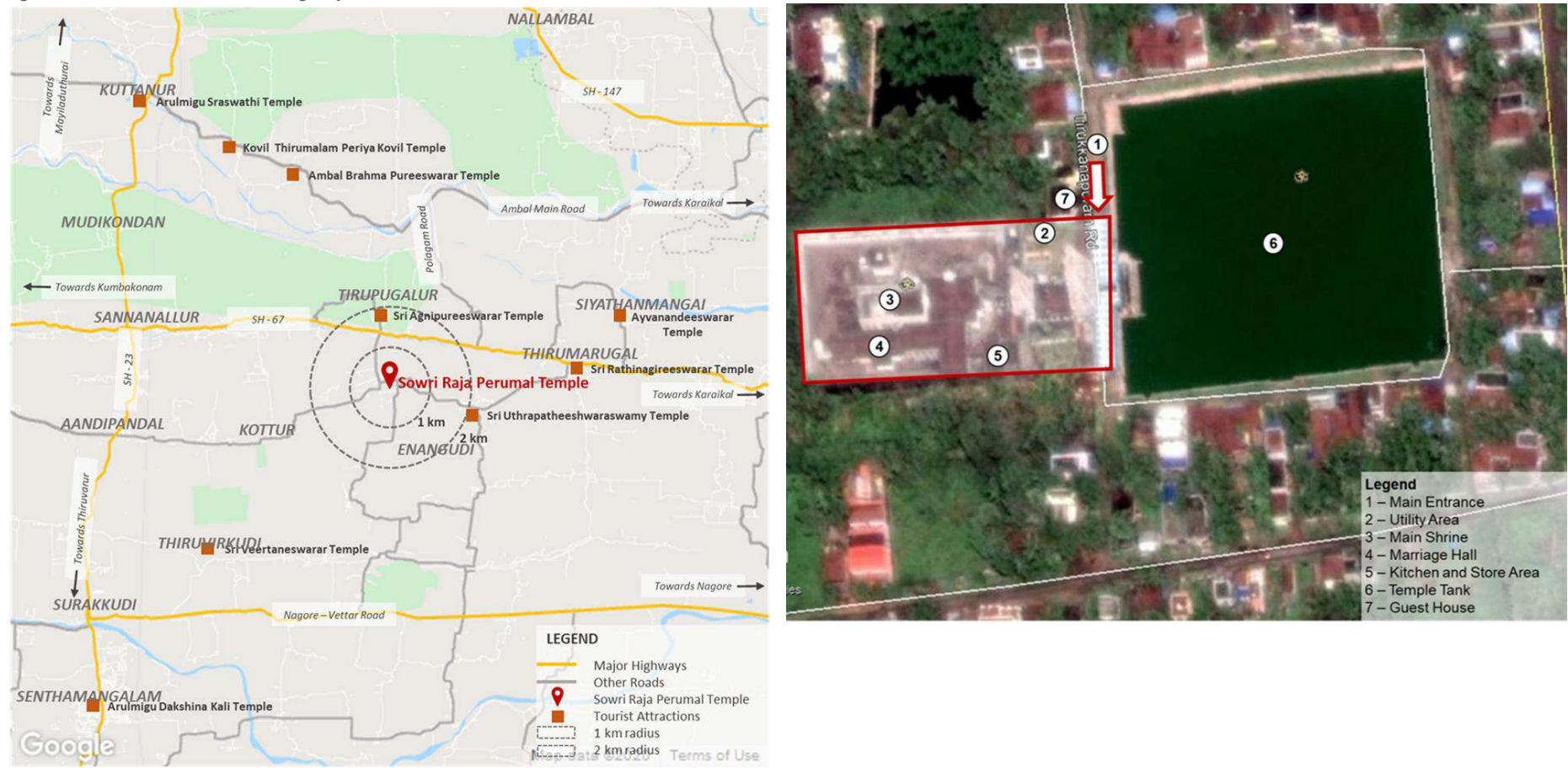
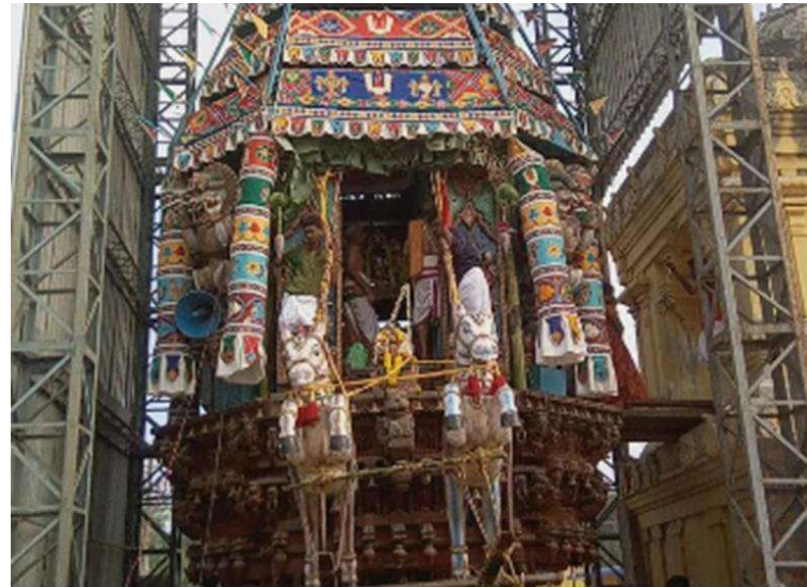


Figure 15-2: Other Land parcels owned by temple authorities



Site Pictures





Vision for the Site

The Sri Sowriraja Perumal Temple is one of the 108 Divya Desams. The 9 Navagrahas carved on the temple walls is a beautiful sight for devotees. The temple has a very ancient setting.

Considering the existing site situation such as:

- The temple's connection to Lord Krishna and the title of Dwarka of the South
- The calm and serene temple surroundings
- The temple is also located in 20 km. of the vicinity of big towns such as Thiruvavur and Karaikal
- The temple complex was observed to be clean and maintained.
- The area surrounding the temple provides vibes of a pure south Indian rural environment.

And the site weaknesses such as:

- Poor maintenance of temple Architecture – The temple façade and architecture were observed to be wearing out.
- Issues with safety during the night – The area around the site is unsafe during the night due to an inadequate number of streetlights.



- Lack of cleanliness around the temple tank and areas around the temple.
- Lack of cultural and recreational spaces around the site to the pilgrim and local engagement.

The temple authorities own ~150 acres of the land parcel around the temple, out of which nearly 7 acres are vacant, and is situated right adjacent to the temple site. The land parcel can be utilized for further development of attraction points and other amenities. Thus, the temple can be envisioned to be developed by utilizing the site surroundings, creating a pleasant and facilitated environment for the visitors while solving the existing issues faced by pilgrims and locals at the site.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience. The target visitor group envisioned to be captured at the site are:

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**. Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data.

Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	490	994	1,706
High Value Tourists (HVT) (Both Domestic and Foreign)	20	41	70
Maximum Carrying Capacity	23,634		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- Foreign – All non-Indians
- High-Value Tourists – A new definition proposed to capture estimated footfall of visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites. For purely pilgrim sites, HVT footfalls are taken as 10% of domestic footfalls.

Proposed Masterplan

Approach to Masterplanning

Utilizing the ~7 acres of land adjacent to the temple site, explore avenues to develop the necessary requirements for the temple and the pilgrims. The main aim of the master planning activity at the site is to utilize and further put to use a small portion of these land parcels to create a pleasant and facilitated environment for the pilgrims.

The objectives for developing master planning interventions at this site are:

- **Improving pilgrims' experience at the temple** – through improved circulation, conveniences, and amenities.
- **Developing vibrant and active spaces** around the site, which can facilitate tourists while they visit the site as well as provide cultural and recreational areas in the small village for the local community.

- **Improving the overall condition of the temple structure** and the ancillary facilities at the site.

Hard Interventions

1. **Community Hall** – Owing to the temple's location in a small village with a minimal number of places for the locals to organize the cultural and private events, the temple site is made available for free for any such requirements.

Developing a community hall will provide an alternative avenue for cultural events organized at the temple, for example, festival celebrations, local school events, cultural dancing events, etc. It can be developed on the land available on the rear side of the temple, near the pond.

Infrastructure Created: ~1540 sqm of built-up area

2. **Waterside Garden** – The temple location, is supplemented by a temple tank and a small water body adjacent to the access road. The space around the pond can be developed into a pilgrim and local recreation area. It can be done by creating an embankment around the pond and a landscaped garden with canopy seating areas and a children's play area. The area can be utilized by the pilgrim to rest for a while and enjoy the calm and serene village environment.

Infrastructure Created: ~3950 sqm of garden space

3. **Parking Area** – Despite the availability of parking spaces near the temple for pilgrims. In the present times, it is adequate for the number of pilgrims visiting the site. A new parking area must be demarcated to accommodate additional traffic visiting the temple site, the community hall, and the garden area. It can be done by the temporary demarcation of space by parking and develop a vehicular connection to it. It can be demarcated on the rear side of the temple, at a location that connects both the temple site as well as the community hall. It can then be further connected to the other areas via a pedestrian pathway.

4. **Paved Internal Road** – The additional set of facilities developed at the site like the community hall, and the parking area needs a vehicular connection to it. A 6m. wide paved road can be developed connecting the main road near the temple, and the demarcated parking area.

Infrastructure Created: ~170 m. length of a 6m. wide road with streetlights

5. **Pedestrian pathway and supporting landscape areas** – The temple, community hall, and the pilgrim garden area can be connected via a pedestrian pathway for easy movement of pilgrims around the site. Additionally, some landscaping areas can be developed near community hall and pilgrim amenities to bring vibrancy to space.

A comprehensive landscape and open space design with a logical pedestrian routing, comfortable places will tie together the variety of spaces at the site and create one cohesive destination.

Infrastructure Created: ~200 m. length of pedestrian pathways and ~950 sqm of General Landscaping Area.

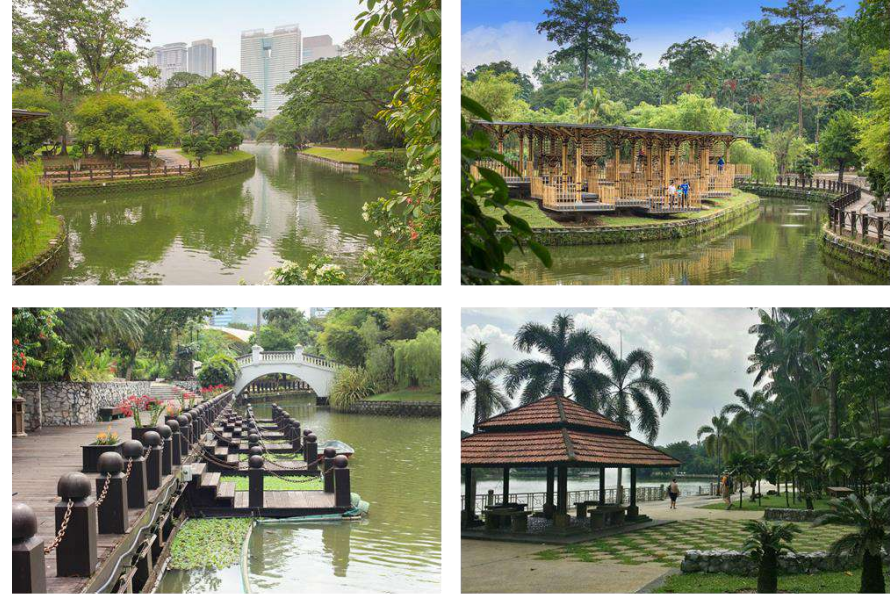
6. **Temple Conservation and Façade Improvement** – To improve the overall experience of the visit to the Temple, the buildings inside the site campus should be well maintained and should reflect the architectural beauty of the Temple.

- The temple authorities must take up activities for the conservation of temple structure which can include improving the overall façade by repainting and some extent of civil works.
- The disfiguring hoardings and other architecturally inappropriate structures added to the buildings over the years should be removed.
- The building exteriors of the other structures at the temple must be repainted with re-construction work if required.
- The pilgrim circulation path inside the temple must be shaded, for the ease of the pilgrims.

Infrastructure Created: Façade Improvement and installation of shading devices over the existing pathway of ~235 m

7. **Block for Other Amenities** – There are limited facilities available at the site. An amenity block with ~5 drinking water stations and a cloakroom, would ease out pilgrim facilitation during the visit to the temple.

Infrastructure Created: ~150 sqm of built-up area.



Lake Garden Spaces



Community Hall

Soft Interventions

1. **The site and Surrounding Maintenance** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:
 - a. **Community participation** programs or devotee volunteers.
 - b. **Providing adequate dustbins** for disposal of segregated waste.
 - c. Through **Innovative interventions** like “Own your Street” where all the stakeholders around the site and residents are made in charge of the cleanliness of the assigned street for a specific period.
2. **Guidelines for Temple Tank Maintenance** - The Pond adjacent to the temple, as observed at the site comprises a dump of ritual constituents and other waste resulting in unhygienic conditions around it. Rejuvenation of the tank can be done using the following measures:
 - a. Restrictions on disposal of organic matter, alternative arrangements can be made for the disposal of organic matter which can then be collected and transported to feed the animals.
 - b. Awareness amongst the general public for disposal of waste at designated locations.
3. **Temple Maintenance Plan**
The temple complex and the structure are observed to be deteriorating. Leaving the situation untouched, affects the aesthetics of the place and more importantly, might weaken the structure. A proper maintenance plan for the temple in consultation with the conservation architects and specialists can be developed in order to improve the visitor experience
4. **Promotion** – The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes

Amenities Plan

1. **Pay and Use Toilet Block** – ~5 units of identified pay and use toilet blocks must be incorporated with the tourist facilitation center. The location of the toilets shown in the master plan is an indicative representation.

2. **Garden Furniture** – Adequate garden furniture like benches, dustbins, bollards, etc. are proposed to be provided at the landscaped areas in the temple complex., along with the design guidelines for street furniture.
3. **Plantation and Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify open-air exhibit areas, sidewalks, open-air theatre, and other visitor zones.
4. **Signages** – Package 1 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.
5. **Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1	Community Hall	~1540 sqm
2	Paved Parking Area	~1800 sqm
3	Toilets	~5 units
4	Block for Other Amenities	~150 sqm
5	Temple Office	~130 sqm
6	Pedestrian Pathway	~200 m
7	Road (6 m.)	~170 m
8	Garden (Canopy Seating Areas)	~3950 sqm
9	Temple Conservation Activities	~235 m.

#	Project Component	Scale
	Façade painting + install shading devices to already existing pathways	
10	Waterfront embankment	~200 m.
11	General Landscaping	~950 sqm
12	Signages	Package 1
13	Technology Interventions a. Electronic Visitor Counter at entry points b. TN Assist App integration at site	Package 1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Community Hall	60
2	Paved Parking Area	29
3	Toilets	5
4	Block for Other Amenities	5
5	Temple Office	5
6	Pedestrian Pathway	4
7	Road (6 m.)	51
8	Garden (Canopy Seating Areas)	27
9	Temple Conservation Activities - shading	12
10	Waterfront embankment	4
11	General Landscaping	1
12	Signages	1
13	Technology Interventions	1
Total		INR 2 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Space on Hire** – Capturing an average of 4 events per month at INR 45,000 per event.
- Parking** – Capturing 100 ECS at 30% occupancy per day at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 25 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **security personnel** for the cultural hall and the parking.
 - b. An **Administration staff** to overlook the operations of the cultural hall and parking.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and

responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 20 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the cultural hall for events at the site to private operators for better efficiency and long-term sustainability.

Sub-projects which can be taken up by the local governing body/ Town panchayat

The last mile connectivity to the temple is poor and has been raised as a repeated concern by the local residents frequently visiting the temple and by the pilgrims alike. Since this is out of the temple's scope, it has to be taken up by the local governing body/ town panchayat to address the concerns of its constituents.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Paved road (Asphalt road)	51	Y0 – Y2	Local governing body/ Town panchayat
2	Community Hall ⁶⁵	60	Y5 – Y7	HR&CE
3	Paved Parking Area	29	Y0 – Y2	HR&CE
4	Toilets	5	Y0 – Y2	HR&CE
5	Block for Other Amenities	5	Y0 – Y2	HR&CE
6	Temple Office	5	Y0 – Y2	HR&CE
7	Pedestrian Pathway	4	Y0 – Y2	HR&CE
8	Garden (Canopy Seating Areas)	27	Y0 – Y2	HR&CE
9	Temple Conservation Activities - shading	12	Y0 – Y2	HR&CE
10	Waterfront embankment	4	Y0 – Y2	HR&CE
11	General Landscaping	1	Y0 – Y2	HR&CE
12	Signages	1	Y0 – Y2	HR&CE

⁶⁵ The development of community hall can be taken up in future phases based on footfall increase and feasibility.

⁶⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
13	Technology Interventions	1	Y0 – Y2	HR&CE
Total		INR 2 Cr		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 8,800⁶⁶ man-days of construction labour (*spread across 2-3 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days⁶⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 22,000 man-days.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁶⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 180 Cr. at the site⁶⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

⁶⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 15-3: Proposed Master Plan – Sowriraja Perumal Temple, Thirukannapuram



16. Jagath Rakshaka Perumal Temple, Thirukkoodaloor

Site Details

District	Thanjavur
Name of Site	Jagath Rakshaka Perumal Temple
Site No:	Site 117 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	10.9252, 79.2033
Land Area:	~0.67 acres + 1.5 acres additional land
Peak footfalls:	30 per day (May-June)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 7,000 (2019-20) For. – nil (2019-20)
Site Revenues:	INR 1 lakh (2019-20)
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~6 km (Ayyampettai)
b. Airport:	~97 km (Tiruchirappalli)
c. Highway:	~200m from SH-22, 7.5km from NH-36
d. Other:	Nil
Trails featured on:	Divya Desam

Jagath Rakshaka Perumal Temple, also known as Sri Vayyam Kaatha Perumal temple, is a Hindu temple. It is one of the 108 Divya Desam temples, dedicated to Lord Vishnu, who is worshipped here as Jagath Rakshaka with his consort Lakshmi as Pushpavalli. The temple is mostly visited by locals in and around Thirukoodalur, as it does not have a pull factor in terms of history, architecture and / or amenities. Scope of interventions and master planning for the site includes the development of site into a regional pilgrim destination with pedestrian-friendly infrastructure.

Existing Condition

Location

The temple is located in Thirukoodalur, a village on the outskirts of Kumbakonam in Thanjavur district. The temple is located at a distance of ~20 km from Kumbakonam and Thanjavur. It is situated on State Highway 22 (SH-22) with proximity to other small shrines, namely Kaasi Viswanathar Temple, Dayanidheeswarar Shiva Temple, Chakrapalli Chakra Vaagheeswara Temple.

Existing Layout and Uses

The temple is spread over an area of almost 0.67 acres of land, surrounded by a tall brick compound wall named 'thirumathil' constructed around the temple, to protect it from damage from floods. The temple has one entry from the 3-tiered Rajagopuram (gateway tower) on the eastern side of the temple. It houses separate shrines for Ramanuja, Azhwars, Andal and Garuda. There is one vimana above the sanctum and the image of Jagath Rakshaka Perumal in standing posture facing east is placed on the central shrine.

The site is currently used for religious purposes mainly. Various poojas are conducted by devotees from the nearby villages. It has 6 daily rituals and few events

during festive days. Some of the festivals conducted at the site are Brahmotsavam and Vaikunta Ekadasi.

Other Land Available

In addition to the temple complex of 0.67 acres, the temple also owns 1-acre land to the east of the complex. Some of this land is occupied by residential developments. The temple tank is located at a distance of ~100 m from the temple complex on the eastern side.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959. The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. Tamil Nadu Combined Development and Building Rules, 2019 – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

The site is located within 15 meters of the Kaveri River, so future development will require permission from an executive authority to prevent any contamination or any risk of the drainage of building passing into the river.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction – The temple is visited by pilgrims, mainly locals, who strongly believe that Perumal would provide security to them if they surrender at his lotus feet. The site is located at a distance of 500m from river Kaveri, providing a pleasant atmosphere and picturesque views. The temple tank also adds to the aesthetic character of the precinct.

The other land available on the eastern side is encroached by residential developments creating a cluttered environment. Moreover, the less frequently visited areas around the temple are maintained in a meager way, affecting the overall character of the space.

2. Accessibility – The Jagath Rakshaka Perumal Temple can be accessed from Thanjavur-Kumbakonam road (SH-22) via Thiruvaiyaru. The access road from SH-22 to the temple is narrow. Pilgrims majorly use private/ rental vehicles and local buses, as there is no auto/ cab connectivity from and to Thanjavur or Kumbakonam. The nearest bus stop is located within 500m of the site. Minor interventions are required to augment accessibility to the site.

Parking – There is no designated parking space available, vehicles are usually parked outside the temple complex.

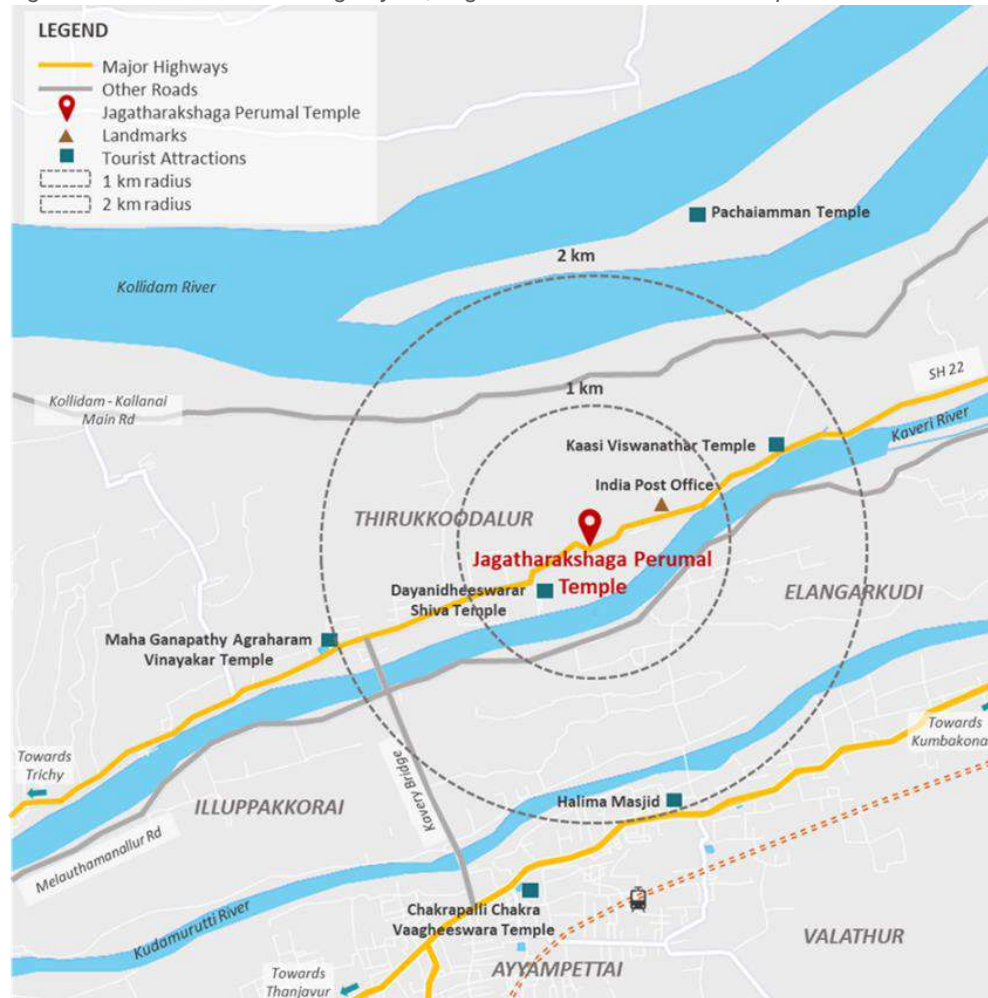
3. Amenities – The temple is equipped with a few basic-level amenities within and around the temple.

- There is no provision of a toilet and drinking water facility.
- The temple premises are adequately clean but there is a lack of dustbins.
- The site premises are guarded by a compound wall; however, it is broken and ill-maintained.
- The site is not equipped with any safety measures. (fire equipment, CCTV camera, security guards, etc.)
- No facilities like footwear stands, cloakrooms, etc. are available at the site.
- The site is additionally not universally accessible by all kinds of pilgrims due to lack of wheelchairs and other measures.

4. Awareness – The temple is not as popular as other temples in Thanjavur. It is majorly visited by local people residing in Thanjavur and surrounding areas. There are only domestic pilgrims from the states of Tamil Nadu, Karnataka and Andhra Pradesh during festivals or vacations.

- 5. Activities** – The temple has minimal pilgrim engaging activities on a normal day. Intermittently, there are some activities such as marriages, dance recitals, etc. within the temple complex. Srisukta Homam, a religious practice, is performed in the temple with 108 lotus leaves on full moon days.
- 6. Accommodation** – There is no accommodation available nearby for visitors. Since the time spent at the temple is not more than 0.5 hours (on non-festive occasions) and 1 hour (on festive occasions), visitors tend to either return to Thanjavur/Kumbakonam or other cities after visiting the temple.
- 7. Association with Community** – There are no common or regular associations of the local communities with the temple. However, few residential developments have come up outside the temple complex land parcel, which cannot be removed due to social issues.

Figure 16-1: Location & Existing Layout, Jagath Rakshaka Perumal Temple



Site Pictures





Vision for the Site

Given the religious significance of the temple and other features, such as:

- The temple site is close to the bank of the Kaveri river, providing a serene and beautiful view on its south-eastern side.
- This temple is located within 5 km of various divyadesams, namely Thirukavithalam and Thirukandiyur, Thirupullabhoothangudi, Thiru Aadanoor and Thanjai Maa Mani, so it can also be covered in the same journey.

and taking in cognisance its weaknesses, such as:

- The footfall of the temple is very low compared to other Divya Desam temples.
- Inadequate facilities and unpleasant views outside the temple complex are the major issues of the site.
- The Jagath Rakshaka Perumal Temple is not a well-established and acknowledged tourist destination.

The temple can be developed as a regional pilgrim destination by enhancing the visitors' experience. The adjoining land can be developed as a community space while retaining the existing landscape and utilizing the Kaveri River's view.

- **Target Visitor** –The site is largely a pilgrim site, with low footfall mainly received from neighbouring areas, namely Andhra Pradesh, Karnataka and Tamil Nadu, due to its religious significance. Going forward, the master planning will target facilitating better amenities and improving the visitor's experience. Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a very low pilgrim site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	7	16	30
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	2757		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High-Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The access route towards the temple complex leading from SH-22 should become much more appealing and safe experience for pilgrims when walking up to the Temple. Provision of strategic parking space with pedestrianization allows the creation of pedestrian-friendly recreational and public space between the temple complex and temple tank, which will be beneficial to the Pilgrims' overall experience of a visit to the Temple.

The master planning approach at the site mainly deals with the provision of basic amenities around the site.

The objectives of master planning at this site include:

- To create an additional **recreational and vibrant space** around the temple for the visitors.
- To improve the access from the main road to temple complex and temple tank area.
- To develop an **interactive space** for the **local community**.

The set of hard interventions for the site are subjected to Provision of basic amenities and addition of a space of local community only with minimal upkeep required / needed of the space.

Hard Interventions

1. **Rejuvenation of Temple Tank** – Currently the temple tank is underutilized, and it has the potential to be developed as a public space. The idea here is to rejuvenate its lost charm and create a better public space for the temple visitors. It can be done by creating a paved walkway around the tank along with soft landscaping with grass/alike elements and provision of adequate number of dustbins spread across the temple tank area. Regular cleaning and maintenance of the tank is also required.

Infrastructure Created:

- Paved walkway ~100 m. length and 3m wide
- Soft landscaping ~100 sqm

2. **Community park** – A community park looking over to the Kaveri river can be provided on the southern side of land available. The existing trees will be retained along with providing the necessary amenities.

- The park could be used by the locals as well as pilgrims, for rejuvenation and recreation purposes.
- Paved Walkways, children play area, benches and streetlights can be provided according to the context of existing trees.

Infrastructure Created: ~2000 sqm. BUA consisting of

- Paved walkway ~150 m. length and 3m wide
- Soft landscaping ~150 sqm (Turf)
- Temporary Seating ~5 units

3. **Development of Parking Space** – Currently, vehicular parking is done outside the temple complex. A new unpaved (Kachha) parking space must be developed near the entry from the SH-22.

Infrastructure Created: ~10 ECS unpaved parking area

4. **Temple Wares (Pooja items, Prashadam)** - 2 temple ware kiosks are suggested outside the temple complex, near the Rajagopuram, for Pooja items and prashadam.

Infrastructure Created: 3mX3m module (2 units)



Reference images for temple tank rejuvenation



Reference images for community park

Soft Interventions

1. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “own your street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
2. **Promotion** –The department should promote Jagath Rakshaka Perumal temple and events/activities held here, in the TN Assist app and on its various platforms, following the site changes.
3. **Site management** – The site must be managed by the respective temple management authorities in the aspects of restricting waste littering inside the complex or at the temple tank area. It should also restrict further encroachment on the vacant land and maintenance of existing infrastructure (boundary wall, Electrical fittings etc.).

Amenities Plan

1. **Community Toilet** – As there is no toilet block in the temple premise, a community toilet block should be developed outside the main temple complex, near the north-east corner. The design guidelines for Community Toilet Block are mentioned in design guidelines. The location of toilet shown in the master plan is an indicative representation.
2. **Street Furniture** – Street furniture needs to become an integral part of landscape design. Street furniture includes the following facilities-
 - **Railing (Type 1)**- Railing type 1 is proposed along the pedestrian pathway with suitable entry points for community park and residential development areas.
Infrastructure Created: 800m.
 - **Street-Lighting** – To ensure safety and security along the pedestrian pathway, parking area and temple tank area, streetlights should be installed.
Infrastructure Created: 10 Units
 - **Dustbins**- Dustbins must be provided in sufficient quantity to maintain the site and keep the surroundings clean. This is important to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines.
Infrastructure Created: Cumulative 10 units for community park, temple complex and temple tank area.
3. **Drinking Water Station**- Availability of free drinking water is a major issue at this site. Hence, 1 drinking water station with RO water coolers should be installed near the toilet block.
4. **Planting & landscaping** – To create comfortable spaces, and to enhance visual perception. Introducing a new landscape blending with the existing vegetation within and/or around the temple should put greater emphasis on the use of local flora. Extensive landscaping has been suggested for the temple complex along with a walkway around the temple.
Infrastructure Created inside temple complex: Soft landscaping(turf) ~1500 sqm and paved walkway ~150m
5. **Signage (Package 1)** – Few direction boards can be installed along the path from the temple tank to the main complex area indicating the directions for the site. Signage Package 1 is proposed to feature for this site. Both directional

signage and informational signage should be used, as per the design guidelines.

6. **Technology Interventions (Package 1)** – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Electronic Visitor Counter at the entry point.
 - TN Assist App integration at the site, with an internet connection and QR scanner.
 - CCTV coverage at up to 3 locations.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Rejuvenation of Temple Tank <ul style="list-style-type: none"> • Paved Walkway around the tank • Soft Landscaping 	100m 100sqm
2	Community park <ul style="list-style-type: none"> • Paved Walkway • Soft Landscaping • Temporary Seating 	150m 2000 sqm 5
3	Parking (Unpaved)	10 ECS
4	Temple Wares (3mX3m)	2
5	Community Toilet	1
6	Railing (Type 1)	800m
7	Street-lighting	10
8	Dustbin	10
9	Drinking Water Station	1
10	Temple Complex <ul style="list-style-type: none"> • General Landscape • Paved Walkway 	1500 sqm 150m

#	Project Component	Scale
11	Signage (Package 1)	1
12	Technology (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Paved Walkway	8
2	Landscaping	3
3	Seats	1
4	Parking (Unpaved)	1
5	Retail Kiosk (3mX3m)	6
6	Community Toilet	5
7	Railing (Type 1)	20
8	Street-lighting	1
9	Dustbin	1
10	Drinking Water Station	3
11	Signage Package 1	1
12	Technology Interventions	1
Total		INR 50 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Parking** – Capturing 10 ECS at 40% occupancy per day at INR 15 per ECS.
- Kiosks** – Captures 4 kiosks, each to be rented out at INR 1.5 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 10 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees

2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 5 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. And since the proposed interventions are limited to basic amenities it is recommended that the project components be funded and implemented by the HR & CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Paved Walkway	8	Y0 – Y2	HR&CE
2	Landscaping	3	Y0 – Y2	HR&CE
3	Seats	1	Y0 – Y2	HR&CE
4	Parking (Unpaved)	1	Y0 – Y2	HR&CE
5	Retail Kiosk (3mX3m)	6	Y0 – Y2	HR&CE
6	Community Toilet	5	Y0 – Y2	HR&CE
7	Railing (Type 1)	20	Y0 – Y2	HR&CE
8	Street-lighting	1	Y0 – Y2	HR&CE
9	Dustbin	1	Y0 – Y2	HR&CE
10	Drinking Water Station	3	Y0 – Y2	HR&CE
11	Signage Package 1	1	Y0 – Y2	HR&CE
12	Technology Interventions	1	Y0 – Y2	HR&CE
Total		INR 50 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,150⁶⁹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁷⁰

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as 5,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 3 Cr. at the site⁷¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

⁶⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁷⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁷¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 16-2: Proposed Master Plan, Jagath Rakshaka Perumal Temple, Thirukkoodaloor



17. Gajendra Varadha Perumal Temple, Kabi Sthalam

Site Details

District	Thanjavur
Name of Site	Gajendra Varadha Perumal Temple
Site No:	Site 118 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9469, 79.2566
Land Area:	>0.5 acres + 0.05 acres
Peak footfalls:	1,000 per day (July-August)
Operator:	Venkadachalapathy Annachathiram Trust
Site Ownership:	Venkadachalapathy Annachathiram Trust
Tourist Footfall:	Dom.– 70,000 (2019-20) For. – nil (2019-20)
Site Revenues:	Nil
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~2 km from Papanasam Railway Station
b. Airport:	~80 km from Tiruchirappalli International Airport
c. Highway:	~350m from SH-22, ~3km NH-36
d. Other:	Nil
Trails featured on:	Divya Desam

Gajendra Varadha Perumal temple is one of the Navagraha Vaishnava temples. Constructed in the Dravidian style of architecture, this temple is dedicated to the Hindu god Maha Vishnu. It is one of the five Pancha-Kannan temples and also one of the 108 Divya Desams. The temple is majorly visited by people residing in and around the region. The surrounding areas do not have adequate infrastructure for providing public amenities. Furthermore, the temple is small and not as architecturally significant as other temples in Thanjavur. The scope of interventions for the site mainly includes improving the existing conditions and developing it into an active religious destination.

Existing Condition

Location

The temple is located in Kabisthalam, a village on the outskirts of Kumbakonam, Thanjavur district, Tamil Nadu. The village is situated 3 km away from Papanasam and ~20 km away from Kumbakonam and Thanjavur. It is located in between the two rivers Kaveri and Kollidam. It is situated near State Highway 22 (SH-22) with close proximity to other small shrines, namely Kaththayi Amman Temple, Ramalingeswarar Temple, Arulmigu Karaimel Alagar Ayyanar Kovil and Kamakshi Ambika Sametha Ekambareshwarar Temple.

Existing Layout and Uses

The temple covers an area of 0.5 acres, surrounded by residential development. A granite wall surrounds the main temple, enclosing all the shrines. The main entrance is located on the eastern side with a five-tier rajagopuram. The rajagopuram leads towards a temple mast with landscaping on both the side. Further, the temple entrance can be approached via a temporary shed.

The prime deity, Gajendra Varadha is enshrined in the sanctum. There is a separate shrine of Ramanavalli, located to the right of the sanctum and shrines for Yoga

Narasimhar, Sudarsana, Garuda and the Azhwar is also placed within the temple complex.

The temple is currently used for poojas conducted by devotees from the nearby villages. It has 6 daily rituals and few events during festive days. Some of the festivals conducted at the site are Gajendra Moksha Leela, Vaikunta Ekadasi, Chariot festival and Brahmotsavam.

Other Land Available

Apart from the ~0.5 acres temple complex, the temple owns the main temple tank named Gajendra Pushkarani (dried) and another tank called Kabila Theertham, located east of the temple complex. In addition to the temple complex of 0.5 acres, the temple also owns 0.05 acres of land to the south of the temple complex, which is proposed to be used for VIP parking by the temple authorities.

Masterplanning Considerations

Applicable Regulations

Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

The site is located within 15 meters of the Kaveri River, so future development will require permission from an executive authority to prevent any contamination or any risk of the drainage of building passing into the river.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Gajendra Varadha Perumal temple is the only Divya Desam where the lord provides darshan to two animals- monkey God Anjaneya and elephant Gajendra.
As the temple resides in a small village, Kabisthalam, there are ongoing agricultural activities around the site with no major tourist attractions. Moreover,

the less frequently visited areas around the temple are maintained in a meager way, affecting the overall character of the space.

There are certain areas inside the temple complex, including the rajagopuram, with uncontrolled vegetation and the organic waste (leaves from the trees, roofing tiles etc.) is piling on the temple premise, creating an uninviting environment. Most of the structures in the temple complex require renovation due to its dilapidated and poor condition.

2. **Accessibility & Mobility** –The Gajendra Varadha Perumal temple can be accessed from Kumbakonam via SH-22. Buses ply at regular intervals in a day between Kumbakonam and Thiruvaiyaru. The last ~300 m access road leading up to the temple is narrow therefore buses can't enter the site area. The access road is connected to SH-22 via Kaliyamman Kovli street (~6m wide). The major modes of transport people use to commute to the site include public bus and private transport. The nearest bus stop is located at a distance of 300m.

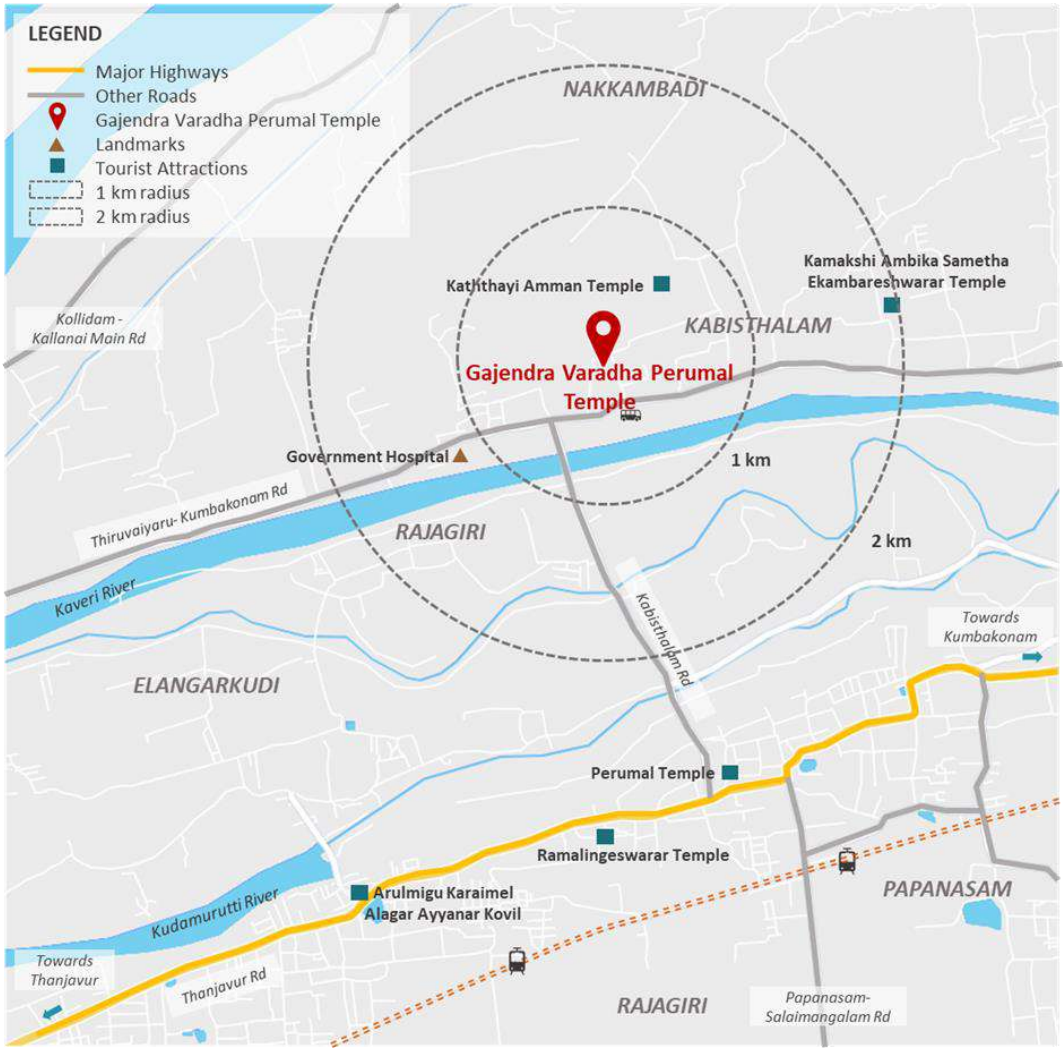
Parking – There are no dedicated parking lots available on the site. Auto/Taxi stand, and bus stop available within 500 m of the site. The vacant land on the southern site is proposed for a VIP parking area.

3. **Amenities** – Averagely maintained and a lower level of amenities has been provided at the site.
 - The site lacks in the provision of toilet facilities and free drinking water facility is available in the office area, but it is not sufficient for the visitors.
 - The site premises are guarded by a compound wall, which is broken in some parts and the lighting facility in the temple complex is in poor condition.
 - There is a lack of signages and wayfinding around the site.
 - The site is not equipped with any safety measures. (fire equipment, CCTV camera, etc.)
 - No facilities like footwear stands, cloakrooms, etc. are available at the site.
 - The site is additionally not universally accessible by all kinds of pilgrims due to lack of wheelchairs and other measures.
4. **Awareness** – The temple is not as popular as other temples in Kumbakonam, though it is the 9th temple in 108 Divya Desams. It is majorly visited by local people residing in Thanjavur and surrounding areas. There are only domestic

pilgrims from the states of Tamil Nadu, Karnataka and Andhra Pradesh during festivals or vacations. No foreign visitors are seen on the site.

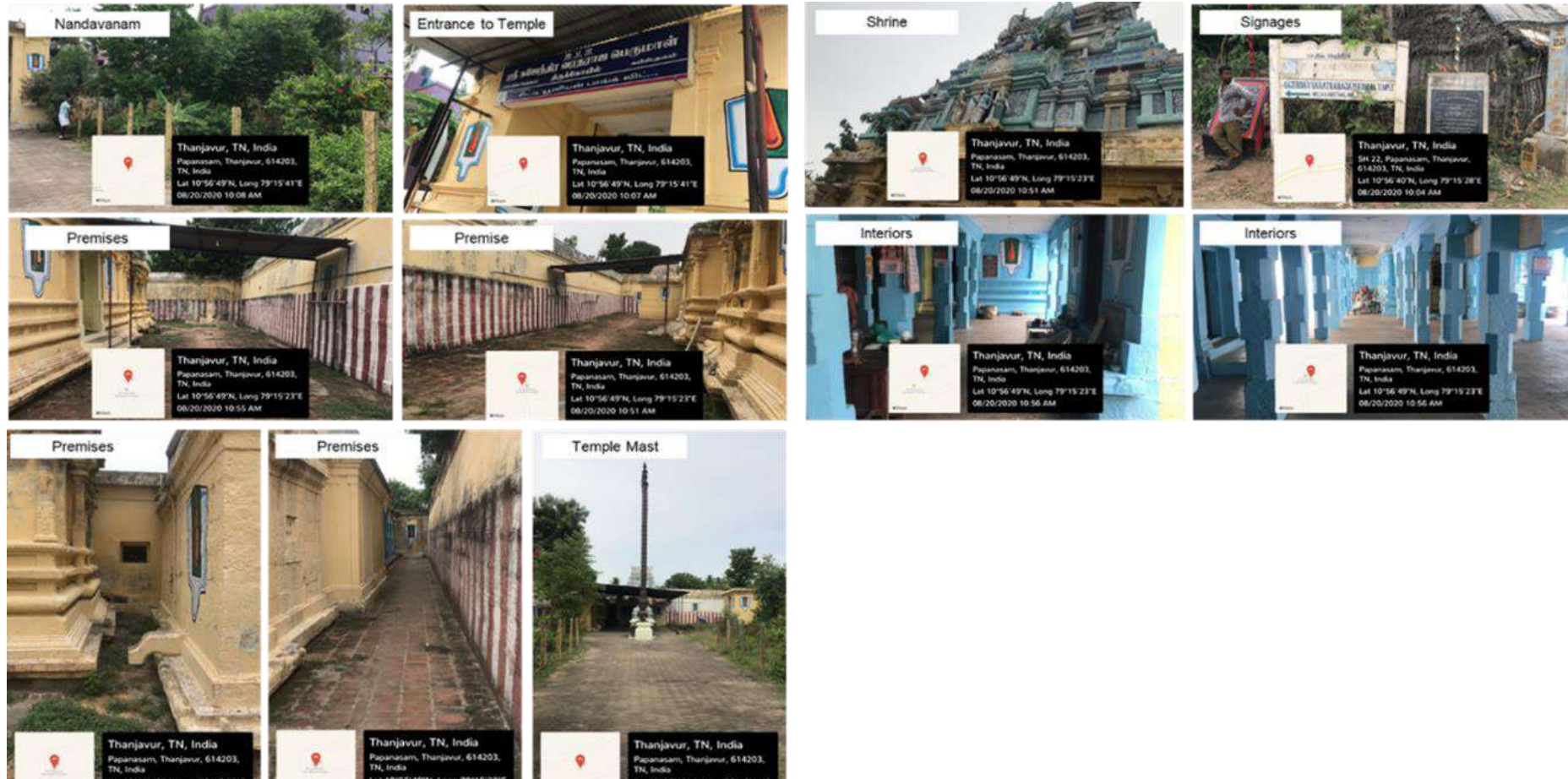
5. **Activities** – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as music, dance recitals, etc. within the temple complex. Gajendra Moksha Leela, celebrated during the Tamil month of Aadi (July–August), is the most prominent. Also, the Gajendra Moksham episode is enacted here every year in Panguni (March-April).
6. **Accommodation** – There is no accommodation available nearby for visitors. Since the time spent at the temple is not more than 0.5 hour (on non-festive occasions) and 1 hour (on festive occasions), visitors tend to either return to Kumbakonam or other cities after visiting the temple.
7. **Association with Community** – There are no common or regular associations of the local communities with the temple.

Figure 17-1: Location & Existing Layout, Gajendra Varadha Perumal Temple



Site Pictures





Vision for the Site

Considering the existing site highlights, such as:

- Constructed in the Dravidian style of architecture, the temple is glorified in the Divya Prabandha the early medieval Tamil canon of the Azhwar saints from the 6th–9th centuries AD.
- The temple has good site connectivity from Kumbakonam and Thanjavur via SH-22. The public transportations (buses, auto and taxi) are also available at regular intervals.

as well as the weaknesses and limitations associated with the site, such as:

- The site is located at a distance of 500m from river Kaveri, but the picturesque view is blocked by residential developments around the premise.
- The footfall of the temple is also very low compared to other Divya Desam temples.
- Poor amenities and lack of maintenance in the temple complex are the major issues of the site.

The vision for the site is to develop it as a regional pilgrim destination by providing basic amenities and improving the people's experience by upgrading the existing facilities (Parking & Temple tank etc.).

- **Target Visitor** –The site is a domestic/pilgrim destination, with low footfall mainly received from neighbouring areas such as Andhra Pradesh, Karnataka and Tamil Nadu, due to its religious significance. Going forward, the master planning will target facilitating better amenities and improving the visitor's experience. Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a very low tourist site with low HVT potential. Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	70	157	302
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	1969		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High-Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The temple, despite being a religious significance and located along the Kaveri river, receives very few footfalls owing to the lack of awareness, absence of basic amenities. Additionally, there is no land available to construct the necessary infrastructural facility.

Considering all the facts about the temple and its potential, the main objectives of the master planning interventions for this site are:

- **Improving visitor's experience** at the temple through improved conveniences and amenities.
- **Renovating and cleaning** the temple complex.
- **Upgrading existing facility** (vacant land for parking and temple tank) to provide improved level of services and recreational facility.

Hard Interventions

1. **Rejuvenation of Temple Tank** – Currently the temple tank is surrounded by residential developments and is not well-maintained. Rejuvenation of this tank will not only revive its lost charm but also create a better public space for the locals as well as temple visitors. It can be done by creating a stepped boundary wall for the tank along with the provision of soft landscaping with grass/like elements and placing benches around the temple tank with an adequate number

of dustbins spread across the temple tank area. Regular cleaning and maintenance of the tank are also required.

Infrastructure Created:

- *Landscaping- ~80 sqm*
- *Temporary Seating~ 4 Units,*
- *Hardscape (Steps)- 430- sqm*



Reference images for temple tank rejuvenation

2. Development of Parking Space- Currently, there is no designated vehicular parking area. An unpaved (Kachha) parking space should be developed on vacant land located on the southern side of the temple. As VIP parking was already proposed on this land, it will be a paid parking service. The parking space will be accessible from the SH-22 via Kalamman Kovli street.

Infrastructure Created: ~15 ECS unpaved parking area.

3. One-time Renovation and Cleanliness Of The Temple Complex- There are dilapidated and incomplete structures present around the temple complex. Site boundaries, interiors and flooring around the praharam are broken and in bad shape. To improve the overall condition and control the overgrowth of vegetation, one-time cleanliness and renovation should be done.

Infrastructure Created: ~1300sqm BUA

Soft Interventions

1. Cleanliness Initiative – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “Own your Street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.

2. Promotion – The Tourism Department should promote the Gajendra Varadha Perumal temple and events/activities held here, in the TN Assist app and on its various platforms, following the site changes.

Amenities Plan

1. Community Toilet- As there is no toilet block in the temple premise, a community toilet block should be developed outside the main temple complex. The design guidelines for Community Toilet Block are. The location of the toilet is not shown in the master plan because of the scarcity of land availability, but the temple authority should decide on a suitable location for the toilet block.

2. Street Furniture- The site has Inadequate street furniture amenities. It includes the following facilities-

- **Street-Lighting** – The lighting is not sufficient in the temple premise. Moreover, there is a lack of lighting facility on the street connecting the temple to the tank and parking area.

Infrastructure Created: 10 units.

- **Dustbins-** Dustbins must be provided in sufficient quantity to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines.

Infrastructure Created: Cumulative 5 units for parking, temple complex and temple tank area.

3. Drinking Water Station- Unavailability of free drinking water is one of the issues at this site. Hence, 1 drinking water station with RO water coolers should be installed at a strategic location within the temple.

4. Technology Interventions (Package 1) – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:

- Electronic Visitor Counter at the entry point.
- TN Assist App integration at the site, with an internet connection and QR scanner.
- CCTV coverage at up to 3 locations.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Rejuvenation of Temple Tank- <ul style="list-style-type: none"> Landscaping Temporary Seating Hardscape (Steps) 	80 sqm 4 430 Sqm
2	Parking Space (Unpaved)	~15 ECS
3	One-time Renovation and Cleanliness	1300 sqm
4	Community Toilet	1
5	Street-Lighting	10
6	Dustbins	5
7	Drinking Water Station	1
8	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Seats	1
2	Landscaping	1
3	Temple Tank steps	4
4	Parking Space (Unpaved)	2
5	One-time Renovation and Cleanliness	6
6	Community Toilet	5
7	Street-Lighting	1

#	Project Component	Cost (INR Lakhs)
8	Dustbins	1
9	Drinking Water Station	3
10	Technology Interventions	1
Total		INR 25 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at the temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
- Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
- Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

- Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

- Salaries and perks of existing employees
- O&M cost of existing site and facilities
- Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. And since the proposed interventions are limited to basic amenities it is recommended that the project components be funded and implemented by the Temple Trust itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Seats	1	Y0 – Y2	Temple Trust
2	Landscaping	1	Y0 – Y2	Temple Trust
3	Temple Tank steps	4	Y0 – Y2	Temple Trust
4	Parking Space (Unpaved)	2	Y0 – Y2	Temple Trust

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
5	One-time Renovation and Cleanliness	6	Y0 – Y2	Temple Trust
6	Community Toilet	5	Y0 – Y2	Temple Trust
7	Street-Lighting	1	Y0 – Y2	Temple Trust
8	Dustbins	1	Y0 – Y2	Temple Trust
9	Drinking Water Station	3	Y0 – Y2	Temple Trust
10	Technology Interventions	1	Y0 – Y2	Temple Trust
Total		INR 25 L		

Impact on Communities:

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,150⁷² man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁷³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

⁷² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 5,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 30 Cr. at the site⁷⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁷³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁷⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area. These mainly include the Thanjavur Gold Painting Artisans.

Figure 17-2: Proposed Master Plan – Gajendra Varadha Perumal Temple



18. Thiru Aadanoor Temple, Adhanur

Site Details

District	Thanjavur
Name of Site	Thiru Aadanoor Temple
Site No:	Site 119 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9764, 79.3133
Land Area:	0.5 acres + 0.75 acres additional land
Peak footfalls:	200 per day (May - June)
Operator:	Ahobila Matha
Site Ownership:	Ahobila Matha
Tourist Footfall:	Dom. – 15,000-20,000 (2019 - 20) For. – 0 (2019 – 20)
Site Revenues:	INR 2 lakhs (2019-20)
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~9 km (Kumbakonam Railway Junction)
b. Airport:	~90 km (Tiruchirappalli International Airport)
c. Highway:	~4 km from SH-22, ~7km from NH-36
d. Other:	Nil
Trails featured on:	Divya Desam

Andalakkum Aiyan Perumal Temple (Thiru Aadanoor Temple) is a Hindu temple dedicated to Lord Vishnu. Constructed in Dravidian style of architecture, the temple is glorified in the Divya Prabandha. It is counted among the 108 Divya Desams. Here, Lord Vishnu is worshiped as Andalakkum Aiyan and his consort is worshiped as Bhargavi. The site is largely a pilgrim site, unlikely to draw footfalls on its own, and should be promoted as part of an itinerary that includes temples in the neighbouring areas. Hence, the scope of interventions at the site is limited to providing basic amenities and facilitating the visitors.

Existing Condition

Location

The temple is located in Adhanur, a small village on the outskirts of Kumbakonam and ~2 km from Swamimalai in Thanjavur district. It is located between Kaveri and Kollidam rivers. Small shrines located nearby are - Thirupullabhoothangudi Temple, Sri Vijayanathar Temple, Ezhuthani Nathar Shiva Temple and Swamimalai Temple.

Existing Layout and Uses

The temple covers an area of 0.5 acres. All the shrines and the temple tower are enclosed by a rectangular boundary wall. The deity of this temple is believed to have similarities with the Srirangam Ranganathaswamy temple with the chief deity Vishnu in a reclining, half-sleeping posture.

The temple has one entry from the 3-tiered Rajagopuram (gateway tower) on the eastern side of the temple. Further, the sanctum is located axial to the gopuram and is approached through the temple mast. The main deity in this temple is Andalakkumayyan facing east direction. It is believed that Hanuman and Lord Rama visited the temple on their way to Sri Lanka, and their footmarks are sculpted in the temple.

The temple is surrounded by a few residential developments and privately-owned vacant/agricultural lands. Currently, the site is used for religious purposes mainly. Some of the festivals conducted at the site are Brahmotsavam and Vaikunta Ekadasi.

Other Land Available

In addition to the temple complex, the temple also owns 0.75 acres of land to the north of the complex. Presently, some of this land is used for parking and staff quarters while the rest is unused.

Masterplanning Considerations

Applicable Regulations

Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the baseline stage are summarised below along the 7A Framework:

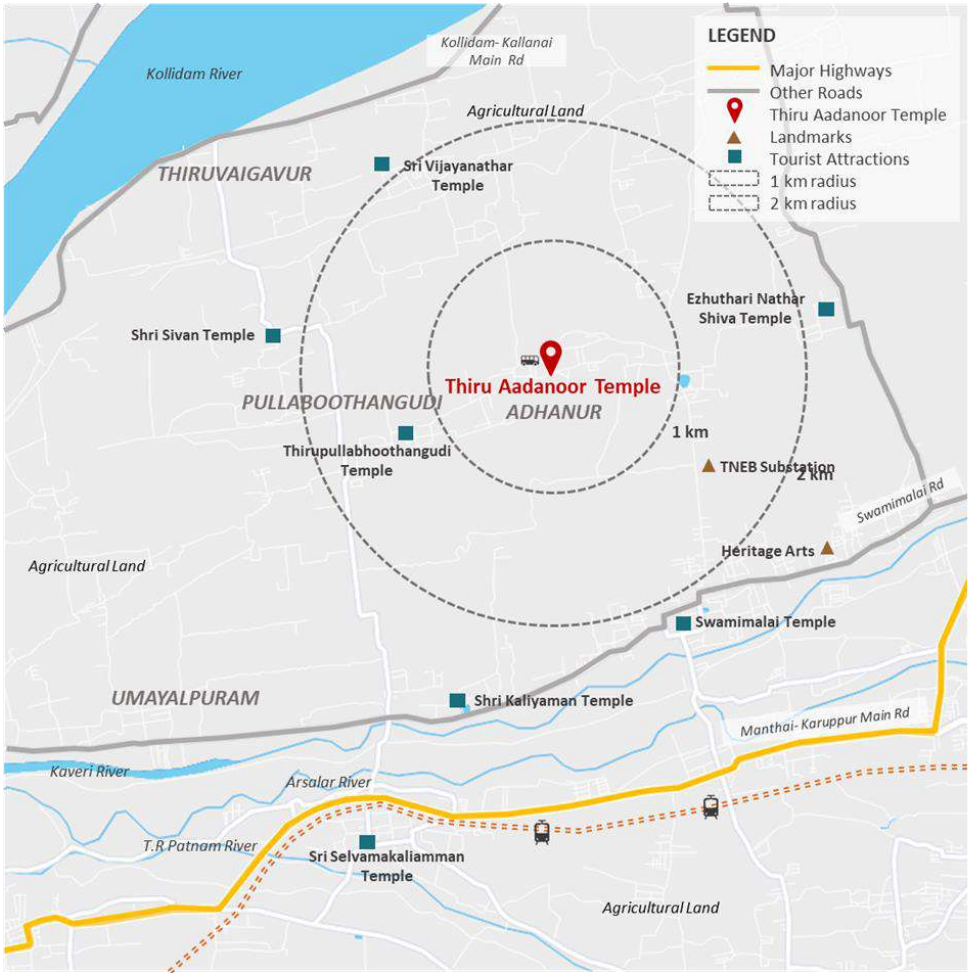
1. **Attraction** – Thiru Aadanoor Temple is the only Divya Desam where the body of the Alwar saint is placed inside the Garbhagriha. Kaamadhenu the divine cow performed penance here, therefore this sthalam is named Aa + than + oor, called "Thiru Adhanoor".
It is believed that the presiding idol is growing in years and the world will get destroyed when the foot of the image emerges. Also, according to beliefs and scriptures, there are two pillars in the abode of Lord Vishnu, devotees would be relieved of their sins if they embrace these pillars.
Worshiping in this temple is thus believed to offer solace to people afflicted by witchcraft. As the temple resides in a small village, Adhanur, it has ongoing agricultural activities around the site with no major tourist attractions. Thirupullabhoothangudi Temple, another Divya Desam is located at a distance of 1 km and can be easily visited along with Thiru Aadanoor Temple.
2. **Accessibility** – The Thiru Aadanoor Temple can be accessed from Kumbakonam via State Highway (SH-22). Pilgrims majorly use private/ rental vehicles and local buses, as there is no auto/ cab connectivity to Kumbakonam.

The last ~300m road leading up to the temple is narrow therefore buses can't enter the site area. The nearest bus stop is located at a distance of 300m.

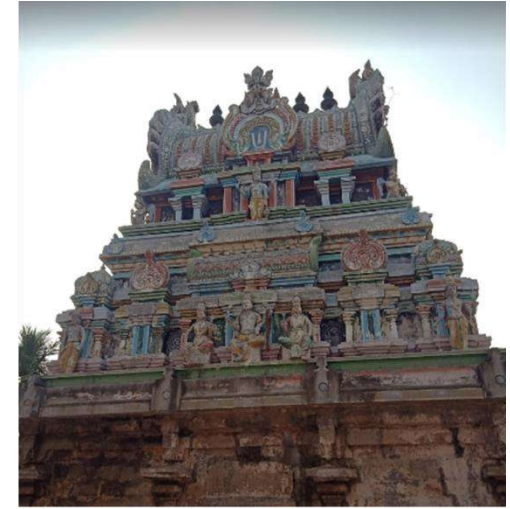
Parking – There is no designated parking space available, vehicles are usually parked outside the temple complex.

3. **Amenities** – The condition of visitor amenities present at the site is poor. The temple lacks in following facilities-
 - There are no directional signages and wayfinding available within the site.
 - 2 public toilets are available, but not well-maintained.
 - Free drinking water facility is not available.
 - The temple premises are adequately clean, but no dustbins are provided on the premises.
 - Only 1 CCTV installed inside the sanctum. No security guards deployed.
 - Inadequate lighting within the premises.
 - Fire safety equipment like fire hoses and extinguishers are not installed.
 - No facilities like footwear stands, cloakrooms, etc. are available at the site.
 - The site is additionally not universally accessible
4. **Awareness** – The temple is not as popular as other temples in Kumbakonam. It is majorly visited by people residing in the area. Foreign tourists are negligible with only Tamilians residing abroad visit the temple rarely. The temple is not included in the department of Tamil Nadu tourism brochure.
5. **Activities** – The temple has minimal pilgrim engaging activities on normal days. Intermittently, there are some activities such as music, dance recitals, etc.
6. **Accommodation** – There is no accommodation available nearby for visitors. Since the time spent at the temple is not more than 0.5 hours (on non-festive occasions) and 1 hour (on festive occasions), visitors tend to either return to Kumbakonam or other cities after visiting the temple.
7. **Association with Community** – There are no common or regular associations of the local communities with the temple.

Figure 18-1: Location & Existing Layout, Thiru Aadanoor Temple



Site Pictures



Vision for the Site

It is believed that worshipping Lord Perumal in this temple brings prosperity to the family and bless the devotee with excellence in educational pursuits.

The footfall of the temple is very low compared to other Divya Desam temples. The surrounding areas are not developed and do not provide for the necessary public amenities.

The temple can be developed as a regional pilgrim destination by providing basic amenities and enhancing the visitors' experience.

- **Target Visitor** –The site is largely a pilgrim site, with low footfall mainly received from neighbouring areas due to its religious significance. Going forward, the master planning will target facilitating better amenities and improving the visitor's experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, divyang and elderly).

- **Tourist Projections** – The site is categorized as a **very low pilgrim site** with **low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	20	45	86
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	1,969		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High-Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The temple has a nice and peaceful environment around the complex. Currently, there is no need for any major intervention as the existing infrastructure is sufficient for the present need. Considering all the facts about the temple and its potential, the main objectives of the master planning interventions for this site are:

- **Improving visitor's experience** at the temple by providing all the basic amenities.
- Keeping the **vacant land** as it is for future requirements.

Hard Interventions

1. **Temple Wares Retail (Pooja items, Prashadam)** - 1 temple ware kiosk is suggested outside the temple complex, on the vacant land near the entrance, for pooja items and prashadam.

Infrastructure Created: 3mX3m module (1 unit).

Soft Interventions

1. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “own your street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
2. **Promotion** –The department should promote Thiru Aadanoor Temple and events/activities held here, in the TN Assist app and on its various platforms, following the site changes.
3. **Site management** – The site must be managed by the respective temple management authorities to maintain the cleanliness in and around the site and conserve the aesthetic feature of the temple, etc.

Amenities Plan

1. **Community Toilet** – As the existing toilet block outside the temple premise is in meagre condition, a community toilet block should be developed in the same place. The design guidelines for community toilet blocks are mentioned in design guidelines. The location of the toilet shown in the master plan is an indicative representation.

2. **Drinking Water Station-** Availability of free drinking water is one of the issues at this site. Hence, 1 drinking water station with RO water coolers should be installed at a suitable location decided by the temple authority.
3. **Safety and Security** – The site lacks security safety and measures, therefore firefighting supplies such as fire extinguishers, sand buckets, emergency exits, etc., should be installed at all entry/exit points, inside and outside the temple.
4. **Solar streetlights** - The site has an inadequate lighting facility. Considering the remote location of the temple, providing solar streetlights will be a sustainable measure. The streets and temple can be kept illuminated after dark. Solar streetlights can be funded jointly by the temple authorities and the panchayat.
Infrastructure Created: 5 units.
5. **Dustbins-** Dustbins must be provided in sufficient quantity to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines.
Infrastructure Created: 2 Units.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Temple wares Retail (3mX3m)	1
2	Community Toilet	1
3	Drinking-Water Station	1
4	Solar Streetlights	5
5	Dustbin	2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Community Toilet block	5
2	Temple Wares (3mX3m)	1
3	Drinking Water Station	3
4	Solar streetlights	1
5	Dustbins	1
Total		INR 10 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are un-escalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Kiosks** – Captures 1 kiosk to be rented out at INR 2 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 2 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.

6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 1 Lakh.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. And since the proposed interventions are limited to basic amenities it is recommended that the project components be funded and implemented by the Temple trust itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Community Toilet block	5	Y0 – Y2	Ahobila Matha
2	Temple Wares (3mX3m)	1	Y0 – Y2	Ahobila Matha
3	Drinking Water Station	3	Y0 – Y2	Ahobila Matha
4	Solar streetlights	1	Y0 – Y2	Ahobila Matha
5	Dustbins	1	Y0 – Y2	Ahobila Matha
Total		INR 10 L		

Impact on Communities:

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 400⁷⁵ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁷⁶

⁷⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 1,100 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 8.50 Cr. at the site⁷⁷.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%

◦ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁷⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁷⁷ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 18-2: Proposed Master Plan – Thiru Aadanoor Temple



19. Thirupullabhoothangudi Temple

Site Details

District	Thanjavur
Name of Site	Thirupullabhoothangudi Temple
Site No:	Site 120 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9712, 79.3031
Land Area:	1 acres + 2.06 acres additional land
Peak footfalls:	100 per day (December- January)
Operator:	Ahobila Matha
Site Ownership:	Ahobila Matha
Tourist Footfall:	Dom. – 18,000 (2019 - 20) For. – 0 (2019 – 20)
Site Revenues:	INR 75000 (2019-20)
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~10 km (Kumbakonam)
b. Airport:	~88 km (Tiruchirappalli)
c. Highway:	~3.5 km from SH-22, ~ 7km from NH- 36
d. Other:	Nil
Trails featured on:	Ramayana, Divya Desam

Thirupullabhoothangudi Temple is one of the 108 Divya Desam temples dedicated to Lord Vishnu. Lord Vishnu is worshiped here as Kolavalli Ramar and his consort Lakshmi as Sita. The temple is small and is located on the outskirts of Kumbakonam. It is majorly visited only by people residing in and around the region. Its surroundings are under-developed and do not provide for basic public amenities. The site is largely a pilgrim site, unlikely to draw footfalls on its own, and should be promoted as part of an itinerary that includes temples in the neighbouring areas. Hence, the scope of interventions at the site is limited to providing basic amenities and enhancing the visitors' experience.

Existing Condition

Location

The temple is located in a Pulla Bhoothangudi, a small village located 8 km from Kumbakonam and 3 km from Swamimalai in Thanjavur district. It is located between Kaveri and Kollidam rivers. Small shrines located nearby are - Thiru Aadanoor Temple, Ezhuthari Nathar Shiva Temple and Swamimalai Temple.

Existing Layout and Uses

The temple covers an area of 1 acre. All the shrines and the temple tower are enclosed by a rectangular wall. The temple has one entry from the 5-tiered Rajagopuram (gateway tower) with seven kalasams on the eastern side of the temple. The rajagopuram leads to a smaller gopuram of three tiers with five kalasams as an entrance to the sanctum through a shaded area. There is a separate shrine for Bhumadevi, seated with a lotus in her hand.

The temple is surrounded by residential developments and agricultural lands. Currently, the site is used for religious purposes mainly. Some of the festivals conducted at the site are Brahmotsavam and Vaikunta Ekadasi.

Other Land Available

In addition to the temple complex, the temple also owns land to the south of the complex (3,000 sqft) and a temple tank to the west (2 acres).

Masterplanning Considerations**Applicable Regulations**

1. Tamil Nadu Combined Development and Building Rules, 2019 The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the baseline stage are summarised below along the 7A Framework:

- 1. Attraction** – The temple is one of the 108 Divya Desams dedicated to Lord Vishnu. This is the only temple in which Lord Rama is worshipped in the reclining posture with his four hands holding the Kodanda bow, the conch and the discus, with the lower right hand in abhaya mudra.
As the temple resides in a small village, Pulla Bhoothangudi, there are no major tourist attractions around. Thiru Aadanoor temple, another Divya Desam is located at a distance of 1 km and can be easily visited along with Thirupullabhoothangudi Temple.
- 2. Accessibility** – The Thirupullabhoothangudi Temple can be accessed from Kumbakonam via State Highway (SH-22). Pilgrims majorly use private/ rental vehicles and local buses, as there is no auto / cab connectivity to Kumbakonam. Buses ply 6 times a day from Kumbakonam and Salai malai to Adhanur. The last ~1 km road leading up to the temple is narrow therefore buses can't enter the site area. The nearest bus stop is located at a distance of 2 km.

Parking – There is no designated parking space available, vehicles are usually parked outside the temple complex.

3. Amenities – The condition of visitor amenities present at the site is poor. The temple lacks in following facilities-

- There are no directional signages and wayfinding available within the site.
- Toilet and free drinking water facility is not available.
- The premises are adequately clean, but no dustbins are provided.
- There is only 1 CCTV installed inside the sanctum. No security guards are deployed. Site boundaries are walled but broken in some parts.
- Fire safety equipment like fire hoses and extinguishers are not installed.
- No facilities like footwear stands, cloakrooms, etc. are available at the site.
- The site is additionally not universally accessible by all kinds of pilgrims due to lack of wheelchairs and other measures.

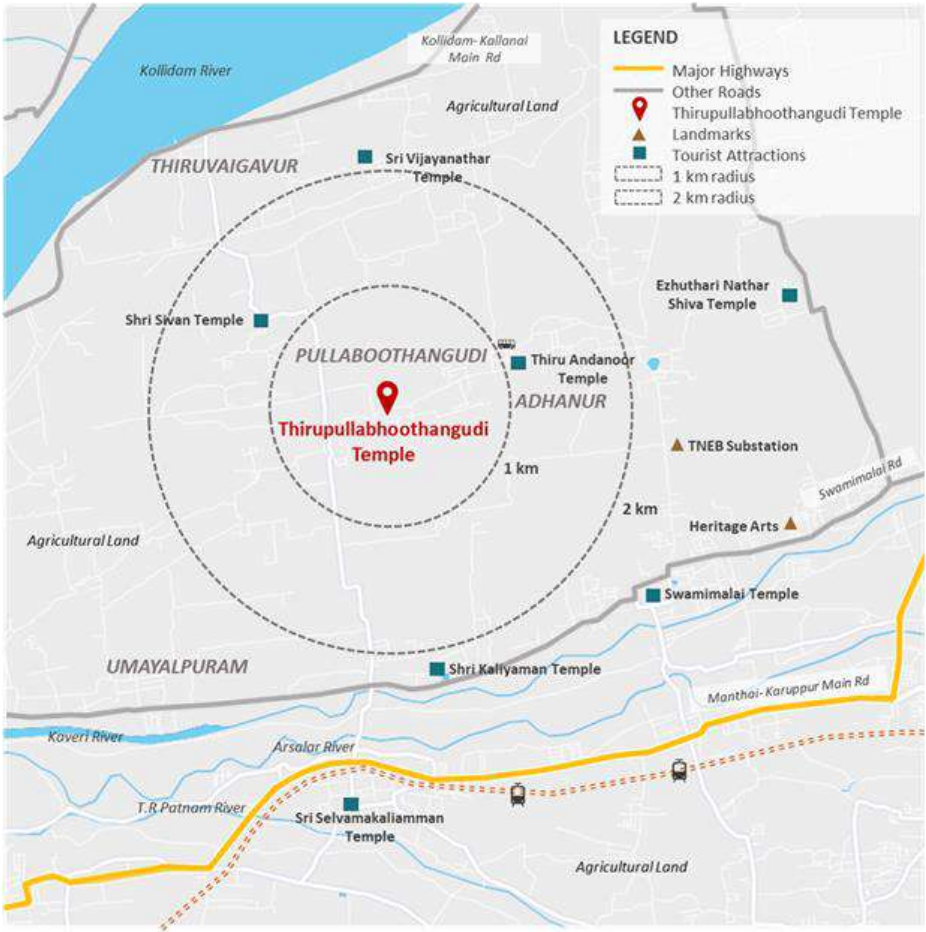
4. Awareness – The temple is not as popular as other temples in Kumbakonam. It is majorly visited by people residing in the area. Foreign tourists are negligible with only Tamilians residing abroad visit the temple rarely. The temple is not included in the department of Tamil Nadu tourism brochure.

5. Activities – The temple has minimal pilgrim engaging activities on normal days. Intermittently, there are some activities such as music, dance recitals, etc. within the temple complex.

6. Accommodation – There is no accommodation available nearby for visitors. Since the time spent at the temple is not more than 0.5 hours (on non-festive occasions) and 1 hour (on festive occasions), visitors tend to either return to Kumbakonam or other cities after visiting the temple.

7. Association with Community – There are no common or regular associations of the local communities with the temple.

Figure 19-1: Location & Existing Layout



- Legend**
- 1 - Raja Gopuram
 - 2 - Shed
 - 3 - Gopuram
 - 4 - Main shrine
 - 5 - Nandavanam
 - 6 - Temple tank

Site Pictures



Vision for the Site

Thirupullabhoothangudi Temple is constructed in the Dravidian style of architecture. The temple is glorified in the Divya Prabandha, the early medieval Tamil canon of the Azhwar saints from the 6th–9th centuries CE.

The footfall at the temple is very low compared to other Divya Desam sites. The temple has generally inadequate facilities and is relatively under-developed compared to other temples in Kumbakonam. Considering the temple's potential and weaknesses, the intent is to develop the temple as a regional pilgrim destination with provision of basic amenities for visitors' convenience.

- **Target Visitor** –The site is largely a pilgrim site, with low footfall mainly received from neighbouring areas and Tamil Nadu, due to its religious significance. Going forward, the master planning will target facilitating better amenities and improving the visitor's experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, divyang and elderly).

- **Tourist Projections** – The site is categorized as a very low pilgrim site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	18	40	78
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	3,939		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists

- **High-Value Tourists** – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Considering all the facts about the temple and its potential, the main objectives of the master planning interventions for this site are:

- **Improving visitor's experience** through improved conveniences and amenities.
- **Improving the access** from the main road to temple complex and temple tank.
- Recharge the water of the temple tank as currently it is dried up.

Hard Interventions

1. **Embankment of the Temple Tank**- 2 acres of temple tank has been dried up completely. Embankments should be constructed around the temple tank to retain rainwater. The idea here is to revive these temple tanks which can be utilized for rainwater harvesting as well as celebrating local festivals.

The embankment should be sloped and stabilized with herbaceous vegetation. A vegetative buffer can also be allowed to grow on the embankment. Buffers can help reduce sediment and nutrient loading in the pond, while providing greater stabilization for the embankment.

Infrastructure created: Embankment Wall ~340m.

2. **Paved Walkway** - A paved walkway is proposed linking the west road, to the temple complex and temple tank area to enhance ease of access to the temple.
Infrastructure Created: ~350m of paved walkway.

3. **Renovation of Temple Boundary Wall** - The boundary wall of the temple complex is broken in many parts. One-time renovation, matching the temple's architectural style, should be done.
Infrastructure Created: ~250m (Length of the boundary wall)

4. **Temple Retail (Pooja items, Prashadam)** - 2 temple ware sale kiosks are suggested inside the temple complex, on the right side of the Rajagopuram.
Infrastructure Created: 3mX3m module (2 units)



Reference images for Temple Tank Embankment

Soft Interventions

1. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “own your street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
2. **Promotion** –The department should promote Thirupullabhoothangudi Temple and events/activities held here, in the TN Assist app and on its various platforms, following the site changes.
3. **Site management** – The site must be managed by the respective temple management authorities in the aspects of maintaining the boundary wall, developing a successful temple tank management and maintenance plan, etc.

Amenities Plan

1. **Drinking Water Station**- Availability of free drinking water is a major issue at this site. Hence, 1 drinking water station with RO water coolers should be installed at a suitable location decided by the temple authority.
2. **Safety and Security** – The site lacks security safety and measures, therefore firefighting supplies such as fire extinguishers, sand buckets, emergency exits, etc, should be installed at all entry/exit points, inside and outside the temple.

3. **Solar streetlights** - The site has inadequate lighting facility. Considering the remote location of the temple, providing solar streetlights will be a sustainable measure. The streets and temple can be kept illuminated after dark. Solar streetlights can be funded jointly by the temple authorities and the panchayat.
Infrastructure Created: 10 units.
4. **Dustbins**- Dustbins must be provided in sufficient quantity to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines.
Infrastructure Created: 2 Units.
5. **Signage (Package 1)** – Few direction boards can be installed along the path from the temple complex and Madam to the temple tank area indicating the directions for the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions required.

Projects Identified

#	Project Component	Scale
1	Embankment of the Temple Tank	340m
2	Paved Walkway	350m
3	Renovation of Temple Boundary Wall	250m
4	Temple Wares (3mX3m)	2
5	Drinking Water Station	1
6	Solar streetlights	10
7	Dustbins	2
8	Signage (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discuss in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Embankment of the Temple Tank	3
2	Paved Walkway	7
3	Renovation of Temple Boundary Wall	13
4	Temple Wares (3mX3m)	3
5	Drinking Water Station	2
6	Solar streetlights	1
7	Dustbins	1
8	Signages	1
Total		INR 30 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of the interventions will depend upon site conditions and detailed design.

Revenues

The following are applicable to the revenue modules below.

- Since a detailed log of existing revenues and sources is not available, existing revenues have not been accounted in this computation. Hence, the revenues here are in addition to all existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (end of short-term).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand. A detailed feasibility assessment is suggested before making investment decision.

The following revenue sources are expected for the site:

- Kiosks** – Captures 2 kiosks to be rented out at INR 3 Lakhs per annum.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Note that the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following are applicable to the operational expense modules below.

- The operating expenses considered here only consider the new interventions/ facilities proposed in the masterplan, and not the expenditure currently made at the site for its existing facilities.
- The expense projections are pegged at **Y5** (end of short-term).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses

such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.

5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 2 Lakhs*.

Note that the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Phasing & Funding Agencies

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore

beneficial. The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated social benefit.

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Embankment of the Temple Tank	3	Y0 – Y2	Ahobila Matha
2	Paved Walkway	7	Y0 – Y2	Ahobila Matha
3	Renovation of Temple Boundary Wall	13	Y0 – Y2	Ahobila Matha
4	Temple Wares (3mX3m)	3	Y0 – Y2	Ahobila Matha
5	Drinking Water Station	2	Y0 – Y2	Ahobila Matha
6	Solar streetlights	1	Y0 – Y2	Ahobila Matha
7	Dustbins	1	Y0 – Y2	Ahobila Matha
8	Signages	1	Y0 – Y2	Ahobila Matha
Total		INR 30 L		

Impact on Communities

Employment Opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,300⁷⁸ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁷⁹

⁷⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labour assumed for computation = *INR 700* per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁷⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as 3,200 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site. It is expected that the additional visitors will generate an additional spending of INR 8 Cr. at the site⁸⁰.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

⁸⁰ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 19-2: Proposed Master Plan – Thirupullabhoothangudi Temple



20. Sarangapani Temple, Kumbakonam

Site Details

District:	Thanjavur
Name of Site	Sarangapani Temple
Site No:	Site 121 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9595, 79.3752
Land Area:	2.5 acres + 1.5 acres (Temple tank)
Peak footfalls:	20,000 per day (March – April) Vaikunta Ekadashi
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 10 lakhs (2019) For. – Nil (2019)
Site Revenues:	INR 47 lakhs (FY20)
Site Orientation:	Pilgrim
Site Potential:	Very Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	2 km (Kumbakonam)
b. Airport:	100 km (Tiruchirappalli)
c. Highway:	4 km from NH 36
Trail featured on:	Divyadesam, Chola Nadu

Sarangapani Temple is one of the 108 Divya Desam temples and Vaishnava Navagraha Temples (dedicated to planet Sun). As one of the biggest Vishnu temples in Kumbakonam, its Rajagopuram towers over the city's skyline. The temple is architecturally significant and is well-maintained. It has adequate public amenities for tourists. Scope for development exists in divyaang-friendly measures, crowd control during festival times and collective promotion with the other major temples in Kumbakonam.

Existing Condition

Location

The Temple is situated between two rivers, Kaveri and Arasalar, in the heart of Kumbakonam city of Thanjavur district, Tamil Nadu. The temple is well connected by road networks with nearest railway station and bus stand at just 1.5 km away. The immediate surroundings of the temple include congested mixed-use residential development and bazaar area.

Located along the banks of the River Kaveri, this temple is one of the Pancharanga Kshetrams (a group of temples dedicated to Vishnu on the banks of the Kaveri) and is considered third in line to the Srirangam and Tirupati temples in prominence. Several important temples located within 500m are Ramaswamy Koil, Adi Kumbeswarar Temple and Nageswaran Temple.

Existing Layout

The temple is enshrined within a huge granite wall and the complex contains all the shrines and the water bodies of the temple except Potramarai tank covering an area of 2.5 acres.

- The Rajagopuram (the main gateway) has eleven tiers and has a height of 173 ft (53 m). It is the tallest tower in Kumbakonam city, therefore, is a prominent landmark.
- There are five others smaller gopurams in the temple.

- The twin temple chariots carved out of wood are stationed outside the Rajagopuram and are the third largest in Tamil Nadu, each weighing 300 tons and renovated in 2007.
- The central shrine is approached via a 100-pillared hall with the outer entrance having a perforated window axial to the sanctum.
- The Potramarai tank, the temple pond, is located opposite to the western entrance of the temple. Bathing rituals inside the tank are permissible.

Existing Uses

- The temple has well-developed infrastructure dedicated for public services. There are mandapams, chariot halls for conducting events, dance recitals etc. There are also toilet block and administrative offices available within the temple premises.
- The important festivals celebrated at the temple are Akshaya Tritiya, Brahmotsavam, Chithrai Utsav, Masi Float festivals, Navaratri and Deepawali etc.

Other Land Available

In addition to the temple complex of 2.5 acres, the temple also owns the 1.5-acre Potramarai tank, located opposite to the western entrance of the temple. The temple also owns nearly 300 acres agricultural land which is under 99-year long term lease in Mannargudi, Thiruvavur.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Kumbakonam Master Plan, site lies in a Residential Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. TN HRCE Rules, 1959

- The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
- Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Sarangapani Temple, is one of the 108 Divya Desam temples for God Vishnu and also one of the Vaishnava Navagraha Temples associated with planet sun. The temple is considered third in line to the Srirangam and Tirupati temples in prominence. It is the largest Vishnu temple in Kumbakonam and has the tallest temple tower in the town. The temple attraction value is certain, however with curated and well facilitated temple trails across all temple sites in Kumbakonam, the temple can achieve higher public interest and footfall.
2. **Accessibility & Mobility** – The Sarangapani Temple can be accessed from Thanjavur- Kumbakonam main road or also called the Big bazaar street. Autos/cabs are readily available outside the temple. The major modes of transport people use to commute to the site include public bus, auto/taxis, and private transport.
3. **Amenities** – The temple scores high on cleanliness and has developed ecosystem of infrastructure earmarked for public amenities. Though common

toilet blocks, drinking water stations, sufficient streetlighting, resting areas and safety security and divyaang friendly measures are present inside the temple, it lacks the following facilities –

- Dustbins not installed in adequate number.
- Water discharge outlet to the temple tank is sometimes non-functional.
- No F&B and Retail shop present inside the temple site, though few eatery joints present outside the site.
- No shaded area and steps around the temple tank
- Ticketed footwear stands and luggage/cloak room facility not available.
- The streets and the area surrounding the temple have sometimes a stinky foul smell due to the bazaar area.

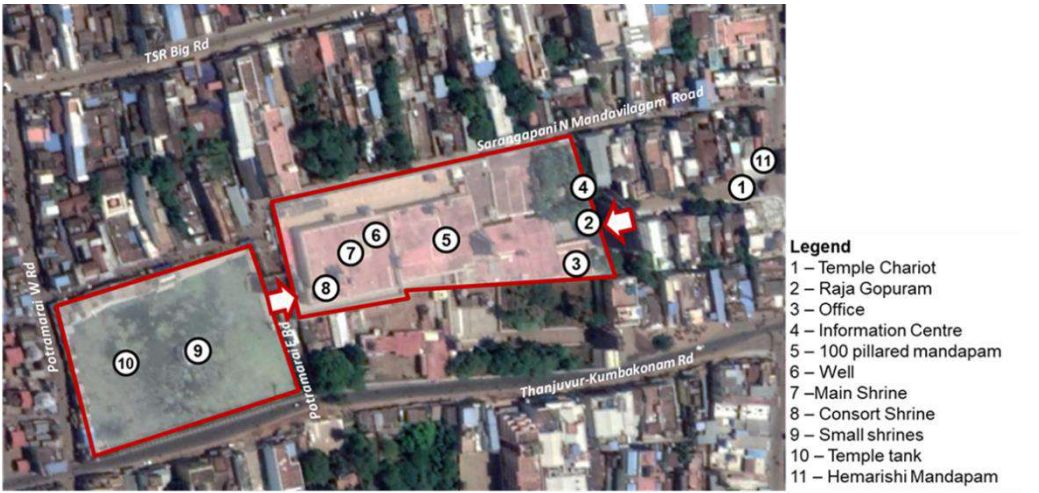
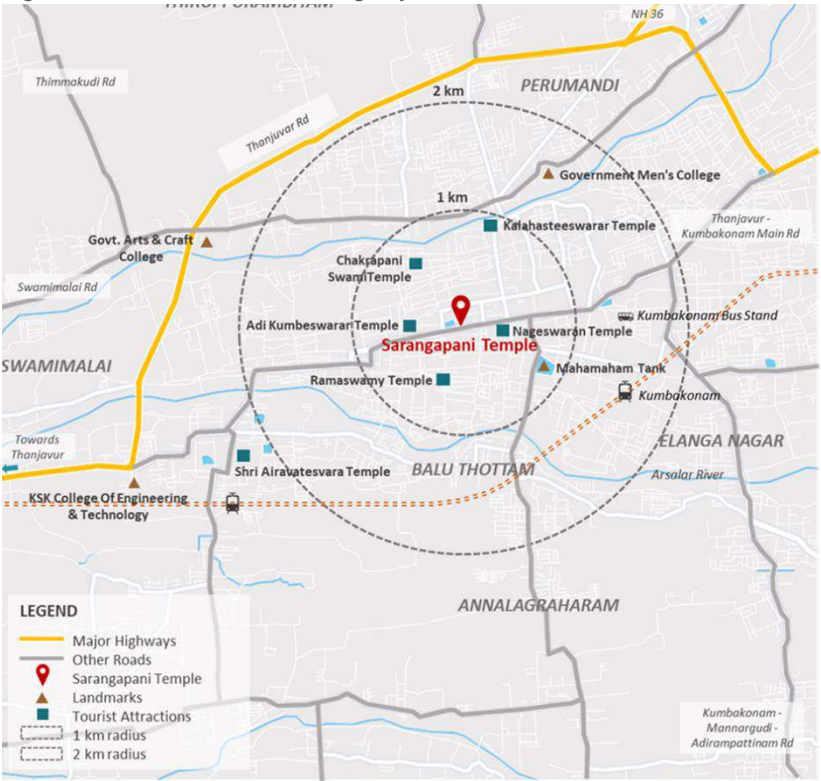
Parking – The Site has a designated parking area of 20 cars maintained by the Panchayat. The parking charge for the same are INR 30 for Car and INR 50 for bus. Also, vehicles park on the street surrounding the temple leading to frequent crowding and congestion during evenings and peak hours.

4. **Awareness** – Sarangapani is a prominent landmark in Kumbakonam. It is majorly visited by people residing in various states (Karnataka, Tamil Nadu, Andhra Pradesh etc) of India. The foreign footfall for the temple is minimum. It finds mention in renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc. The temple also has a dedicated website, maintained by the HR&CE department. The relevance of the temple and its sculptural essence needs to be highlighted and promoted to a larger audience.
5. **Activities** – On normal days, the temple does not offer any activities. The temple chariot festival is the most prominent festival of the temple. The chariots are pulled by hundreds of devotees across the streets around the temple twice a year, once during the Brahmotsavam during April–May and other during Ratasaptami in January–February. On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc. Holy bathing in temple tank is allowed on special request.
6. **Accommodation** – There are few low budget accommodation facilities available nearby for visitors like dormitories and budget hotel with fixed tariff for A/C rooms as INR 1500 to INR 2000 and normal rooms ranging from INR 750 to INR 1000.

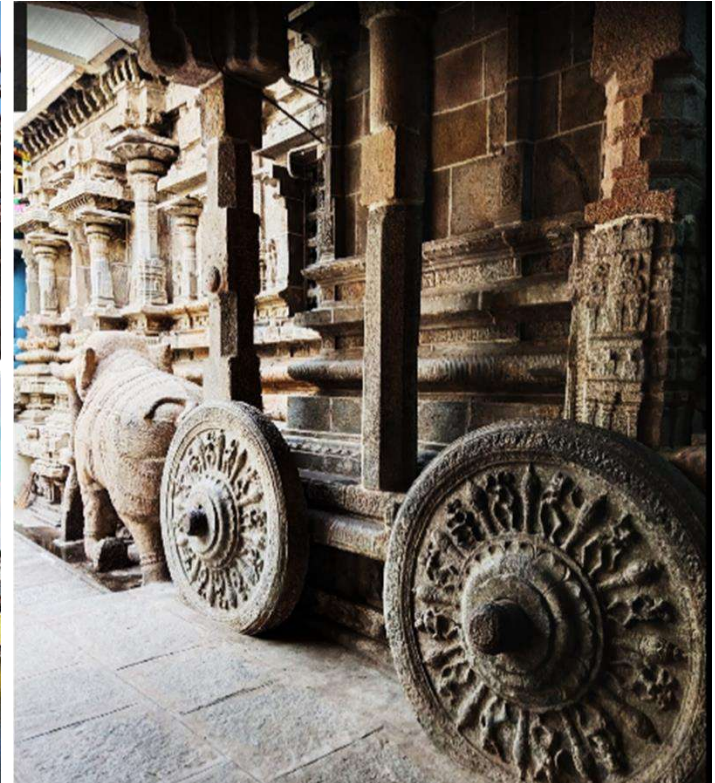
A wider range of options and 3- star hotels are available near Kumbakonam railway station and bus stand.

7. **Association with Community** – There are no guides at the temple. The festivals of the temple enjoy immense participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts and food items increasing congestion.

Figure 20-1: Location and Existing Layout



Site Pictures



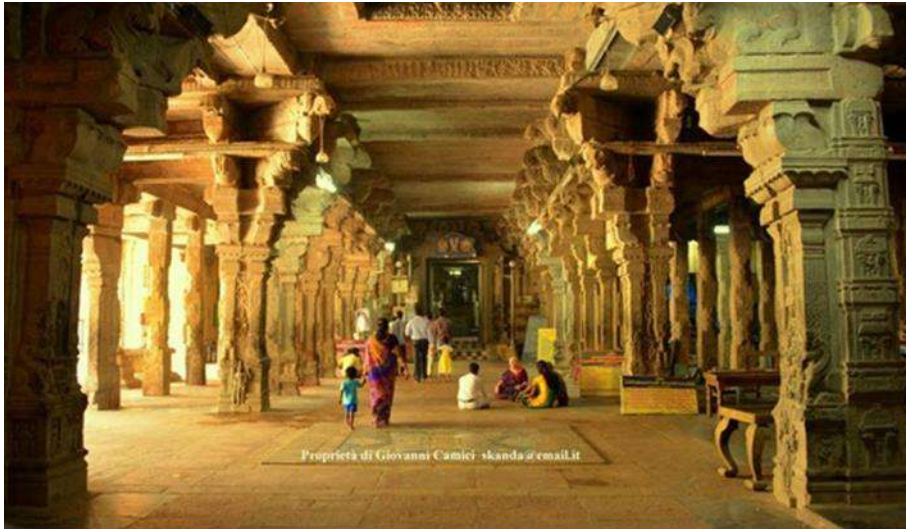
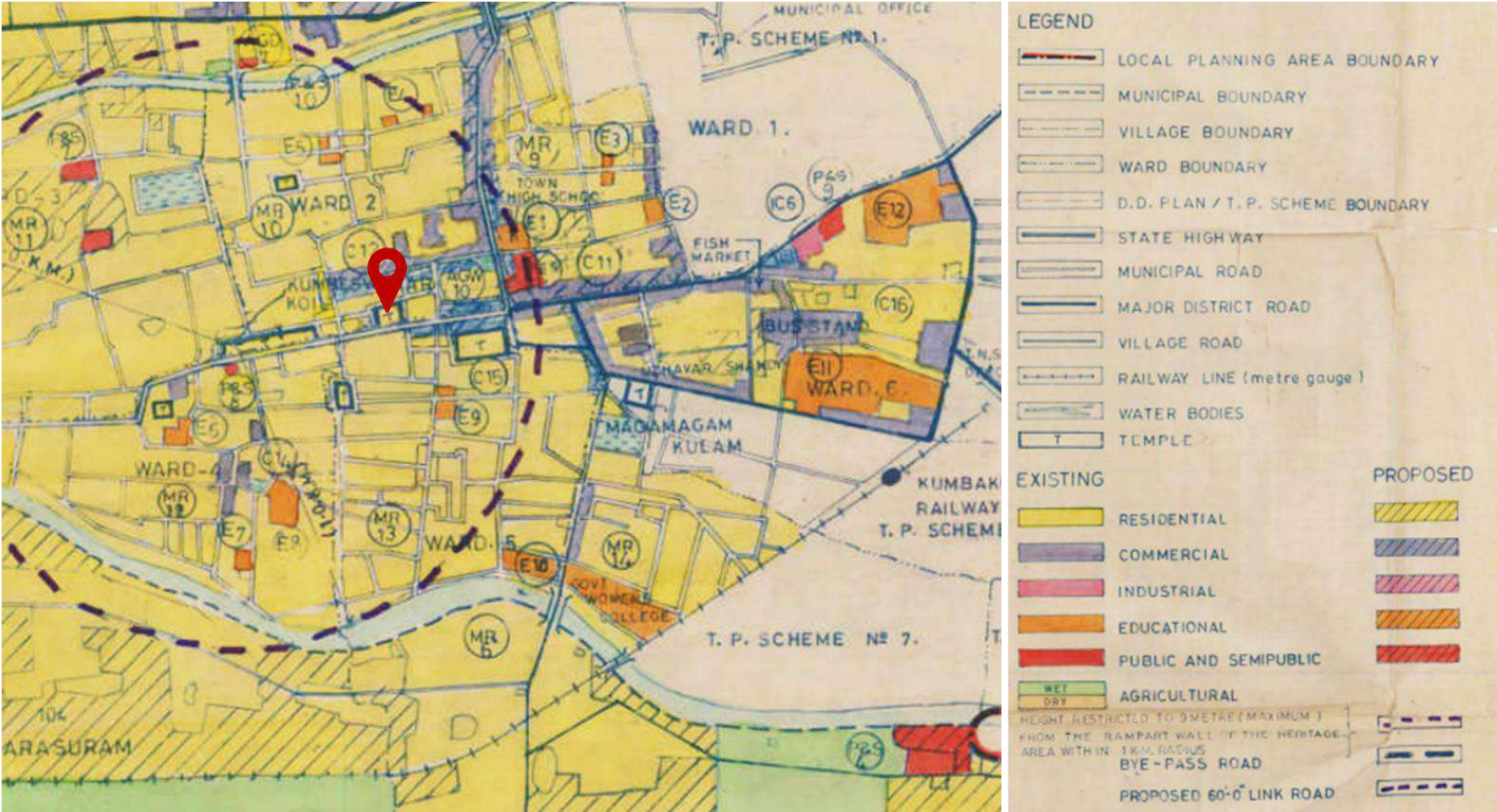


Figure 20-2: Site Land Use – Kumbakonam Master Plan



Vision for the Site

- The Sarangapani Temple is one of the 108 Divya Desams and is Kumbakonam biggest and main attraction. Furthermore, it is one of South India's most famous temples. The temple has immense popularity among locals and pilgrims as it is considered third in line to the Srirangam and Tirupati temple.
 - As the temple is located in the heart of the city, it has easy access from all transport hubs and other religious spots. The temple has a developed ecosystem of auto rickshaws, pharmacies, banks, retail stores, lodging facilities, however, it lacks on basic public amenities like inadequate dustbins and parking area, cloak room, rest area etc.
 - Sarangapani Temple has the potential to be developed into a nodal religious tourist attraction for the town with development of a tourist facilitation centre, provision of amenities, temple tank rejuvenation, crowd control and traffic calming measures. This shall facilitate tourist comfort at site and leverage ancillary recreation activities for local and tourist engagement.
 - The vision for the site is to develop it as a domestic/pilgrim tourist destination by developing and upgrading existing infrastructure and basic amenities and linking it with the temple trail of the city.
 - **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
- Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	10	23	44
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	9847		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a low footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Master Plan Concept

The objectives of Master planning at this Site include:

- **Maintenance and renovation of existing temple** issues with latest materials and finishes, improving tourist comfort.
- **Improving visitor' experience** at the temple – through improved circulation, conveniences, and amenities.
- **Linkage with other temples in Kumbakonam** – enabling high tourist footfall and temple visibility.
- **Rejuvenating temple tank and steps** – This will improve tourist engagement at the site.
- **Improving pilgrim footfall** through appropriate marketing and promotion of the unique features of the site.

Hard Interventions

1. **Tourist Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, ticket sales counter, galleries to display and showcase temple importance and architecture, shoe stand and cloak room. It will be a standalone building

placed at the entrance of the temple. This development will be as per the design guidelines mentioned in Volume A.

Infrastructure Created: ~140 sqm of BUA.

2. **Temple tank Rejuvenation** – The temple has a beautiful temple tank with permissible bathing rituals. Therefore, temple tank will be rejuvenated, and water will be cleaned using sustainable techniques like rainwater harvesting. Ghat like steps and a shaded pathway around the temple tank will be developed. Beautification and maintenance of the same would increase the aesthetic appeal of the temple.

Infrastructure Created:

- *Cleaning of temple tank – 5315 sqm water area*
- *Steps around the tank – 320 m length*
- *Shaded Walkway – 350 m in length and 3 m wide*

3. **Pilgrim Walkway** – A pilgrim walkway can be developed between the temple rajagopuram and Amman Kovil Street. This can be achieved by developing a shaded 3m wide pedestrian pathway with restrictive vehicular movement. This will improve visibility and importance of the temple. It will also develop larger area for public movement, hence acting as a crowd control measure.

Infrastructure Created: 80 m shaded pedestrian walkway (3m wide)

4. **Vending Zone** – During peak season, vending outside the temple leads to congestion. Therefore, a temporary vending area will be designed parallel to proposed pilgrim walkway. The area will be pedestrianized and regulated with only limited vendors allowed as per the area capacity, thus reducing foot congestion at site. This will enhance community participation and visitor's engagement facilities on the site.

Infrastructure Created: Vending Area – 3 m wide and 75 m in length.

5. **Stone Flooring** – Pilgrims tend to take parikramas around the temple precinct in the outer pragharam area. Therefore, comfortable light coloured stone paving is proposed in the entire area to provide thermal comfort to pilgrims and tourists and also improve the overall look and feel of the place.

Rock stone flooring is also proposed inside the chariot hall replacing the existing brick flooring, as it is unable to withstand the weight of the chariot.

Infrastructure Created:

- *Pragharam Area – 2250 sqm*
- *Chariot Hall – 1420 sqm*



Pilgrim Walkway



Vending Zone



Stone Flooring

Soft Interventions

1. **Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events,

associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.

2. **Crowd Management** – As the access road is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
 - Access timings can be made exclusive for high-value tourists.
3. **Curation of facilitated tours** – Incorporate the site in Kumbakonam temple tour. These will be facilitated with licensed tour guides and hop on hop off services at all temple sites.
4. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “Own your Street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.

Amenities Plan

1. **Technology** – As the site is small in scale and does not attract large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines mentioned in Volume A.
2. **Divyaang Toilet** – The temple complex is already well equipped with toilet facilities but lacks divyaang or aged friendly toilet block. Therefore, one divyaang friendly toilet is proposed next to the common toilet block near the entrance.
3. **Pay and Use Toilet Blocks** – ~1 unit of toilet is proposed to be provided near the temple tank. As bathing rituals are permitted within the temple tank located outside the temple, a pay and use toilet block is proposed, facilitating tourist comfort. This will be developed as per the design standards mentioned in Volume A.

4. **EV & EC Stop** – An EV/EC stop can be developed outside the temple which can provide connectivity to the bus stop and various other temple sites across Kumbakonam. This shall facilitate and ease movement across all sites for the tourists avoiding traffic jams near temples and reducing vehicular movement around.

5. **Temporary Movable Sheds** – The temple can own 2 temporary movable sheds that can be placed on the main road for people to rest and wait during peak season and festive days. This can be a multi-functional structure used for several purposes for the comfort of the tourists.

Trunk Infrastructure

Sewer and Drainage lines – The temple authority faces serious issues of wastewater discharge in the temple tank due to the improper existing drain lines. Sometimes, these have to manually laid to protect the temple tank from city drain. Therefore, the drainage lines in the area need to be rectified and renovated with adequate water discharge facility.

Please refer to Design Guidelines in Volume A regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Tourist Facilitation Centre (Type 1)	140 sqm
2	Temple tank rejuvenation <ul style="list-style-type: none"> • Cleaning of temple tank • Steps around the tank • Shaded Walkway 	5315 sqm 320 m 350 m
3	Pilgrim Walkway	80 m
4	Shaded Walkway	180 m
5	Vending Zone (3m wide)	75 m
6	Stone Flooring <ul style="list-style-type: none"> • Pragharam Area • Chariot Hall 	2250 sqm 1420 sqm
7	Cleanliness Drive	1 time

#	Project Component	Scale
8	Divyaang Toilet	1
9	Technology (Package 1)	1
10	Pay and Use Toilet Block	1
11	EV & EC Stop	1
12	Temporary Movable Sheds	2
13	Sewer & Drainage Lines	375 m

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre (Type 1)	15
2	Walkway (Footpath)	12
3	Stone flooring	73
4	Temple tank steps	3
5	Vending zone	3
6	Cleanliness Drive	1
7	Divyaang Toilet	4
8	Pay and Use Toilet Block	20
9	EV & EC Stop	20
10	Temporary Movable Sheds	4
11	Sewer & Drainage Lines	7
12	Technology (Package1)	1
Total		INR 165 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Built-up area rent** – Captures renting out of 225 sqm built-up space at INR 960 per sqm per annum.
- Kiosks** – Captures 1 kiosk to be rented out at INR 2 Lakhs per annum.
- Revenue share from activity operators** – Capturing 1 operator at INR 8 Lakh per year.
- Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships

6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 15 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the facilitation centre.
 - b. A **security personnel** for the facilitation centre and the vending one.
 - c. An **Administration staff** to overlook the operations of the facilitation centre.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 13 Lakhs

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions are in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option

for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Tourist Facilitation Centre (Type 1)	15	Y0 – Y2	HR&CE
2	Walkway (Footpath)	12	Y0 – Y2	HR&CE
3	Stone flooring	73	Y0 – Y2	HR&CE
4	Temple tank steps	3	Y0 – Y2	HR&CE
5	Vending zone	3	Y0 – Y2	HR&CE
6	Cleanliness Drive	1	Y0 – Y2	HR&CE
7	Divyaang Toilet	4	Y0 – Y2	HR&CE
8	Pay and Use Toilet Block	20	Y0 – Y2	HR&CE
9	EV & EC Stop ⁸¹	20	Y0 – Y2	HR&CE
10	Temporary Movable Sheds	4	Y0 – Y2	HR&CE
11	Sewer & Drainage Lines	7	Y0 – Y2	HR&CE
12	Technology (Package1)	1	Y0 – Y2	HR&CE
Total		INR 165 L		

⁸¹ The development of the proposed component can be taken up at later phases based on the increase in future footfalls.

⁸² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 7,100⁸² man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁸³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 17,700 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

It is expected that the additional visitors will generate an additional spending of INR 4.5 Cr. at the site⁸⁴.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁸³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁸⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 20-3: Proposed Master Plan – Sarangapani Temple



21.Uppiliappan Temple, Thirunageswaram

Site Details

District:	Thanjavur
Name of Site:	Uppiliappan Temple
Site No:	Site 122 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9614, 79.4318
Land Area:	4 acres
Peak footfalls:	1,000 per day (March – April)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 14.13 lakhs (2019 - 20) For. – 5,615 (2019 - 20)
Site Revenues:	INR 3.6 crores (FY20)
Site Orientation:	Pilgrim
Site Potential:	Medium tourism site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	5.5 km (Kumbakonam)
b. Airport:	108 km (Tiruchirappalli)
c. Highway:	500 m from SH 147
d. Other:	Nil
Trails featured on:	Divya Desam

Uppiliappan Temple is one of the 108 Divya Desams and is glorified in the Divya Prabandha. It is also known as the “Tirupati of the south”. The Temple receives tourists who are unable to visit Tirupati. It is well known for its prasadam which tastes good without the use of salt in preparation. The temple is big, well maintained and has adequate public amenities. The scope of intervention lies in traffic management and crowd control with maintenance & upgradation of existing infrastructure.

Existing Condition

Location

Uppiliappan Temple is located near Thirunageswaram, a village in the outskirts of the Kumbakonam city (~7 kms away) in Thanjavur district, Tamil Nadu. The temple is located on the southern bank of the river Kaveri. It is well connected with autos/taxis and bus services from Kumbakonam. Another important temple located nearby is Thirunageswaram Naganatha Swamy Temple (~500 m away).

Existing Layout

The temple complex covers an area of 4 acres surrounded by a granite wall. The complex contains all the shrines and water bodies associated with it.

- The temple has a rectangular plan and is approached through a 50 ft high five-tiered Rajagopuram (the gateway tower) on the eastern side.
- A marble hall located on the western side in the inner precinct acts as the resting hall for the tourists during festivals.
- Temple has a hall for housing festival vehicles, a library, and a hall with eight carved pillars on the banks of the temple tank.
- Outside the main complex, the temple maintains two marriage halls, a rest house containing five rooms, two other halls, a housing each for the small chariot and the big chariot.
- There is a garden around the third precinct of the temple with tulsi plant.
- The Pushkarini (Temple Tank) is known as "Ahoratra Pushkarini", meaning that bathing is permissible here, both during day and night.

Existing Uses

- The temple has reasonable popularity and is visited by people for worship.
- The temple tank is called Ahoratra Pushkarini, which is said to have healing power in the day as well as night.
- The temple has well-developed infrastructure dedicated for public services. There are mandapams, marble halls, marriage hall with rooms for conducting events, dance recitals etc. There are also 6 toilet block and administrative offices present within the site.
- The important festivals celebrated at the temple are Vasanta Utsavam, Brahmotsavam, Pavitrotsavam, Thai Poosa star float festival, Big Chariot festival etc.

Other Land Available

The temple does not have any land adjoining the complex. It owns about 70 acres land in and around Thanjavur, which has been provided for agricultural purposes on 99-years lease.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Uppiliappan Temple, is one of the 108 Divya Desams temples for God Vishnu. The temple is considered the southern counterpart of Tirupati temple and hence devotees perform their marriages and vows as they do in Tirupati. It houses the only temple tank where one can do theerth thaadanam even in the night. It is one of the most accepted places for conducting tonsure ceremony of getting children shaved for the first time to promote proper growth and ear piercing by the devotees.

One of the mystic features of the temple is, the prasada offered in the temple is prepared without any salt but tastes normal to the devotees within the temple complex.
2. **Accessibility & Mobility** – The Uppiliappan Temple can be accessed from Kumbakonam (~7 km away) via SH147 (Kumbakonam- Karaikkal road). The access road to the site is narrow and frequently congested by hawkers and vendors. There is availability of bus every 2 hours from Kumbakonam directly to the temple. Autos/cabs are readily available outside the temple and Kumbakonam city for easy access to the site. The major modes of transport people use to commute to the site include public bus, auto/taxis, and private transport.
3. **Amenities** – The temple scores high on cleanliness and has developed ecosystem of infrastructure earmarked for public amenities. Though common toilet blocks, drinking water stations, sufficient streetlighting, resting areas and safety security and divyaang friendly measures are present inside the temple, it lacks the following facilities –
 - No wayfinding's available for the site and signages available only in Tamil language.
 - No F&B and Retail shop present inside the temple site, though few eatery joints present outside the site.

- No shaded area around the temple tank

Parking – The Site does not have any designated parking area. Vehicles park on the street surrounding the temple leading to frequent crowding and congestion during evenings and peak hours.

4. **Awareness** – Uppiliappan Temple is a popular temple near Kumbakonam. It is majorly visited by people residing in Tamil Nadu. It is majorly visited by people residing in Tamil Nadu, Karnataka, and Andhra Pradesh. Foreign tourists are negligible with only Tamilians residing abroad visiting the temple. The temple is considered equivalent to Tirupati temple. It finds mention in renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc. The temple also has a dedicated website, maintained by the HR&CE department.

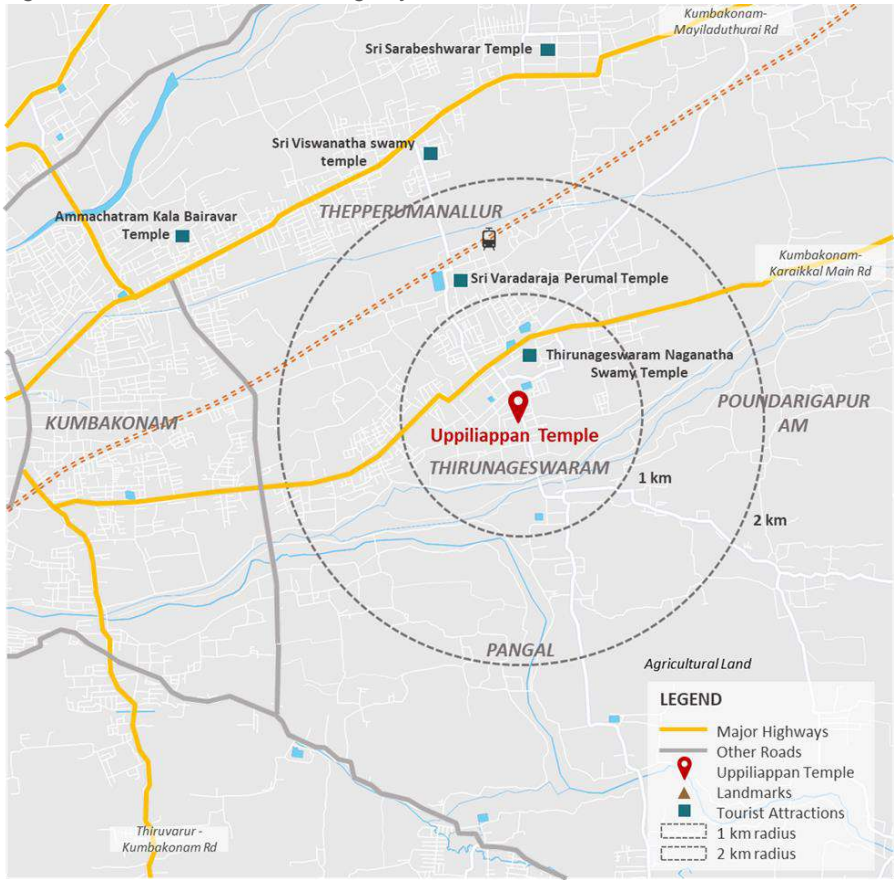
5. **Activities** – On normal days, the temple does not offer any activities. On specific requests of the devotees, in fulfilment of their vow, Kalyana utsavam, Garuda Sevai, Golden chariot, Brahmotsavam, Dolotsavam, Nityaaradhana, mirror-room seva, and Darbar seva are performed at the appropriate timings with relevant fees.

On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc. Holy bathing in temple tank is allowed on special request. Every month, Sravanam day is celebrated in a grand manner in this temple, when thousands of devotees congregate and worship the Lord.

6. **Accommodation** – There are few low budget accommodation facilities available nearby for visitors like dormitories and budget hotel with fixed tariff for A/C rooms as INR 1500 and normal rooms ranging from INR 750 to INR 1000. A wider range of options and 3- star hotels are available in Kumbakonam (~7km away)

7. **Association with Community** – There are no guides at the temple. The festivals of the temple enjoy immense participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts and food items increasing congestion.

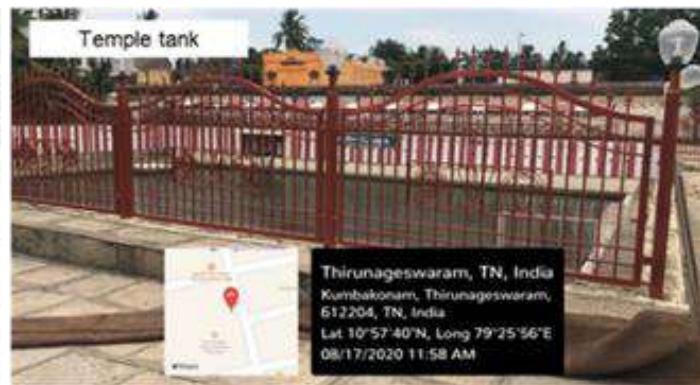
Figure 21-1: Location and Existing Layout



- Legend**
- 1 – Raja Gopuram
 - 2 – Information centre
 - 3 – Annadhana Hall
 - 4 – Ticket counter
 - 5 – Office
 - 6 – Marble Hall
 - 7 – Well
 - 8 – Entrance to sanctum
 - 9 – Small shrines
 - 10 – Main shrine
 - 11 – Garden
 - 12 – Toilet block
 - 13 – Temple tank
 - 14 – Cow shed
 - 15 – Library

Site Pictures





Vision for the Site

- Uppiliappan Temple is one of the Divya Desams, also known as the “Tirupati of the south”. The temple enjoys immense popularity among South Indians and Tamil foreigners for its holy dip in temple tank and tonsuring activities. It has easy accessibility from Kumbakonam city with well-developed public amenities like toilets, drinking water, cloak room, rest area etc.
- The temple has few limitations with major being overcrowding in peak hours and festive seasons. There is no designated parking space, and the access roads are often occupied by beggars and hawkers, affecting the urban character of the temple.
- Uppiliappan Temple has the potential to be developed into a religious tourist attraction complimenting with Thirunageswaram Naganatha Swamy Temple in the town. This can be achieved with adequate maintenance of the existing infrastructure, provision of regulated parking easing out congestion and facilitating tourist comfort within temple complex.
- The vision for the site is to develop it as a domestic/pilgrim tourist destination by maintaining and upgrading existing infrastructure and basic amenities and effectively imposing crowd control measures due to restrictive site boundary and lack of open space in and around the temple.
- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Foreigners visiting the temple are majorly from Tamil origin having deep religious belief. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,407	3,643	8,160
High Value Tourists (HVT) (Both domestic and foreign)	11	36	81
Maximum Carrying Capacity	15,756		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a moderate footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Master Plan Concept

The objectives of Master planning at this Site include:

- **Maintenance and renovation of existing temple** blocks with latest materials and finishes, improving tourist comfort.
- **Improving visitor experience** at the temple – through improved circulation, conveniences, and amenities.
- **Enforcement of crowd control measures** – provision of temporary sheds, deployment of security guards and implementation of token system.
- **Linking it with Thirunageswaram Naganatha Swamy Temple** – developing shaded pilgrim walkway connecting the two temples.

Hard Interventions

1. **Temple tank Rejuvenation** – The temple has a beautiful temple tank with a holy belief of cleansing sins. Therefore, temple tank will be rejuvenated, and water will be cleaned with sustainable techniques like rainwater harvesting. An asbestos covered shaded pathway around the temple tank should be created to ease public movement as several devotees prefer to walk around the tank. Beautification and maintenance of the same would increase the aesthetic appeal of the temple.

Infrastructure Created:

- Cleaning of temple tank – 1525 sqm water area
- Asbestos covered shaded pathway – 210 m length

2. **CVending Zone** – During peak season, vending outside the temple leads to congestion. Therefore, a temporary vending area will be designed parallel to the temple frontage with temporary kiosks and stalls. The area will be pedestrianized and regulated with only limited vendors allowed as per the area capacity, thus reducing foot congestion at site. This will enhance community participation and provide visitors engagement facilities on the site.

Infrastructure Created: Vending Area – 3 m wide and 60 m in length

3. **Pilgrim Walkway** – As the temple is 500m south of Thirunageswaram Naganatha Swamy Temple, a pilgrim walkway can be developed between the two along the access road. This can be achieved by developing a shaded 3 m wide pedestrian pathway. This will improve visibility and importance of the temples and hence increase tourist footfalls for the sites.

Infrastructure Created: 450 m shaded pedestrian walkway (3m wide)

4. **Renovation of existing activity blocks** – The marble hall and library on the southern side of the site needs to be renovated from the interiors. The interiors are outdated and worn out; therefore, modern flooring and face-lifting is proposed for the two buildings.

Infrastructure Created: 450 m shaded pedestrian walkway (3m wide)



Temple tank Renovation



Vending Zone



Pilgrim Walkway

Soft Interventions

1. **Events** – The open space and various mandapams and rest houses at the site could be used for organizing local craft fairs, cultural events, festivals, which will make the place more alive and vibrant throughout the year.

- 2. Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.
- 3. Crowd Management** – As the access road is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
 - Access timings can be made exclusive for high-value tourists.
- 4. Curation of facilitated tours** – Incorporate the site in Kumbakonam temple tour. These will be facilitated with licensed tour guides and hop on hop off services.

Amenities Plan

- 1. Signage (Package 1)** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site's importance. All the signages at the site should be as per the design guidelines.
- 2. Divyaang Toilet** – The temple complex is already well equipped with toilet facilities but lacks divyaang or aged friendly toilet block. Therefore, one divyaang friendly toilet block is proposed next to the common toilet block near the entrance.
- 3. Parking** – The temple doesn't have any available vacant land around for developing designated parking space. The access roads around the temple have sufficient ROW to accommodate strategically planned surface parking and simultaneously not affecting the usual vehicle traffic on road. Therefore, parallel parking along the access roads on two sides can be developed. This parking can be regulated and ticketed, thus reducing the overall traffic congestion at the site.

Also, Thirunageswaram Naganatha Swamy Temple, 500 m away has ample amount of designated parking space inside its premises. During peak season parking space in that temple can also be utilized.

Infrastructure Created: 450 m shaded pedestrian walkway (3m wide)

- 4. Benches/Sit-outs** – The temple already has a beautifully landscaped nandavanam with native grown trees. This area can be effectively utilized as a naturally shaded sit-outs space with installation of benches in between. This will improve the vibrance and involvement of tourist at site.

Infrastructure Created: 450 m shaded pedestrian walkway (3m wide)

- 5. General Site Landscaping** – More strategic tree planting and site landscaping is required along the entrance road, near the temple tank and rear side to create more natural shaded areas and make the site attractive as a destination. This green cover will ensure rainwater absorption into the ground, air purification, reduction of ambient noise and temperature.

Infrastructure Created:

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Temple tank rejuvenation <ul style="list-style-type: none"> • Cleaning of temple tank • Asbestos covered shaded pathway 	Sqm Length (m)
2	Vending Zone	Length x breadth
3	Renovation of existing activity blocks	Sqm
4	Signage (Package 1)	1
5	Divyaang Toilet	1
6	Parking	ECS
7	Benches/ Seats	Units
8	General Site Landscaping	Sqm

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Asbestos covered shaded pathway	7
2	Pathway	3
3	Vending Zone	3
4	Renovation of existing activity blocks (Interiors)	20
5	Signage (Package 1)	1
6	Divyaang Toilet	4
7	Parking	16
8	Benches/ Seats	1
9	General Site Landscaping	6
Total		INR 60 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.

- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Built-up area rent** – Captures renting out of 225 sqm built-up space at INR 960 per sqm per annum.
- Parking** – Capturing 55 ECS at 30% occupancy per day at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.

2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 10 Lakhs*

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Asbestos covered shaded pathway	7	Y0 – Y2	HR&CE
2	Pathway	3	Y0 – Y2	HR&CE
3	Vending Zone	3	Y0 – Y2	HR&CE
4	Renovation of existing activity blocks (Interiors)	20	Y0 – Y2	HR&CE
5	Signage (Package 1)	1	Y0 – Y2	HR&CE
6	Divyaang Toilet	4	Y0 – Y2	HR&CE
7	Parking	16	Y0 – Y2	HR&CE
8	Benches/ Seats	1	Y0 – Y2	HR&CE
9	General Site Landscaping	6	Y0 – Y2	HR&CE
Total		INR 60 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,600⁸⁵ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days⁸⁶

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 6,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 850 Cr at the site⁸⁷.

⁸⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

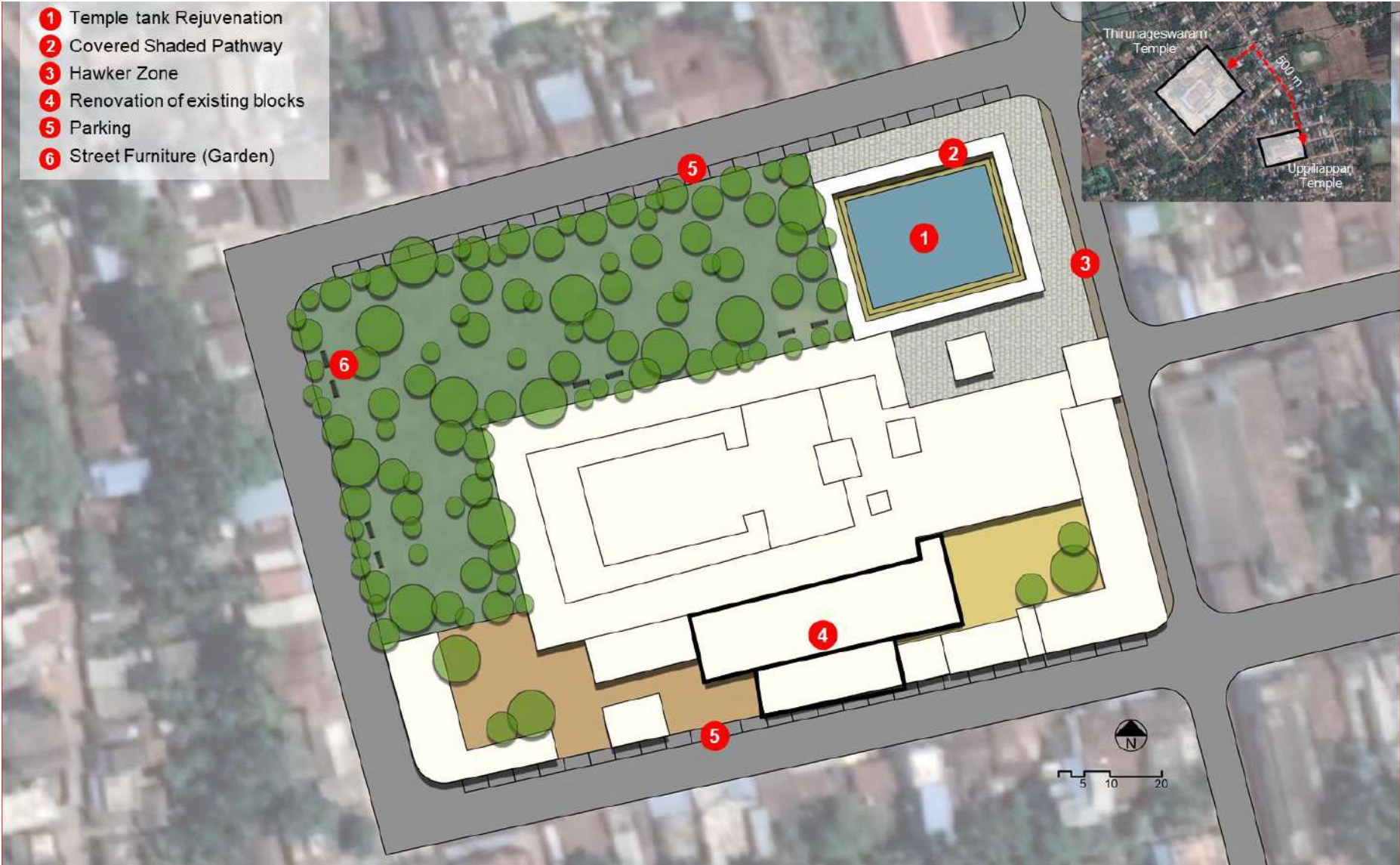
○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁸⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁸⁷ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 21-2: Proposed Master Plan – Uppiliappan Temple



22. Sri Saranathan Perumal Temple, Thanjavur

Site Details

District	Thanjavur
Name of Site	Thiruccherai Sri Saranathan Perumal Temple
Site No:	Site 158 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.8787, 79.4540
Land Area:	3.37 acres + 7.5 acres
Peak footfalls:	5,000 per day (January, May, June) Brahmotsavam, Thai Poosam)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 1 Lakh (2019 - 2020) For. – 75 (2019 - 2020)
Site Revenues:	INR 30 Lakh (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	50 km (Thanjavur)
b. Airport:	100 km (Tiruchirappalli)
c. Highway:	0.5 km from SH-65
d. Other:	Nil
Trails featured on:	Divya Desam

Sri Saranathan Perumal Temple, one of the 108 Divya Desams in Tamil Nadu, is dedicated to Lord Vishnu and River Cauvery. While it is popular among pilgrims, it lacks adequate temple facilities to cater to the large crowds gathering during festival season. The temple has immense potential to standalone as a holistic pilgrim site with efficient usage of space around the site. The scope of interventions at the site includes improved visitor experience, through the series of socio – cultural projects, in and around the temple complex.

Existing Condition

Location

Sri Saranathan Perumal Temple is located in Tiruccherai, lying on the outskirts of Thanjavur. The temple is surrounded mainly with agricultural lands and few houses. Few other tourist attractions located near the site are:

- Sri Saraparneswarar Temple – ~400 m
- Kudavasal Koneswaran Shiva Temple – ~4.5 km
- Sri Srinivasa Perumal Temple – ~5 km
- Sri Swarnapureeshwarar Temple – ~5.8 km

Existing Layout

The temple occupies an area of ~3.37 acres, with the presence of temple pond opposite to the temple's main entrance. The five-tiered gopuram (temple tower) is 120 ft (37 m) tall and pierces the large compound wall around the temple.

The temple complex is operated and maintained by HR&CE Department. The temple is accessed from local road which is narrow and dilapidated.

Existing Uses

- The temple is currently used as a space of worship by local and regional pilgrims. Along with the presence of main shrine inside the temple complex, it also houses uses like Administrative office and utility area.

- Adjacent to the temple is a marriage hall, used to host marriage functions in the community

Other Land Available

The temple complex covers an area of 3.37 acres including temple tank. The temple also owns nearly ~7.5 acres land adjacent to temple complex. At present, it is encroached by residential development as per what was informed by the site manager. Due to the ongoing dispute on the vacant land available, no development has been proposed on it.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Sri Saranathan Temple, also called Pancha Saraksetrwn, is considered one of the important Divya Desam temples as it is the only temple where Lord Vishnu is found with five Goddesses. Apart from its historical value, the temple complex houses a large water tank and marriage hall. The temple is religiously significant and is visited by locals and pilgrims from neighbouring states.
2. **Accessibility** – The temple is located along SH 65 and is easily accessible from Thanjavur, and Kumbakonam. The area is serviced by many government and private buses. The temple site has good connectivity with its surrounding areas.
3. **Amenities** – The temple lacks in adequate facilities in and around the temple. The facilities present are in need of renovation or maintenance.
 - No wayfinding signages and informative signage boards are available for the site. The signage present are in Tamil language.
 - No cloak room, waiting area or drinking water facilities are available for pilgrims.
 - No F&B kiosks are present inside the temple site, though few retail shops present outside the temple site.
 - No divyand friendly infrastructure is present within the temple complex.
4. **Awareness** – Sri Saranatha Perumal Temple in Tiruchurai is a fairly known Divya Desam and a religious tourist destination. It is majorly visited by people residing in Tamil Nadu, Karnataka, Andhra Pradesh, and Maharashtra. The temple is a part of known 108 Divy Desams in Tamil Nadu and is famous for its grand celebration of Brahmotsavam.
5. **Activities** – On normal days, the temple does not offer any activities. However, there are 2 main temple festivals Thai Poosam and Brahmotsavam which attract ~5,000 persons in a day to the temple.
6. **Accommodation** – There is no accommodation facility available for pilgrims within the temple complex. Kumbakonam (~15 km) is the central place for nearby tourist destination where tourist often prefer to stay because of availability of good options within the range of INR 600 to INR 2000, depending upon the stay

category.

7. **Association with Community** – Currently the locals are involved in the basic transportation and in the regular operation and maintenance of the site. They are also engaged in numerous retail outlets around the temple, which are owned by temple. There are several stalls present outside the temple along the state highway which gets benefitted due to tourist activity in festival period. There is immense potential to involve the local community and develop an ecosystem to generate additional employment opportunities.

Figure 22-1: Location and Existing Layout



Site Pictures

Sri Saranathan Perumal Temple



Temple Entrance



Bhramotsavam



Water Tank



Temple Entrance





Vision for the Site

Saranathan Perumal Temple holds a religious value as it is the only temple where Lord Vishnu is found with five Goddesses and a shrine dedicated to river Cauvery. It connects with multiple religious tourist destinations in the close vicinity.

- The site is envisioned as an inviting religious pilgrim destination, which hosts social and cultural activities in and around its complex.
- The vision for the site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex
- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from neighbouring areas as Tamil Nadu, Karnataka, Andhra Pradesh, and Maharashtra due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	100	343	890
High Value Tourists (HVT) (Both domestic and foreign)	-	1	2
Maximum Carrying Capacity	13,392		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality

of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The objectives of master planning at this site include:

- **Improving visitors' experience** – through revamping and redevelopment of existing resources, amenities, and creation of interactive spaces.
- Creating facilities to handle peak load of pilgrims during festivals.
- Creating informal spaces for gathering and hosting cultural events around the site.
- Creating a welcoming/ inviting environment around the site for the visitors.

Hard Interventions

1. **Improved Access to the temple** – The last ~50m of the site approach road is a narrow pathway, currently in dilapidated condition. The temple access pathway creates an uninviting experience for the visitors and suppresses the architectural significance of 'Gopuram' in the temple entrance. Further, improved road access from nearby bus/ auto stands would create a safe and attractive pedestrian experience. Thus, pathway could be developed with asphalt. Paved walkway and dedicated pick-up and drop-off space for autos would not only make temple entrance more appealing but also increase local business.

Infrastructure Created: ~1900 sqm of asphalt paved.

2. **Cultural Hall and Yatri Niwas:** A new cultural facility, in the place of existing marriage hall, near the temple site. The hall would host gatherings in the cultural event like festivals and marriage celebrations. The cultural hall would be developed with basic infrastructure including toilet and drinking water facility. Yatri Niwas is proposed as a small facility of 8 – 10 rooms on the first floor of the cultural hall, to accommodate guests hosted in the cultural hall as well as pilgrims visiting the temple.

Infrastructure Created for cultural hall: ~325 sqm of BUA

3. **Rejuvenating the Water Tank** – The area towards east of the temple entrance faces the temple tank. As an added attraction, the water tank can be developed into a landscaped garden, with additional elements of pathways, lighting fixtures

along the tank. Traditionally, the tanks were used to recharge the aquifer and maintain the ecological cycle. The temple tank would be replenished through rainwater harvesting measures and revived for same purposes. Alternatively, it could also function as a Community congregation space, and host cultural events.

Infrastructure Created: ~430 sqm of hard landscaped steps with ~725 sqm of soft landscaped areas.



Soft Interventions

- Toilet unit improvements** – The temple site have existing toilet units within its premises. The existing toilet facilities could be improved and made gender and disabled friendly.
- Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness/

Amenities Plan

- Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
- Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:
 - Electronic Visitor Counter at entry point

- TN Assist App integration at site, with internet connection and QR scanner
- CCTV coverage at up to 3 locations

- Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines in.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Asphalt Paved Access	1900 sqm
2	<ul style="list-style-type: none"> Cultural Hall Yatri Niwas 	325 sqm 8 – 10 rooms
3	Temple tank rejuvenation <ul style="list-style-type: none"> Cleaning of temple tank Steps Soft landscape 	5400 sqm 430 sqm 725sqm
4	Signage Package 1	1
5	Technology Intervention (Package 1)	1
6	Drinking Water Station	3

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Paved road (Asphalt road)	58
2	Cultural Hall	60

#	Project Component	Cost (INR Lakhs)
3	Yatri Niwas	150
4	Temple tank rejuvenation	13
5	Temple tank steps	4
6	Temple tank - Landscaping	1
7	Drinking Water Station	2
8	Signage Package 1	1
9	Technology Interventions	1
Total		INR 2.9 – 3 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Space on Hire** – Capturing 4 events per month at INR 10,000 per event.
- Yatri Niwas** – Capturing 10 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 45 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **security personnel** for the cultural hall and the yatri niwas.
 - An **Administration staff** to overlook the operations of the cultural hall and yatri niwas.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 35 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the following facilities at the site to private operators for better efficiency and long-term sustainability:

- Yatri Niwas.
- Cultural Hall.

Sub-projects which can be taken up by the local governing body/ Town panchayat

The last mile connectivity to the temple is poor and has been raised as a repeated concern by the local residents frequently visiting the temple and by the pilgrims alike. Since this is out of the temple's scope, it has to be taken up by the local governing body/ town panchayat to address the concerns of its constituents.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Paved road (Asphalt road)	58	Y0 – Y2	Local governing body/ Town panchayat

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
2	Cultural Hall ⁸⁸	60	Y3 – Y5	HR&CE
3	Yatri Niwas ⁸⁵	150	Y5– Y7	HR&CE
4	Temple tank rejuvenation	13	Y0 – Y2	HR&CE
5	Temple tank steps	4	Y0 – Y2	HR&CE
6	Temple tank Landscaping	1	Y0 – Y2	HR&CE
7	Drinking Water Station	2	Y0 – Y2	HR&CE
8	Signage Package 1	1	Y0 – Y2	HR&CE
9	Technology Interventions	1	Y0 – Y2	HR&CE
Total		INR 290 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 12,400⁸⁹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 5.7 man – days per day⁹⁰
- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days⁹¹

Employment is typically generated at 3 levels:

⁸⁸ The development of the proposed component can be taken up at later phases based on the increase in future footfalls.

⁸⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 31,100 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 89 Cr. at the site⁹².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%

- Cumulative labour man-days = 30% * CAPEX / 700

⁹⁰ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁹¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁹² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area. These mainly include the Kumbakonam metal workers.

Figure 22-2: Proposed Master Plan – Sri Saranathan Perumal Temple



23. Thirunaraiyur Nambi Temple, Thirunaraiyur

Site Details

District	Thiruvavarur
Name of Site	Thirunaraiyur Nambi Temple
Site No:	Site 88 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	10.9214, 79.4416
Land Area:	8 acres
Peak footfalls:	3,000 per day (March, December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 6 lakhs (2019-20) For. – 30,000 (2019-20)
Site Revenues:	INR 50 lakh (2019-20)
Site Orientation	Pilgrim
Site Potential:	Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~10 km (Kumbakonam)
b. Airport:	~110 km (Tiruchirappalli)
c. Highway:	Located on SH-65, ~15 km from NH-36
d. Other:	Nil
Trails featured on:	Divya Desam, Siddhar

Sri Thirunaraiyur Nambi Temple is considered one of the nine Vaishnava Navagraha Temples of Tamil Nadu and is associated with the planet Mars. The temple is known for devotees making amends to the problems that arise as a consequence of their astrological signs not aligning with the planet Mars. This is the only Divyadesam temple, where Lord Vishnu came as a Guru and offered Mudradanam (A Vaishnavite sign) to a devotee Tirumangai Alwar. The temple is equipped with all the essential amenities. The scope of interventions at the temple is limited to maintaining the existing infrastructure.

Existing Condition

Location

Thirunaraiyur Nambi Temple is located in a remote village of Thirunaraiyur on the outskirts of Kumbakonam. The temple is surrounded by a mixed-use neighborhood of Natchiarkoil Village, about 10 km south of Kumbakonam and about 50 km west of the Bay of Bengal. Several prominent tourist landmarks nearby Thirunaraiyur Nambi Temple are Sri Abathsagayeswarar Temple, Sri Alagatheswarar Temple, Sri Swarnpureeswarar Temple and Sri Amrithakalasanathar Temple.

Existing Layout and Uses

The temple precinct covers an area of 4.5 acres with additional 3.5 acres of the temple tank. The temple has a main entrance from 5-tiered rajagopuram on the eastern side, raising to a height of 75 ft (23 m). The entrance through the eastern gateway leads to a hall of 16 pillars, called Neenila Mutram.

A few of the other components of the temple complex are:

- The shrine of Tirumangai Azhwar - located on the northern side.
- A garden with the Sthala Vriksha (temple tree) is located on the southern side of the temple.
- A 100-pillared hall where the wedding festival takes place during the Tamil month of Aavani (September–October).

- The first precinct has separate shrines and idols of the utsavar deities of the 108 divyadesams.

The site is currently used for religious purposes mainly. Some of the festivals conducted at the site are Garuda Sevai, Vasanthotsavam, and Thirukalyana Utsavam that attract a lot of crowd to the temple.

Other Land Available

Apart from the 8 acres temple complex, the temple owns a collective land area of about 332 acres which is currently leased out for farming. The land is distributed across the neighbouring villages with a larger land parcel between the temple and the Mathur village. The temple also has 100 acres of land that is utilized for wet crop cultivation and ~50 acres of drylands in the south-eastern direction of the temple.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959. The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction – The** unique feature of this temple is that it is the only Divya Desam where the Lord is seen with Conch and Chakra in front of his face.

This temple has 10 feet tall Brahma statue in a standing posture within the sanctum. A huge and well-built Lord Garuda is seen just next to Lord Srinivasa's Sannidhi, made of Salagrama Stone, unlike other temples where it is often made in wood. The temple also has idols of the presiding deities of the 108 Divya Desams of Srivaishnavas.

2. **Accessibility –** Thirunaraiyur Nambi Temple is situated in a rural setup surrounded by small shops, located in the outskirts of Kumbakonam along the SH-65. The temple is accessible via wide roads. The most optimal way to reach the temple is through an auto, bus, or private vehicle. The nearest bus stop is located within 200m of the site.

Parking – There is no designated parking space, the vehicles are usually parked on the street on a regular day; however, during special events, panchayat provides the land for visitor parking free of charge.

3. **Amenities –** The temple is equipped with all the basic-level amenities and the condition of amenities present at the site is fairly good.

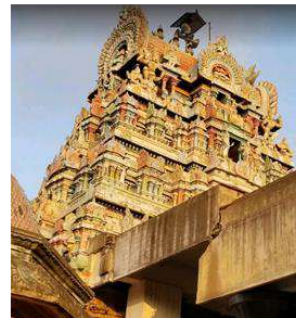
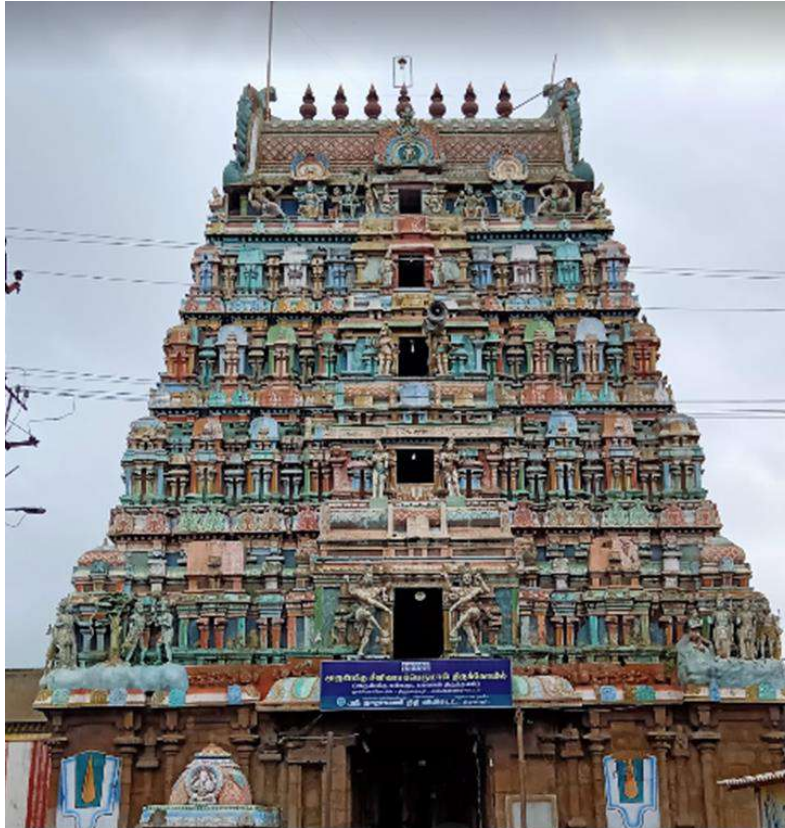
- There are 10 blocks of the toilet and 2 bathrooms available on the outer side of the temple. The toilet blocks are observed to be in clean and working condition.
- The site has the provision of adequate dustbins for waste collections by the local bodies; The site premises are generally kept clean as much as possible by the temple administration.
- The temple has no provisions for drinking water; visitors need to buy it from the shops outside the temple.
- There are more than 12 CCTV cameras across the site as well as frisking/scanning of visitors being done at entry and there are 3 security guards are present (1 during the day and 2 during the night).

- The site boundaries are walled and there are provisions of street lighting around the site. However, the need for extra streetlights is observed to entirely light up the important areas in the temple.
 - The site also has the provision of fire safety equipment including 7 fire hoses, fire extinguishers, 8 sand and water buckets and marking of emergency exit routes.
 - There is one retail store inside the temple complex for prasadam and also a few small retail outlets outside the temple providing pooja items like flowers, coconuts, bottled water, etc.
 - The temple allows free of charge entry to all its visitors; however, it collects INR 5/- for Archanai and a special Pradhanai can be obtained at INR 320 for 7 Thursdays.
 - A power backup facility is available at the site.
 - The temple has no provisions of ramp and wheelchairs for senior citizens and physically handicapped visitors.
 - There are permanent and semi-permanent barriers used as a measure to manage heavy crowding at the temple.
- 4. Awareness –** The temple enjoys immense popularity among pilgrims and locals, drawing as many as 1,000 people on a normal day. It is a well-known pilgrim destination for couples who are not blessed with children or facing difficulties in getting married. The temple tourists mainly comprise domestic visitors from Andhra Pradesh, Karnataka, and Mumbai. The temple owing to its location near Kumbakonam also attracts certain foreign tourists from Singapore and Malaysia too.
- Advance booking for festivals can be done online through a website. There are several temple bloggers and religious enthusiasts who have written about the greatness of this temple. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor etc. The temple also features on many “must-visits” lists of tourist places near Kumbakonam.
- 5. Activities –** The temple also does not offer any special services or activities that can attract many people, except for Annadhanam. On a normal day, it is open for the visitors to worship and special festival pooja are conducted during Brahmotsavam for 10 days. The temple also celebrates festivals like Garuda Sevai, Vasanhotsavam, and Thirukalyana Utsavam that attract a lot of crowd to the temple.
- 6. Accommodation –** There are a very few accommodation options available for tourists visiting the place. Budget hotels and online booking of hotels through MMT app is available within the distance of 500 m- 1 km of the temple. Visitors often prefer to stay at Kumbakonam due to its proximity to the other tourist locations and the availability of wider range of accommodation options.
- 7. Association with Community –** There are no common or regular associations of the local communities with the temple.

Figure 23-1: Location & Existing Layout, Sri Thirunaraiyur Nambi Temple



Site Pictures



Vision for the Site

Sri Thirunaraiyur Nambi Temple is believed to be built by King Kochengat Cholan, he built 70 temples dedicated to Shiva and Thirunaraiyur is the only Vishnu temple constructed by him. The temple has been built in such a way that one can see the main sannidhi even from outside of the temple. With several steps leading to the sannidhi, the sannidhi looks like being atop a small hill.

The temple is well-maintained, and the temple authorities ensure the safety and security of the tourist. The vision for the site is to develop it as a pilgrim tourist destination by improving existing infrastructure and basic amenities.

- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws few tourists – both foreign and domestic.

Given the location of the site with proximity to Kumbakonam and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **low tourism site** with **low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	570	1277	2458
High Value Tourists (HVT) (Both domestic and foreign)	60	134	259
Maximum Carrying Capacity	31,512		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The master planning approach at the site mainly deals with the provision of basic amenities around the site.

The objectives of master planning at this site include:

- To **preserve** the vacant land for agriculture use and future requirement.
- To provide **basic amenities** for visitors.
- To conserve and promote the **architectural treasure** of the temple such as the Garuda statue, the standing Brahma posture, etc.

Hard Interventions

The temple is remotely located with the vacant land being used for various types of agricultural activities. And the temple complex already has sufficient infrastructure in good condition. Hence, no hard interventions are proposed in this temple.

Soft Interventions

1. **Events-** The 100 pillar mandapam at the site could be used for organizing local events and festivals. Opening up the temple campus for various school and family events can be helpful in revenue generation. It will make the place more alive and vibrant throughout the year and also maintaining such facilities would provide jobs to locals.
2. **Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.
3. **Curation of facilitated tours** – Incorporate the site in Kumbakonam temple tour. These will be facilitated with licensed tour guides and hop on hop off services.

4. **Temple maintenance plan-** The Garuda statue, the standing Brahma statue at the Thirunaraiyur Nambi Temple is a rare piece of architecture. A proper maintenance plan for the temple in consultation with the conservation architects and specialists can be developed to conserve and preserve the architecture of the temple.

Amenities Plan

1. **Solar Streetlights** - The site is observed to be dull during the night. Considering the remote location of the temple, providing solar streetlights will be a sustainable measure. The streets and temple can be kept illuminated after dark. Solar streetlights can be funded jointly by the temple authorities and the panchayat.
Infrastructure Created: 10 units.
2. **Drinking Water Station-** Availability of free drinking water is a major issue at this site. Hence, 1 drinking water station with RO water coolers should be installed near the toilet block.
3. **Signage (Package 1)** – Few direction boards can be installed along the path from the temple tank to the main complex area indicating the directions for the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Solar Streetlights	10
2	Drinking Water Station	1
3	Signage Package 1	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Solar Streetlights	1
2	Drinking Water Station	3
3	Signage Package 1	1
Total		INR 5 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- c) All revenues are unescalated.*
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.

6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 1 Lakh.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Solar Streetlights	1	Y0 – Y2	HR&CE
2	Drinking Water Station	3	Y0 – Y2	HR&CE
3	Signage Package 1	1	Y0 – Y2	HR&CE
Total		INR 5 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 200⁹³ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days per day⁹⁴

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 550 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 270 Cr. at the site⁹⁵.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

⁹³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁹⁴ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁹⁵ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 23-2 : Proposed Master Plan- Sri Thirunaraiyur Nambi Temple



24. Sthalasayana Perumal Temple, Tirusirupuliyur

Site Details

District	Thiruvavur
Name of Site	Sthalasayana Perumal Temple
Site No:	Site 90 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.6174, 80.1908
Land Area:	1 acres + xx acres
Peak footfalls:	700 per day (June, December) Chariot Festival (Ther), Brahmotsavam, Thepm Festival
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 5 Lakhs (2019 - 2020) For. – Nil (2019 - 2020)
Site Revenues:	INR 6 lakhs (FY20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	3.5 km (Kollumangudi)
b. Airport:	110 km (Tiruchirapalli)
c. Highway:	0.8 km from SH-147

d. Other: Nil

Trails featured on: **Divya Desam**

The Sthalasayana Perumal Temple is a hindu temple, constructed in Dravidian style of architecture. The temple is a fairly small temple and vaguely known to the tourists outside the Tamil Nadu circle. The temple also receives visitors from the surrounding states like Andhra Pradesh and Karnataka, people visiting from other states or Tamil Nadu usually have ancestral ties to the temple.

While the temple is located in a small village, it forms an integral part of the local community and its devotees. Hence, the scope of interventions includes improving the visitor's experience at the temple along with addition of facilities for the community.

Existing Condition

Location

Sthalasayana Perumal temple is located in the village of Tirusirupuliyur, at a distance of about 15 km. south of Mayiladuthurai near Kollamangudi town. Located in the rural setup, the temple is surrounded by few houses and agricultural fields. Several prominent tourist landmarks nearby Sthalasayana Perumal Temple are:

- Sri Sivalokanathar Temple - ~5 km.
- Arulmigu Gnanapureeswarar Thirukovil - ~6 km
- Munneswar Kovil – ~4.5 km

Existing Layout

The temple, constructed in Dravidian architectural style, covers an area of 1 acre. The south facing temple is adorned with a five – tiered Raja Gopuram. The temple complex is mainly surrounded by calm residential neighbourhood. The components of the temple site are:

- The temple complex has a tower with sanctum, facing the southern direction and a Gosala in the eastern side.
- The temple complex houses Maha Mandapam, Prakara, Sub shrines of Andal and Hanuman, Adi Shesha shrine, Manavala Mamunigal.
- The temple complex has a toilet block outside the main temple area.
- The temple area has an unpaved parking on vacant land, outside the temple entrance.

Existing Uses

- The temple is currently used as a place of worship by the local residents and a religious pilgrim destination by the nearby tourists. Majority of the devotees seek child boon from lord Perumal. The devotees perform Tirumanjanam to Perumal and offer Vastras at the temple. The temple is currently maintained by HR & CE.
- The important festivals celebrated at the temple are Ther festival, Vaikunta ekadasi, Navaratri

Other Land Available

In addition to the 1-acre temple complex, the temple also owns 266 acres of land which is primarily used for agricultural purposes. The land is distributed across the near villages of Keeranoor, Kollumangudi and Pavattakudi.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

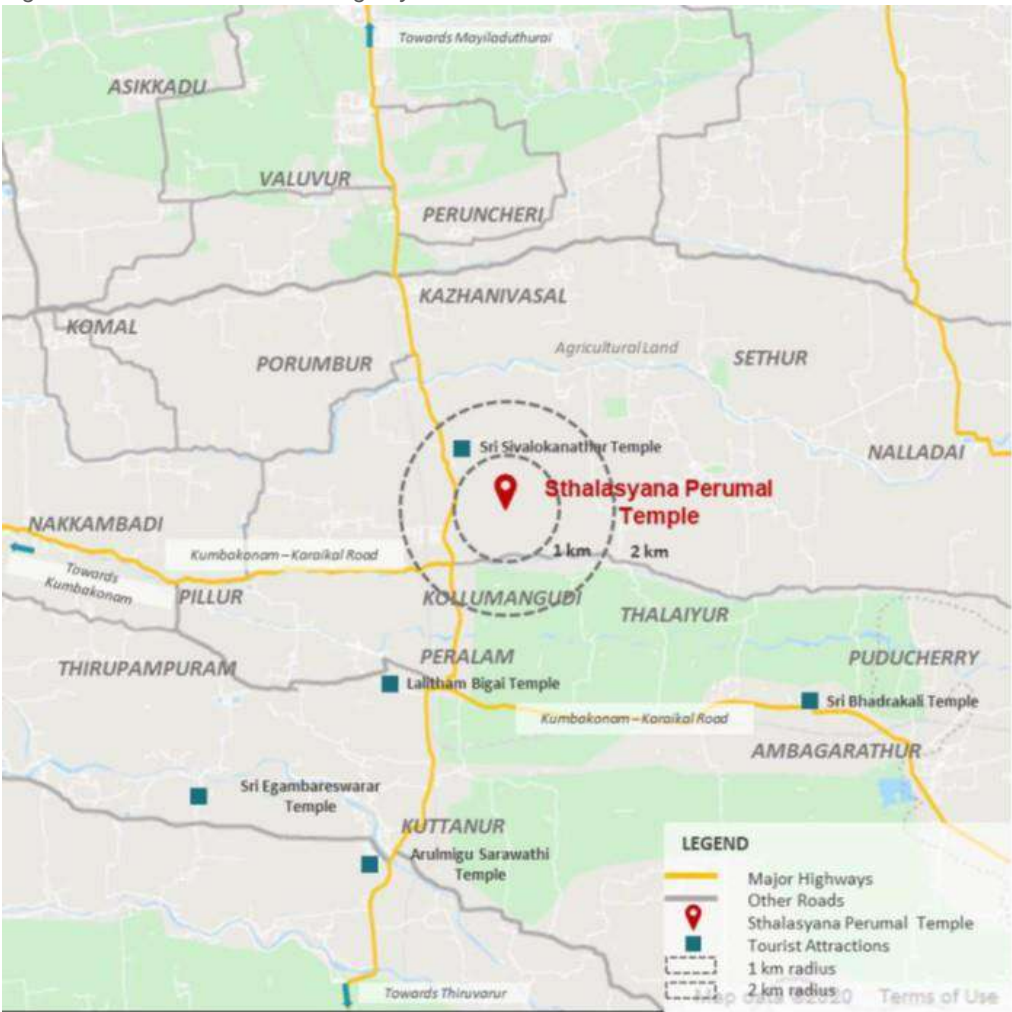
Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple holds a religious value and is mainly visited by pilgrims from local areas. The temple also receives visitors, with ancestral ties, from the surrounding states like Andhra Pradesh and Karnataka
2. **Accessibility**– The temple is easily accessible by bus, auto and private vehicles. The access road to the temple entrance is a muddy pathway from a narrow local road.
 - Bus Stop ~ 100 m
 - Auto Stand ~ 100m
 - Cab Stand ~ 50 m
3. **Amenities** – The temple is located in a small village and lacks in adequate facilities in and around the temple. The facilities present are in need of renovation or maintenance.
 - No wayfinding signages and informative signage boards are available for the site. The informative signage present are in Tamil language.
 - No cloak room, waiting area or drinking water facilities are available for pilgrims.
 - No F&B kiosks are present inside the temple site, though few retail shops present outside the temple site.
 - The site is having many steps to visit different areas within the site. No divyand friendly infrastructure is present within the temple site.
 - The area around the temple is not well lit due to absence of adequate lighting.
4. **Awareness** – The temple is of religious significance to the local people and is visited mainly by people, who have ancestral links to the place. The temple is not very popular with tourists and receives a footfall of ~20 on a normal day. Festivals may see comparatively larger crowds with the daily footfall as high as ~700.
5. **Activities** – On normal days, the temple does not offer any activities. However, there a 10-day Brahmotsavam Festival in Vaikasi and 3 – day Avataara Utsavam in Maasi are celebrated annually at the temple. Brahmotsavam is a grand temple festival which includes many rituals and traditions. However, the temple facilities can be improved for the provision of activities such as marriage rituals.

6. **Accommodation** – There are no accommodation options available for tourists in the nearby vicinity of the temple. The options for stay are available at Mayiladuthurai ranging from INR 1000 to INR 3000 at a minimum distance of 15 Km. from the temple.
7. **Association with Community** – The temple is of religious significance to the local people. The community, both local and regional, has ancestral links with the temple. Therefore, the families associate themselves with the temple closely.

Figure 24-1: Location and Existing Layout



Site Pictures



Vision for the Site

The temple holds a religious value and is visited mainly by local pilgrims and few regional pilgrims.

- The vision for the site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex and adding the missing amenities.
- The temple has a potential to involve local community and pilgrims visiting from nearby areas. By adding spaces for community use and engaging the pilgrims in various activities like goshala, the site would attract visitors and experience more community involvement.
- **Target Visitor** – The site is largely a pilgrim site, with footfall from local areas, as well as from rest of Tamil Nadu, Andhra Pradesh and Karnataka. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	500	1,718	3,939
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	3,939		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality

of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of Master planning at this Site include:

- Creating a **welcoming entrance to the temple site** for the visitors.
- **Improving visitor experience** at the temple – through improved circulation, conveniences, and amenities.
- **Upgrading the existing Goshala** to engage the pilgrims in activities within site and attract more visitors.

Hard Interventions

1. **Paved walkway** – The temple is accessed by a ~160m muddy pathway from the local tarred road. This creates an uninviting entrance to the temple site. Thus, a paved walkway, from the local road to the Rajagopuram, would mark a welcoming entrance to the temple site. A standard 3 m wide pathway with paver block.

Infrastructure Created: ~160 m of paved walkway

2. **Cultural Hall (Kalyan Mandapam)** – The temple administration highlights the repeated enquiries for the development of 'Kalyan Mandapam'. A new cultural facility that would host marriage celebrations for the local people. The cultural hall would be developed with basic infrastructure including toilet and drinking water facility. The facility would increase the chances of activities and revenue for the temple campus. Moreover, these Mandapams can also be used as an exhibit space to exhibit the history of the temple and hold gatherings during the time of the festivals.

Infrastructure Created for cultural hall: ~210 sqm of BUA

3. **Goshala Shed**– The temple site houses a gosala in the eastern side of the main temple. An added shed with local materials in the existing setting of gosala. The pilgrims and local residents could engage in the activities in gosala on the daily basis. This would promote the community involvement in temple activities and increase the footfall of temple on daily basis. A shading device type 2 with locally available material and other specifications.

- 4. Divyaang friendly infrastructure** – Many areas within the site are accessed by a flight of steps, which become inaccessible for the people with disabilities. Divyang friendly infrastructure with a series of ramps to increase the accessibility within the site. Ramps to access the main shrine, thayar shrine, and temple office.

Infrastructure Created: ~03 number of ramps of 3m width

Soft Interventions

- 1. Restoration and maintenance of the temple building.** - The temple site requires maintenance and landscaping to enhance the visitor experience. Currently the site conditions do not provide inviting surroundings.
- 2. Promotion: Temple to be included in 'Divya desam circuit'– The inclusion of temple withig the tourism circuit would increase the visibility of the temple.** Additionally, promoting the site with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness about its religious significance.
- 3. Unpaved parking** – The vacant land at the entrance of the temple site is used to mee the current parking demands of the temple. An unpaved, regulated parking coupled with the paved pathway (as proposed in hard interventions) would provide an inviting entrance to the temple.

Amenities Plan

- 1. Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
- 2. Streetlight** – The area around the temple is not well lit due to absence of adequate lighting. To ensure temple site and surrounding areas are safe and secure, streetlights would be installed in and around the temple area.
- 3. Drinking water Station** - As highlighted by many tourists in the baseline surveys, availability of free drinking water was a major issue at tourist sites. Hence, drinking water stations with RO water coolers could be installed at the

temple site. A standalone drinking water station, in the courtyard, near to the temple office block.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Paved Walkway	270 sqm
2	Cultural Centre (Kalyan Mandapam)	210 sqm
3	Gosala Shed	180
4	Signage Package 1	1
5	Drinking Water Station	

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Paved walkway	2
2	Cultural centre	56
3	Goshala shed	3
4	Signage Package 1	1
5	Drinking Water Station	2

Total	INR 65 L
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Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Space on Hire** – Capturing an average of 4 events per month at INR 6,000 per event.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.

- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees

2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “**social cause**”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Shaded walkway	8	Y0 – Y2	HR&CE
2	Cultural centre ⁹⁶	53	Y3 – Y5	HR&CE
3	Streetlight	1	Y0 – Y2	HR&CE
4	Signage Package 1	1	Y0 – Y2	HR&CE
5	Drinking Water Station	2	Y0 – Y2	HR&CE
Total		INR 65 L		

⁹⁶ The development of the proposed component can be taken up at later phases based on the increase in future footfalls.

⁹⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,800⁹⁷ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁹⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 7,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁹⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 395 Cr. at the site⁹⁹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

⁹⁹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 24-2: Proposed Master Plan – Sthalasayana Perumal Temple



25. Sri Ranganathaswamy Temple, Tiruchirappalli

Site Details

District	Tiruchirappalli
Name of Site	Sri Ranganathaswamy Temple
Site No:	Site 94 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.8265, 78.6899
Land Area:	25 acres+ ~130 acres Other lands
Peak footfalls:	1 Lakh per day (January- April, September-December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 119 lakhs (2019 - 20) For. – 0.9 lakhs (2019 – 20)
Site Revenues:	Undisclosed (One of the richest temples in Tamil Nadu)
Site Orientation	Pilgrim
Site Potential:	Very High tourism site
HVT Potential:	High HVT Potential
Connectivity:	
a. Railway station:	~1 km from Srirangam Railway Station
b. Airport:	~18 km from Tiruchirappalli International Airport
c. Highway:	~3 km from SH-25, ~1.5 km from NH-81
d. Other:	Nil
Trails featured on:	Ramayana, Gopuram, Divya Desam, Chola Nadu

Sri Ranganathaswamy Temple is the first of the 108 Divya Desam temples. It is one of the most prolific temples in South India, receiving visitors from all over the country and abroad. The surrounding areas of Srirangam have a well-developed ecosystem of public amenities. The major areas for development are urban design to improve the character of the place and crowd management measures to handle the large influx of visitors.

Existing Condition

Location

The temple is located in Srirangam, Tiruchirappalli. Srirangam is an island between the Kollidam and Kaveri rivers. It is vast and planned as a temple town with a Sapta-Prakaram design where the sanctum, gopuram, services and living area are co-located in seven concentric enclosures. Several prominent tourist attractions located nearby are Jambukeswarar Temple, Uthamar Koil, Our Lady of Lourdes Church and Rock Fort Ucchi Pillaiyar Temple.

Existing Layout and Uses

The temple is spread over an area of 25 acres of land with the immediate surroundings of mixed-use residential development on all sides.

- The temple is enclosed by 7 concentric enclosures with courtyards (prakarams), major gopurams, 39 pavilions, 50 shrines, 9 sacred water pools, 1000-pillar mandapam and several small water bodies inside.

- The temple is aligned to the north-south and east-west axis, on an island surrounded by the Kaveri and Kollidam rivers. The outer two prakarams (outer courtyard) are residential developments with shops, restaurants and flower stalls.
- The five inner courtyards have shrines of Vishnu and his various avatars such as Rama and Krishna.

The temple has twelve major water tanks. Of these, the Surya Pushkarini (sun pool) and Chandra Pushkarani (moon pool) are two of the largest tanks, that harvest most of rainwater. They have a combined capacity of two million litres of water.

Some of the festivals conducted at the site are Chithirai, Navratri, Theppam, Vaikunta Ekadasi and Deepavali. The temple also has a well-developed infrastructure dedicated for public services such as-

- Retail – 15+ shops selling worship accessories and religious books
- Events – 1000-pillared mandapam
- Offices of the administrators
- Multiple temple tanks
- Art Museum

Other Land Available

Apart from the 25-acre temple complex, the temple owns more than 130 acres of land in and around Srirangam. Some of this land has been used to build establishments like Yatri Nivas, some have been encroached by other parties and some lie vacant.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification / additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.

- d. The HR&CE Dept. owned land can be leased for no more than 3 years.

2. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel falls under the Tiruchirappalli planning area. However, its land use could not be identified as per the latest available map (Tiruchirappalli Master Plan, Proposed Land use-2011).

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Sri Ranganathaswamy Temple, the foremost of the 108 Divya Desam temples is one of the most visited temples in South India. It is often ranked as one of the largest functioning temple complexes, alongside Angkor Wat (Cambodia) and Borobudur (Indonesia). Out of the multiple gopurams of the complex, the Raja gopuram tower is one of the highest points of the city's skyline.

The architecture of the temple represents an accretion of building activity of years by the Chola, Kongu, Hoysala and Vijayanagar dynasties. The 1000-pillared mandapam is a fine architectural specimen. The temple is also a treasure trove for epigraphists, having more than 600 inscriptions. The ASI has devoted an entire volume in its South Indian Inscriptions series to record the inscriptions copied from the temple. The walls of the complex are painted with exquisite paintings using herbal and vegetable dyes. Frescos and mural paintings are well-preserved.

2. **Accessibility-** The temple is located in Srirangam, easily accessible from Tiruchirappalli via wide urban roads. The last ~1km leading up to the temple are narrow roads and tend to get congested during festivals and peak days of the week. The major modes of transport people use to commute to the site include tour bus, autos and taxis / private cars. Srirangam Bus stop located is located at ~800m distance. There is an Auto stand available at the site and cab services (Ola/Uber) are also available.

Parking – 1 privately owned parking lot with 50 buses capacity is located at ~600 m distance from the site. Parking is also done on the streets surrounding the temple complex.

3. Amenities- Being a popular tourist destination, the temple has a developed ecosystem of infrastructure earmarked for public amenities.

- Tourist Information Centre is available inside the temple complex.
- Signages for major areas in the temple are available in Tamil and English.
- 2-3 public toilets are available at each of 3 entrances but there are no washrooms available inside the temple complex.
- Free drinking water is available.
- Adequate CCTV cameras are covering all key areas, along with more than 10 security guards employed at the site. Scanning of tourists is also being done.
- Site boundaries are walled and there is sufficient street lighting.
- Fire safety equipment like fire hoses and extinguishers are provided. Emergency exit routes are also marked.
- 15+ Shops inside the site sell inexpensive souvenirs, temple-related articles and books.
- The temple has free access to all the visitors. However, Priority access is also available at INR 50 and INR 250
- Backup power facility available.
- The site has the provision of ticketed footwear stands, luggage/ cloakrooms and ATM (cash withdrawal and deposit).
- The temple has 3 golf carts for tourist use within the complex and wheelchairs are also provided if necessary

4. Awareness - As one of the most prolific temples in India, it receives a huge footfall. The temple finds mention in renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. Moreover, it is the first entry in the “Top things to do in Tiruchirappalli” list by Lonely Planet. The HR&CE department maintains a temple website with relevant information. In a nutshell, Sri Ranganathaswamy Temple is synonymous with Tiruchirappalli. While the majority of the temple’s visitors hail from South Indian states (Tamil Nadu, Andhra Pradesh and Karnataka), it also receives a significant proportion of footfalls from North India and abroad.

5. Activities - On normal days, the temple does not offer any activities. On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc. The temple also has an art museum that showcases antique dolls, swords and other artifacts.

6. Accommodation- The temple has its brand of hospitality – Yatri Nivas. It has various categories of keys such as dormitories, rooms and cottages. The tariff is fixed below-market rates, INR 750 per night for double bed AC, INR 1750 per night for the cottage. Apart from Yatri Nivas, there are multiple lodges and budget hotels in Srirangam. Premium hotels are available in abundance in Tiruchirappalli city.

7. Association with Community- The temple is a part of the day-to-day life of locals who visit the temple for daily worship. Various families and individuals are also dependent on the temple and its visitors for their livelihood. The various ways in which the community is associated include jobs at the temple, auto and taxi drivers, etc.

Figure 25-1: Location & Existing Layout

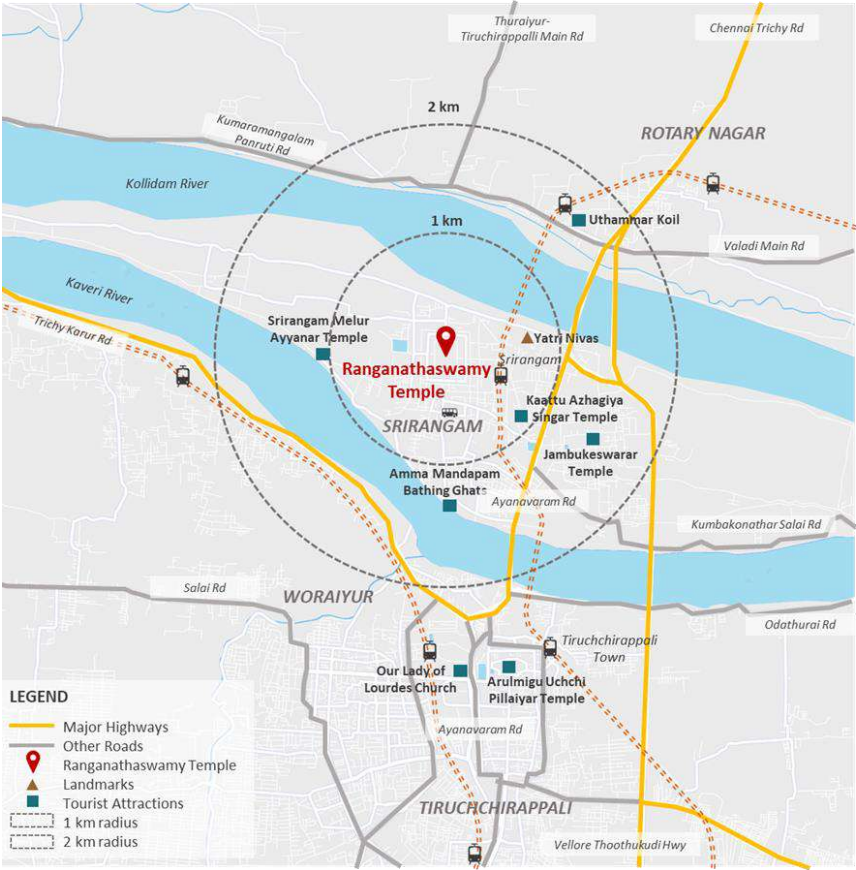


Figure 25-2: Other Land Owned by the Temple



Site Pictures

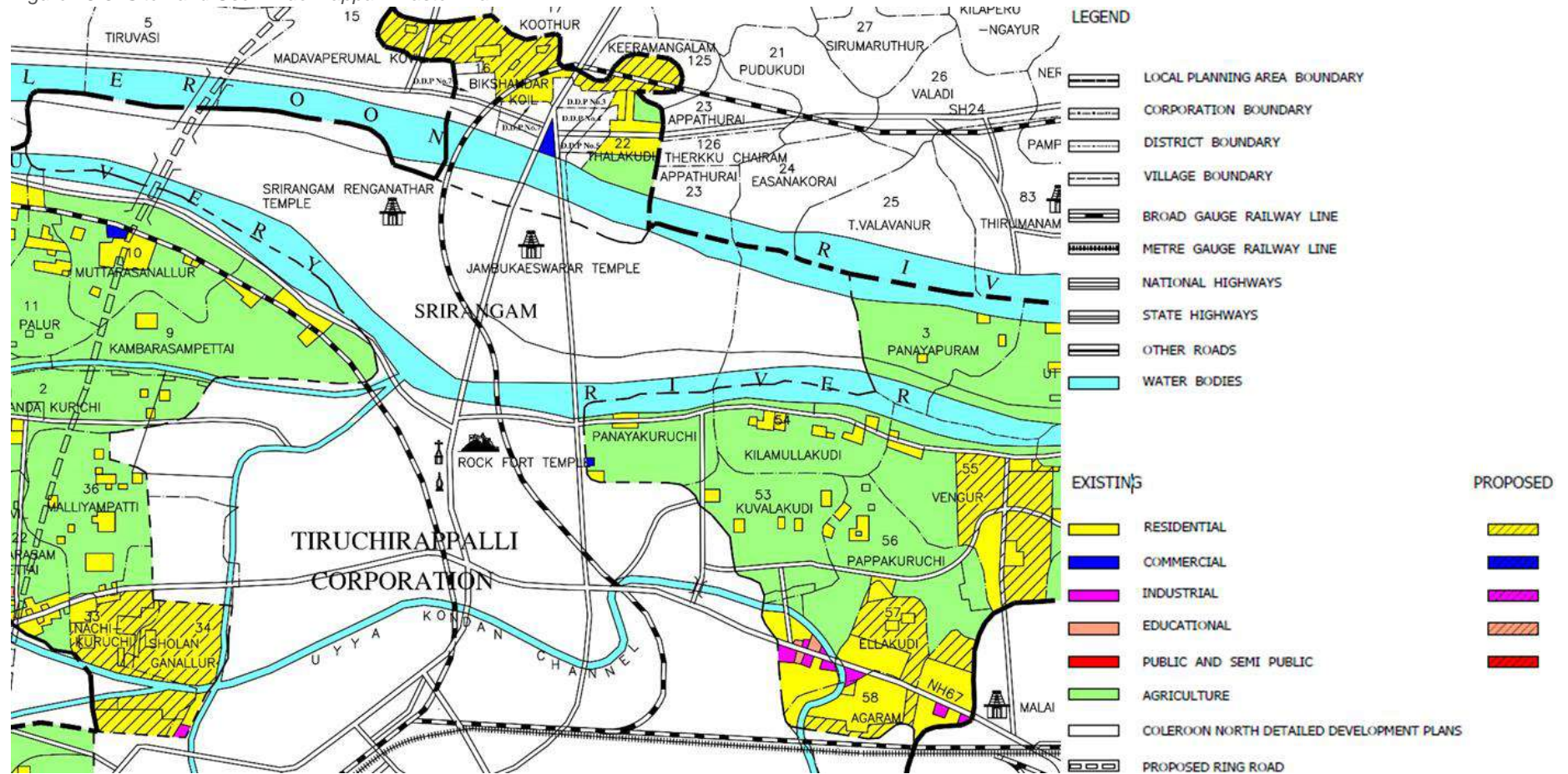








Figure 25-3: Site Land Use- Tiruchirappalli Master Plan



Vision for the Site

Ranganathaswamy Temple is one of South-India's most important temples. As a prime attraction of Tiruchirappalli, it draws large groups of pilgrims and both domestic and foreign tourists. The temple faces issues due to crowding and inadequate parking. Tourist-friendliness at the site can be improved by better traffic management, traffic calming of some of its busiest streets and an upgraded dedicated parking area. A special temple interpretation / tourist facilitation centre and improved pilgrim and staff accommodation can also be proposed. At Ranganathaswamy Temple and surrounding streets, no vacant land is available, however several of the separate parcels owned by the Temple authorities provide the opportunity to provide these temple-related facilities nearby.

- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a very high Tourism Site with high HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	11,810	23,428	33,582
High Value Tourists (HVT) (Both domestic and foreign)	180	688	1,040
Maximum Carrying Capacity	98,450		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

- After entering through the first gopuram the visitors step into the outer prakarams (outer courtyards) of a total of seven courtyards around the inner sanctum of Ranganathaswamy Temple. The outer three prakarams are effectively public space, but with limited vehicular access (due to lack of space), mostly used only by pedestrians and two-wheelers, aligned with small houses, shops, restaurants, flower stalls and pilgrim accommodation. The main streets leading through the gopurams straight into the Temple from the North Gate, the East Gate and the South Gate (part of Ammamandapam road) should become more appealing when walking up to the temple, by adhering to stricter urban design guidelines with a maximum permissible building height and improved standards for the buildings' façade treatment. Over the years some buildings have gotten (unsightly) additional floors, which is detrimental to the visitor's experience when they obscure the view of the gopurams.
- Better traffic management (i.e., Traffic Calming, Pick Up/Drop Off areas, and a large Parking Area) in this part of Srirangam will allow the formalization of the pedestrian-friendly public space of the outer three prakarams (i.e. Uthrai and Chitra Streets). It will be very beneficial to the tourists and pilgrims' overall experience of a visit to the temple. Instead of having tourists' and pilgrims' cars and buses randomly parked, a plot of land owned by the temple authorities 500 meters from the north gopuram is recommended to be developed into a large car and bus parking area.
- One of the major aspects of the tourist's experience when visiting a temple complex that needs to be improved is the lack of proper amenities, tourist

information and engaging background information at the temple site. To address all of the above issues, a large site interpretation/tourist facilitation centre is proposed (nearby the Parking Facilities) overlooking the Kollidam River.

Hard Interventions

- 1. Traffic Calming Measure-** Pedestrianisation Improvement measures should be undertaken in the outer Prakarams (Uthrai and Chitra Streets).

Infrastructure Created: ~4 km long by 10m wide paved streets for pedestrians with new trees and street furniture.



Conservation and Renovation of historic buildings near gopurams and retaining historic low rise streetscape of 1 - 2 floors



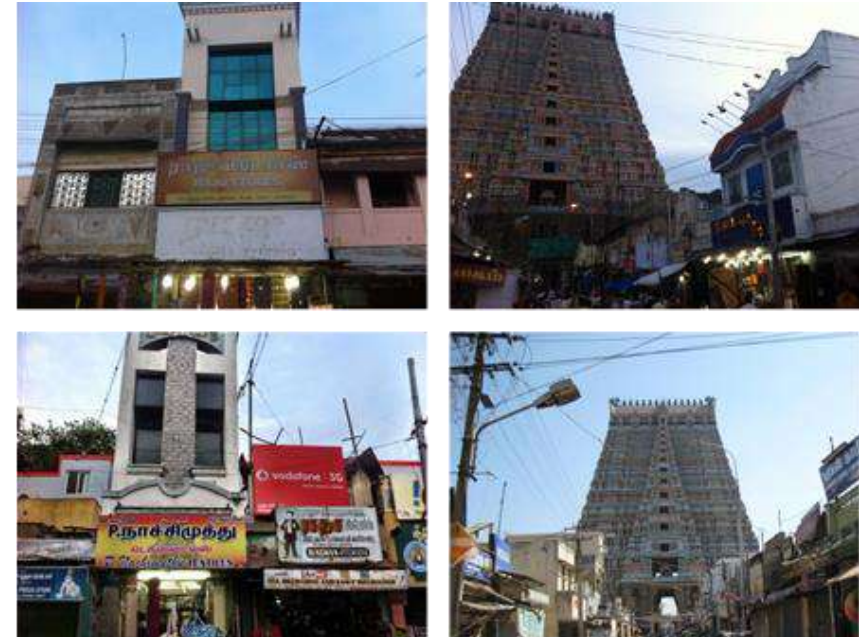
Traffic Calming / Pedestrianisation Uthrai and Chitra Streets

2. Façade Beautification of main streets from North, East, South leading through the Gopurams into Temple- To improve the overall experience of the visit to the historically significant Temple, the buildings along these streets that get almost all the pilgrim and tourist footfall, should reflect the architectural beauty of the temple. Firstly, the disfiguring hoardings and other architecturally inappropriate structures added to the buildings over the years should be removed. Secondly, the owners of historic buildings along the street should be financially incentivized to renovate their building facades to let the original architecture shine. Thirdly, building facades nearest to the gopurams that are a real eyesore and distract from the historic beauty of the temple should be beautified in a manner that is historically more appropriate. Fourthly, buildings nearest to the gopurams that have added floors over the years that are now obstructing views of the gopuram and distract from the historic beauty of the temple should remove these top floors.

3. Dedicated Tourist Car/Bus Parking Area- Instead of having tourists' and pilgrims' cars and buses randomly parked on streets around the temple. A plot of land of ~3.6 ha at ~500 meters from the North gopuram owned by the temple authorities is available to be developed as a parking area for the temple. Tourists are encouraged to be dropped off here and visit the Ranganathaswamy Temple Interpretation and Tourist Facilitation Centre across the street. From here it's only a 500-meter walk to the North gate of the Temple. Another option is the use an electric shuttle vehicle that operates between the pick-up/drop of zones near the temple gopurams and the Parking Area.

Infrastructure Created: ~36,000 sqm hard landscaped area including trees, few food & beverage kiosks and large public bathroom facilities

4. Ranganathaswamy Temple Interpretation and Tourist Facilitation Centre – Kollidam Riverside Park - One of the major aspects of the Tourist's experience when visiting a Temple complex that needs to be improved is the lack of proper amenities, tourist information and engaging background information at the Temple Sites. To address all of the above issues, a Site Interpretation / Tourist Facilitation Centre is proposed. Considering the large unused open space available along the Kollidam River, it's recommended this site be used for such a facility. The Interpretation Centre is aimed at the tourists who don't know much about the site. Inside the centre the story of the Tiruchirappalli's history and the Ranganathaswamy Temple, in particular, will be told engagingly via displays, galleries and interactive exhibits.



Additional floors near gopurams no longer allowed



Façade Beautification facades main streets, historic building near gopurams

Considering the lack of bathroom facilities inside the temple, it will be provided too, a small shop selling local handicrafts made by local craftsmen and weavers & other souvenirs. The site around the facilitation centre has many mature trees and greenery that will be kept as much as possible and will be turned into a public garden, with new footpaths leading to the river where a café-restaurant with alfresco seating provides a beautiful quiet spot for tourists as a respite from the crowded streets of Srirangam. A small jetty into the riverbed allows visitors to take a boat ride when the water level is high enough.

Infrastructure Created:

- *Facilitation Centre Type 2, ~750 sqm of BUA,*
- *Footpath ~800m long by 3m wide footpath and street furniture,*
- *Jetty 50m long by 3m wide jetty.*

5. **Temple Guest Houses, Dormitories-** Two 2 ha temple-owned plots in the area (one close to the Train Station and one opposite the existing Yatra Niwas) are planned as guest houses, dormitory accommodation and some ancillary facilities for pilgrims.

Infrastructure Created:

- *Several 2 storey courtyard buildings ~13,000 sqm of BUA*
- *Retail ~600 sqm*
- *Soft landscaping ~3000 sqm*
- *Hard landscaping ~4000 sqm*
- *Parking ~1,000 sqm*

6. **Beautification of Sri Rangam Pond-**The Temple Tank should be renovated and beautified too.

Infrastructure Created: ~700m long by 10m wide hard landscaping, trees and street furniture



Riverfront Park with Temple Interpretation and Tourist Facilitation Centre and Restaurant-Café with Al-fresco seating overlooking River

Soft Interventions

1. **EV Shuttle to/from Parking** The distance to the car park of ~500m from the North gopuram may be too far to walk for some elderly people and small children. In case pick-up by the bus or car can't be arranged at a specific time, an EV shuttle service to and from the parking area would be the most comfortable solution, avoiding any large traffic jams on the road near the temples entry-exit points at the outer gopurams.
2. **Crowd Management** – As the temple is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
 - Access timings can be made exclusive for high-value tourists.

Amenities Plan

1. **Lighting** –The streets around the temple riverside park will need a Street lighting Plan, with an emphasis on different types of lighting and levels of brightness befitting the variety in areas (Temple, Temple pond, Temple accommodation plots, traffic-calmed streets, Riverside Park area, Parking area).
2. **Street furniture** – An international standard to the design and quality of street furniture should be the benchmark. Street furniture needs to become an integral part of landscape design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, wayfinding, etc.
3. **Planting & landscaping** – Strategic tree planting is required along the traffic-calmed streets to create more shade to make these sites more attractive as a pedestrian-friendly destination, where walking is encouraged also during the day.
4. **Signage (Package 3)** - Direction boards can be erected along the main roads in the area indicating the presence of this site. Package 3 signage is proposed to feature in Sri Ranganathaswamy Temple. Both directional signage and informational signage should be used, as per the design guidelines.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Paved street (Traffic Calming Measure)	4 km X10 m
2	Parking Area	36,000 sqm
3	Kollidam Riverside Park - <ul style="list-style-type: none"> • Facilitation Centre Type 2 • Footpath • Jetty 	1 800m X 3m 50m X 3m
4	Temple Guest Houses- <ul style="list-style-type: none"> • 2 storey courtyard buildings • Retail • Soft landscaping • Hard landscaping • Parking 	13,000 sqm 600 sqm 3000 sqm 4000 sqm 1000 sqm
5	Beautification of Sri Rangan Pond <ul style="list-style-type: none"> • Hardscape 	700m X 10m
6	Signage (Package 3)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre (Type 2)	42
2	Parking	576
3	Paved street (Traffic calming measures)	0
4	Kollidam Riverside Park - Footpath	16
5	Kollidam Riverside Park - Jetty	30
6	Temple Guest Houses - 2 storey	1,500
7	Temple Guest Houses - Retail	120
8	Temple Guest Houses - Landscaping	14
9	Temple Guest Houses - Parking	16
10	Sri Rangam pond - Hardscaping	14
11	Signage (Package 3)	6
Total		INR 23 - 24 Cr.

Note: The cost outlined above is indicative only. The actual cost of construction / implementation will depend upon site conditions, sizing and detailed design.

Revenues

The following are applicable to the revenue modules below.

- Estimated revenue projections are pegged at **Y5** (end of short-term).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 2 kiosks at the facilitation centre, each to be rented out at INR 1.5 Lakhs per annum.
- Parking** – Capturing 1000 ECS at 20% occupancy per day with 2 rotations at INR 15 per ECS.
- Yatri Niwas** – Capturing 100 keys with average yearly occupancy of 60% at INR 2200 per room and additional revenues of 20% over room revenues.

- Revenue share from shuttle operators** – Capturing 2 operators at INR 8 Lakh per operator per year.

- Hawker zone** – Captures renting out of 600 sqm of built-up space at INR 1200 per sqm per annum.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5.35 Cr.

Note the above does not include any existing revenue streams that the temple already accrues.

Operating Expenditures (OPEX)

The following are applicable to the operational expense modules below.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan and not any operations and maintenance expenditure currently made at the site for its existing facilities.
- The expense projections are pegged at **Y5** (end of short-term).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - Assuming **4 Help-desk staff** for the facilitation centre, amenity block, and the retail area.
 - Assuming **5 security personnel** for the facilitation centre, yatri niwas, and the parking.
 - Assuming **4 Administration staff** to overlook the operations of the facilitation centre, yatri niwas, and the retail spaces.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a

variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Pond Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple pond such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 4.95 Cr.*

Phasing & Funding Agencies

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple and the entire Ramayana trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated social benefit. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the Yatri Niwas at the site to private operators for better efficiency and long-term sustainability:

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Tourist Facilitation Centre (Type 2)	42	Y0 – Y2	HR & CE
2	Parking	576	Y0 – Y2	HR & CE
3	Paved street (Traffic calming measures)	0	Y0 – Y2	HR & CE
4	Kollidam Riverside Park - Footpath	16	Y0 – Y2	HR & CE
5	Kollidam Riverside Park - Jetty	30	Y0 – Y2	HR & CE
6	Temple Guest Houses - 2 storey	1,500	Y0 – Y2	PPP - OMT
7	Temple Guest Houses - Retail	120	Y0 – Y2	HR & CE
8	Temple Guest Houses - Landscaping	14	Y0 – Y2	HR & CE
9	Temple Guest Houses - Parking	16	Y0 – Y2	HR & CE
10	Sri Rangam pond - Hardscaping	14	Y0 – Y2	HR & CE
11	Signage (Package 3)	6	Y0 – Y2	HR & CE
Total		INR 23 - 24 Cr		

Impact on Communities:

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 100,000¹⁰⁰ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 85 man-days per day
- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days per day¹⁰¹
- Retail and F&B spaces = 60 man-days per day¹⁰²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 2,50,500 man-days.

¹⁰⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site. Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 5,400 Cr. at the site¹⁰³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- **Cumulative labour man-days = 30% * CAPEX / 700**

¹⁰¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁰² Assuming average 2.5 persons per kiosk / shop

¹⁰³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 25-4: Proposed Master Plan –Sri Ranganathaswamy Temple related Facilities and Interventions, Srirangam

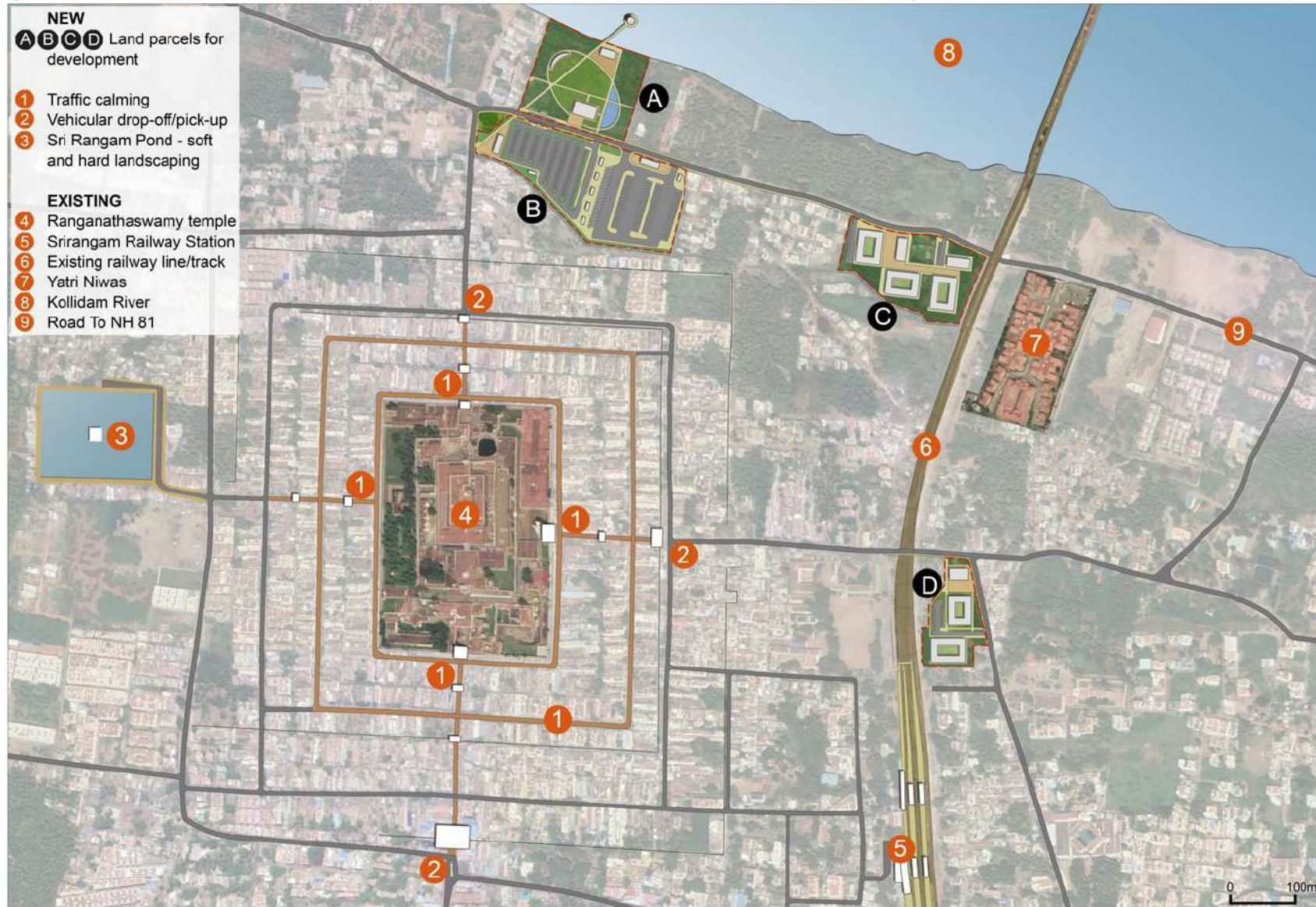


Figure 25-5: Proposed Master Plan – Ranganatha Swamy Temple Tourist Interpretation Centre and Kollidam Riverfront Park



Figure 25-6: Proposed Master Plan – Ranganatha Swamy Temple Car and Bus Parking Facility



Figure 25-7: Proposed Master Plan – Ranganatha Swamy Temple Pilgrim Accommodation Sites



26. Pundarikakshan Perumal Temple, Thiruvellarai

Site Details

District:	Tiruchirappalli
Name of Site	Pundarikakshan Perumal Temple
Site No:	Site 100 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9559, 78.6674
Land Area:	~6.9 acres (Temple) ~20 acres (Additional Land)
Peak footfalls:	~10,00 per day (February – April)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 2.3 lakhs (2019 – 20) For – 155 (2019 – 20)
Site Revenues:	INR 68 lakhs (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Very low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~27 km (Tiruchirappalli)
b. Airport:	~30 km (Tiruchirappalli)
c. Highway:	~850 m from SH 62
d. Other:	Nil

Trails featured on: **Divya Desam**

Built in the Treta Yuga, Pundarikakshan Perumal Temple is one of the oldest temples in South India and is believed to pre-date Sri Ranganathaswamy Temple. The uniqueness of this temple stems from the fact that it is built like a fort and has a Rajagopuram that is an unfinished, magnificent structure. Presently visited only by locals, the temple complex is maintained well and has the potential to enhance the visitor's experience. Therefore, scope of interventions includes the development of landscaped gardens, toilet blocks, drinking water stations for visitor's convenience. Besides the development of new amenities, maintenance of existing infrastructure along with appropriate marketing strategies for the temple visibility is envisioned.

Existing Condition

Location

The Pundarikakshan Perumal Temple is located in Thiruvellarai, a village on the outskirts of the Tiruchirappalli district of Tamil Nadu. It is located at a distance of 27 km from Tiruchirappalli, on the Thuraiyur road. The presence of white rock hillocks lends this place the name "Swetagiri". The surroundings of the site have very sparse mixed-use development, followed by vacant land. Small shrines present in its vicinity include Sri Angalamman Temple (~0.5 km), Padichunai Andavar Kovil (~3 km), Kambha Perumal Temple (~2.1 km), Vadakkippatti Selva Mariamman Kovil (~3 km).

Existing Layout

The temple complex covers an area of 6.9 acres enclosed within a rectangular granite wall. The temple complex consists of various shrines and six of its seven waterbodies. Other prominent features of the temple complex are:

- The Rajagopuram, the temple's gateway tower is unfinished.
- There are 18 steps to reach the temple representing 18 chapters of the Bhagavad Gita and another 4 steps representing the 4 Vedas.

- There are two stepped entrances to the sanctum – Utharayana Vaasal and Dhakshanayana Vaasal, each open for a six-month period. The two gates in the temple are believed to represent the continuous cycle of entering into life and getting out of it.
- An image of the presiding deity, Pundarikakshan, is seen in a standing posture facing east. The vimanam (structure over the sanctum) is called Vimalakriti Vimanam.
- A swastika-shaped temple tank (Kalyani Theertham) covering an area of 0.3 acres built in 800 ADS by Kamban Araiyan during the reign of Dantivarman is present in the south-western corner outside the temple complex. It has four stepped gateways, each having 51 steps on all four sides with the unusual characteristic that if one bathes at one end of the tank, he cannot be seen from the other end due to the shape of the tank.

Existing Uses

The temple is currently used as a place of worship by the devotees. Locals and pilgrims flock to the temple premises to celebrate festivals of Panguni, Chithirai, Navratri, and Vijayadasami. Apart from religious purposes, the temple is used for:

- Swastika-shaped temple tank
- Garden
- Cave Temple
- Administration Office

Other Land

The temple does not own any land around the complex; however, it owns land ~20 acres of additional land in Kattakulam and Palur villages that are ~175 km and ~25 km away from the site.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair,

alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction –** The major unique feature of the Pundarikakshan temple is that the temple is built as a fort and classified as the oldest of all 108 Divya Desam temples and is older than the Srirangam temple. The temple has magnificent Rajagopuram which is unfinished. There are rooms built of stones on the south side with high echo powers. The temple has a telescopic way to view Sri Rangathaswamy temple and Rockfort temple in Tiruchirappalli. Another unique element is the Swastika-shaped temple tank present in the south-western corner outside the temple complex. This is unusually designed with a peculiar shape and ensures complete privacy. The temple's premises are serene. Apart from the temple and other small shrines in the vicinity, there is no major attraction spot to attract tourists.
- 2. Accessibility –** The Temple is located in Thiruvellarai, a village on the outskirts of Tiruchirappalli. It is located at a distance of 27 km from the city, on the Thuraiyur road which is quite wide. The last ~1 km of the approach road to the temple is narrow. Bus stop and Auto stand are located ~1 km away on Thuraiyur road. Being located in the outskirts of Tiruchirappalli, there is no railway station in the vicinity. The nearest railway station and airport is Tiruchirappalli junction and Tiruchirappalli International Airport located ~27 km and ~30 km away

respectively. The major modes of transport people use to commute to the site include tour buses, autos, and taxis / private cars, however, the best way to reach the temple is by private taxi from Tiruchirappalli.

3. **Amenities** – The condition of tourist amenities within and around the temple is quite poor. The site lacks the following facilities:
- No tourist Information center.
 - No drinking water facility inside the temple
 - No toilet block inside the temple complex.
 - No rest/waiting area
 - No information signages
 - No retail/temple souvenir shop inside the temple.

Parking – The temple has sufficient parking space. The parking lot is located outside the site, owned and maintained by the village panchayat. Parking is charged on an hourly basis. Parking charges per hour for bus, car, and auto are INR 100, 40, and 15 respectively.

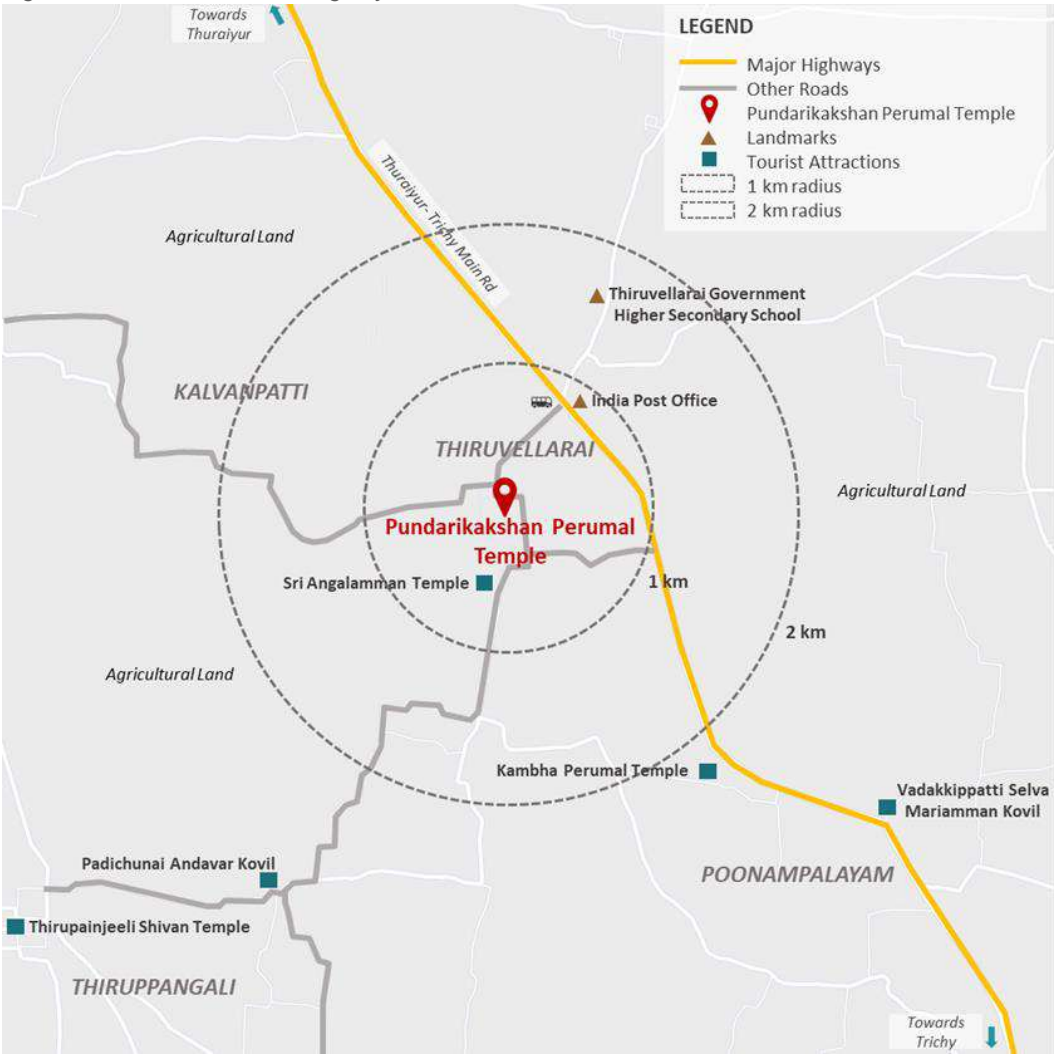
4. **Awareness** – The temple is popular among pilgrims and is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. The HR&CE department maintains a temple website with relevant information. Even after having good awareness, the footfall received by the temple is very low, with only 1000 people visiting the temple during festival time. The visitors majorly consist of locals residing in and around Thiruvellarai.

5. **Activities** – On normal days, the temple does not offer any activities other than the pooja rituals performed six times a day. Intermittently, there are some activities such as the Chariot festival, the most prominent festival of the temple, and for the surrounding villages. It is celebrated during the Tamil month of Chithirai (March–April) when devotees pull the chariot around the streets of Thiruvellarai. The processional idols of Pundarikakshan and Pankajavalli are brought to the temple car and Ratharohanam, the rituals associated with taking the idols to the temple car, is performed at an auspicious time before commencing the procession.

6. **Accommodation** – There is no lodging facility available in Thiruvellarai. As the temple is a day tour from Tiruchirappalli, therefore tourists prefer to stay in Thiruchirappalli or Srirangam which has variant categories of hotels for accommodation options.

7. **Association with Community** – The locals are well aware of the temple's history and significance. They readily participate in the everyday rituals and flock to the site during festive seasons. Vending activities can be observed outside the temple and along the approach road.

Figure 26-1: Location & Existing Layout



Site Pictures





Vision for the Site

- The temple is considered to be one of the oldest temples in South India (built during Treta Yuga) and is one of the 108 Divya Desams dedicated to Lord Vishnu. The temple has several special aspects worth seeing such as an echoing cave, swastika-shaped pool, gates that open only for 6 months, architectural beauty of the Rajagopuram, However, the site attracts less footfall.
- The temple complex is maintained well and has the potential to enhance its facilities considering the availability of the vacant land within the temple complex. It has a good opportunity to provide the needed amenities to enhance the visitor's experience.
- The vision for the site is to improve visitor's experience by improving facilities on the site. Therefore, the development of landscaped gardens, toilet blocks, drinking water stations for visitor's convenience. Besides the development of new amenities, maintenance of existing infrastructure is proposed.
- Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	230	543	1092
High Value Tourists (HVT) (Both domestic and foreign)	0	0	1
Maximum Carrying Capacity	10,832		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious and architectural significance and its popularity among locals and pilgrims, the concept of the masterplan includes:

- Improving pilgrims' experience** at the temple – through improved basic amenities of toilets, seating area, and streetlighting.
- Enhancing interactive spaces on the site** with development of landscaped gardens, event area, temple-ware retail kiosks .
- Improving tourist footfall** through signages, appropriate marketing and promotion.

Hard Interventions

- Landscaped Garden**– Temple has a huge vacant land parcel within the temple complex, located on the western side. This land with time has grown organic greens that give an abandoned appeal to the area. Therefore, clearing of wild plants and a designed landscaped garden is proposed. It will include trees, plants, and a naturally shaded seating area. This will enhance the aesthetic appeal of the temple and provide visitors with seating/waiting/relaxing areas within temple premises. The landscaping will be done using native flora requiring lesser care.

Infrastructure Created – A ~1200 sqm of landscaped garden with 2 shaded-benches.

- 2. Temple-ware retail kiosk** – As the temple is mostly visited by pilgrims visiting Tiruchirappalli which is ~27km away, therefore retail kiosk within temple premises providing refreshments and temple wares will enhance the convenience of the visitors. These can be located on the south-west corner within the proposed landscaped garden and shaded-seating area. A drinking water station will be placed along with these retail shops.

Infrastructure Created: A total of 3 retail shops of 3 by 3 sqm along with a drinking water station.

- 3. Event/ Holding Area** – There is a huge, paved area of 600 sqm between the main shrine and cave temple. This land can be used to develop an event stage that will have shaded canopy style seating and a paved area for events during festivals. This area can alternatively be used as holding space in peak seasons.

Infrastructure Created: A ~400 sqm of stage and 2 Canopy-style seating areas.

Soft Interventions

- 1. Marketing and Promotion** – As one of the oldest temples in South India, it needs to be promoted to a wider audience. Firstly, the temple should be included in the Department of Tourism's Tiruchirappalli brochure, which can be circulated at Tiruchirappalli airport and railway station. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract tourists.

- 2. Guided Tours**– A self-guided audio tour provision shall be present on the site to portray the rich history of the site. Licensed guides can be deployed on the site to guide the visitors about the history and significance of the temple. This will help in the awareness of visitors as well as enhance community engagement.

- 3. Community Engagement** – The local community is involved in the everyday activities of the temple. Locals can also be engaged by allotting them temporary retail kiosks on a rotational basis. Moreover, locals are aware of the temple's history and thus can be trained and appointed as guides on the site.

Amenities Plan

- 1. Signage** – Signages can be installed along the approach roads and on the prominent sites within the vicinity, indicating the presence of the site. Further,

information signages explaining the uniqueness of the temple shall be erected within the site at appropriate places. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.



Landscaped Garden with shaded seating area



Temple-ware retail shop



Directional and Information signages

- 2. Toilet Blocks** – The existing toilet blocks outside the temple premises are in poor condition with broken tiles. These are also inadequate in numbers. Therefore, maintenance of the existing toilet block is proposed. Besides the development of ~2 units of Pay and Use Toilets within the temple complex is proposed. These will be provided near the proposed retail kiosk within the landscaped garden on the south-west side of the temple complex. It will be standalone unisex units based on modern technologies and standards that have paid access and automated self-cleaning. The location of the toilet block is indicative and will be approved by the HR&CE department. The design

guidelines for Pay and Use Toilet Blocks are mentioned in Glossary of Interventions.

Infrastructure created: 2 new Pay and Use toilet blocks will be developed.

- 3. Streetlighting – Streetlights along the** pathway connecting the temple complex with the Kalyani Tank (Swastika-shaped tank) outside the temple complex are proposed to be positioned at appropriate distances. Sustainable means can be adopted, and the streets can be kept illuminated by deploying solar streetlights.

Infrastructure Created: 150 m long stretch will be provided with streetlight at the appropriate distance.

- 4. Technology Interventions –** For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:

- Free WiFi
- Compatibility with TN Assist App
- The package shall exclude CCTV's as there is a sufficient number of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Landscaped Garden <ul style="list-style-type: none"> • Soft Landscaping • Canopy-style seating area 	1200 sqm 2
2	Temple-ware retail kiosk <ul style="list-style-type: none"> • 3*3m Retail Kiosk • Drinking Water Station 	3 1
3	Event/ Holding Area Event Stage	400 sqm

#	Project Component	Scale
	Canopy-stle seating area	2
4	Signage Package 1	1
5	Pay and Use Toilet block	2
6	Streetlighting	150 m
7	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Landscaping	1
2	Canopy-style seating area	1
3	Retail Kiosk	5
4	Drinking Water Station	3
5	Event/ Holding Area - Event Stage	7
6	Canopy-style seating area	1
7	Pay and Use Toilet block	20
8	Signage Package 1	1
9	Streetlighting	2
10	Technology Package 1	1
Total		INR 40 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

1. **Kiosks** – Captures 3 kiosk, each to be rented out at INR 1.5 Lakhs per annum.
2. **Space on Hire** – Capturing 4 events per month at INR ~ 11,000 per event.
3. **Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 15 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. An **Admin staff** to manage the operations of the events hall.
 - b. A **Helpdesk staff** at the amenity block.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 15 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple as well as the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

¹⁰⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Landscaping	1	Y0 – Y2	HR & CE
2	Canopy-style seating area	1	Y0 – Y2	HR & CE
3	Retail Kiosk	5	Y0 – Y2	HR & CE
4	Drinking Water Station	3	Y0 – Y2	HR & CE
5	Event/ Holding Area - Event Stage	7	Y0 – Y2	HR & CE
6	Canopy-style seating area	1	Y0 – Y2	HR & CE
7	Pay and Use Toilet block	20	Y0 – Y2	HR & CE
8	Signage Package 1	1	Y0 – Y2	HR & CE
9	Streetlighting	2	Y0 – Y2	HR & CE
10	Technology Package 1	1	Y0 – Y2	HR & CE
Total		INR 40 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,700¹⁰⁴ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days per day¹⁰⁵
- Retail and F&B spaces = 7.5 man-days per day¹⁰⁶

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labour assumed for computation = *INR 700* per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹⁰⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁰⁶ Assuming average 2.5 persons per kiosk / shop

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 4,300 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 110 Cr. at the site¹⁰⁷.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹⁰⁷ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 26-2: Proposed Master Plan – Pundarikakshan Perumal Temple, Tiruvellarai



27. Sundararaja Perumal Temple, Anbil

Site Details

District:	Tiruchirappalli
Name of Site	Sundararaja Perumal Temple
Site No:	Site 101 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9559, 78.6674
Land Area:	~1.5 acres (Temple) ~3.5 acres (Additional Land)
Peak footfalls:	~1,000 per day (December – February)
Operator:	HR & CE Dept. (Under Sri Ranganathaswamy Temple Trust)
Site Ownership:	HR & CE Dept. (Under Sri Ranganathaswamy Temple Trust)
Tourist Footfall:	Dom – 44,263 (2019 – 20) For – 20 (2019 – 20)
Site Revenues:	INR 28 lakhs (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Very low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~9 km from Lalgudi Railway Station
b. Airport:	~35 km from Tiruchirappalli International Airport
c. Highway:	~7.3 km from NH 81 ~8.6 km from SH 22
d. Other:	Nil
Trails featured on:	Divya Desam, Siddhar

Sundararaja Perumal Temple is one of the 108 Divya Desam temples. The temple is majorly visited by locals in and around Anbil. The temple does not have a developed ecosystem of public amenities. Therefore, the scope of interventions includes the development of amenity block having toilets, drinking water station, luggage/cloakroom, and landscaped garden, children's park, pathways, paved plazas, temple-ware retail kiosks on the site is proposed for visitor's convenience and enhanced experience. Besides the development of new amenities, maintenance of existing infrastructure along with appropriate marketing strategies for the temple visibility is envisioned.

Existing Condition

Location

The Sundararaja Perumal Temple is located in Anbil, a village on the outskirts of Tiruchirappalli in Tamil Nadu. The temple is situated on the North shore (Vadakarai) of the Kollidam river and is surrounded by sparse mixed-use development. There are buses to Anbil from the Tiruchirappalli bus stand that pass through Lalgudi and Kallanai to Kumbakonam. The nearest airport to the site is Tiruchirappalli International Airport at a distance of ~35 km. Other temples located in the vicinity include Sri Satyavaakeeswarar Sivan Kovil (~0.5 km), Achiramavalli Amman (~1.0 km), Tiruchinampoondi Mahadeva Temple (~2.0 km), and Appakudathan Temple (~2.2 km).

Existing Layout

The temple is spread over an area of 1.5 acres. A granite wall surrounds the temple, enclosing all its shrines and waterbodies. Other prominent features of the temple include:

- The Rajagopuram, the temple's gateway tower, is east facing and has a 3-tier structure.
- The temple mast is located at the entrance of the temple.

- The main shrine has the image of the presiding deity Sundararaja Perumal in reclining posture over his divine serpent Adishesha.
- The images of his consorts (Sridevi and Bhoo devi) and Brahma are present in the sanctum. The festive image of Sundararajan, Vadivazhagiya Nambi, is also housed in the sanctum.
- The precinct around the sanctum houses the shrines of the twelve Azhwars, Narasimha, Venugopal, Lakshmi Narasimha, and Hanuman.
- The structure of the roof over the sanctum is in the form of a gopuram, which is usually a feature in the gateway tower. The front hall of the sanctum has a shrine for Andal in a standing posture, while her bronze idol is present in a seated posture.
- The temple tank is called Mandooka Pushkarni, and the Vimana is known as Dharaga Vimanam.

Existing Uses

The temple is currently used as a place of worship by the devotees. Locals and pilgrims flock to the temple premises to celebrate festivals of Puratasi, Maasi (Garuda Sevai), Margazhi, and Aadi month (Thaila kaapu). Apart from religious purposes, the temple is used for:

- Mandapam used by devotees.
- Temple Tank is used for bathing and during festivals by locals and pilgrims.
- Kalyana Mandapam – ~3,000 sq ft, by locals for occasional marriages, and dance recitals.
- Office of administration.

Other Land

In addition to the temple complex, the temple also owns ~3.5 acres of land to the east and north of the complex. Presently, some of this land is used for parking while the rest is unused. Also, some of the land to the east has been temporarily handed over to a school.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – It is the fourth of the 108 Divya Desams dedicated to Lord Vishnu. This Anbil Sthalam is closely related to Lord Brahma and Valmiki Maharishi. The temple attracts devotees praying for marriage and financial stability. The structure of the roof over the sanctum is in the form of a gopuram, which is its unique feature. The temple complex also has a marriage hall used by the locals. Furthermore, the temple is close to the River Kollidam. Apart from these, there is no major tourist attraction in the vicinity.
- 2. Accessibility** – The Sundararaja Perumal temple can be accessed from Tiruchirappalli (~30 km) via Anbil Road via Lalgudi. There is no auto/ cab connectivity from and to Tiruchirappalli, therefore, tourists majorly use private/ rental vehicles and local buses to reach the site. The temple is approached by Anbil road which is quite wide, however, the last 200 m of the road is narrow and unpaved at some part. Anbil does not have a railway station of its own. However, the nearest railway station can be found in Lalgudi which is ~9 km away from the temple. The site can also be accessed from Tiruchirappalli Railway Junction and

Tiruchirappalli International airport at a distance of ~35 km each. The major modes of transport people use to commute to the site include public bus and private transport.

3. Amenities – The condition of tourist amenities within and around the temple is quite poor. The site lacks the following facilities:

- No tourist Information center.
- No drinking water facility inside the temple.
- No toilets inside or outside the temple complex.
- No footwear stand.
- No luggage/cloakroom.
- No rest/waiting area.
- No information signages.
- No retail/temple souvenir shop inside the temple.
- Inadequate dustbins on the site.
- No wheelchair availability on the site.
- Inadequate lighting in the temple.
- Unpaved approach road.

Parking – The empty land owned by the temple authority outside the temple complex towards its east is currently used for parking and is not charged. There is a need to design parking space, as currently vehicles are parked organically.

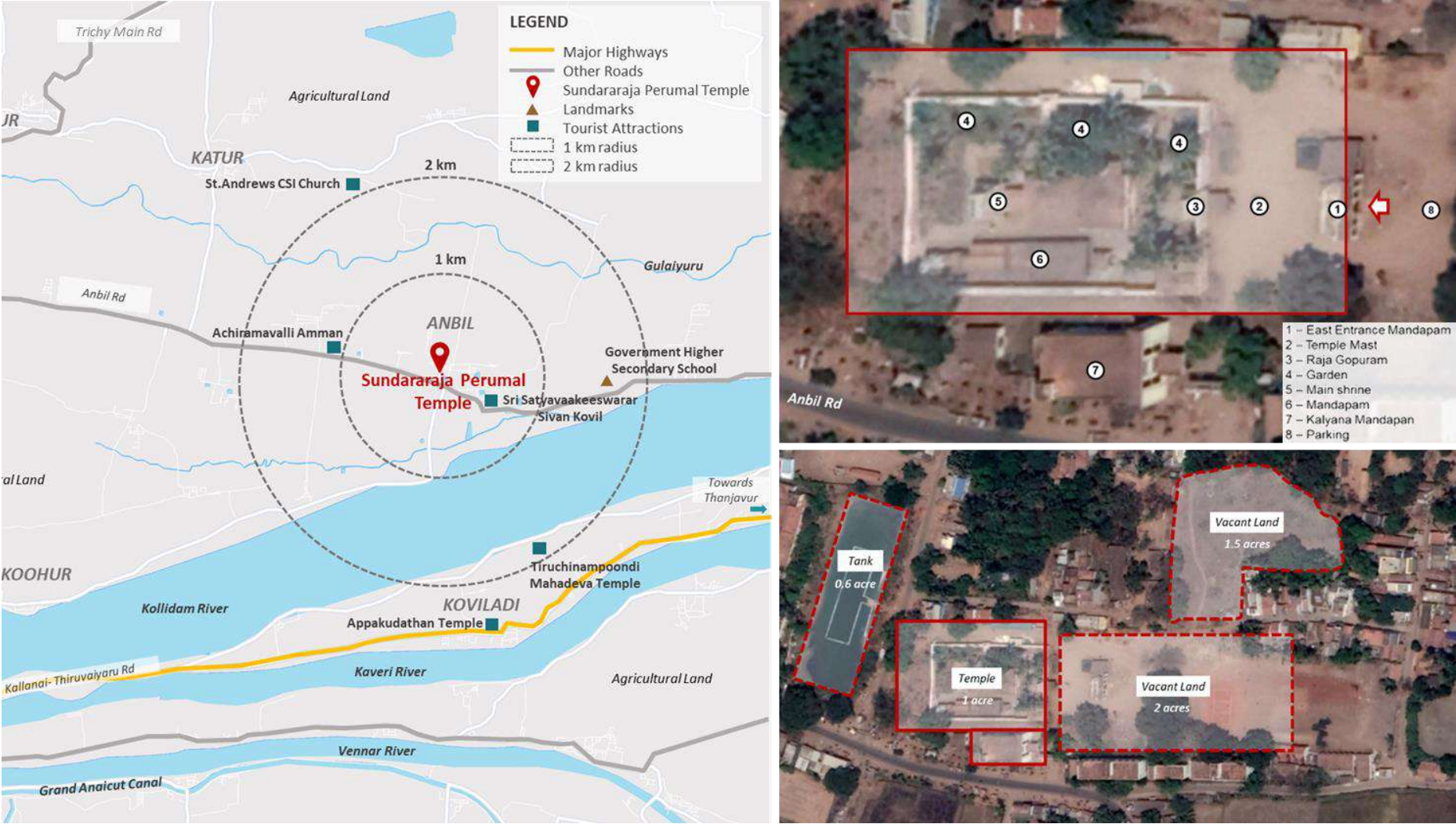
4. Awareness – The temple is not as popular as other temples in Tiruchirappalli. It is majorly visited by people residing in Anbil and surrounding areas. The temple is yet to find mention in popular international travel journals such as Lonely Planet and CN Traveller. Moreover, the temple is not included in the Department of Tourism's Tiruchirappalli brochure.

5. Activities – On normal days, the temple does not offer many activities. Intermittently, there are some activities such as marriages, dance recitals, etc. within the temple complex.

6. Accommodation – There is no accommodation available nearby for visitors. Since the time spent at the temple is not more than half an hour on non-festive occasions and 1 hour on festive occasions, visitors tend to either return to Tiruchirappalli or other cities after visiting the temple.

7. Association with Community – The locals are well aware of the temple's history and significance. They readily participate in the everyday rituals and flock to the site during festive seasons. Locals also use the temple's Kalyana Mandapam as marriage venue.

Figure 27-1: Location & Existing Layout



Site Pictures



Vision for the Site

Sundararaja Perumal Temple, also called Vadivazhagiya Nambi Perumal Temple is dedicated to the Hindu God Vishnu. Constructed in the Dravidian style of architecture, the temple is glorified in the Divya Prabandha. Being one of the 108 Divya Desam, the has less footfall compared to other Divya Desam temples.

The temple complex has the potential to enhance its facilities considering the availability of the huge vacant land around the temple complex. It has a good opportunity to provide the needed amenities to enhance the visitor's experience.

The vision for the site is to improve visitor's experience and convenience by improving facilities on the site. Therefore, the development of amenity block having toilets, drinking water station, luggage/ cloak room, landscaped garden, children's park, pathways, paved plazas, temple-ware retail kiosks on the site is proposed for visitor's convenience. Besides the development of new amenities, maintenance of existing infrastructure such as gardens and temple tanks are proposed.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	44	104	209
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	4,000		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious and architectural significance and its popularity among locals and pilgrims, the concept of the masterplan includes:

- **Improving pilgrims' experience** at the temple – through improved basic amenities of toilets, drinking water station, luggage room, seating area, and lighting within the temple.
- **Enhancing interactive spaces on the site** with development of landscaped gardens, children's park, pathways, and temple-ware retail kiosks .
- **Improving tourist footfall** through signages, appropriate marketing and promotion.

Hard Interventions

1. **Amenity Block** – A small amenity block with an inquiry desk, luggage room, toilets, drinking water station, and a shoe stand will be developed for tourist convenience and ease at the site. The amenity block can be placed near the entrance gate of the temple.

Infrastructure Created: ~120 sqm of building.

2. **Beautification of Temple Entrance** – The temple entrance has an unpaved surface resulting in an unpleasant appearance. Therefore, beautification of the entrance is proposed. A paved entrance plaza with soft landscaping will be developed between the temple entrance and outer Mandapam. This will enhance the aesthetic appearance and act as an interactive space for visitors.

Infrastructure Created: A ~1000 sqm of the paved area along with ~200 sqm of soft landscaping.

- 3. Landscaped Garden and Children Park–** Temple has a huge vacant land parcel in front of Mandapam that is proposed to be developed as a landscaped garden. As mandapam is occasionally used for hosting marriages and other events, therefore the landscaped gardens will be used as an extended space to hold crowds during such occasions. Moreover, the garden can be used by the local community and visitors to relax and spend more time around the temple. It will also include a children's park where students from the adjacent school can play. Shaded-seating areas will be provided for visitor's convenience. The landscaping will be done using native flora requiring lesser care.

Infrastructure Created – A ~800 sqm of landscaped garden and 700 sqm of children park along with 4 number of shaded-benches.

- 4. Temple-ware retail kiosk –** As the temple is mostly visited by pilgrims visiting Tiruchirappalli which is ~30 km away, therefore retail kiosk within temple premises providing refreshments and temple wares will enhance the convenience of the visitors. These can be located near the entrance gate of the temple along the proposed entrance plaza.

Infrastructure Created: A total of 2 retail shops of 3 m by 3 m.

- 5. Renovation of Boundary Wall –** The boundary wall of the temple was observed to be broken at some parts. Therefore, renovation of the boundary wall is proposed to enhance the security within the temple. The renovation work will be carried out considering the existing use of material and structural elements.

Infrastructure Created: Renovation of 195 m long boundary wall of 2 m height.

- 6. Pathways –** The temple has an unpaved approach road and unpaved surfaces around the temple. Therefore, paved and naturally shaded pathways are proposed connecting the parking area, mandapam, landscaped gardens, and temple tank with the temple complex. This will enhance visitor's convenience by providing ease of movement around the site.

Infrastructure Created: ~400 m long and 2 m wide paved pathways.



Beautification of temple entrance- Paved public plaza



Temple-ware Retail Shop



Paved Pathways



Landscaped Garden



Children's Park

Soft Interventions

- 1. Maintenance of existing garden** – The temple has a beautiful garden within its complex. The garden was observed to be in poor condition with wild plantation resulting in an abandoned and unaesthetic appearance. Therefore, maintenance of the existing garden is proposed to restore the beauty and enhance the usage of the space.
- 2. Cleaning of Temple Tank** – The temple has a beautiful temple tank outside the temple complex, located on the western side. The tank is used by pilgrims and locals alike. The water in the tank needs to be cleaned as it is covered with algae and organic greenery. Therefore, to restore the natural beauty of the tank, cleaning the temple tank is proposed.
- 3. Marketing and Promotion** – The temple has poor awareness and is mostly visited by the locals and pilgrims. The site is not even included in the Department of Tourism's Tiruchirappalli brochure. To attract more footfall, firstly, it should be included in the brochure, which can be circulated at Tiruchirappalli airport and railway station. Signages leading towards the temple shall be erected on the nearby tourist spots. This will help to enhance footfall and attract tourists.
- 4. Guided Tours** – A self-guided audio tour provision shall be present on the site to portray the rich history of the site. Licensed guides can be deployed on the site to guide the visitors about the history and significance of the temple.
- 5. Community Engagement** – The local community is involved in the everyday activities of the temple. Locals can also be engaged by allotting them temporary retail kiosks on a rotational basis. Moreover, locals are aware of the temple's history and thus can be trained and appointed as guides on the site.

Amenities Plan

- 1. Signage** – Signages can be installed along the approach roads and on the prominent sites within the vicinity, indicating the presence of the site. Further, information signages explaining the uniqueness of the temple shall be erected within the site at the appropriate place. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in the Glossary of Interventions.

- 2. Lighting inside temple complex** – The temple was observed to have insufficient lights to illuminate the temple. Therefore adequate lighting at an appropriate position is proposed. Sustainable means can be adopted, and the site shall be illuminated by deploying solar lights wherever possible.
Infrastructure Created: ~2000 sqm of temple area to be illuminated.

- 3. Technology Interventions** – For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:

- Free WiFi
- Compatibility with TN Assist App
- The package shall exclude CCTV's as there is a sufficient number of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Amenity Block	120 sqm
2	Beautification of temple entrance <ul style="list-style-type: none"> • Paved plaza • Soft Landscaping 	1000 sqm 200 sqm
3	Landscaped garden Children Park Shaded-seating area	800 sqm 700 sqm 4
4	Temple ware Retail kiosk (3m by 3m)	2
	Renovation of boundary wall (2 m height)	195 m
	Paved Pathway (2m wide)	400 m
5	Signage Package 1	1
6	Lights within temple	2000 sqm
7	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Amenity block - Toilet	5
2	Amenity block - Drinking water station	3
3	Amenity block - storage	5
4	Paved plaza	2
5	Landscaping	1
6	Children park	5
7	Shaded seating	1
8	Temple ware Retail kiosk (3m by 3m)	3
9	Renovation of boundary wall (2 m height)	11
10	Paved Pathway (2m wide)	5
11	Signage Package 1	1
12	Lights within temple	40
13	Technology Package 1 (Exclude CCTV's)	1
Total		INR 80 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 2 retail kiosks each to be rented out at INR 2 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakh.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.

- a. A **Helpdesk staff** at the amenity block.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees

2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 10 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity block - Toilet	5	Y0 – Y2	HR&CE
2	Amenity block - Drinking water	3	Y0 – Y2	HR&CE
3	Amenity block - storage	5	Y0 – Y2	HR&CE
4	Paved plaza	2	Y0 – Y2	HR&CE
5	Landscaping	1	Y0 – Y2	HR&CE
6	Children park	5	Y0 – Y2	HR&CE
7	Shaded seating	1	Y0 – Y2	HR&CE
8	Temple ware Retail kiosk	3	Y0 – Y2	HR&CE
9	Renovation of boundary wall	11	Y0 – Y2	HR&CE
10	Paved Pathway (2m wide)	5	Y0 – Y2	HR&CE
11	Signage Package 1	1	Y0 – Y2	HR&CE
12	Lights within temple	40	Y0 – Y2	HR&CE
13	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 80 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,400¹⁰⁸ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁰⁹
- Retail and F&B spaces = 5 man-days per day¹¹⁰

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 8,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 21 Cr. at the site¹¹¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

¹⁰⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁰⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹¹⁰ Assuming average 2.5 persons per kiosk / shop

¹¹¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area

Figure 27-2: Proposed Master Plan –Sundaraja Perumal Temple, Anbil



28. Azhagiya Manavala Perumal Temple, Uraiyur

Site Details

District	Tiruchirappalli
Name of Site	Azhagiya Manavala Perumal Temple (also called Nachiyar Koil)
Site No:	Site 99A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.8269, 78.6732
Land Area:	2 acres
Peak footfalls:	4,000 per day (February - March Panguni month Urchavam, Theppam festival)
Operator:	HR & CE Dept. (under Sri Ranganathaswamy Trust)
Site Ownership:	HR & CE Dept. (under Sri Ranganathaswamy Trust)
Tourist Footfall:	Dom. – 5.7 Lakh (2019 - 2020) For. – nil (not allowed)
Site Revenues:	INR 10 - 12 Lakhs (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	5 km (Tiruchirappalli)
b. Airport:	5 km (Tiruchirappalli)
c. Highway:	2.5 km from NH-67
d. Other:	Nil
Trails featured on:	Divya Desam

The Azhagiya Manavala Perumal Temple is located in Uraiyur, the ancient Chola capital, in the suburbs of Tiruchirappalli. The temple is the 2nd of the 108 Divya Desam Temples, visited only by domestic tourists as foreign tourists are not allowed to enter the temple complex. Dedicated to lord Vishnu, this Dravidian architectural style temple, is of religious importance to mainly locals. While the temple is well maintained, it lacks basic public amenities (toilets, drinking water, cloak room, etc.). Given the smaller scale of temple site, it can be developed for improved visitor experience.

Existing Condition

Location

Azhagiya Manavalan Perumal Temple is located in Uraiyur, a suburb neighbourhood in Tiruchirappalli of Tamil Nadu. Uraiyur is located between Trichy - Erode railway line, 2 miles away from Tiruchirappalli junction. The immediate surroundings of the temple include congested residential development on all sides. Tourist attractions in the area are –

- Sri Vekkali Amman Temple - 0.6 km
- Our Lady of Lourdes Church - 2.5 km
- Sri Ayyappan Temple - 3 km

Existing Layout

The temple occupies an area of ~2 acres, enclosed by a granite wall. The wall encloses the main shrines and water bodies within the temple. The temple is located in densely packed residential neighbourhood, with few commercial activities around. The southern edge of the temple is shared with the school playground.

Existing Uses

- The temple is currently used as a space of worship by local and regional pilgrims. Along with the presence of main shrine, the temple complex has water tank and Nandavanam (flower garden).
- The site also has mandapam, which acts as a resting area for visitors.

Other Land Available

Apart from the 2 acres, the temple does not own any other land.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Tiruchirapalli Master Plan 2011, site lies in a Residential Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. **TN HRCE Rules, 1959**

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

3. **ASI Regulations** – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:

- a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to 100 m in all directions)
- b. Reconstruction or repairs or renovation of existing buildings within the prohibited area, requires prior permission from the Competent Authority under the act.
- c. Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple is second in line of the 108 Divya Desams dedicated to lord Vishnu. Being the only Divya Desam where the shrine of the main deity is facing northwards, the temple is religiously significant and is visited mainly by local pilgrims and few regional pilgrims.
2. **Accessibility** – The temple is located in Uraiyur neighbourhood of Tiruchirappalli and is easily accessible via wide urban roads. The last ~400 m leading up to the temple is a narrow pathway and tend to get congested. Buses cannot enter the narrow access road, therefore, must be parked 1.5 km away.
3. **Amenities** – Very few basic tourist amenities are available within and around the temple. The condition of existing amenities is inadequate.
 - No tourist information centre for visitors.
 - No cloak room, waiting area or free drinking water facilities are available for pilgrims.
 - No wayfinding signages and informative signage boards are available within the site. The signage present are in Tamil language.

- No retail or F&B kiosks are present near the temple site.
- No divyaang friendly infrastructure is present within the temple complex.

Parking- The access road is used for parking needs of the temple. Buses cannot enter the narrow access road, therefore, must be parked 1.5 km away.

4. **Awareness** – The temple is one of the popular temples of Tiruchirappalli, under the Sri Ranganathaswamy Trust of Srirangam. It finds mention in renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc. The HR&CE department maintains a temple website with relevant information. The temple generally receives tourists from the southern states. Foreigners do not visit the temple due to entry restrictions.
5. **Activities** – On normal days, the temple does not offer any activities. On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc.
6. **Accommodation** – Being in Tiruchirappalli, the temple has good accommodation options available. Within a 3-km radius of the site, more than 10 budget hotels are available with an average room charge of INR 1,200 near Tiruchirappalli fort junction and Chatiram Bus stand. A wider range of options and 3- star hotels are available near Tiruchirappalli junction and airport.
7. **Association with Community** – The temple is used by locals as a pilgrim site. Apart from daily rituals the temple celebrates two festivals annually, attended by local and regional tourists.

Figure 28-1: Location and Existing Layout



Site Pictures

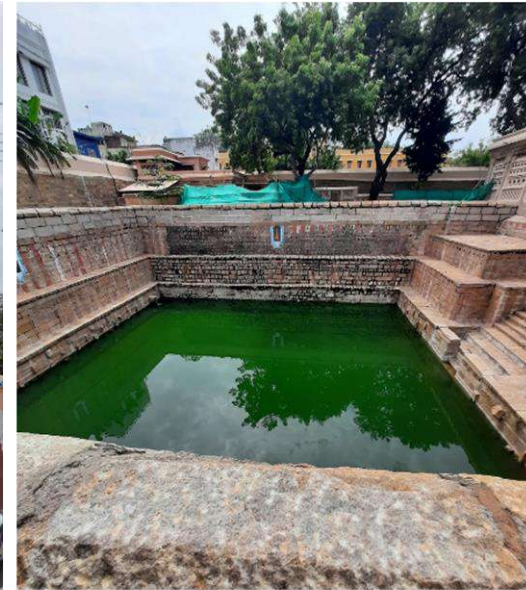
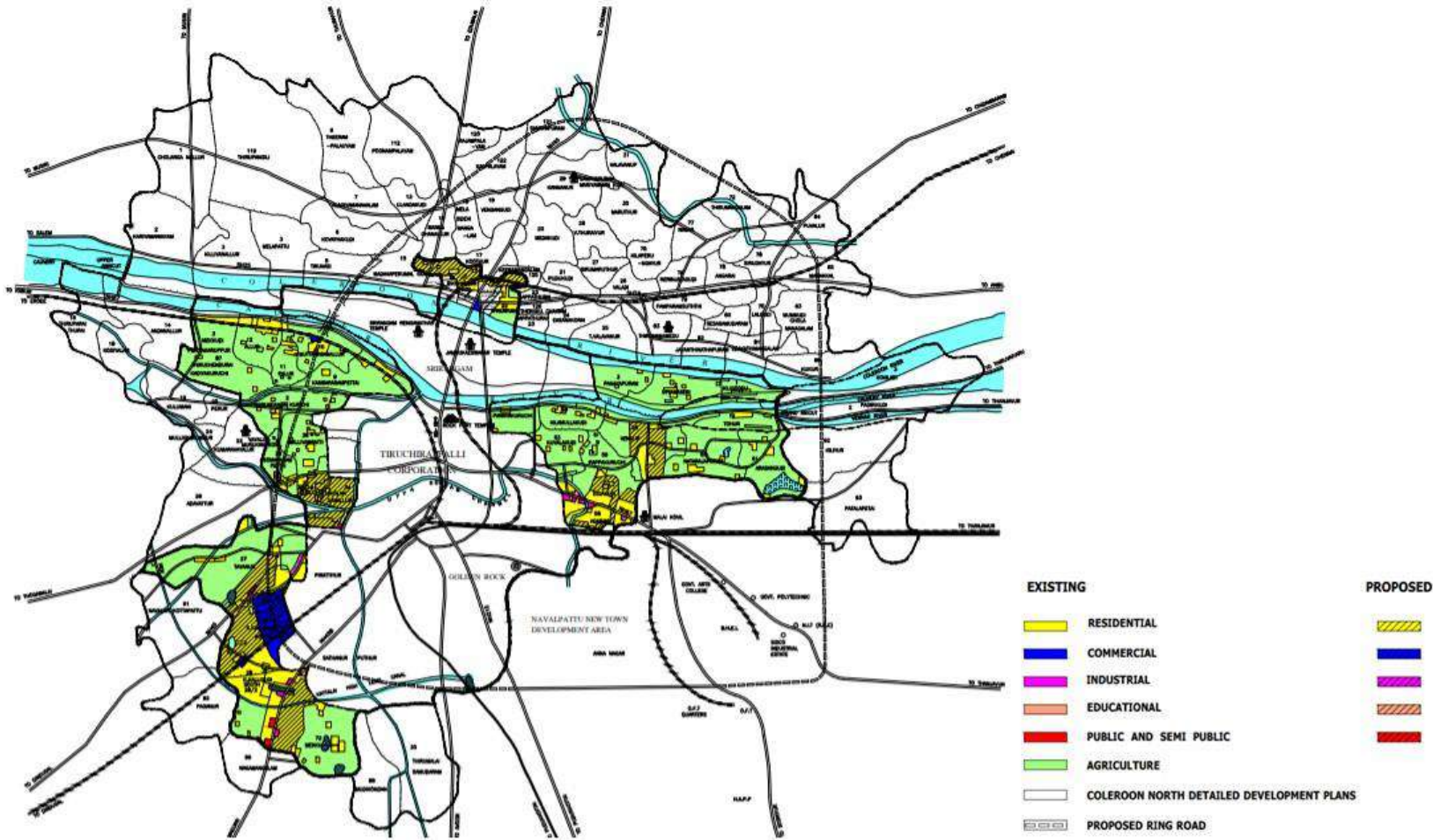


Figure 28-2: Land Uses Regulation Zone at the Site



Vision for the Site

The temple holds a religious value as it is second in line of the 108 Divya Desams dedicated to Vishnu. The temple is visited mainly by locals and few regional pilgrims.

- Due to small scale of the site and no other land available in temple vicinity, the level of interventions is limited to addition of missing amenities.
- The vision for the site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex.
- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	570	1,346	2,707
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	7,676		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through revamping existing resources and amenities.
- The site is envisioned as a **community congregation space**, with interactive community spaces. Creating informal spaces for gatherings and events around the temple tank.

Hard Interventions

1. **Waiting Area** – A semi covered waiting area (shading device type 1) within the temple complex, near the north entrance from Rajagopuram. A seating area with two benches, as waiting space for the visitors. The waiting area would also house a footwear stand. The benches and footwear stand to be detailed as per the design guidelines in.

Infrastructure Created: ~50 sqm of Shaded Area

2. **Community Gathering Area:** The temple tank within the temple complex, has available vacant space which could be used as community gathering place. The place can be used by pilgrims as well as locals for cultural and social activities. A seating space module around the tree, as per the design guidelines in Glossary of Interventions regarding amenities and urban design.



Soft Interventions

1. **Parking** – The temple site is approached by a narrow road, covered with unregulated vending and on-street parking, making the entrance to the temple uninviting. The lack of open space in close vicinity to the temple, encourages tourists to park on the street leading to temple. The local municipal body should regulate the on-street parking in linear manner and facilitate a vacant land parcel for parking.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
2. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be detailed as per the design guidelines.
3. **Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines in design guidelines.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Shading Device Type 1	50 sqm
2	Benches	2
3	Footwear Stand	1
4	Community Gathering Area	1
5	Signage Package 1	1
6	Drinking Water Station	1
7	Dustbins	2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Footwear stand	3
2	Community gathering area	6
3	Benches	1
4	Shading Type 1	1
5	Drinking water station	3
6	Dustbins	1
7	Signage Package 1	1
Total		INR 15 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken in the Divya Desam trail.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** at the footwear stand.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Though there are no additional revenues earned through the capital projects, the aforementioned operating expenditure incurred are subject to the maintenance of the basic interventions planned at the temple. These interventions are directed to

cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Footwear stand	3	Y0 – Y2	HR&CE
2	Community gathering area	6	Y0 – Y2	HR&CE
3	Benches	1	Y0 – Y2	HR&CE
4	Shading Type 1	1	Y0 – Y2	HR&CE
5	Drinking water station	3	Y0 – Y2	HR&CE
6	Dustbins	1	Y0 – Y2	HR&CE
7	Signage Package 1	1	Y0 – Y2	HR&CE
Total		INR 15 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 650¹¹² man-days of construction labour (spread across 1-2 years of implementation)

¹¹² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹¹³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 1,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 270 Cr. at the site¹¹⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

○ Assumed cost of labour assumed for computation = INR 700 per day

• Cumulative labour man-days = 30% * CAPEX / 700

¹¹³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹¹⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 28-3: Proposed Master Plan – Azhagiya Manavala Perumal Temple



29. Uthamar Koil, Uthamarkoil

Site Details

District	Tiruchirappalli
Name of Site	Uthamar Koil
Site No:	Site 99C of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.877242, 78.7033
Land Area:	2.29 acres + 2.5 acres
Peak footfalls:	25,000 per day (November - December) Brahmotsavam, Sani Peyarchi, Guru Peyarchi, Kadamba Thiruvizha)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 5.9 Lakh (2019 - 2020) For. – nil (2019 - 2020)
Site Revenues:	INR 2 Crores (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	0.4 km (Uthamar Kovil)
b. Airport:	18 km (Tiruchirappalli)
c. Highway:	50 m from SH-25
Trails featured on:	Divya Desam

The Uthamar Koil temple is dedicated to the Holy Trinity (Lords Brahma, Vishnu, Shiva), and holds a significant religious value among pilgrims. It is majorly visited by devotees residing in Southern India. While the temple is not as architecturally significant as other temples in Trichy-Thanjavur area, it has scope for development in terms of public amenities and marketing of its uniqueness to a wider audience. The site can be developed for improved visitor experience and interactive community spaces.

Existing Condition

Location

Uthamar Temple is situated in Uthamarkoil village of Manachanallur in Tiruchirappalli district. It is easily accessed from the Tiruchirappalli Main Road overlooking River Kollidam in the southern side. Several prominent tourist landmarks nearby are:

- Ranganathaswamy Temple – 1.9 km
- Jambukeswarar Temple -2.1 km
- Srirangam Melur Ayyanar Temple - 2.6 km
- Arulmigu Uchchi Pillaiyar Temple – 4.5 km

Existing Layout

The temple occupies an area of ~2.29 acres, enclosed by a granite wall. The wall encloses the main shrines and office quarters within the temple, whereas the temple tank lies outside the main gateway.

Existing Uses

- The temple is currently used as a space of worship by local and regional pilgrims. Along with the presence of main shrine inside the temple complex, the complex has office area and staff quarters.
- The site also has mandapam, which acts as a resting area for visitors.

Other Land Available

Apart from the 2.29-acre complex, the temple owns 2.5 acres of land to the north of the temple. The land is unused; occasionally used as parking during festivals. The land could be used in future for development of city – wide amenity for Trichy circle.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple is one of the few temples in India where the trinity (Lords Brahma, Vishnu, and Shiva) can be seen in the same premises. The temple occupies a spot amongst the 108 Divya Desams, revered by Thirumangai Azhwar in his hymns. The temple is religiously significant and is visited mainly by local pilgrims.

2. **Accessibility** – The temple is located along SH 25 and is easily accessible from Tiruchirappalli via NH 81. The area is accessed by private vehicles, whereas cabs and autos are available from/ to Tiruchirappalli.
3. **Amenities** – Very few basic tourist amenities are available within and around the temple. The condition of existing amenities is inadequate.
 - No wayfinding signages and informative signage boards are available for the site. The signage present are in Tamil language.
 - No cloak room, waiting area or free drinking water facilities are available for pilgrims.
 - No retail or F&B kiosks are present near the temple site.
 - No divyang friendly infrastructure is present within the temple complex.

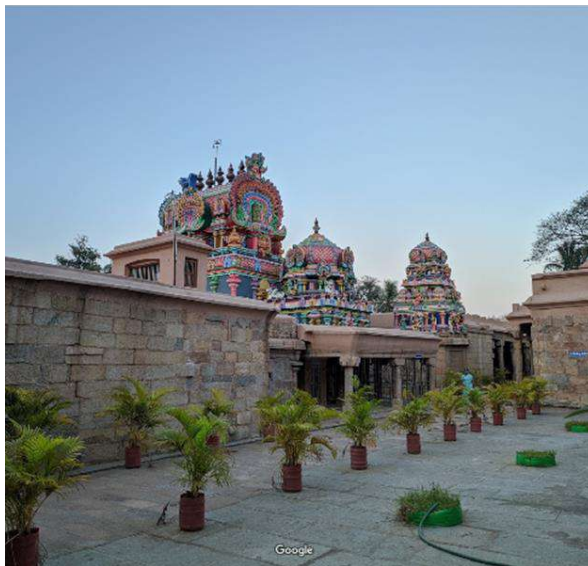
Parking- The access road is used for parking needs of the temple.

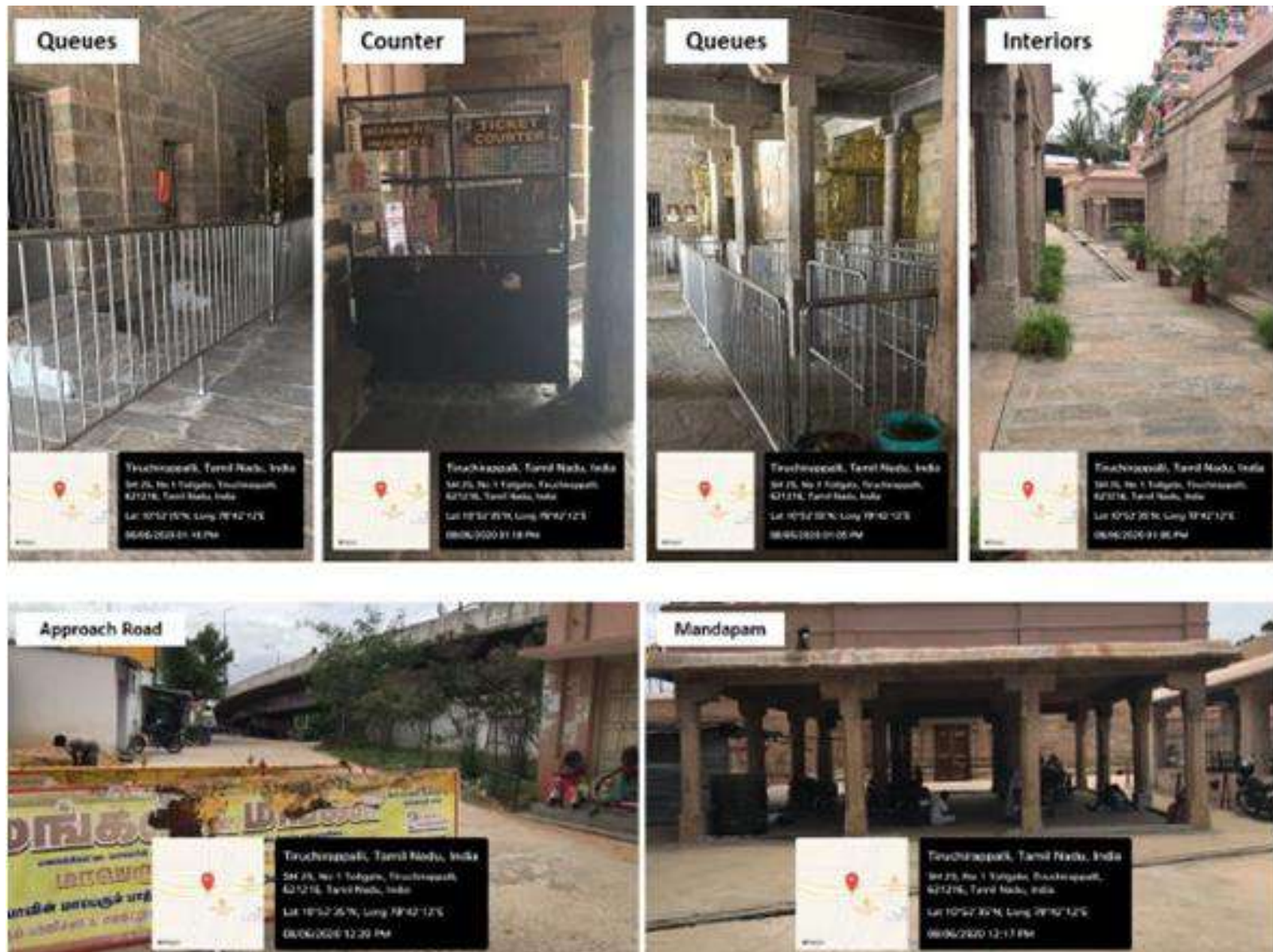
4. **Awareness** – The temple does not feature in any popular journals such as Lonely Planet and Native Planet and is barely promoted on travel websites. The temple finds slight mention as part of Tiruchirappalli's Divya Desam tour. The temple is majorly visited by local pilgrims
5. **Activities** – **Six** daily rituals and four yearly festivals are held at the temple for each of trinities. No other activities are available at the temple.
6. **Accommodation** – There is no accommodation available in the immediate surroundings. Lodges and budget hotels are available in Srirangam (~3 km away). A Yatri Nivas, located 2.5 km away, is a subsidised quality accommodation facility run by Sri Ranganathaswamy Temple.
7. **Association with Community** – The temple is used by locals as a pilgrim site. Apart from daily rituals the temple celebrates four festivals annually, attended by local and regional tourists.

Figure 29-1: Location and Existing Layout



Site Pictures





Vision for the Site

The temple holds a religious value as it is one of the few temples in India where the trinity (Lords Brahma, Vishnu, and Shiva) can be seen in the same premises. The temple occupies a spot amongst the 108 Divya Desams.

- Due to small scale of the site, the level of interventions is limited to addition of missing amenities and upgradation of site infrastructure.
- The vision for the site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex.
- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	590	1,393	2,802
High Value Tourists (HVT) (Both domestic and foreign)	0	0	1
Maximum Carrying Capacity	9,020		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through revamping existing resources, amenities.
- The site is envisioned as a **community congregation space**, with interactive open spaces. Creating informal spaces for gathering and hosting cultural events around the site.

Hard Interventions

1. **Annadhanam Kitchen** – The community kitchen is a common feature associated with Indian temples. The kitchen provides free food service, not only to the pilgrims visiting the temple but also homeless and daily wage labourers. The service is proposed in the western side of temple next to the vacant plot.

Infrastructure Created: ~140 sqm of BUA

2. **Community Park:** A community congregation space to be developed in the vacant land behind the temple site. A multipurpose open area that could be used by the locals as well as pilgrims, for rejuvenation and recreation purposes. The park can be used as holding area for annadhanam kitchen.

Infrastructure Created: 2000 sqm of landscaped area

3. **Paved Walkway:** A safe pedestrian pathway from the proposed parking area to the entrance gateway of the temple. Walkway with standard width of 2m with paver blocks, as per the design guidelines.

Infrastructure Created: 130 sqm of paved area



Soft Interventions

1. **Unpaved Parking** – The vacant land at the back of the temple site could be used to meet the current parking demands of the temple. An unpaved, regulated parking coupled with the paved walkway would provide an inviting entrance.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
2. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines.
3. **Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per design guidelines
4. **Benches** – A modular unit installed in open park area near Annadhanam kitchen. The seating provided for visitor movement to be detailed as per the design guidelines

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Annadhanam Kitchen	140 Sqm
2	Community Park	2000 sqm
3	Paved Walkway	130 sqm
4	Signage Package 1	1
5	Drinking Water Station	1
6	Dustbins	2
7	Benches	2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Annadhanam kitchen	28
2	Paved walkway	3
3	Community Park	14
4	Benches	1
5	Drinking water station	3
6	Dustbins	1
7	Signage Package 1	1
Total		INR 50 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken in the Divya Desam trail.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Security personnel** at the community park.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of

broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Though there are no additional revenues earned through the capital projects, the aforementioned operating expenditure incurred are subject to the maintenance of the basic interventions planned at the temple. These interventions are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “**social cause**”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Annadhanam kitchen	28	Y0 – Y2	HR&CE
2	Paved walkway	3	Y0 – Y2	HR&CE
3	Community Park	14	Y0 – Y2	HR&CE
4	Benches	1	Y0 – Y2	HR&CE
5	Drinking water station	3	Y0 – Y2	HR&CE
6	Dustbins	1	Y0 – Y2	HR&CE
7	Signage Package 1	1	Y0 – Y2	HR&CE
Total		INR 50 L		

¹¹⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,150¹¹⁵ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹¹⁶

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 5,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹¹⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 280 Cr. at the site¹¹⁷.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹¹⁷ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 29-2: Proposed Master Plan – Uthamar Koil



30. Kallazhagar Temple, Azhagar Kovil, Madurai

Site Details

District:	Madurai
Name of Site:	Kallazhagar Temple
Site No:	Site 131 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	10.0741, 78.2143
Land Area:	~6.36 acres
Peak footfalls:	39,000 per day ¹¹⁸ (Dec – Jan, Apr - May)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 37.8 lakhs (2019 - 20) For. – 2,330 (2019 - 20) ¹¹⁹
Site Revenues:	INR 21 Crore (2019 - 2020)
Site Orientation:	Pilgrim/Tourist
Site Potential:	High Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~22 km (Madurai)
b. Airport:	~31 km (Madurai)
c. Highway:	Along SH 72A (Melur – Azhagarkovil Road)

Trails featured on: **Divya Desam**

One of the 108 Divya Desam Temples, Kallazhagar Koil is located at the foothills of a picturesque hill. Alongside Meenakshi Sundareswarar Temple, it is one of Madurai's prime tourist attractions. The temple complex and the area around it have well-developed public amenities for tourists. The area for further improvement stems from leveraging the hill to develop an eco-ashram and usage of indigenous herbs for selling oil and medicinal produce. The temple should aim to promote itself in collaboration with the other 2 temples located further uphill – Pazhamudircholai and Rakkayee Amman temples.

Existing Condition

Location

Koodal Azhagar Temple is in the village of Alagar Koyil, ~21 km northwest of Madurai, at the foot of the range of hills called Alagar Malai. The temple is well connected via road to Madurai city and other transportation hubs with frequent buses. The central bus stand is ~23 km away and Madurai railway station is ~22 km away.

Existing Layout

This temple, which is constructed in the Dravidian style of architecture has a captivating architecture. It has the following prominent aspects -

- The temple with all its shrines is enclosed in a rectangular enclosure by a granite wall
- The southern gateway to the fort, the Hiranyankottai vaasal is the main entrance
- 7-tiered Rajagopuram stands at the main entrance
- The main sanctum houses the presiding diety, Perumal in the southern enclosure. There are many other shrines as well in the sanctum dedicated to Kalyana Sundaravalli and other deities

¹¹⁸ Received from Site Manager

¹¹⁹ Recieved from Site Manager (The existing foreign tourist footfalls at the site comprise of the NRI and South Indian (especially people from Tamil Nadu) residing overseas.

- The temple is known for its intricate sculpting and mandapams.
- The temple also has two goshalas and an elephant shed
- The hill by the side of the temple is about 300 metres high and is famous for its holy springs called Silamboru and Noopura Gangai. The 3 kms path on the hillock leads to the summit, where bathing facilities are available.
- 3 F&B outlets - Prasadam
- Administration office
- 10 toilets
- 1 retail outlet
- Dining area for Annadanam scheme- provides free lunch to 100 people
- Luggage/ Cloak rooms

Existing Uses

The temple is currently accessed by pilgrims for religious uses. An area of the temple site is also occasionally used for local cultural events and celebrations of festivals.

Other Land Available

Apart from the ~6-acre temple complex, the temple also owns ~52 acres of land. The land has been used to develop the temple tank, school, parking, retail stores, guesthouses and staff quarters. Vacant land of more than 15 acres is available.

Masterplanning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
- 2. TNHRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

- 3. Height Regulations** – AAI height restrictions allow the construction of buildings up to ~240 m. above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

There are no specific environmental/social sensitivities to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The temple is one of the 108 Divya Desams and has high religious significance. It boasts of captivating architecture with a seven-tiered Rajagopuram and numerous Mandapams. Located on a picturesque, wooded hill in a reserved forest area, it is enclosed by the ruins of a fort and provides a peaceful, serene environment to the visitors. The temple is part of a hilly trail of 3 temples, starting with Rakkayee Amman Temple at the top, followed by Pazhamudircholai Temple in the middle and Kallazhagar Temple at the foothills. The site is maintained aesthetically, with chances of improvements in several areas in terms of façade development, landscape maintenance, wall painting, etc.
- 2. Accessibility** – The temple site is accessible via SH 72A from Madurai (~20 km). It can be accessed via Alagar Kovil Main Road. Regular government buses are available from Periyar Bus stand

Parking – Paid parking is available outside the site with a capacity of ~200 2W. It is a common facility for both Azhagar Kovil and Pazhamudircholai Murugan Temple. The parking area for 2W is shaded while mini-buses and cars park in open. Tourist buses are usually parked around the corner of the road. The parking site available is not well managed, which results in parking in front of the temple entrance, most often.

Internal Circulation – The temple site facilitate tourist circulation through paved areas/ pedestrian pathways. However, these areas are not shaded and are supported by very minimal landscaping, which makes the circulation difficult for the pilgrims during high heats.

3. Amenities – The temple has a developed ecosystem of infrastructure.

- The number of toilets and drinking water outlets present in and around the site is inadequate in number in comparison to the number of tourists received as well as non-functional in nature. Moreover, these toilets are unhygienic to use and in poor condition.
- The site area is monitored by an adequate number of CCTV cameras and is made safe both physically by a boundary wall and from fire casualties by placing an adequate number of fire safety measures with frisking of visitors at all the 4 entry points.
- Retail and prasad stalls are present inside the site, near the west entrance for tourist facilitation, along with the presence of footwear stands, cloakrooms, lockers, and a TIC.
- The site surroundings provide a minimal number of public toilets, accommodation options, F&B outlets, retail shops, and adequate lighting. However, the cleanliness condition of the site surrounding is poor due to the presence of beggars and stray animals.
- There are no signboards present inside the site that depict/talk about the site's history and its mythological connection in addition to absence of tourist information centre.

4. Awareness – The temple awareness is great amongst domestic tourists, mainly the tourists from neighbouring areas and other south indian states, in comparison to foreign tourists. With sufficient online presence, one can find the relevant information about the temple from various blogs and its mentions as one of the must visit places around Madurai from popular travel journals like Trip Advisor and Lonely Planet.

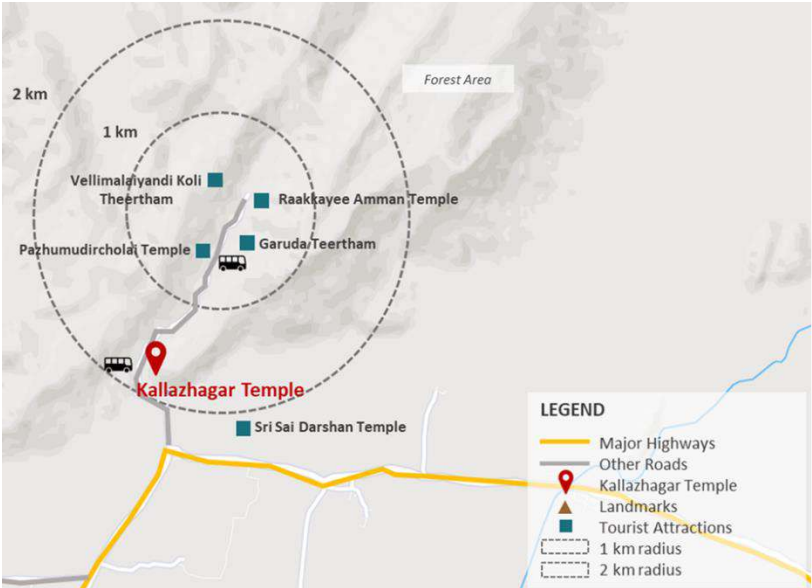
5. Activities – The temple being a relatively high pilgrim destination rather than a tourist destination, it do not offer much tourist activities. On a normal day the tourists mostly visit the temple for Darshan and to take a dip in the holy Noopur

Ganga Teertham. There are provisions for the pilgrim's F&B requirements at the site, in the form of a small restaurant and small shop.

6. Accommodation – Sufficient amount of accommodation options are made available for the pilgrim at Azhagar kovil. Azhagar Hills manages a lodge and 12 cottages for the visitors which is common for Pazhamudircholai and Azhagar Kovil. The luxury accommodation requirements for visitors are fulfilled by the options available at Madurai. (~20 km)

7. Association with Communities – Most of the villager's small bussinessess and living is sufficed due to presence of the temple, suggesting a dependence of local community on the temple and pilgrim activities around it. However, there is no unique attraction/interaction by the local communities which can be further leveraged to devleop a pilgrim infrastructure at the site. The locals, in search of new employment opportunities move out of the village. Development around the temple site can fulfill atleast a part of the employment requirments in the village.

Figure 30-1: Location and Existing Layout



Site Pictures



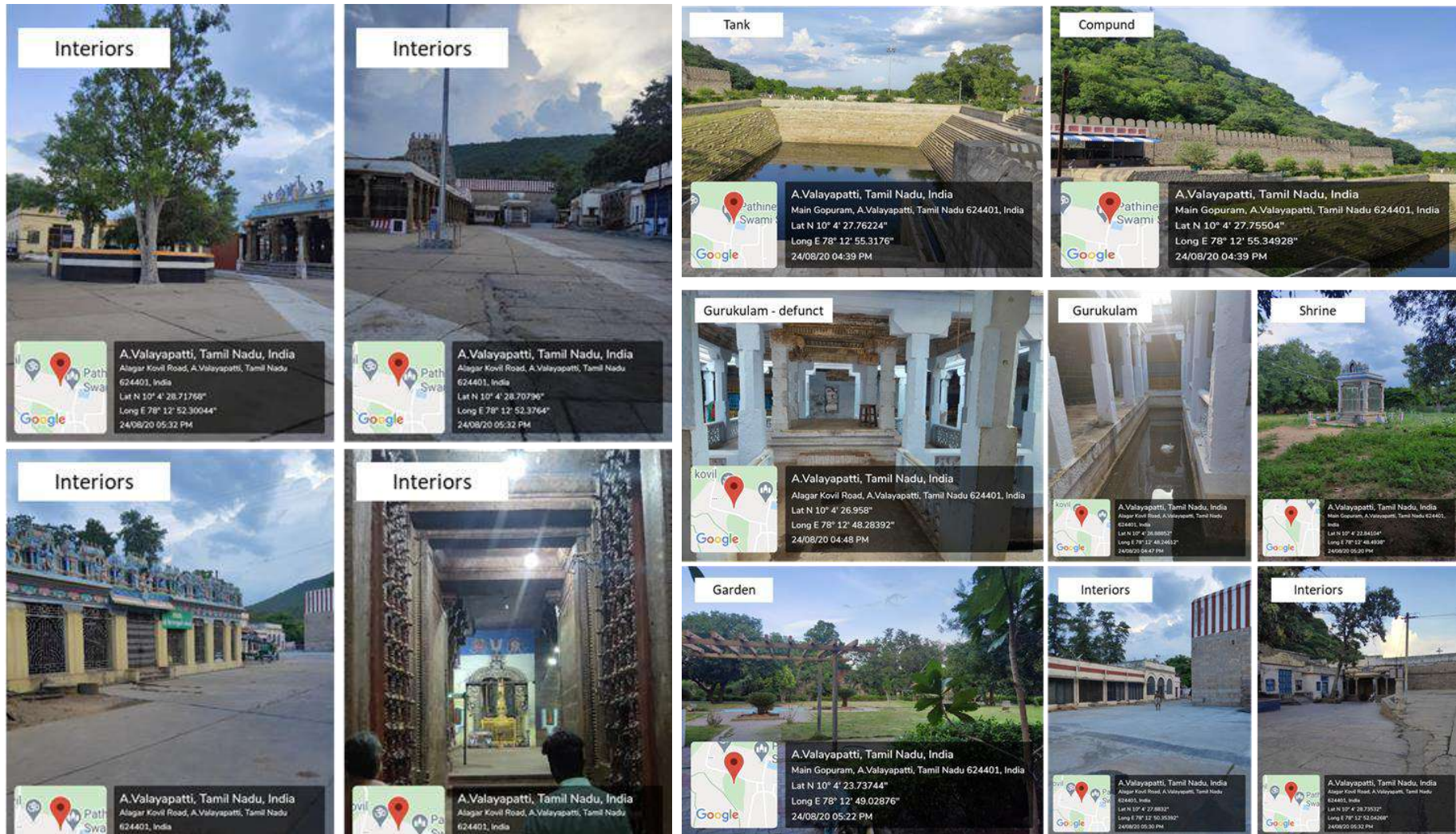


Figure 30-2: Other Lands



Vision for the Site

Kallazhagar Koil is located in the foothills of a picturesque hill, providing a peaceful, environment to the visitors. The Temple Site area contains ample open space, which can be used to create a more diverse offering of Temple related facilities and amenities that can draw more people and can extend their visit. The beautiful natural backdrop and surrounding area should be reflected better at the Site, with denser tree-cover, landscaping and general emphasis on sustainability, the sales of indigenous herbs for selling oil and medicinal produce, Healthy Lifestyle and an Eco-Ashram attractive for a wide domestic and international audience. The temple should aim to promote itself in collaboration with the other 2 temples located further uphill – Pazhamudircholai and Rakkayee Amman temples.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

- **Pilgrims and Domestic Tourists** – To develop as pilgrim site in the temple trail of the state, where visitors can enjoy and acknowledge the religious value of all the sites and increase its popularity and footfall.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **High Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	3,778	8,774	11,801
High Value Tourists (HVT) (Both domestic and foreign)	5	12	16
Maximum Carrying Capacity	11,817		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Masterplan

Approach to Masterplanning

- The Site area has two distinctive areas: one arrives first through a cluster of informal guesthouses and shops in an area with more dense vegetation, whilst at the far end of the Site the formal religious area is located with the iconic Temple – Tank Area at the bottom of the hill. This distinction will be made into a Strength by allowing the central axis which is the original entrance road to be turned into a Pedestrian friendly Park Pathway. The outer oval road should be turned into the main circulation route for vehicular traffic to/from the Temple complex, connecting all existing and additional facilities around the Site.
- The natural setting, close to the major Tourist Hub Madurai and with ample land available lends the Site to the addition of an Eco-Ashram, which will give it a more lively campus like atmosphere during the day and in the evening to the southern half of the Site. These additional buildings will all be eco sensitive low-rise structures along the oval road, located at a distance from the main Temple complex. The sales of indigenous herbs for selling oil and medicinal produce at new modern shops fits into the promotion of a Healthy Lifestyle at the Eco Ashram.
- One of the major aspects of the Tourist's experience when visiting a Temple complex like this that needs to be improved is the lack of proper amenities, tourist information and engaging background information at the Site. To address all of

the above, one large Site Interpretation / Tourist Facilitation Centre is proposed close to the Temple, complementing the existing formality of the Temple and Tank area architecture.



Site Facilitation / Interpretation Centre and Eco Ashram

Hard Interventions

1. **Kallazhagar Temple Interpretation and Tourist Facilitation Centre** - Close to the Temple – in between the water tank and the Temple school, a large Site Interpretation Centre / Tourist Facilitation Centre should be constructed. One of the major aspects missing in a Tourist's experience when visiting a Temple complex like this is the lack of proper amenities and engaging background information of the historical, cultural and architectural significance of the Site. To address all of this, an Interpretation / Tourist Facilitation Centre is proposed. Inside the building the story of the Kallazhagar Temple's history will be told in an engaging way via displays, a gallery and interactive exhibit.

Infrastructure Created: Prototype 2: ~750 sqm of built-up area, ~200 m long by 3-meter-wide footpath and street furniture, ~400 sqm soft landscaping.

2. **Outdoor Event Space for Religious events** - The availability of land allows also to demarcate an adjoining area next to the School and the Interpretation Centre for religious events. This is an important space to be used for pilgrims, tourists, visitors staying at the accommodation and Eco-Ashram.

Infrastructure created – 400 sqm soft landscaped area and tree plantation.

3. **Eco Ashram** - Seven 1 story sustainably designed courtyard buildings that merge with the natural surroundings for specific teachings about religion and Eco-Friendly Lifestyles. The buildings will be housing (dorm) rooms, bathroom facilities, canteen/restaurant, prayer rooms, gathering spaces, relaxation/lounge areas, library, back of house offices, etc. Informal Courtyard spaces can be used as gardens for relaxation, yoga and meditation, vegetable gardens etc. Several small shops selling oil and medicinal produce and local handicrafts made by local craftsmen and weavers & other souvenirs and eateries run by the Temple and the Ashram will be planned at several locations around the Site, convenient for both people staying at the Ashram and the visitors to the Temple.

Infrastructure created – 5400 sqm built up area of Ashram Buildings and 600 sqm built up area of small shops and other ancillary facilities, ~300 m long by 2 m wide footpath and street furniture, ~3000 sqm soft landscaping and tree plantation.



Event Space / Eateries and Shops selling only local produce, handicrafts and medicines run by the temple authorities

Soft Interventions

1. **Promotion** - The temple should aim to promote itself in collaboration with the other 2 temples located further uphill – Pazhamudircholai and Rakkayee Amman temples. The natural, tranquil setting they have in common should become part of their Unique Selling point for visitors. The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes
2. **Temple site cleanliness maintenance** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:
 - d. **Community participation** programs or devotee volunteers.
 - e. **Providing adequate dustbins** for disposal of segregated waste.
 - f. Regulations for **no waste disposal into the temple tank**

Amenities Plan

1. **Street furniture** – An international standard to the design and quality of the street furniture should be the benchmark. The street furniture needs to become an integral part of the Landscape Design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, way finding etc.
2. **Planting & landscaping** – Strategic tree planting is required along the roads, footpaths and all important outdoor spaces to create more shaded space, to entice people to live more sustainably outdoors and be in more in touch with nature. More sculptural trees and flowering trees and shrubs should help to beautify the site in some areas and demarcate the walking trail.
Infrastructure Created: ~1000 meter long x 5 meter wide hard landscaped footpaths
3. **Signage - Signage** - Package 2 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly. Direction boards can be erected along the main roads in the area indicating the presence of this Site

4. **Dedicated Car/Bus Parking** Instead of having tourists' cars randomly parked around the Site's roads, one large and two smaller visitor car/bus parking areas are planned along the oval main road, to be used for both short term and long-term parking. The rest of the site should be free of parked vehicles to enhance the natural, quiet setting of the Site.

Infrastructure Created: ~3000 sqm of hard landscaped area.

5. **Technology Interventions** – Package 2 set of technology interventions are required to be deployed at the site. These include:
 - a. TN Assist App integration at the site, with internet connection and QR scanner
 - b. CCTV coverage servicing the entire site area
 - c. WiFi bollards and/or enclosures across the site
 - d. Audio Guides with RFID points at all key attractions within the site

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1.	Temple Interpretation and Facilitation Centre	~750 sqm (Type 2)
2.	Eco Ashram	~5400 sqm (~55 – 60 Keys)
3.	Retail Kiosks	600 sqm (~20 shops)
4.	Paved Pathway with Street Furniture	~1,500 m x 3 m
5.	Paved Parking Area	~3,000 sqm
6.	Landscaping Area	~1 acre
7.	Signage	Package 2
8.	Technology	Package 2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple Interpretation & Facilitation Centre	42
2	Eco Ashram	900
3	Retail Kiosks	30
4	Paved Pathway	30
5	Street Furnitures	3
6	Paved Parking Area	48
7	Landscaping Area	4
8	Signage	3
9	Technology Package 1 (Exclude CCTV's)	7
Total		INR 10.5 - 11 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.

- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Retail Kiosks** – Captures 20 kiosks each to be rented out at INR 1.5 Lakhs per annum.
- Eco Ashram** – Capturing 60 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.
- Parking** – Capturing 120 ECS at 20% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 2.5 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. 2 **Helpdesk staff** for the facilitation centre.
 - b. A **security personnel** each at the Eco Ashram and the parking space.
 - c. 2 **Administration staff** to overlook the operations of the Eco Ashram and the retail space.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees

2. O&M cost of existing site and facilities

3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 2 Cr.*

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple as well as the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the 3-year lease cap implemented by the HR & CE dept., PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR & CE dept. itself.

However, it is recommended to give out operations and management of the Eco Ashram at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple Interpretation & Facilitation Centre	42	Y0 – Y2	HR & CE
2	Eco Ashram	900	Y0 – Y2	PPP
3	Retail Kiosks	30	Y0 – Y2	HR & CE
4	Paved Pathway	30	Y0 – Y2	HR & CE
5	Street Furnitures	3	Y0 – Y2	HR & CE

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
6	Paved Parking Area	48	Y0 – Y2	HR & CE
7	Landscaping Area	4	Y0 – Y2	HR & CE
8	Signage	3	Y0 – Y2	HR & CE
9	Technology Package 1	7	Y0 – Y2	HR & CE
Total		INR 10.5 - 11 Cr.		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 45,700¹²⁰ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 39 man-days per day
- Additional personnel deployed at the site (Housekeeping, management, security) = 2 man-days per day¹²¹
- Retail and F&B spaces = 50 man-days per day¹²²

Employment is typically generated at 3 levels:

- Direct employment in tourism at the site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in the value chain.

¹²⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

As per market norms, the multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 1,14,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid in the improvement/increase in footfalls to the site.

Both, increase in overall number of visitors and an increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,180 Cr. at the site¹²³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

- Cumulative labour man-days = 30% * CAPEX / 700

¹²¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹²² Assuming average 2.5 persons per kiosk / shop

¹²³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in an impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, woodworks, etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 30-3: Proposed Master Plan – Kallazhagar Temple



31.Koodal Azhagar Temple, Azhagar Kovil, Madurai

Site Details

District:	Madurai
Name of Site	Koodal Azhagar Temple
Site No:	Site 133 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	9.9142, 78.1136
Land Area:	~2.44 acres (Temple) ~1.55 acres (Additional Land)
Peak footfalls:	~5,000 per day (May – June, October)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 17.58 lakhs (2019 – 20) For – 3,395 (2019 – 20)
Site Revenues:	INR 2 crores (2019 – 20)
Site Orientation:	Pilgrim and Tourists
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~900 m from Madurai Railway Station
b. Airport:	~11 km from Madurai Airport
c. Highway:	~1 km from SH 32 ~1.3 km from NH 85
d. Other:	Nil

Trails featured on: **Divya Desam**

Koodal Azhagar Temple is a special temple in various aspects. Along with being a Divya Desam temple, it is one of the few temples with all Navagraha idols. It is also special concerning the position of Lord Vishnu in the Sannadhis. It is a fairly popular temple, drawing tourists from domestic and foreign lands. The temple has most of the amenities, however, lacks to provide visitors with a good experience. Therefore, to improve visitors experience and ease on the site, the scope of interventions include the redevelopment of the approach road to provide visitors with footpaths, paved public plazas, vending zones, and a parking area; rejuvenation of the temple tank by clearing encroachment, constructing steps and side-pathways having benches to make it usable and further enhance tourist activities around it; and improving the visual experience of the visitors through landscaping on the approach road and painting of the temple walls. Additionally, maintenance of existing infrastructure along with appropriate marketing strategies for the temple visibility is envisioned.

Existing Condition

Location

Koodal Azhagar Temple is located in the heart of Madurai. The site is ~600 m away from the central bus stand and ~900 m away from the Madurai railway station. The nearest airport from the site is Madurai Airport at a distance of ~11 km. The temple is surrounded by a dense mixed-residential neighbourhood. Other prominent tourist destinations in the area include Meenakshi Amman Temple (0.9 km) and Thirumalai Nayakkar Mahal (1.3 km).

Existing Layout

This temple complex is spread across an area of 2.44 acres. Enclosed within rectangular granite walls, the complex houses all many shrines. The prominent features of the temple include:

- The five-tiered Rajagopuram rising to a height of 125 ft.
- The main shrine of the temple has an elevated structure and the idol of the main deity Koodal Azhagar in three forms, namely sitting, standing, and reclining postures at three different levels.
- The huge over the structure, whose shadow does not fall on the ground. This type of Vimana construction is said to be found in only three other temples in Tamil Nadu.
- The Teppakulam, the temple tank, is located outside the temple premises
- Vacant land of ~4,000 sq ft is present within the temple premises.

Existing Uses

The site privately serves as a temple attracting tourists from all over the country and abroad. Pilgrims, locals, and tourists flock to the site in huge numbers to celebrate the festivals of Vaikasi Ther Thiruvizha and Navaratri. Apart from this, the temple is used for:

- 1 F&B outlet
- Prasadam shop
- Administration office
- 2 toilets and 2 restrooms
- 1 Footwear stand
- Petrol Station

Other Land

Apart from the temple complex, the temple owns a mandapam (~1,900 sq ft), a chariot shed, and a temple tank (~1.5 acres).

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – Koodal Azhagar temple is one of the 108 Divya Desam (47th in rank). It is the only Vishnu temple to have Navagrahas, the nine planetary deities. Temple is famous for its architecture and Rajagopuram. There is a huge unique Ashtanga Vimanam, which is said to be found in only three other temples in Tamil Nadu. The other rare aspect of the temple is the presence of three different postures of Vishnu at such proximity to each other. Besides the temple itself, there are other major attractions like Meenakshi Amman Temple and Thirumalai Nayakkar Mahal that attract tourists to the site.
- 2. Accessibility** – The Temple is located in the heart of Madurai and can be accessed via wide urban roads. However, the approach roads towards the end have many potholes. The site has good public transportation connectivity, with a bus stop and auto stand situated ~1 km and ~500 m away respectively. The site enjoys excellent rail and airport access with Madurai Railway Junction and Madurai Airport located at a distance of ~900 m and ~11 km away respectively.

The major modes of transport people use to commute to the site include tourist/public bus, auto-rickshaw, taxi, OLA/Uber, and private/hired transport.

3. Amenities – The condition of tourist amenities within and around the temple is quite poor. The site lacks the following facilities:

- No tourist Information center.
- No information signages in the English language.
- No wayfinding signages to reach the site.
- No temple-ware retail shop
- No footpaths on the approach road.
- No public toilets outside the temple.
- No seating area outside the temple.
- No tour guides or audio/visual guides available.
- Inadequate dustbins on the site.

Parking – Parking is available outside the site with a capacity of 20-30 cars. Parking is charged on an hourly basis with per hour charge for Two Wheelers is INR 5, for Car is INR 10, and for Bus is INR 50. However, parking is not well managed as most of the vehicles are parked against the temple's boundary wall and are not charged.

4. Awareness – The temple is very popular with tourists and draws huge crowds during the peak season. It is frequently visited by solo travelers, families, and large groups. It witnesses domestic tourists from Andhra Pradesh, Karnataka, and West Bengal and foreign tourists from Malaysia, Singapore, and England. The temple finds mention in popular travel journals like Trip Advisor and Lonely Planet. It is also included in the Department of Tourism's Madurai brochure. The temple also has an online website managed by HR & CE that provides details about the temple.

5. Activities – The tourists mostly visit the temple for regular Darshan. There are weekly, monthly, and fortnightly rituals performed in the temple. Two major festivals are celebrated here namely Vaikasi Ther Thiruvizha and Navaratri. These festivals attract many locals, pilgrims, and tourists in huge numbers.

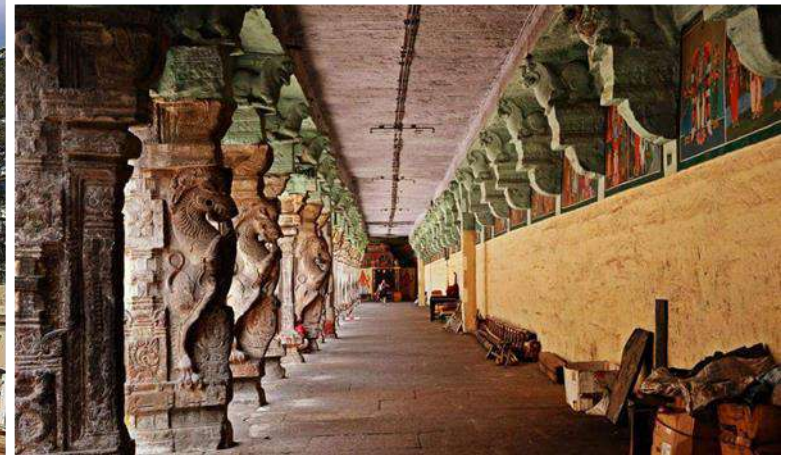
6. Accommodation – Decent budget accommodation facility (OYO Rooms, Lodges, etc) with an average tariff of INR 1000 per night are available around the site. Hotel Tamil Nadu I is also located in the vicinity.

7. Association with Community – The locals are well aware of the temple's history and significance. They readily participate in the everyday rituals and flock to the site during festive seasons. Vending and hawking can be observed outside the temple premises.

Figure 31-1: Location & Existing Layout



Site Pictures





Vision for the Site

The Koodal Azhagar temple is one of the 108 Divya Desam (47th in rank) and is the only Vishnu temple to have Navagrahas, the nine planetary deities, and is regularly visited by devotees from across India. Its huge Rajagopuram and Ashtanga Vimanam, make it architecturally significant.

Considering its importance, the temple has huge potential to attract more tourists. Due to the lack of additional vacant land, the temple has restricted the opportunity to enhance its facilities. However, redevelopment of approach road to cater congestion because of haphazard parking and vending activities on the road can be done. Additionally, existing infrastructure can be maintained to restore its original beauty.

The vision for the site is to improve visitor's experience and convenience by developing new facilities with improvement in existing facilities on the site. Therefore, redevelopment of the approach road is proposed to provide visitors with footpaths, paved public plazas, and a designated parking area. Besides, rejuvenation of the temple tank is envisioned. By clearing encroachment, constructing steps and side-pathways having benches will result in a usable temple tank and further enhance tourist activities around it. To improve the visual experience of the visitors, landscaping on the approach road and painting of the temple walls is proposed.

- **Target Visitor** – The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,747	3923	3923
High Value Tourists (HVT) (Both domestic and foreign)	7	16	16
Maximum Carrying Capacity	3908		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a significant footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious and architectural significance and its popularity among locals, pilgrims, and tourists, the concept of the masterplan includes:

- **Improving pilgrims' experience at the temple** through improved basic amenities of footpaths, and parking.
- **Enhancing interactive spaces on the site** through the development of entrance plaza having vending zone, benches, paved plaza and rejuvenation of temple tank with steps, side pathways and benches.
- **Maintenance of existing infrastructure** such as toilets, painting of temple walls, and construction of permanent structure for protection of temple Chariot.
- **Improving tourist footfall** through signages, appropriate marketing and promotion, guided tours, and community engagement.

Hard Interventions

1. **Redevelopment of the approach road and entrance plaza** – The 175 m stretch of approach road will be redeveloped to cater to the parking, pedestrian safety, Chariot Shed maintenance, and vending issue. Proposals for the redevelopment of the approach road include:
 - **Footpaths** – The approach road will have designated footpaths on both sides of the road for the safety of pedestrians.
 - **Parking** – A designated parking area will run adjacent to the footpath on the right side of the approach road, while on the left side the footpath will merge with a paved plaza housing the temple Chariot shed.

- **Maintenance of Chariot** – The Chariot will be enclosed in a glass wall with a roof protecting it from adverse weather effects. Bollards separating the paved plaza from the Chariot shed will be placed.
- **Pedestrianization of the entrance plaza** – Furthermore, the entire stretch starting from the mandapam to the temple entrance, will be pedestrianized with bollards restricting vehicular movement. This area will be paved and have shaded benches.
- **Vending zone** – A designated vending zone will be developed on the entrance plaza having temporary vending stalls selling handmade souvenirs, temple-ware items, food, and beverages to visitors. This will cater to congestion issues due to vending activities.
- **Landscaping** – The refuge area between parking and footpath will be landscaped, adding to the aesthetics of the entrance. Additionally, a water fountain between the temple entrance and Mandapam will be developed.
- The approach road will act as an engagement space where visitors can walk, relax and engage with surrounding retail shops. This will enhance tourists' time spent on the site that will eventually increase the temples and local's revenue.

Infrastructure Created: Footpath ~240 m long and 1.5 m wide; paved parking area of ~275 sqm with 22 ECS; ~38 m by ~3 m (height) of the glass wall and roof structure for Chariot; ~980 sqm of paved entrance plaza with ~19 bollards restricting vehicular movement; ~170 sqm of landscaping and ~30 sqm of the water fountain.



Redevelopment of Approach Road



Landscaping on Approach Road

Designated Footpaths



Rejuvenation of Temple tank

- 2. Rejuvenation of temple tank** – The temple tank has been encroached by the surrounding retail shops on all four sides and is mostly dry resulting in unusable Theppam. Therefore, rejuvenation of the temple tank is proposed. Clearing of encroachment will be carried out. Steps and side pathways around the temple tank will be developed. Rainwater harvesting techniques will be used to prevent temple tank from getting dried. The tank will be enclosed within a boundary wall with gates to prevent further encroachment. Pathways will have trees and benches to provide seating on the site.

Infrastructure Created: A ~360 m long paved pathway of 3 m width, ~1700 sqm of steps, and 4 number of benches shaded with trees. ~360 m long boundary wall of 2 m height with an Aluminium gate.

- 3. Renovation of Boundary Wall** – **Currently** the temple walls are not clean, therefore painting of the walls to restore the aesthetics of the temple is proposed. The renovation work will be carried out considering the existing use of material for paint.

Infrastructure Created: Painting of 350 m of boundary wall of 2 m height.

Soft Interventions

- 1. Maintenance of existing toilet block** – The temple has a toilet block that is not well-maintained. Therefore, regular cleaning and maintenance of toilet block are suggested for the convenience of visitors.
- 2. Crowd Management** – As the temple receives high footfall during peak seasons. Further, the projected footfall depicts that with the current trend, the site will reach its maximum holding capacity in 5 years. Therefore, following crowd management measures can be taken:
- Ramps or special access for wheelchairs
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Limit the number of people within the temple complex.
 - Proposed Entrance Plaza outside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
- 3. Marketing and Promotion** – The temple is quite popular among tourists and pilgrims. However, to target more visitors, Marketing and Advertising at all key sites such as Madurai Junction, Madurai Airport, CMBT, Chennai International

Airport, and Chennai Central Railway Station will help to enhance high-value tourists' footfall on the site.

- 4. Guided Tours** – A self-guided audio tour provision shall be present on the site to portray the rich history of the site. Licensed guides can be deployed on the site to guide the visitors about the history and significance of the temple.
- 5. Community Engagement** – The local community is involved in the everyday activities of the temple. Locals having business setup along the approach road will get benefit from the redevelopment of the approach road due to footpaths and pedestrianisation of the entrance plaza. The tourists while walking will engage more with these business/retail shops resulting in increased revenue. Moreover, locals can also be engaged by allotting them vending kiosks on a rotational basis and they can be trained and appointed as guides for tourist awareness on the site.

Amenities Plan

- 1. Signages** – Koodal Azhagar temple is a unique shrine in many respects such as, being a Divya Desam, having all Nava Graha idols, and hosting idols of Vishnu in all three postures. These unique aspects must be easily evident to the tourist. Installation of information boards depicting its rich history is essential. Moreover, the existing signages in the temple are in the Tamil language whereas the temple receives foreign footfall. Therefore, Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used in English and Tamil language, as per the design guidelines mentioned in the Glossary of Interventions.
- 2. Technology Interventions** – For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
- Free WiFi
 - Compatibility with TN Assist App
 - The package shall exclude CCTV's as there is a sufficient number of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Redevelopment of the approach road and entrance plaza	
	• Footpaths (1.5 m wide)	240 m
	• Parking (275 sqm)	22 ECS
	• Glass wall structure with roof for Chariot protection (3 m high)	38 m
	• Pedestrianised plaza (paved pathway)	980 sqm
	• Temporary vending kiosks (3 by 3 m each)	3
	• Soft landscaping	170 sqm
	• Benches	4
	• Bollards	19
	• Water Fountain	30 sqm
2	Rejuvenation of temple tank	
	• Steps construction	1700 sqm
	• Paved side pathways (3 m wide)	360 m
	• Benches	4
	• Boundary wall (2 m height)	360 m
	• Gate	1
3	Renovation of temple walls (Only Painting of the walls) 3 m high	350 m
4	Signage Package 1	1
5	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Footpaths (1.5 m wide)	2
2	Parking (275 sqm)	4
3	Glass wall with roof for Chariot protection	2
4	Pedestrianised plaza (paved pathway)	7
5	Temporary vending kiosks (3 by 3 m each)	5
6	Soft landscaping	1
7	Benches	1
8	Bollards	1
9	Water Fountain	2
10	Step's construction	17
11	Paved side pathways (8.5 m wide)	20
12	Benches	1
13	Boundary wall (2 m height)	20
14	Gate	2
15	Painting of the walls	1
16	Signage Package 1	1
17	Technology Package 1 (Exclude CCTV's)	1
Total		INR 85 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.

d) *Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

1. **Kiosks** – Captures 3 kiosk, each to be rented out at INR 1.5 Lakhs per annum.
2. **Parking** – Capturing 22 ECS at 30% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.

2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.

6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple as well as the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Footpaths (1.5 m wide)	2	Y0 – Y2	HR & CE
2	Parking (275 sqm)	4	Y0 – Y2	HR & CE
3	Glass exhibit for Chariot protection	2	Y0 – Y2	HR & CE
4	Pedestrianised plaza (paved pathway)	7	Y0 – Y2	HR & CE
5	Temporary vending kiosks	5	Y0 – Y2	HR & CE
6	Soft landscaping	1	Y0 – Y2	HR & CE
7	Benches	1	Y0 – Y2	HR & CE
8	Bollards	1	Y0 – Y2	HR & CE
9	Water Fountain	2	Y0 – Y2	HR & CE
10	Step's construction	17	Y0 – Y2	HR & CE
11	Paved side pathways (8.5 m wide)	20	Y0 – Y2	HR & CE
12	Benches	1	Y0 – Y2	HR & CE
13	Boundary wall (2 m height)	20	Y0 – Y2	HR & CE

¹²⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
14	Gate	2	Y0 – Y2	HR & CE
15	Painting of the walls	1	Y0 – Y2	HR & CE
16	Signage Package 1	1	Y0 – Y2	HR & CE
17	Technology Package 1	1	Y0 – Y2	HR & CE
Total		INR 85 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,650¹²⁴ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹²⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹²⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 9,100 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 395 Cr. at the site¹²⁶.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹²⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 31-2: Proposed Master Plan – Koodal Azhagar Temple, Madurai

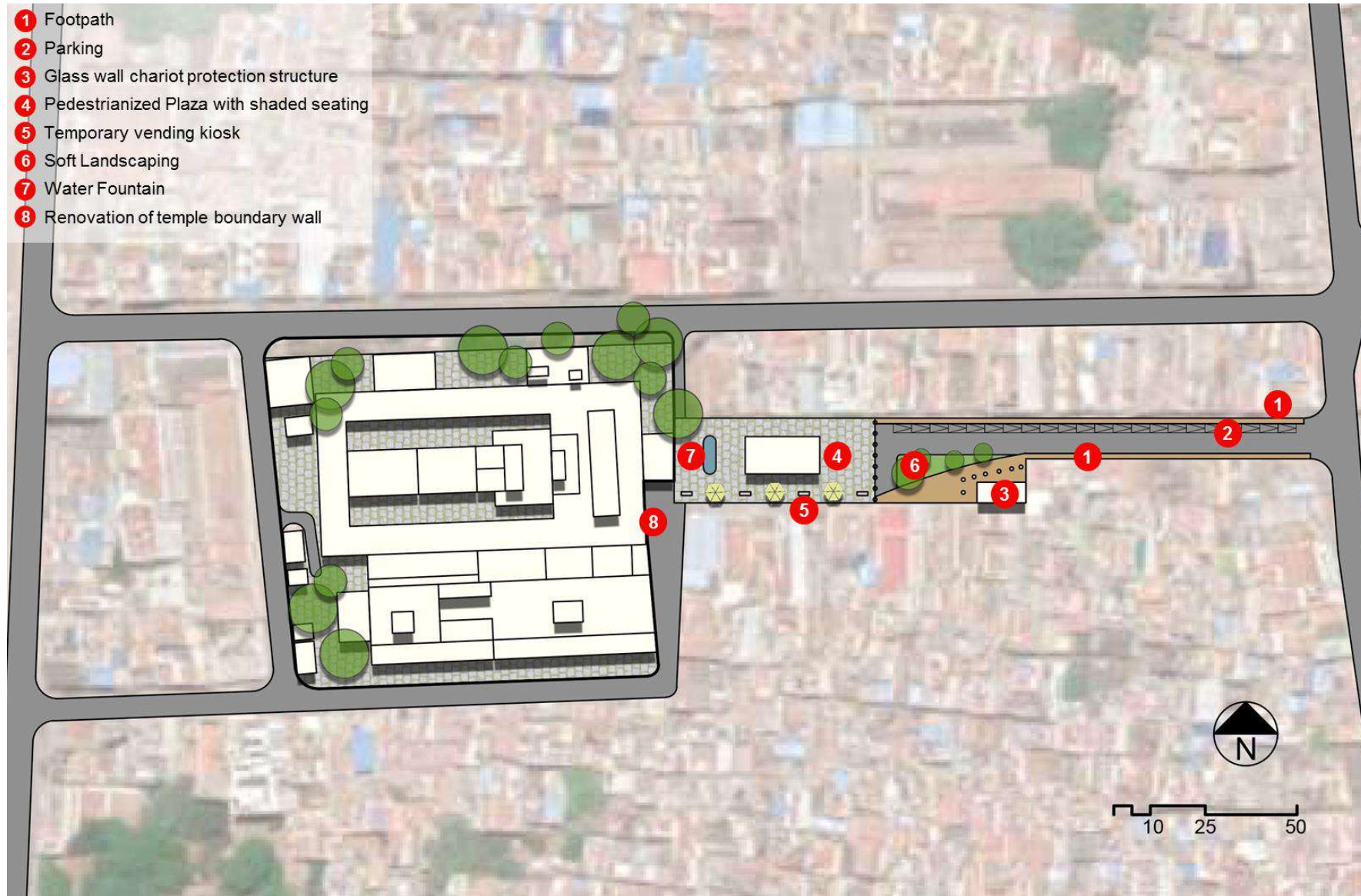


Figure 31-3: Proposed Master Plan – Koodal Azhagar Temple, Madurai (Temple and Temple Tank)



32. Thirumohoor Kalamegaperumal Temple, Madurai

Site Details

District	Madurai
Name of Site	Thirumohoor Kalamegaperumal Temple
Site No:	Site 134 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	9.9509, 78.2071
Land Area:	3.48 acres
Peak footfalls:	2,000 per day (January, March- April, May-June)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 96,799 (2019 - 20) For. – 498 (2019 – 20)
Site Revenues:	91 lakhs (2019 - 20)
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~15 km from Madurai Railway Station
b. Airport:	~22 km from Madurai Airport
c. Highway:	~10 km from SH-72A, ~5 km from NH-38
d. Other:	Nil
Trails featured on:	Divya Desam

One of the Divya Desam temples, Kalamegaperumal Temple is located away from the hustle-bustle of Madurai city. It is dedicated to Lord Vishnu, who is worshipped here as Neelamega Perumal with his divine consort Goddess Lakshmi as Thirukannapuram Nayagi. The temple's atmosphere has a calming effect on devotees. It has the potential to attract considerable pilgrims, provided it focuses on maintenance of the premises, gardens, temple tanks and provides adequate public amenities.

Existing Condition

Location

Thirumohoor Kalamegaperumal Temple is located on the outskirts of Madurai town in Madurai district. The temple is situated approximately 10 km northeast of Madurai and 15 km southwest of Melur. It is located amidst a mid-density residential neighbourhood, surrounded by few small shops, numerous temples, vacant lands and a large lake. Several prominent tourist landmarks nearby Thirumohoor Kalamegaperumal Temple are scenic spot at Yanai Malai, Arulmigu Yoga Narasinga Perumal Thiru Kovil, Pandi Kovil Temple, Madurai Corporation Eco Park and Meenakshi Sundareswarar Temple.

Existing Layout and Uses

This temple presents an impressive example of artistic Dravidian-style architecture occupying an area of 3.48 acres. The main temple along with shrines is surrounded by granite compound walls. The temple has one entry from the 5-tiered Rajagopuram (gateway tower) on the eastern side of the temple. The administrative office is located on the left side of the main entrance along with a store area. There are various mandapams located inside the compound. The temple has four prakarams and an annadhanam block with a capacity of ~100 people. A columned pillar hall

leads to the Garuda hall, which also has a small gopuram. The sanctum houses the shrine of Kalamega and also has the images of Bhoodevi and Sridevi. A separate shrine accommodates the image of Anantasayi Vishnu.

The site is currently used for religious purposes mainly. Some of the festivals conducted at the site are Vaikunta Ekadasi, Vaikasi Brammotsavam and Thirukalyanam (during the Tamil month of Panguni).

Other Land Available

In addition to the temple complex of 3.48 acres, the temple also owns 97 cents land in Thirumohoor, 83 cents in Kaayampatti district and 2.93 acres in Sengulam.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. **Tamil Nadu Combined Development and Building Rules 2019** - The site lies in the **Proposed Residential Zone** as per the Madurai Local Planning Area Plan. The permissible uses include-
Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

3. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~240m above mean sea level in the Thirumohoor and surrounding areas.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

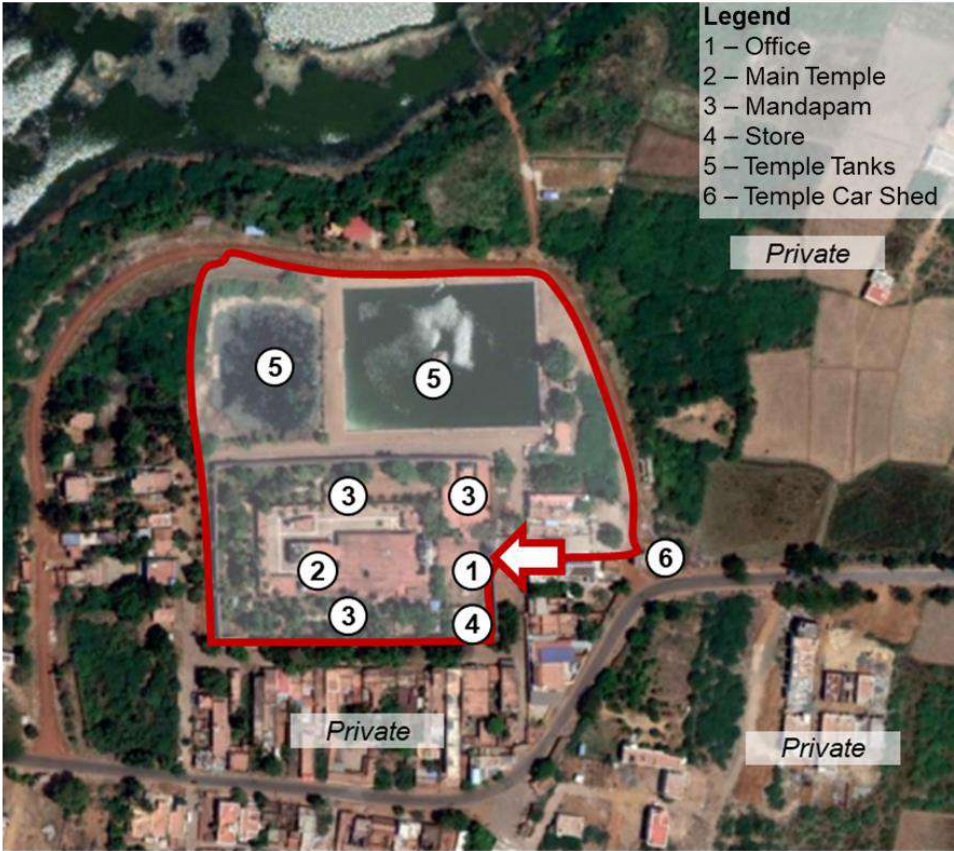
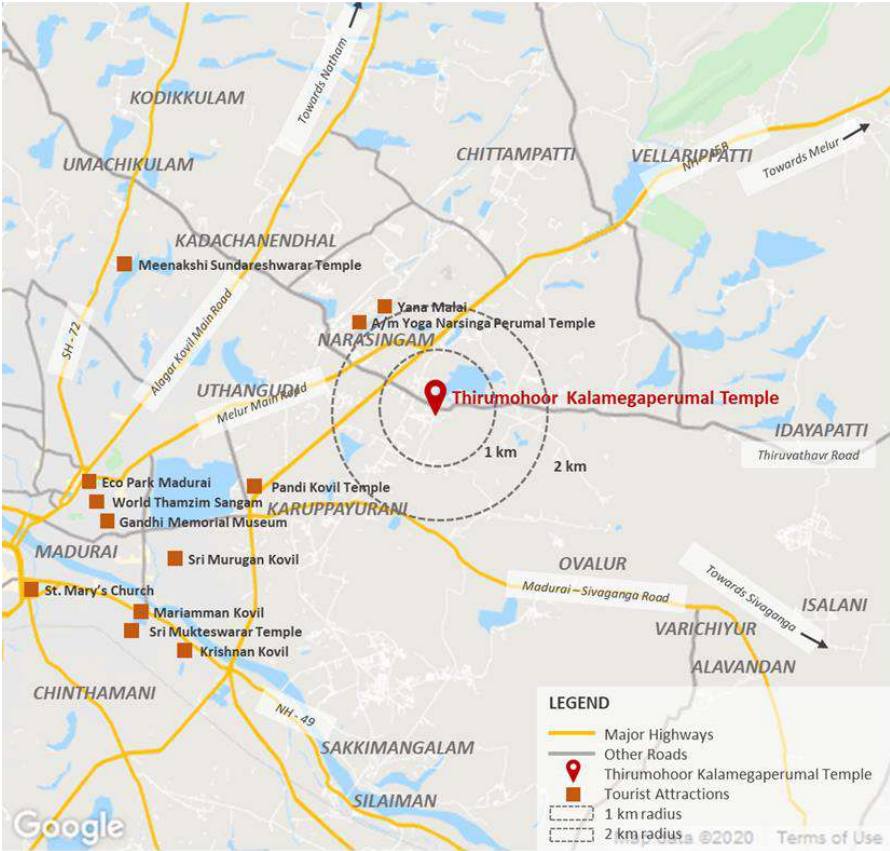
1. **Attraction** - The temple is visited by pilgrims, mainly locals, who strongly believe that visit to this temple guarantee salvation to the devotee. The architectural attraction of this temple is the Sudharsanar. It is said that circling his Sannidhi 6 times or in multiples of six would fulfill all the wishes. Another unique feature of this temple is the shrine of Chakkarathalwar with intricate architectural details.
2. **Accessibility** – Thirumohoor Kalamegaperumal Temple is situated on the outskirts of Madurai town and is accessible via tarred wide roads. This temple is connected to Madurai-Melur road (NH-38) via Thirumogur road. Cabs (Ola/Uber) are available, and an auto stand is also available near the main entrance of the site. The nearest bus stop is located within 200m of the site. Buses running on the temple routes make a stop right in front of the temple gate.

Parking – There is paid parking facility developed by the corporation, available outside the site and near the lake, having a capacity of 100 bikes and 100 cars respectively. The corporation charges INR 5/- for 2-wheeler and INR 20/- for cars. These parking lots are usually found vacant, and the tourist vehicles are observed being parked alongside the street and corners of the road.

3. **Amenities** – The temple is equipped with most of the basic-level amenities within and around the temple. However, the condition is average, and it can be improved.
 - There are 3 toilets and 1 bathroom available, each for men and women outside the temple complex, these facilities were observed to be on average condition.

- The site has the provision of adequate dustbins for waste collection; however, its use is still a concern as there was littering observed near the Annadhanam area and Prasadam stall.
 - The other site premise areas were generally found to be clean, except certain pathways near the garden which were covered with bushes and tree leaves.
 - Dumping of waste into the temple tank was observed at the site.
 - The temple has provisions for drinking water; however, it is covered most of the time to restrict its use by the locals for their daily needs.
 - There are 24 CCTV cameras across all the areas of the site and 4 security guards at the temple.
 - Site boundaries are walled and there are provisions of street lighting around the site. However, the need for extra streetlights is observed to entirely light up the important areas in the temple especially near the temple tank.
 - The site also has the provision of fire safety equipment like fire extinguishers, and sand buckets, observed in a poor condition.
 - There is 1 retail stall inside the temple complex for Pooja items and religious photographs along with prasadam stall.
 - The temple collects various charges (Cash) from the visitors based on the purpose of the visit.
 - There are 2 generators of 40 KV and 7 KV as power backup facilities.
4. **Awareness – Thirumohoor** Kalamegaperumal temple is majorly visited by domestic visitors from Andhra Pradesh, Karnataka and Kerala. The temple owing to its location near Madurai is also listed under a must-visit location near Madurai, also attracts certain foreign Tamil tourists from Singapore, Malaysia and Sri Lanka. There are several temple bloggers and religious enthusiasts who have written about the greatness and architecture of this temple. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor etc.
5. **Activities** – The temple does not offer any special services or activities that can attract many people, except for Annadhanam for about 100 – 200 people. Special festival pooja is conducted on festivals of Brahmotsavam, Ekadasi, Panguni Thirukalyanam, Sudarshana Homam, etc. that attracts about 20,000 persons per day in the peak season. The temple also facilitates events of marriage at nominal charges. It hosted a Maha Sudarshana Homam in 2013, which attracted a lot of Bhagavathaas from various places for this grand event at Thirumohur.
6. **Accommodation** – There is no accommodation available nearby for visitors. It is also observed that visitors do not spend long hours at the temple, since it is located close to Madurai, tourists prefer to stay at Madurai due to the availability of more options.
7. **Association with Community** – There are no common or regular associations of the local communities with the temple. However, one of the temple tanks and toilet facilities is regularly used by the local residents.

Figure 32-1: Location & Existing Layout, Thirumohoor Kalamegaperumal Temple



Site Pictures

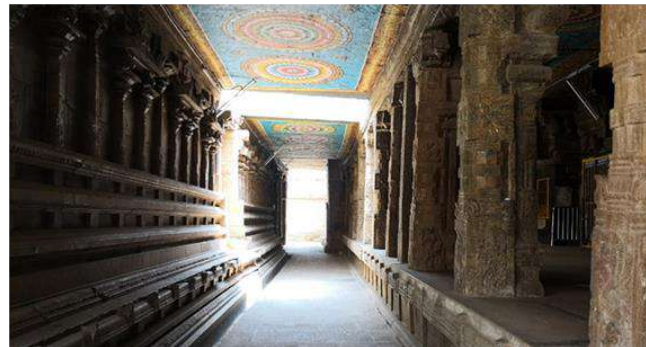
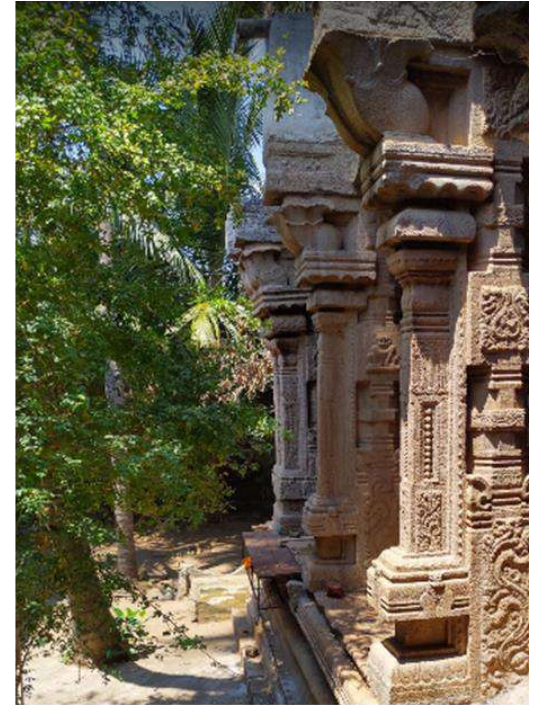
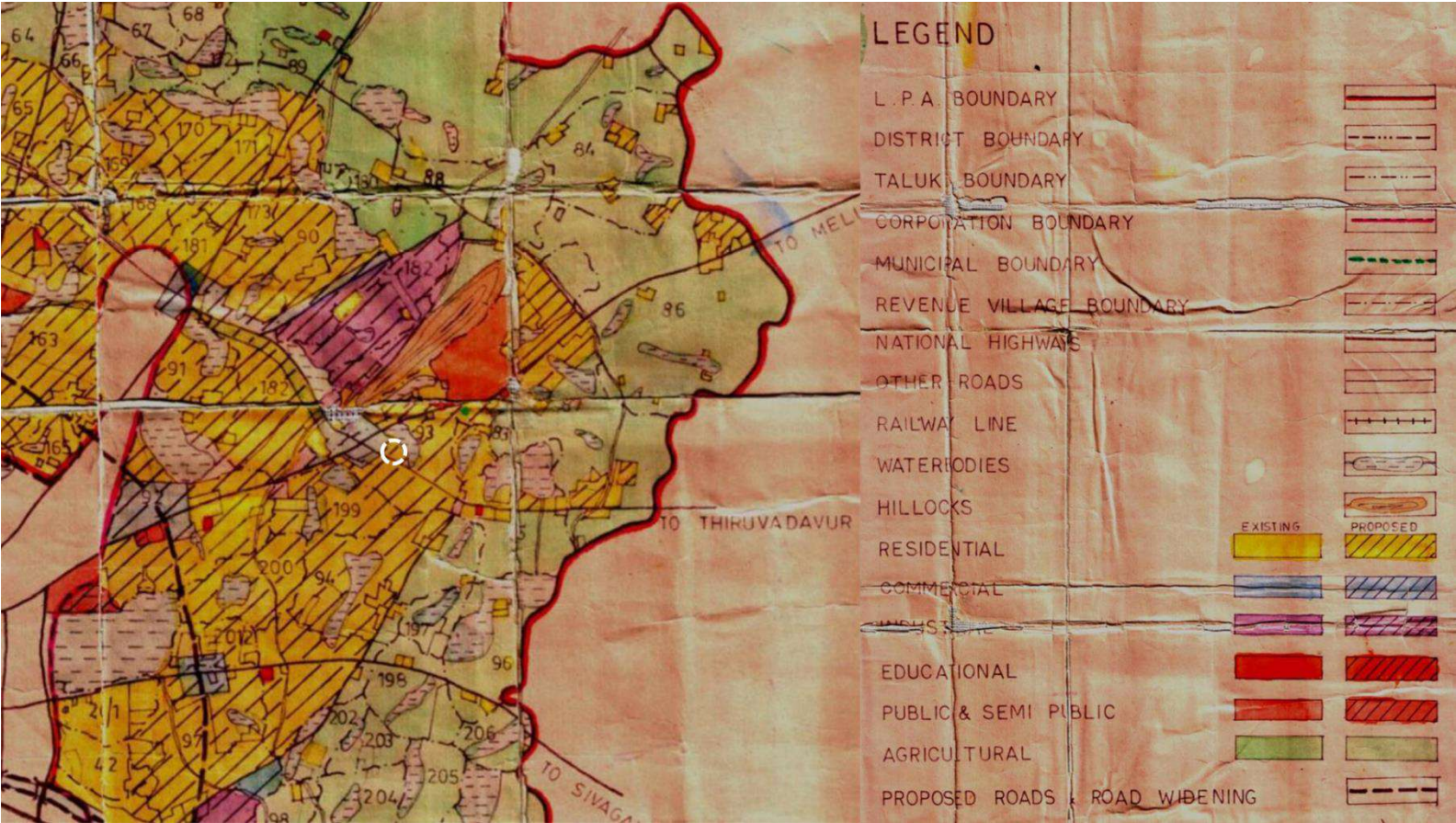


Figure 32-2: Site Land Use- Madurai Local Planning Area



Vision for the Site

A prominent religious shrine, Thirumohoor Kalamegaperumal Temple is one of the 108 Divya Desams. Many devotees come here to attain salvation as it is popularly believed that those devotees who come to offer prayers here attain a place in the heavenly Vaikunta. Although the temple has rich architectural and religious value, it is lacking with effective measures for maintenance around the temple and temple tanks.

Thirumohoor Kalamegaperumal Temple has the potential to be developed into a nodal religious tourist attraction with the improvement of existing facilities, the revival of the existing landscape and temple tanks. This shall facilitate tourist comfort at the site and leverage ancillary recreation activities for local and tourist engagement.

The vision for the site is to develop it as a domestic/pilgrim tourist destination by improving existing infrastructure and basic amenities and effectively utilizing the natural background around the site.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a very low tourism Site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	97	224	445
High Value Tourists (HVT) (Both domestic and foreign)	1	2	5
Maximum Carrying Capacity	19,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Owing to the location of the temple on the outskirts of Madurai, the temple site is very well connected via public and other road transportation systems. Despite being of religious significance and located with a large natural backdrop, it receives very low footfall owing to the lack of awareness, absence of basic amenities.

Considering all the facts about the temple and its potential, the main objectives of the master planning interventions for this site are:

- To create an additional **recreational and vibrant space** around the temple tanks for the visitors and locals.
- **Improving visitor's experience** at the temple through improved conveniences and amenities.
- **Conservation and cleaning** the temple complex.

Hard Interventions

1. **Temple tank Rejuvenation** – There are two temple tanks located on the northern side of the temple complex. Currently, one of the temple tanks is utilized by local people for daily use and the other tank is underutilized and it has the potential to be developed as a public space. The idea here is to rejuvenate its lost charm and create a better public space for the temple visitors. It can be done by creating a paved walkway around the tank along with soft landscaping with grass/alike elements and provision of adequate number of dustbins spread across the temple tank area. Regular cleaning and maintenance of the tank is also required.

Infrastructure Created:

- *Cleaning of temple tank – 8000 sqm water area*
- *Soft landscaping ~200 sqm*
- *Hardscape ~1100 sqm*

2. **Paved Walkway** – The lanes outside the main temple complex connecting to the temple tanks area will be developed as a paved pathway. This will improve and earmark a clear external circulation and regularize the tourist movement.

Infrastructure Created: 500 m length (3m wide).

3. **16 pillar Mandapam-** Currently the 16 pillar mandapam is incomplete and abandoned. The construction should be completed in line with the architectural style of the temple. The mandapam will be housing all facilities required for (semi) indoor and outdoor events, with an emphasis on hosting religious wedding ceremonies, cultural and religious events.

Infrastructure Created: ~250 sqm

4. **Redevelopment of Existing Garden Area** - The existing temple garden is located on the western side of the temple behind the shrines. It has uncontrolled vegetation with a lack of maintenance measures. Reviving the garden area with a nice seating arrangement and trees providing natural shade is proposed. The landscaping will feature native and religious flowers and bushes, and should, as far as possible, be the least maintenance-oriented and be self-sustainable. This shall thus create a visual treat for the visitors.

Infrastructure Created:

- *Footpath - 200 m length and 3 m wide*
- *Softscape- 1400sqm*
- *Temporary Seating – 4 units*

Soft Interventions

1. **Temple Conservation Plan** – One of the unique features of the temple (the Chaakrathalwar) was found broken and the lack of the temple's expertise on its restoration and conservation might result in a permanent loss of the temple's unique attraction. The walls are also found with scribbles by people, affecting the aesthetic beauty and architecture of the temple. To reduce the degradation of the temple with time, a proper conservation plan should be developed for the conservation of the rich architecture of the temple.

2. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “Own your Street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.

3. **Site management** – The site must be managed by the respective temple management authorities in the aspects of restricting waste littering inside the complex or at the temple tank area. It should also restrict on-street parking outside the temple.



Reference images for Temple Tank Rejuvenation



Reference images for Redevelopment of Garden Area



Reference images for Paved Walkway

Amenities Plan

1. **Dustbins**- Dustbins must be provided in sufficient quantity around the temple tank area to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines.

Infrastructure Created: 5 units

2. **General Site Landscaping** – More strategic tree planting and site landscaping is required around temple tanks along with adequate benches to create naturally shaded resting areas and make the site attractive as a destination. This green cover will ensure rainwater absorption into the ground, air purification, reduction of ambient noise and temperature.

Infrastructure Created:

- Softscaping – 1200 sqm
- Temporary Seating – 4 units

3. **Signage (Package 1)** – Few direction boards can be installed indicating the directions for the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines.

4. **Street-Lighting** – To ensure safety and security along the paved pathway and temple tank area, streetlights should be installed.

Infrastructure Created: 10 Units

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Temple Tank Rejuvenation <ul style="list-style-type: none"> • Cleaning of Temple Tank (Water Area) • Hardscape 	8000 sqm 1100 sqm
2	Paved Walkway	700m
3	16 pillar Mandapam	250 sqm
5	Street-Lighting	10

#	Project Component	Scale
6	Dustbins	5
7	Soft landscaping	2800 sqm
8	Temporary Seating	8
9	Signage (Package 1)	1

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Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple tank - Landscaping	3
2	Temple tank cleaning	0 (Included in OPEX)
3	Paved Walkway	14
4	16 pillar Mandapam - roofing	5
5	Street-Lighting	1
6	Dustbins	1
7	Soft landscaping	2
8	Temporary Seating	1
9	Signage (Package 1)	1

Total	INR 25 L
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Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) *Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- b) *Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- c) *All revenues are unescalated.*
- d) *Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

- 1. Prasadam sale
- 2. Puja tickets
- 3. VIP tickets
- 4. Mass meals
- 5. Donations and Sponsorships
- 6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

- 1. Salaries and perks of existing employees
- 2. O&M cost of existing site and facilities
- 3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 2 Lakhs.

Feasibility Assessment and Implementation Plan

Though there are no revenue streams pegged to the proposed capital projects, the interventions proposed at the temple are necessary, as it is envisioned to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple tank - Landscaping	3	Y0 – Y2	HR&CE
2	Temple tank cleaning	0	Y0 – Y2	HR&CE
3	Paved Walkway	14	Y0 – Y2	HR&CE
4	16 pillar Mandapam - roofing	5	Y0 – Y2	HR&CE
5	Street-Lighting	1	Y0 – Y2	HR&CE
6	Dustbins	1	Y0 – Y2	HR&CE
7	Soft landscaping	2	Y0 – Y2	HR&CE
8	Temporary Seating	1	Y0 – Y2	HR&CE
9	Signage (Package 1)	1	Y0 – Y2	HR&CE
Total		INR 25 L		

¹²⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,100¹²⁷ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹²⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 2,700 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹²⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 45 Cr. at the site¹²⁹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹²⁹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 32-3: Proposed Master Plan – Thirumohoor Kalamegaperumal Temple



33. Sathyamurthi Perumal Temple, Pudukkottai

Site Details

District	Pudukottai
Name of Site	Sathyamurthi Perumal Temple
Site No:	Site 215A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.2473, 78.7516
Land Area:	~1 acre
Peak footfalls:	~3000 per day
Operator:	ASI (maintained by HR & CE Dept.)
Site Ownership:	ASI
Tourist Footfall:	Dom. – 1.75 lakhs (2019) For. – 0 (2019 - 20)
Site Revenues:	Undisclosed
Site Orientation	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~1.4 km (Thirumayam)
b. Airport:	~66 km (Trichy)
c. Highway:	~1.5 km from NH-36
d. Other:	Nil
Trails featured on:	Divya Desam

Sathyamurthi Perumal Temple is one of the 108 Divya Desam temples and is dedicated to Lord Vishnu. Constructed in the Dravidian style of architecture, the temple is glorified in the Divya Prabandha, the early medieval Tamil canon of the Azhwar saints from the 6th–9th centuries AD. The presiding deity of Lord Vishnu is worshiped here as Sathyamurthi Perumal along with his consort Lakshmi as Ujeevana Thayar. The temple is believed to have been built during the 9th century by the Pandyas. The temple lies adjacent to the ASI maintained Thirumayam Fort or popularly known as Oomayan Kottai.

Existing Condition

Location

Sathyamurthi Perumal Temple is located near Thirumayam, a panchayat town near Pudukkottai. The temple is easily accessible via NH-36 and is well connected with autos/taxis and bus services from Pudukkottai. Other tourist attractions located near the temple include Thirumayam Fort (50m), Chidambara Vilas (~4.2km), government museum, Pudukkottai (19.2km), and Vettangudi Bird sanctuary (36km)

Existing Layout

Built by the Pandyas in the 9th century, the temple is constructed in the beautiful Dravidian style of architecture.

- A granite wall surrounds the temple, enclosing all its shrines
- The entrance to the temple is through a five-tiered gopuram
- The idol of the presiding deity is approximately seven feet in height and is placed on a rock, along with this consort
- Adjacent to the main sanctum is the sanctum of Mahavishnu, who can be seen in a reclining position (the largest reclining idol in India)
- The hall preceding the sanctum, the Ardha mandapa is rectangular and similar to the sanctum
- The temple tank is located inside the temple premise

Existing Uses

2. **Accessibility & Mobility** – Sathyamurthi Perumal Temple can be accessed from Pudukkottai (~20 km away) via NH-336 & NH-36. The major modes of transport people use to visit the temple include bus (both public & private), taxi/cabs, autos, and private vehicles. Autos/cabs are readily available outside the temple as well as at Pudukkottai city for easy access to the site. The nearest railway station is Thirumayam railway station, ~1.4 km from the site. The temple is ~17 km from Pudukkottai railway station and ~25 km from Karaikudi railway station. Trichy junction is about 64kms away. The nearest airport is Trichy airport ~66km from the site.

Parking – The Site does not have any designated parking area. Vehicles park on the street surrounding the temple leading to frequent crowding and congestion during evenings and peak hours.

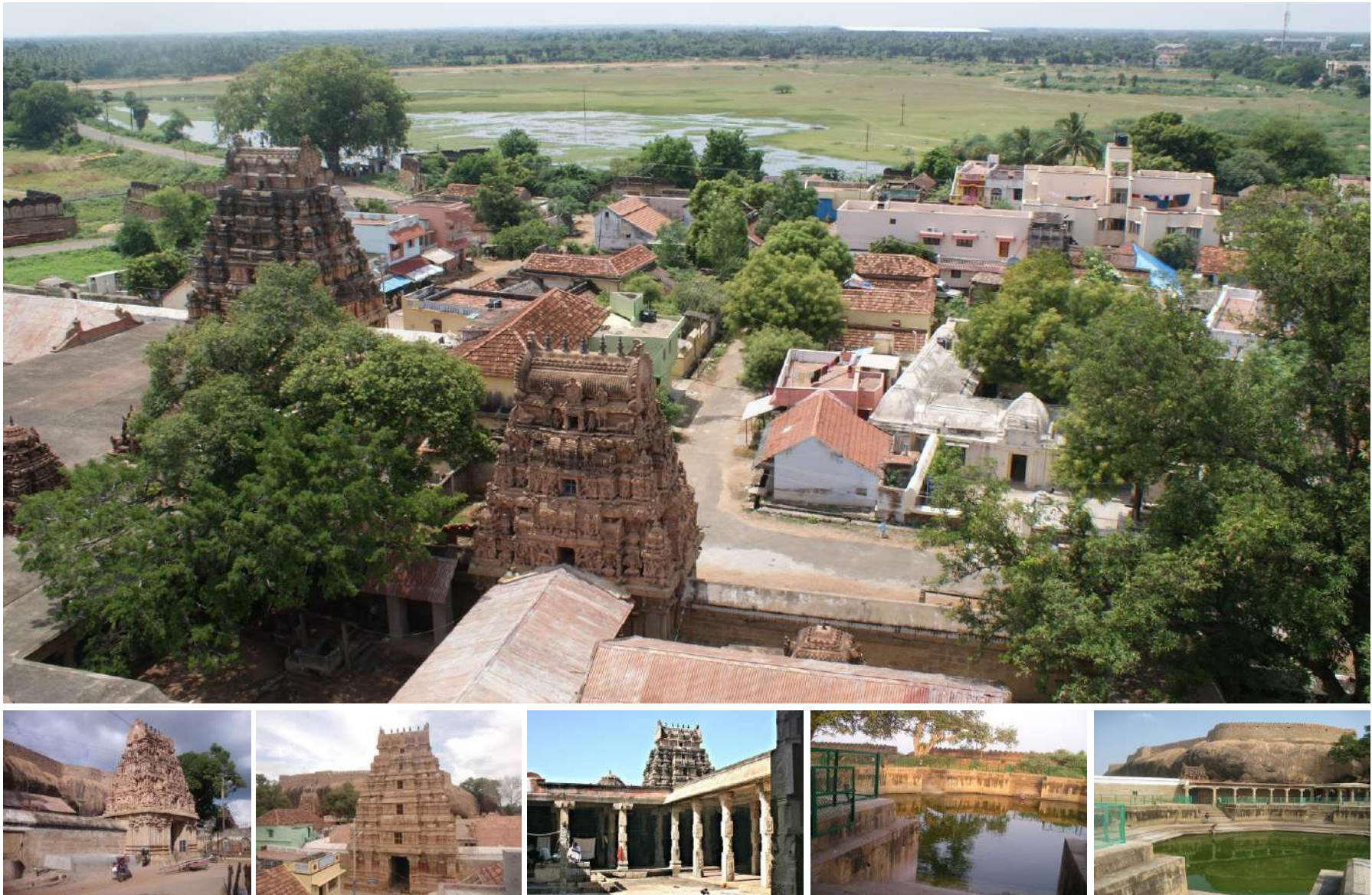
3. **Amenities** – The temple has sufficient tourist infrastructure in place, however additional basic infrastructure facilities are required to cater to the needs of the visitors. Though the site is walled on all 4 sides and has common toilet blocks, CCTV Cameras, sufficient street lighting, fire safety equipment, and retail shops within the temple premise, it lacks the following facilities –
- Unavailability of free drinking water
 - No power backup facility
 - No shaded areas or resting area around the temple
4. **Awareness** – Sathyamurthi Perumal Temple enjoys immense popularity due to its religious significance as a Divyadesam temple. It is majorly visited by pilgrims residing in Tamil Nadu. Most of the domestic visitors apart from Tamandu are from states like Delhi, Kerala, and Karnataka. Foreign tourists are almost negligible. It finds mention in renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc.
5. **Activities** – On normal days, the temple does not offer any specific activities. The temple priest performs four daily rituals at various times of the day. The temple follows the traditions of the Thenkalai sect of Vaishnavites tradition and follows Vaikasana agama. There are many yearly festivals held at the temple, of which the car festival during the Tamil month of Vaikaasi (April - May), Krishna Jayanti during Aavani (August - September), and Aadi Pooram during July - August are the most prominent.

6. **Accommodation** – The town doesn't provide many options for accommodation. However, Chidambara Vilas, a luxury heritage resort is located ~4km from the temple with a room tariff of INR 6000 per night. Other budget hotels are located in Pudukkottai (~20 km) and Karaikudi (~22 km). The room tariffs of these hotels range from INR 1500 TO INR 3000 per night.
7. **Association with Community** – There isn't much interaction of the temple with the locals. However, the festivals at the temple enjoy immense participation among the locals. Some many hawkers and vendors dot the site with carts and stalls – selling local goods, handicrafts and food items, etc.

Figure 33-2: Location and Existing Layout



Site Pictures





Vision for the Site

Sathyamurthi Perumal Temple along with Thirumayam Fort are exquisite architectural landmarks in the Pudukkottai district. The temple is one of the oldest temples & is one among the 108 Divyadesam, and the fort has great historical significance. One of the main attractions for tourists is the beautiful view of the surrounding areas from the hilltop. The fort was recently renovated; however, it lacks a few basic amenities that could improve the tourist's experience like proper parking, better landscaping & resting areas, adequate toilet blocks, and a small Interpretation Centre (providing information about the history of the Fort and Temple). The proposed interventions at the site are planned commonly for both the temple and the fort since they lie within the same complex.

- **Target Visitor** – The site is largely a religious & historic site, with significant footfall from locals & regional tourists from Tamil Nadu and the neighbouring state of Karnataka. Foreigners visiting the temple are very minimal. Going forward, the master planning will target low spending tourists, while facilitating better amenities and experience.

Those with an inclination towards the cultural heritage aspects of a place and are also interested to be in quieter surroundings as opposed to most temple sites, could be the potential visitors. The Sites could be marketed together with other similar and interesting cultural heritage destinations nearby like the unique settlements of Chettinadu and Kadiyapati Town.

Further, tourist groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** - The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	174	411	826
High Value Tourists (HVT) (Both domestic and foreign)	2	5	9
Maximum Carrying Capacity	10,241		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

A visit to Sathyamurthi Temple and Thirumayam Fort should become much more appealing for Tourists. This could be done by landscaping the village streets & open spaces next to the Temple in such a way that it becomes a more Pedestrian Friendly destination. The intent is to create spaces where it's a pleasure to sit and walk from the Temple through the village to the Fort and vice versa.

One of the major aspects of the Tourist's experience when visiting an ancient Fort and Temple complex is the presence of proper amenities, tourist information, and engaging background information of the Site. To address all of the above-mentioned criteria, one small Site Interpretation / Tourist Facilitation Centre is proposed, right outside of the ASI prohibited building area. This Site Interpretation / Tourist Facilitation Centre is located next to a new Bus & Car Parking area, just 200 meters from the Temple. Visitors are encouraged to disembark here, visit the Site Interpretation / Tourist Facilitation Centre and walk the rest of their way to the Temple and Fort, considering the short distances. This will encourage visitors to walk through the village streets, which will be an incentive for local villagers to open up little tourist shops, café, or restaurants.

The Site Interpretation / Tourist Facilitation Centre and the soft & hard landscaping interventions will need to be high on impact for the visitors' experience, but

exceptionally low on interference with the local heritage environment, the ancient structures, and the historic character of the Site.

Hard Interventions

1. Dedicated Tourist Car and Bus Parking Area and Toilets

Infrastructure Created: ~1500 sqm of a hard landscaped area car park, 150 m long x 3 m wide footpath, tree plantation, and new toilet block.

2. Thirumayam Fort and Sathyamurthi Temple Interpretation and Tourist Facilitation Centre

Infrastructure Created: Prototype 5 ~150 sqm of built-up area

3. Traffic Calming Pedestrian-Friendly Village Streets, Landscaping Plaza next to Temple and Tank

Infrastructure Created: Traffic Calmed Streets: 500 m x 10 m wide, Plaza next to Temple: ~1000 sqm soft landscaping, ~2000 sqm hard landscaping, trees and street furniture, wide footpaths along the roads: ~1200 m x 3 m wide.

Soft Interventions

- Promotion** – The Site should be promoted as a tourist destination for those visitors who have a keen interest in the cultural heritage of a place and are interested in places that have quieter surroundings, as opposed to most temple sites. The Site could be marketed together with other similarly and attractive cultural heritage destinations nearby like the unique settlements of Chettinadu and Kadiyapati Town.

Amenities Plan

- Street furniture** – An international standard to the design and quality of the street furniture should be the benchmark. The street furniture needs to become an integral part of the Landscape Design. A detailed Landscape Design Guideline Manual will have to be prepared that will form the standard for all the street furnitures including seating benches, shading devices, canopies, dustbins, bollards, paving materials, way finding etc.
- Planting & landscaping** – Strategic tree planting is required along some of the streets and in particular at certain scenic locations that are the perfect resting spots like the Plaza next to the Temple. Addition of few sculptural & flowering



Site Interpretation Centre, Pedestrian Friendly Landscaping Village Streets and Plaza next to Temple

trees and shrubs should help to beautify the site in certain areas and demarcate a walking trail.

3. **Signage** - Direction boards can be erected along the main roads in the area, indicating the presence of the Site.
4. **Drinking Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines in Glossary of interventions

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Tourist Car & Bus parking	1500 sqm
2	Interpretation and Tourist Facilitation Centre (Prototype 5)	150 sqm
3	Pedestrian footpath (3m wide) near parking	150m in length
4	Plaza (soft landscaping)	1000 sqm
5	Traffic calmed streets (10m wide)	500m in length
6	Soft landscaping	2000 sqm
7	Footpaths near plaza (3m wide)	1200
8	Signages	Package 1
9	Drinking water station	2
10	Toilet Block	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Tourist parking	24
2	Facilitation centre (Type 5)	21
3	Footpath - parking	3
4	Landscaped plaza	1
5	Paved asphalt	150
6	Landscaping	2
7	Footpath - plaza	24
8	Signages	1
9	Toilet block	5
10	Drinking Water Station	3
Total		INR 2.25 – 2.5 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) *Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- b) *Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- c) *All revenues are unescalated.*

d) *Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

The following revenue sources are expected for the site:

1. **Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs per annum.
2. **Parking** – Capturing 75 ECS at 20% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.

a. A **Helpdesk staff** for the facilitation centre.

2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees

2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 10 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the restrictions imposed by ASI, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by the ASI itself.

Sub-projects which can be taken up by the local governing body/ Town panchayat

The last mile connectivity to the temple is poor and has been raised as a repeated concern by the local residents frequently visiting the temple and by the pilgrims alike. Since this is out of the temple's scope, it has to be taken up by the local governing body/ town panchayat to address the concerns of its constituents.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Tourist parking	24	Y0 – Y2	ASI

¹³¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
2	Facilitation centre (Type 5)	21	Y0 – Y2	ASI
3	Footpath - parking	3	Y0 – Y2	ASI
4	Landscaped plaza	1	Y0 – Y2	ASI
5	Paved asphalt	150	Y0 – Y2	Local governing body/ Town panchayat
6	Landscaping	2	Y0 – Y2	ASI
7	Footpath - plaza	24	Y0 – Y2	ASI
8	Signages	1	Y0 – Y2	ASI
9	Toilet block	5	Y0 – Y2	ASI
10	Drinking Water Station	3	Y0 – Y2	ASI
Total		INR 2.25 – 2.5 Cr.		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 10,000¹³¹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹³²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹³² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 25,100 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 84 Cr. at the site¹³³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹³³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 33-3: Proposed Master Plan – Thirumayam Fort & Sathyamurthi Temple



34. Thirukoshtiyur – Sowmya Narayana Perumal Temple, Sivagangai

Site Details

District	Sivagangai
Name of Site	Sowmya Narayana Perumal Temple
Site No:	Site 227 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.0608, 78.5603
Land Area:	6 acres+ 13.72 acres other land
Peak footfalls:	30,000 per day (December-March, September-October)
Operator:	Sivagangai Devasthanam
Site Ownership:	Sivagangai Devasthanam
Tourist Footfall:	Dom. – 74,691 (2019 - 20) For. – 567 (2019 – 20)
Site Revenues:	~66 Lakhs
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~23 km from Karaikudi Railway Station
b. Airport:	~75 km from Madurai International Airport
c. Highway:	~10 km from SH-35, ~300m from NH-36
d. Other:	Nil
Trails featured on:	Divya Desam

Sowmya Narayan Perumal Temple is one of the 108 Divyadesams dedicated to Vishnu and his consort Lakshmi. The place and the temple occupy a great place of importance in the history of Vaishnavism. It is a famous Perumal temple in Madurai region, known for its architectural beauty and the unique features of its Vimana. The temple enjoys decent footfall from the local tourists and has good connectivity. However, it has the limited potential of being a national-scale tourist destination. The scope of interventions for the site is limited to the provision of improved amenities and maintenance of the temple.

Existing Condition

Location

Sowmya Narayan Perumal is located ~8 km southwest of Tiruppattur on Sivaganga Highway in Thirukoshtiyur. The immediate surroundings of the temple include small shops and agricultural fields. Several prominent tourist landmarks located nearby are Thiruthalinathar Temple, Padal Petra Temple, Sri Pattamangalam Guru Temple, Malai Marundheeswarar Temple and Kadukavalar Temple.

Existing Layout and Uses

The temple complex is a rectangular enclosure with huge granite walls covering an area of ~2 acres and the temple tank located opposite the temple covers an area of ~4 acres. The temple has a five-tiered gopuram (gateway tower) on the eastern side of the temple complex.

- The central shrine houses the image of the presiding deity, Uragamellayan Perumal in a reclining posture on a snake bed similar to that of Srirangam Ranganathaswamy temple.
- The vimana is designed in Ashtanga architecture style, which has eight parts. The outer parts of the vimana have various stucco images of Narasimha, sages,

Dasavatara and other mythical stories. The Ashtanga Vimana is found in only three places, namely, the Uthiramerur, Koodal Azhagar Temple and Cheranmadevi temples. The ashtanga vimana rising to a height of 25 m (82 ft), is taller than the gopuram of the temple, which is not a common feature in Dravidian temples.

- The shrine of the consort of Sowmyanarayana Perumal, Thirumamagal, is located to the south of the main shrine.
- Smaller shrines of Lakshmi Narasimha, Rama, Lakshmi Narayana and Krishna are located close to the sanctum. The shrines of Andal, Narasimha and Manavala Mamunigal are found in separate shrines around the first precinct.
- The shrine of Garuda, Anjaneya, Ramanuja, Vedanta Desika and Azhwars are present in the second precinct.

The temple is currently used as a place of worship by the devotees. The temple is also used for the daily activity of Annadhanam for the devotees and less fortunate ones. During festivals, the temple is also used as a venue for the organisation of cultural and religious events. Other uses housed in the temple complex are Mandapams, open area, Offices of the administrators, Annadhanam Building and Kosalai. Some of the festivals conducted at the site are Maasi Float Festival (Feb – Mar), Vaikuntha Ekadasi (Dec – Jan), Purattasi Navarathri (Sep-Oct) and Aadi pooram.

Other Land Available

In addition to the temple complex of ~6 acres, the temple owns few land parcels the details of which are as follows:

- 1.72 acres of agricultural land, on the northern side of the temple
- 0.11 acres of built land near the temple, the built structure on it comprises of some closed small temple, an unused block, etc.
- 5 acres of vacant land on the eastern side of the temple.
- 7 acres of vacant land on the northern side of the temple.

Masterplanning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – Sowmya Naraya Perumal Temple is very well known for the architectural features of its Vimana. The Ashtanga vimanam of the temple is a rare one and such kind of vimanam is present in very few temples like Madurai Koodal Azhagar temple, Uttiramerur temple and Vaikunda Perumal temple in Kanchipuram. The unique feature of this vimanam is that it never casts shadows. The temple is situated opposite a large temple tank, which, if utilized properly can be developed into a serene recreational space for the visitors as well as the locals.

The temple is also known for the Mahamaga Kinaru Festival which occurs once in 12 years when the Lord grants darshan to the devotees sitting on his Garuda Vahana.

- 2. Accessibility** – The Sowmya Naraya Perumal Temple can be accessed from Sivagangai – Tiruppattur Highway. It is easily accessible via wide urban roads. The major modes of transport people use to commute to the site include tour bus, autos and taxi. There is no bus stop near the temple area, but buses operating on the route make a stop near the temple. An auto stand is available at the site. No interventions are required to augment accessibility to the site.

Parking – There is no designated parking space available, vehicles are usually parked along the road corners, street side and near the Theppam. Parking charges are INR 60 for cars and INR 100 for buses. The lack of designated parking space at temple and on-street parking often results in street congestion during the time of festivals.

- 3. Amenities** – The temple is a popular tourist destination in the district, equipped with a few basic-level amenities within and around the temple.
 - 2 to 3 signages are available in the temple complex in the Tamil language.

- There is no provision of toilets at the site.
- Free RO drinking water is available, but insufficient at the time of festivals.
- The temple premise is adequately clean, and dustbins are installed in adequate numbers.
- 16 CCTV cameras are covering all the key areas, entry/exit points and 8 Security guards are deployed at the site.
- The site boundaries are walled, however, there are inadequate streetlights observed in the area.
- Fire safety equipment like fire hoses and extinguishers are provided and emergency exit routes are marked.
- There is one prasad stall available.

4. Awareness- Sowmya Narayana Perumal Temple is considered to be one of the oldest and must-visit Divya Desam around Madurai. The temple is located in ~20 km vicinity of many heritage temples. The temple enjoys a decent rush of domestic pilgrims throughout the year. Most of the domestic pilgrims come from the regions of Andhra Pradesh, Kerala and Karnataka and from in and around other districts of Tamil Nadu. The temple enjoys very little attention from foreign tourists accounting for ~1% of the total tourists in 2019, from Sri Lanka, Malaysia, Singapore. The temple's review and its mentions as a religious tourist destination can be found on renowned travel referrals and review aggregators such as Lonely Planet, TripAdvisor, etc.

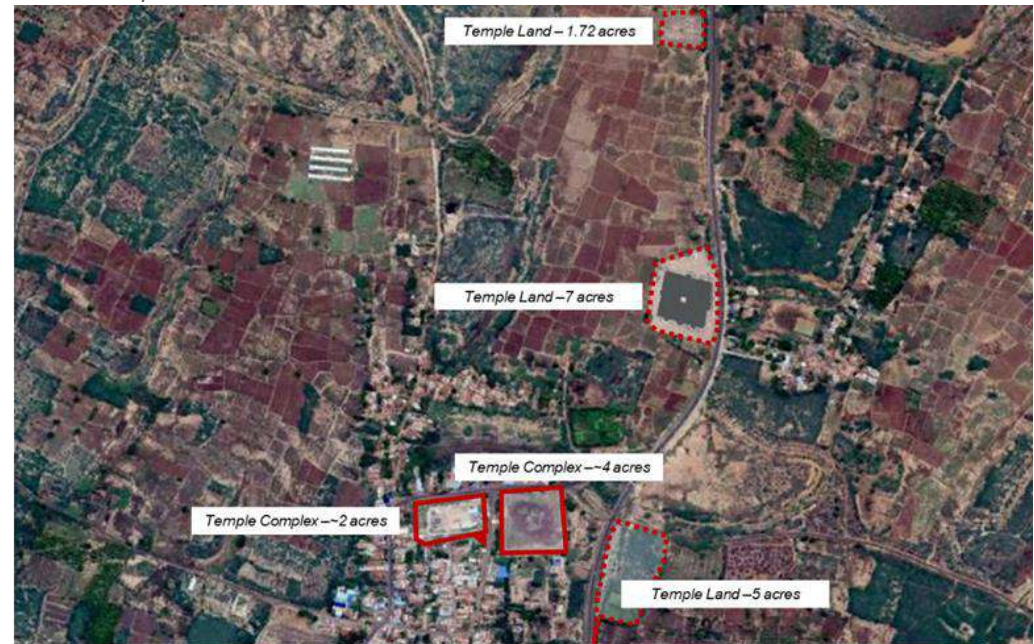
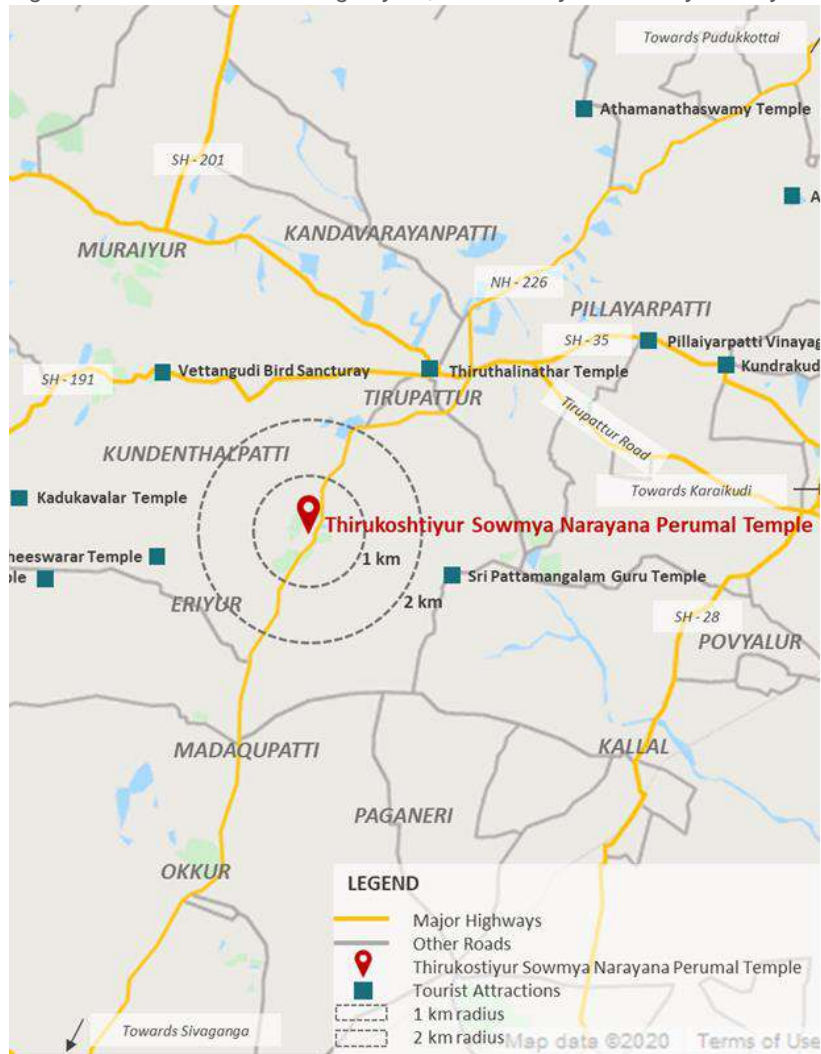
5. Activities- Every year millions of people assemble at Thirukoshtiyur for the temple float (thepposavam) event during the Tamil month of Maasi (Magha - mid-March). It is believed that one who takes the sacred lamp from the theppam and wraps it on a yellow cloth and worships the lamp at their home is blessed with the boon they seek, especially those wanting a child or a marriage. Once the wishes get fulfilled, the devotees return to the temple with the lamp and leave additional lamps as per their wish.

6. Accommodation- There are limited accommodation options available in Thirukoshtiyur. Also due to the lack of any other tourist destination within the town except for the temple, visitors do not prefer to stay in Thirukoshtiyur for more than a day. Karaikudi, located at ~30 km is a preferred destination by the tourists during their visits to this place. Karaikudi comprises numerous

accommodation options ranging from budget-friendly to 3- & 4-star hotels in the range of INR 700 to INR 3000 for AC room per night.

7. Association with Community - The people living in Thirukostiyur are employed for day-to-day activities and staff inside the temple. As well as the area outside the temple also comprises of 30 – 40 small shops, tea stalls, flower stalls, food stalls, etc. operated by the local people.

Figure 34-1: Location & Existing Layout, Thirukoshtiyur – Sowmya Narayana Perumal Temple



Site Pictures





Vision for the Site

Constructed in the Dravidian style of architecture, the temple is famous for Ashtangana Vimana above the presiding Perumal, just a couple of Vishnu temples have this Vimana. The temple has easy accessibility from Tirupattur, Madurai, Karaikudi via good highways.

Although the temple is well maintained and the temple authorities ensure the safety and security of the tourist, it has a major issue of parking spaces and lack of basic amenities like toilets and drinking water.

The vision for the Sowmya Narayana Perumal Temple is to develop it as a domestic/pilgrim tourist destination by improving existing infrastructure and basic amenities and effectively utilizing the available vacant parcels on the opposite side of the temple complex.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a very low tourism site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	75	147	256
High Value Tourists (HVT) (Both domestic and foreign)	1	2	3
Maximum Carrying Capacity	10,241		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The master planning approach at the site mainly deals with the provision of basic amenities around the site.

The objectives of master planning at this site include:

- **Renovating and cleaning** the temple complex.
- **Improving visitor's experience** at the temple by providing all the basic amenities such as rest areas, toilets, etc. on the vacant land available.
- Developing **pilgrim recreational spaces** on available vacant land.
- **Rejuvenation of the temple tank** to improve the aesthetic of the surroundings.

Hard Interventions

1. **Rejuvenation of Temple Tank** – Currently the temple tank is underutilized, and it has the potential to be developed as a public space. The idea here is to rejuvenate its lost charm and create a better public space for the temple visitors. It can be done by creating a paved walkway around the tank along with soft landscaping with grass/alike elements and provision of an adequate number of dustbins spread across the temple tank area. Regular cleaning and maintenance of the tank is also required.

Infrastructure Created:

- Steps ~3,300 sqm
- Soft landscaping ~300 sqm
- Solar streetlights- 5
- Dustbin-2

2. **Recreation Space with Landscaped Garden** - A major part of vacant land located on the eastern side of the temple complex will be developed as a garden area that will not only provide a recreational space for locals but also act as a resting place for the visitors. The garden will be developed with proper landscape and seating arrangement. It will have temporary shaded areas in the form of

canopy structures or gazebos, tensile sit-outs adorned with beautifully carved pathways. The landscaping will feature native and religious flowers and bushes, and should, as far as possible, be the least maintenance-oriented and be self-sustainable. This shall thus create a visual treat for the visitors.

Infrastructure Created:

- *Softscape – 4700 sqm*
- *Footpath – 300 sqm*
- *Temporary Seating – 10*
- *Solar Streetlights- 5*
- *Dustbins-2*

3. **Paved Parking Space** – Currently there is no provision for parking near the temple, a dedicated parking facility can be developed on the vacant land available one block away on the eastern side of the temple.

Infrastructure Created: ~ 50 ECS paved parking area



Reference images for Temple Tank Rejuvenation



Reference images for Garden Area

Soft Interventions

1. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “own your street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
2. **Promotion** –The department should promote Sowmya Narayana Perumal Temple and events/activities held here, in the TN Assist app and on its various platforms, following the site changes.
3. **Conservation of Temple’s Architecture-** It is observed that the renovation work has been started. The temple has a rich connection to the history and great architectural features in it Astha Vimana which is not demonstrated anywhere at the temple. Development of informative signages talking about the temple’s history, the legends connected along with the temple, its architectural features, etc. can be beneficial in spreading the knowledge about the temple. Local communities can also be deployed as guides at the temple who can talk and demonstrate about the temple.

Amenities Plan

1. **Toilet-** There is no provision of public toilets inside or outside the temple. The toilet blocks can be constructed on the vacant land available near the proposed garden area. Maintenance should be ensured by the operating authority. The design for toilet blocks is mentioned in design guidelines. The location of the toilet shown in the master plan is an indicative representation.

Infrastructure Created: ~30 sqm (1 block with separate male-female toilet)

2. **RO Drinking Water Facility-** There is only 1 RO drinking water facility at the entrance of the temple complex, which is insufficient and inconvenient for tourists. Therefore, an additional facility should be installed at the rear side of the temple complex for tourist convenience.

3. **Solar Streetlights** - The site is observed to be dull during the night. Sustainable means can be adopted, and the streets can be kept illuminated by deploying solar streetlights. Solar streetlights can be funded jointly by the temple authorities and the local bodies.

Infrastructure Created: Solar Streetlights 10 Units

4. **Signage (Package 1)** – Few direction boards can be installed indicating the directions for the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Rejuvenation of Temple Tank <ul style="list-style-type: none"> • Steps • Soft landscaping 	3,300 sqm 300 sqm
2	Recreation Space with Landscaped Garden <ul style="list-style-type: none"> • Softscape • Footpath • Temporary Seating 	4700 sqm 300 m 10
3	Paved Parking Space	50 ECS
4	Toilet Blocks	30 sqm
5	Dustbin	4
6	RO Drinking Water Facility	1
7	Solar Streetlights	20
8	Signage (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple Tank - Landscaping	1
2	Temple Tank - Steps	33
3	Garden - Landscaping	4
4	Garden - Footpath	6
5	Garden - Seating	1
6	Paved Parking Space	14
7	Toilet Blocks	5
8	Dustbin	1
9	RO Drinking Water Facility	3
10	Streetlights	1
11	Signage (Package 1)	1
Total		INR 70 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

- Parking** – Capturing 50 ECS at 20% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1 Lakh.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses

such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

4. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
5. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
6. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 3 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple Tank - Landscaping	1	Y0 – Y2	HR&CE
2	Temple Tank - Steps	33	Y0 – Y2	HR&CE
3	Garden - Landscaping	4	Y0 – Y2	HR&CE
4	Garden - Footpath	6	Y0 – Y2	HR&CE
5	Garden - Seating	1	Y0 – Y2	HR&CE
6	Paved Parking Space	14	Y0 – Y2	HR&CE
7	Toilet Blocks	5	Y0 – Y2	HR&CE
8	Dustbin	1	Y0 – Y2	HR&CE
9	RO Drinking Water Facility	3	Y0 – Y2	HR&CE
10	Streetlights	1	Y0 – Y2	HR&CE
11	Signage (Package 1)	1	Y0 – Y2	HR&CE
Total		INR 70 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,000¹³⁴ man-days of construction labour (spread across 1-2 years of implementation)

¹³⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹³⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 7,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 25 Cr. at the site¹³⁶.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹³⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹³⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 34-2: Proposed Master Plan – Thirukoshtiyur – Sowmya Narayana Perumal Temple



35. Srivilliputhur Andal Temple, Virudhunagar

Site Details

District	Virudhunagar
Name of Site	Srivilliputhur Andal Temple
Site No:	Site 235 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	9.5082, 77.6308
Land Area:	6.05 acres+ ~10.56 acres other lands
Peak footfalls:	3 Lakh per day (December- January, March- April, June)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 8.7 lakhs (2019 - 20) For. – 528 (2019 – 20)
Site Revenues:	2.79 Crores
Site Orientation	Pilgrim
Site Potential:	Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~2 km from Srivilliputhur Railway Station
b. Airport:	~75 km from Madurai International Airport
c. Highway:	~200 m from SH-42, 100m NH-208
d. Other:	Nil
Trails featured on:	Divya Desam

Srivilliputhur Andal temple, constructed in the Dravidian style of architecture, is one of the 108 Divyadesam dedicated to Lord Vishnu, who is worshipped here as Vadapathrasayi and his consort Lakshmi as Andal. This temple is one of the grand temples symbolizing the age-old matured culture and stands majestically as a proud tradition. While it is well-connected and enjoys a decent number of domestic footfalls, the temple lacks in terms of provision of adequate infrastructural facilities and appropriate use of its spaces at the time of the festival. The scope for interventions at the temple is focused on Improving visitor's experience with the provision of amenities and utilization of available vacant land for different facilities.

Existing Condition

Location

The Srivilliputhur Andal temple is located in the town of Srivilliputhur. It is situated ~ 50 km southwest of Virudhunagar, ~100 km south of Madurai along Kollam – Thirumangalam Highway. The temple is present in a mixed-use neighbourhood and is surrounded by many retail shops, houses and institutional buildings. Few other prominent tourist attractions near the temple are Tirumalai Srinivasa Perumal Temple, Sri Vaidyanatha Swamy Temple, Ayyanar Waterfalls and Kaatalagar Temple.

Existing Layout and Uses

The temple occupies an area of ~6.05 acres with one of the tallest Rajagopuram in Tamil Nadu. The temple is divided into two divisions, on Southwest Andal is located and the Vatapatrasayi (Vishnu) is located in the Northeast direction. A granite wall surrounds the temple enclosing all its shrines and the garden where Andal was found along with two waterbodies.

- The walls around the shrine have paintings of the life of Andal. The second hall from the entrance towards the sanctum is the Kalyana Mandapa which has life-size sculptures of Mohini, Rama, Kamadeva, Rati and many other deities.

- The Vatapatrasayi division has two precincts. The sanctum in the second level can be approached through a flight of steps, it has the image of Vatapatrasayi in a reclining posture.
- The sanctum has three doorways providing the view of the presiding deity. The hall leading to the sanctum, Bhopala villam, has detailed teak wood carvings depicting incidents from the Puranas and the ten avatars of Vishnu, the Dashavatara. The ceiling also has a set of decorative carvings.
- The temple houses some rare Vijayanagara sculptures similar to the ones in Soundararajaperumal Temple, Thadikombu, Krishnapuram Venkatachalapathy temple, Alagar Koyil and Jalakandeswarar Temple, Vellore.

The temple is currently used for religious purposes mainly. It also conducts the daily activity of Annadhanam for the devotees and less fortunate ones. The temple arranges Thirupaavai competition during Thirukalyanam, where students can participate. Other uses housed in the temple complex are Mandapams, open area, offices of the administrators, annadhanam, utility area and various other Shrines. Some of the festivals conducted at the site are Aadi Pooram, Margazhi Yennai Kaapu and Thiru Kalyanam.

Other Land Available

In addition to the temple complex of 6.05 acres, the temple also owns various parcels of land nearby as follows:

- Parking area – ~1.5 acres
- Temple Tank area – ~7 acres
- Unused Vacant Land – ~ 1 acre
- Guest House – ~0.06 acres
- Maidan – ~1 acre

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. **Tamil Nadu Combined Development and Building Rules 2019** - The site lies in the **Existing Residential Zone** as per the Srivilliputhur Master Plan. The permissible uses include- Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The greatest attraction of Srivilliputhur Andal temple is the Rajagopuram of the temple with eleven tiers and 192" height being among the tallest temple towers in Tamil Nadu. The temple signifies the ancient Tamil architecture; it symbolizes the age-old matured culture and stands majestically as a proud tradition. The temple has inscriptions from Chola, Pandya and Nayak rulers, spanning across various centuries. The sculptures and ancient drawings are the heritage recognized by the Government of Tamil Nadu.
2. **Accessibility** – The Srivilliputhur Andal temple is located along Kollam Thirumangalam Highway (NH-208). Pilgrims majorly use public buses and private transport. The access road from NH-208 goes through a congested area. Cabs/taxi services are available for the temple from nearby cities like Madurai,

Virudhunagar, Rajapalayam. Srivilliputhur Bus stop is located within ~850m from the site.

Parking – Designated parking space is available, vehicles are usually parked outside the temple complex with the parking fee of the car (INR 50) and bus (INR 100), 2W (INR 10). However, there is an issue of road congestion due to on-street parking during the peak season.

3. **Amenities** – As a popular tourist destination, the temple has a par - developed ecosystem of infrastructure earmarked for public amenities.

- There is no tourist information centre available.
- Signages are present at all key areas and entry/exit points within the temple complex. However, they are available only in the Tamil language across the site.
- There are 3 urinals, 6 toilets and 2 bathrooms for the tourists, they were observed to be unclean and not maintained.
- The temple premises are observed to be clean. However, there is a lack of dustbins at the temple complex.
- Free drinking water facility is not available.
- The temple site also has a provision of the cloakroom and ticketed footwear stand.
- 64 CCTVs are installed at tourist-gathering spaces and entry/exit points. The pilgrims are also scanned and checked upon entering the temple.
- The Site boundaries are walled with adequate lighting along with deployment of 8 security guards and 3 police (2 shifts).
- Fire safety equipment like extinguishers is installed and emergency exit routes are marked.
- There is 2 prasadam stall located inside the temple complex.
- The temple has a backup power facility with 1 generator of 63 KV.
- Wheelchairs/ Ramps are provided for divyang and senior citizens.

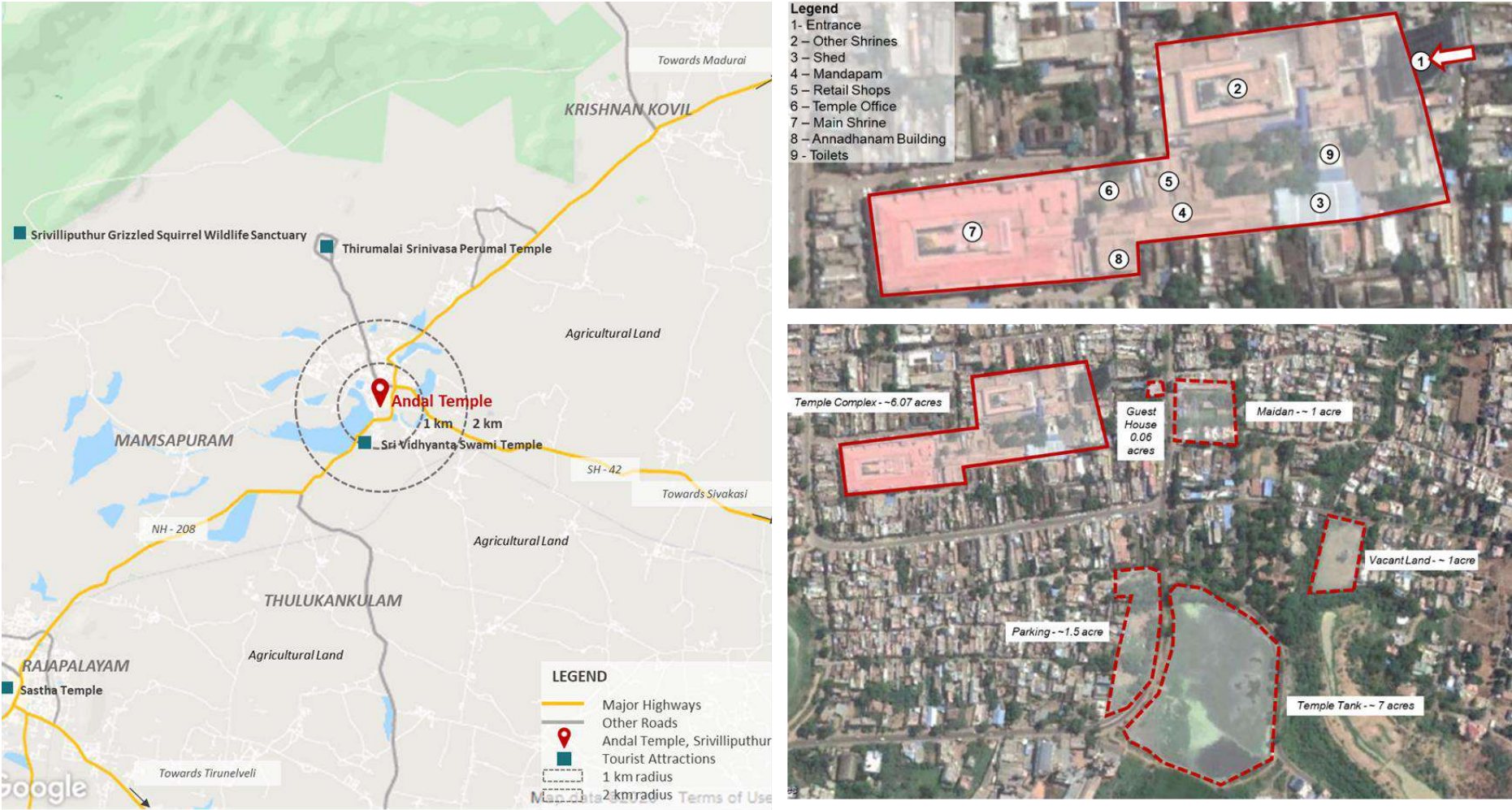
4. **Awareness**- The temple is a popular religious tourist destination amongst Vaishnav tourists from Kerala, Andhra Pradesh and Maharashtra. The temple finds mention in renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor etc. The temple is known for its tall rajagopuram and few trekking destinations around it.

5. **Activities**- On normal days, the temple does not offer any activities. However, the car festival is one of the grandest festivals celebrated at this temple. During this festival, Sri Andal's, as well as Lord Rajamannar's idols, are taken out in a procession on the streets. Thirupaavai competition during Thirukalyanam is arranged by the temple authority where students partake and win prizes.

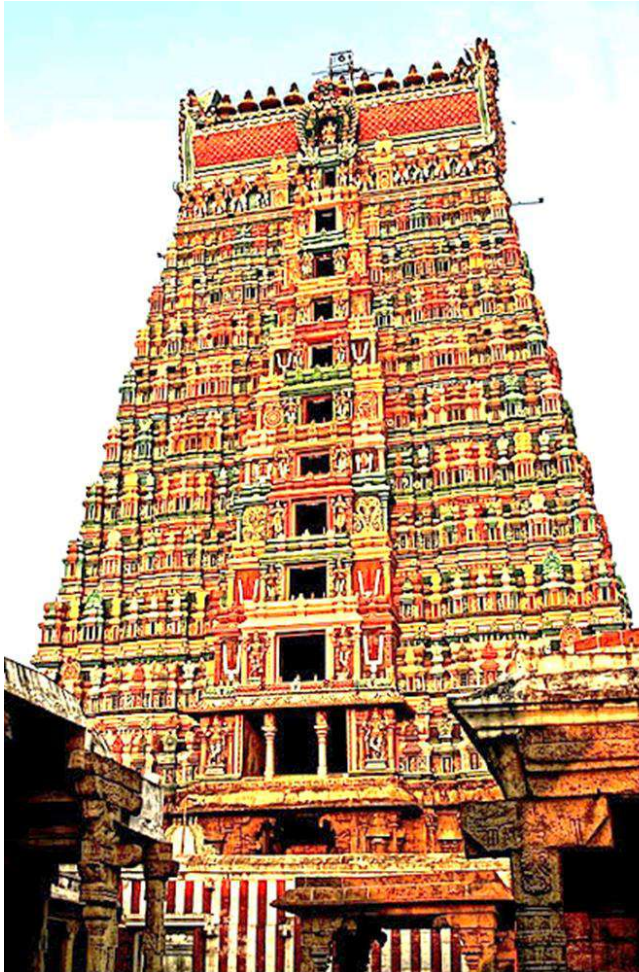
6. **Accommodation**- There are 4 – 5 lodges and budget-friendly accommodation options available for the tourists, within the range of INR 600 – INR 1000. Few of the decent accommodation options are available at Rajapalayam (~11 km) and Sivakasi (~20 km) which range from INR 700 – INR 2000.

7. **Association with Community**- The Increased tourism activity at the peak season benefits the locals and more people can be trained and involved in the process too. This place provides ample opportunity for entrepreneurs by prowling around Rajapalayam, which is an industrial hub for textiles, handloom and cement. Sivakasi is also located nearby, a well-known manufacturing centre for match boxes, fireworks and litho printing.

Figure 35-1: Location & Existing Layout, Srivilliputhur Andal Temple



Site Pictures



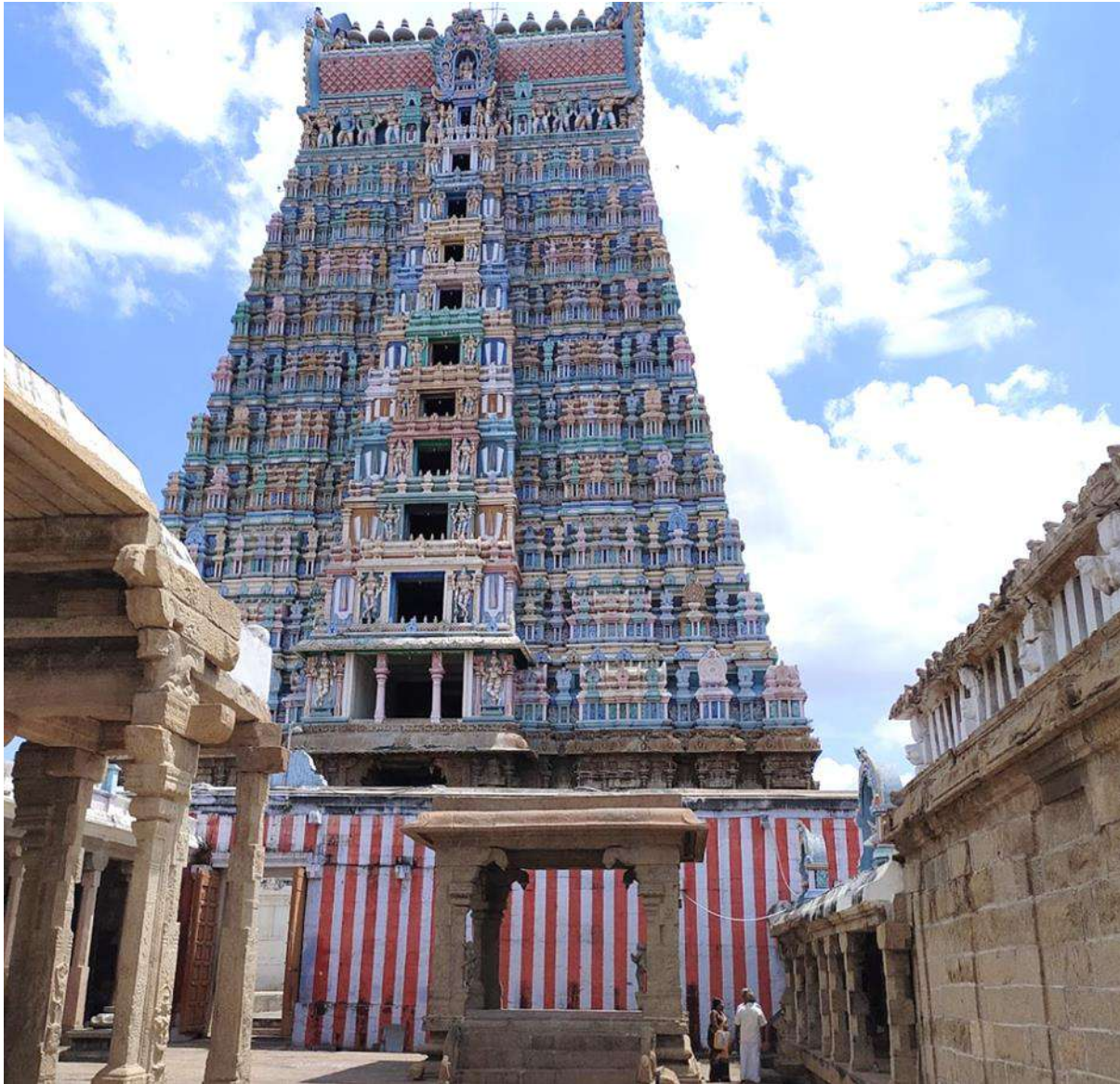
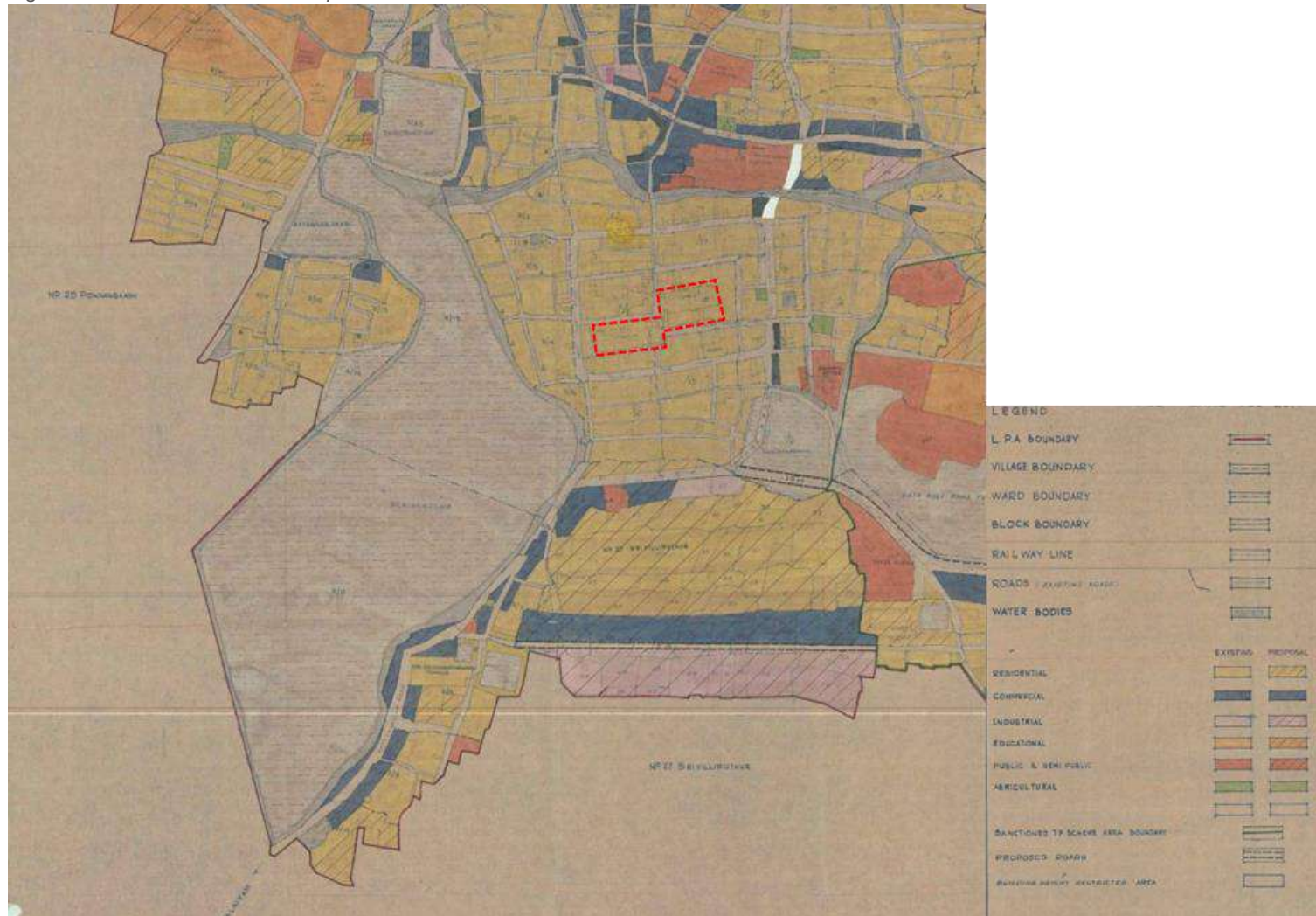


Figure 35-2: Site Land Use- Srivilliputhur Master Plan



Vision for the Site

The temple's uniqueness stems from its architecture and intricate carvings, depicting various deities. The greatest attraction is the Rajagopuram of the temple with eleven tiers and 192" height it is one of the tallest towers of temples in Tamil Nadu. The temple provides various facilities to its visitors. However, being situated in a dense settlement, the approach road to the temple is highly congested due to vehicles parked on-street and retail shops on both sides of the road. This causes inconvenience to the tourists and pilgrims. As a tourist magnet, the temple faces issues about inadequate parking despite having a dedicated parking space.

The temple has huge potential to provide a great experience to tourists along with its beautiful architecture and rich history. The temple has the opportunity to utilize the vacant land that the temple authority owns in various parcels, for the development of necessary amenities for the tourists.

Given that the site is popular and religiously significant, interventions should be planned with the perspective of improving the visitor's experience. Besides, the development aims to provide amenities such as multi-level car parking to cater to parking issues and a facilitation center to engage with the historical background of the temple.

- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws a good number of tourists – both foreign and domestic.
Given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.
The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a low tourism site with low HVT potential.
Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	870	2490	5591
High Value Tourists (HVT) (Both domestic and foreign)	1	3	6
Maximum Carrying Capacity	78,779		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

The objectives of Master planning at this site include:

- **Improving visitor's experience** at the temple through improved conveniences, and amenities.
- **Rejuvenation of the temple tank** to provide an additional recreation space.
- Development of a **Pilgrim Resthouse (Yatri Niwas)** at the available vacant land on the northern side for pilgrims.
- Construction of **multilevel car parking (MLCP)** to reduce road congestion and parking created by the tourist during the peak season.

Hard Interventions

1. **Yatri Niwas** – A Yatri Niwas for pilgrim accommodation should be developed at the vacant land northern side near the temple tank area. The Yatri Niwas can be developed with good landscaping areas around in traditional south Indian

architectural style using local materials. The proposed yatri niwas is a G+2 structure with a holding capacity of 50 keys which will include:

- 8 VIP/VVIP AC rooms with attached washrooms - These rooms will be spacious with better in-house amenities and facilities.
- 2 dormitories
- 25 AC rooms with attached washrooms.
- 15 non-AC rooms with attached washrooms.
- A dining hall with a kitchen for tourists and visitors to the temple for dine-in on an ala-carte basis.
- Landscaping area.

Infrastructure Created:

- Built-up area- 5400 sqm G+2 building (1800 sqm each floor)
- Softscape- 1400 sqm
- Hardscape- 2000 sqm

- 2. Multilevel Car Parking (MLCP)** – Despite having a dedicated car parking area, the temple faces huge congestion issues. As there is limited vacant land available around the temple premises, therefore an MLCP is proposed to be located on the additional 1-acre maidan located opposite the temple complex. The MLCP is proposed for 120 ECS with a G+2 structure, further, the floors can be added in the future according to the requirement of the site.

Infrastructure Created: 3000sqm BUA, G+2 building (1000sqm each), 120 ECS

- 3. Tourist Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, information centre, galleries to display and showcase temple importance and architecture and waiting room. It will be a standalone building placed at the entrance of the temple adjacent to the temple tank. This development will be as per the design guidelines.

Infrastructure Created: ~150 sqm of BUA

- 4. Temple Tank Rejuvenation** – Currently the temple tank is underutilized, and it has the potential to be developed as a public space. The idea here is to rejuvenate its lost charm, recharge the water with sustainable techniques like rainwater harvesting and create a better public space for the locals and temple visitors. It can be done by creating a paved walkway along the northern edge of the temple tank with soft landscaping with grass/alike elements and provision of

adequate number of dustbins spread across the temple tank area. Regular cleaning and maintenance of the tank is also required

Infrastructure Created:

- Paved walkway ~300 m. length and 3m wide
- Steps-5800 sqm
- Dustbins-2
- Streetlights-8



Reference images for Yatri Niwas



Reference images for Multi-Level Car Parking



Reference images for temple tank rejuvenation

Soft Interventions

1. **Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail.
2. **Crowd Management** – As the access road is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
 - Access timings can be made exclusive for high-value tourists.
3. **Curation of facilitated tours** – Incorporate the site in Virudhnagar temple tour. These will be facilitated with licensed tour guides and hop on hop off services.

Amenities Plan

1. **Signage (Package 2)** – Package 2 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
2. **Dustbins** – Dustbins must be provided in sufficient quantity. This is important to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines.
Infrastructure Created: 10 units around the entire temple premise.
3. **Drinking Water Facility**- As the temple is one of the significant temples and has a peak footfall of 3,00,000 people per day, therefore, a sufficient RO drinking water facility should be developed within the temple complex.
4. **General Site Landscaping** –Strategic site landscaping has been done on the vacant maidan area near the proposed MLCP to make the area attractive. This green cover will ensure rainwater absorption into the ground, air purification, reduction of ambient noise and temperature.
Infrastructure Created: Softscape- 350 sqm | Pathway - 150 m

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Yatri Niwas (50 Keys)- <ul style="list-style-type: none"> • Built-up area (G+2) • Softscape • Hardscape 	5400 sqm 1400 sqm 2000 sqm
2	Multilevel Car Parking (MLCP) (G+2)	120 ECS
3	Tourist Facilitation Centre (Type 1)	1
4	Temple Tank Rejuvenation- <ul style="list-style-type: none"> • Paved walkway • Steps • Streetlight 	300 m 5800 sqm 8
5	General Site Landscaping- <ul style="list-style-type: none"> • Softscape • Pathway 	350 sqm 150 m
6	Signage (Package 2)	1
7	Dustbins	12
8	Drinking Water Facility	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of interventions.

#	Project Component	Cost (INR Lakhs)
1	Facilitation centre (Type 1)	16
2	Yatri Niwas	750

#	Project Component	Cost (INR Lakhs)
3	Yatri Niwas - landscaping	7
4	MLCP	450
5	Temple tank - Paved walkway	6
6	Temple tank - steps	58
7	Temple tank - street lights	1
8	General site landscaping	1
9	Pathway	3
10	Signage -1	1
11	Dustbins	1
Total		INR 13 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs per annum.
- Yatri Niwas** – Capturing 50 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.

- Parking** – Capturing 120 ECS at 10% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1.7 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **Helpdesk staff** at the facilitation centre.
 - A **security personnel** each at the MLCP and the Yatri niwas.
 - An **Administration staff** to overlook the operations of the Yatri niwas.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.

3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 1.5 Cr.*

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the 3-year lease cap implemented by the HR & CE dept., PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR & CE dept. itself.

However, it is recommended to give out operations and management of the Yatri niwas at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Facilitation centre (Type 1)	16	Y0 – Y2	HR & CE
2	Yatri Niwas ¹³⁷	750	Y5 – Y7	HR & CE
3	YatriNiwas - landscaping	7	Y5 – Y7	HR & CE
4	MLCP ¹³⁷	450	Y5 – Y7	HR & CE
5	Temple tank - Paved walkway	6	Y0 – Y2	HR & CE
6	Temple tank - steps	58	Y0 – Y2	HR & CE
7	Temple tank - street lights	1	Y0 – Y2	HR & CE
8	General site landscaping	1	Y0 – Y2	HR & CE
9	Pathway	3	Y0 – Y2	HR & CE
10	Signage -1	1	Y0 – Y2	HR & CE

¹³⁷ The development of the proposed components can be taken up at later phases based on the increase in future footfalls.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
11	Dustbins	1	Y0 – Y2	HR & CE
Total		INR 13 Cr.		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 55,500¹³⁸ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 36 man – days per day¹³⁹
- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days per day¹⁴⁰

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of

2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 1,37,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 560 Cr. at the site¹⁴¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

¹³⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹³⁹ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

¹⁴⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁴¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 35-3: Proposed Master Plan – Srivilliputhur Andal Temple



36.Ninra Narayana Perumal Temple, Thiruthangal

Site Details

District	Virudhunagar
Name of Site	Ninra Narayan Perumal Temple
Site No:	Site 236 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	9.48230, 77.81130
Land Area:	2 acres
Peak footfalls:	3,000 per day (During festivals)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 2.14 lakhs (2019 - 20) For. – Nil (2019 – 20)
Site Revenues:	~12 lakhs
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~500m from Thiruthangal Railway Station
b. Airport:	~70 km from Madurai International Airport
c. Highway:	~200 m from SH-42, 20 km from NH-44
Trails featured on:	Divya Desam

Ninra Narayana Perumal Temple (also called as Nindra Narayana Perumal temple) or Thiruthankaal is dedicated to the Hindu god Vishnu. Constructed in the Dravidian style of architecture, the temple is one of the 108 Divyadesam temples. Lord Vishnu is worshipped here as Ninra Narayana and his consort Lakshmi as Arunakamala Mahadevi. While the temple enjoys a decent number of domestic footfalls, it lacks in terms of the provision of visitor engagement activities. The scope of intervention at this site is limited to maintenance and up-gradation of existing facilities.

Existing Condition

Location

Ninra Narayana Perumal Temple is located in Thiruthangal, a municipality in Virudhunagar district. It is situated ~25 km southwest of Virudhunagar and ~4.5 km north of Sivakasi. The immediate surroundings of the temple include small shops and F&B outlets. It is easily accessible through the State Highway-42 running from Virudhunagar to Tirunelveli. Several prominent tourist landmarks located nearby are Sri Bhadrakali Amman Temple, Arulmigu Thoppu Karuppasamy Kovil, Vadakathiamman Temple and Theppakulam Virudhunagar.

Existing Layout and Uses

The temple occupies an area of ~2 acres. It is built on a granite hill 100 ft. (30 m) tall, and a granite wall surrounds the temple, enclosing all the shrines and waterbodies. The temple is located opposite of Karunellinathar temple, a famous Shiva temple and can be reached from that temple on the hillock.

- The rajagopuram is located on the southern side of the temple complex. It has a flat structure, compared to other South Indian temples with steep structure.
- The sanctum is guarded by imposing images of Dwarapalakas, which are believed to be constructed during the rule of Sattur Kolarapatti. The sanctum houses eleven images of Ninra Narayana Perumal, Markendeya, Garuda, Aruna, Viswakarma, Bhudevi, Sridevi on the right and Neeladevi, Usha, Aniruddha and Bhrgu to the left.
- The roof over the sanctum is called Somachandra Vimana. It is similar to the ones in Srirangam Ranganathaswamy temple and Alagarkovil.
- The images of Nardanakrishnan, Andal, Durga and Vinayaka are seen on the precinct around the sanctum, while the image of Azhwars is housed in the hall leading to the sanctum.
- The consort of Ninra Narayana, Aruna Mahadevi (also called "Shenbagavalli") has a separate shrine in the second tier.
- A cave temple on the lower tier, bearing the traces of Pandyan art, is located to the West of Kalyana Mandap.

The temple is currently used for religious purposes mainly. It is also used for the daily activity of Annadhanam for the devotees and less fortunate ones. Other uses housed in the temple complex are mandapams, open area, offices of the administrators, annadhanam Building, theppam and other Shrines. Some of the festivals conducted at the site are Margazhi Vaikunta Ekadasi, Purattasi 5 Saturday and Aadi Brahmotsavam.

Other Land Available

In addition to the temple complex of ~2 acres, the temple also owns 107 acres of agricultural land in the outer region of Thiruthangal.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. **Tamil Nadu Combined Development and Building Rules, 2019** – The master plan for Thiruthangal Municipal Area is not available at the moment. It is therefore difficult to judge the land use zone and permissible uses applicable at the site.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The unique feature of Sri Ninra Narayana Perumal Temple is that Garuda is seen along with his traditional enemy, 'The Serpent Lord Aadhiseshan'. Another attraction is the Thaayarin standing posture facing her thirumugam along the East direction. This is the only temple where the thaayar is found in a standing position, all the other sthalams have Thaayar in a sitting position.
The temple pond here is known as paapa vinasa theertham. A bath in the pushkarni is believed to provide moksham for the devotees after death. Built in a cave, the temple provides a beautiful view of the town from the top. It can be visited in conjunction with the Srivilliputhur Andal temple and Sahasta Falls in one day.
2. **Accessibility** – Sri Ninra Narayana Perumal Temple can be accessed via Madurai - Sivakasi Highway. The major modes of transport people use to commute to the site include tour bus, autos and taxi. Thiruthangal bus stop is located ~140 m from the temple. There is an auto stand at the site and the cab (Ola/Uber) services are also available.

Parking – There is no designated parking space available, vehicles are usually parked outside the temple complex along the road corners, street side and near the Theppam. Such parking arrangements often create congestions during the festival period and blocks the narrow roads.

3. Amenities – The temple is a popular tourist destination in the district. It is equipped with a few basic-level amenities within and around the temple.

- There are 2 to 3 painted signages available only in the Tamil language inside the temple.
- There are 2 toilets and 2 bathrooms are provided at the site; however, they were observed in obsolete condition.
- Free RO drinking water is available at the site.
- The temple premise is adequately clean and dustbins are installed in adequate numbers.
- 7 CCTV cameras cover all key areas, entry/exit points; however, there is a requirement for more CCTV cameras at the site.
- 3 security guards are deployed at the site.
- Site boundaries are walled, with adequate streetlights observed in the area.
- Fire safety equipment like fire hoses and extinguishers are provided.
- There is no built/shaded space for tourists to rest, in and around the temple.
- The site does not have any retail outlet within the temple complex.

4. Awareness- Ninra Narayana Perumal Temple is considered to be one of the oldest and must-visit Divya Desam which has 11 idols in one place. The temple enjoys a decent rush of domestic tourists throughout the year. Most of the domestic tourists come from the regions of Andhra Pradesh, Kerala, Karnataka and Tamil Nadu. The temple review and its mentions as a religious tourist destination can be found on renowned travel referrals and review aggregators such as Lonely Planet, TripAdvisor, etc.

5. Activities- On a normal day, the temple does not offer any special activity. However, The Vaikasi Vasanthotsavam, Pillai Lokacharyar festival and Kurathazhwar festival, each celebrated for ten days are the most prominent festivals of the temple, and for the surrounding villages. Vaikasi Vasanthotsavam is celebrated during the Tamil month of Vaikasi (May–June) when devotees pull the chariot around the streets of Thiruthangal. Verses from

Nalayira Divya Prabandham are recited by a group of temple priests amidst music with Nagaswaram (pipe instrument) and Taval (percussion instrument).

6. Accommodation- There are limited accommodation options available in Thiruthangal near the temple. The available accommodation is few lodges. A variety of accommodation options are available at Sivakasi (~4 km) in the form of budget-friendly hotels and lodges. The accommodations at Sivakasi range from INR 700 – INR 1800 per night.

7. Association with Community - The temple has very little association with the community. There are shops owned by the town residents around the temple, certain staff employed inside the temple belongs to the town, etc. The most highlighted point from the local surveys for enhancing tourism at the site were developing appropriate amenities and reduce on street parking.

Figure 36-1: Location & Existing Layout, Ninra Narayana Perumal Temple



Site Pictures





Vision for the Site

Ninra Narayana Perumal Temple has three inscriptions in its two rock-cut caves, dating from the period 8th century. The temple is located on a 30m hillock providing a beautiful view of the settlement around. This temple is located near Srivilliputhur Andal temple and Sahasta Falls, so it can also be covered in the same journey.

The temple is a popular tourist destination in the district, but it is lacking with adequate facilities. Owing to the location of the temple amidst a dense residential area, there are no land parcels available for further development near the temple site. Also, inducing further crowds might be a nuisance for residents.

The vision for the site is to develop it as a domestic/pilgrim tourist destination by improving existing infrastructure, basic amenities and enhancing the visitors' experience.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas [as well as from rest of Tamil Nadu and other south Indian states] due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyang and elderly).

- **Tourist Projections** – The site is categorized as a very low tourism site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	214	424	737
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	19,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The master planning approach at the site mainly deals with the provision of basic amenities around the site.

The objectives of master planning at this site include:

- **Maintenance** of temple spaces and promote a clean environment.
- Provision of **basic amenities** for visitors.
- **Cleaning of the temple tank** to enhance its beauty.

Hard Interventions

1. **Temple Tank Rejuvenation** – As observed on the site, the temple tank had a thick cover of algae on it. Moreover, the area is not well maintained, which makes it difficult to access the holy water in the tank. Therefore, to restore the beauty of this huge temple tank, cleaning of the tank is proposed. Aquatic plants that purify water can be planted in the temple tank to keep it clean and healthy.

Infrastructure Created: Cleaning of 200 sqm of water tank

Soft Interventions

1. **Parking-** There is no provision of parking space. As a result of which the visitors usually park on a narrow road adjacent to the temple adding to the issues of congestion. An effective parking management strategy would manage the street congestion during peak tourist season. Owing to its location in a dense

neighbourhood few of the parking strategies can be adopted for better management.

- Shared parking options for locals and visitors can be explored in consultation with the local bodies.
- Preferential parking for high occupancy vehicles.

2. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “Own your Street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
3. **Site management** – The site must be managed by the respective temple management authorities to maintain the cleanliness in and around the site and conserve the aesthetic feature of the temple, etc.

Amenities Plan

1. **Technology Interventions (Package 1)** –Although the temple has 7 CCTV there is a requirement for more CCTV cameras at the site. The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Electronic Visitor Counter at the entry point.
 - TN Assist App integration at the site, with an internet connection and QR scanner.
 - CCTV coverage at up to 3 more locations.
2. **Signage (Package 1)** – Signages can be installed along the approach roads and on the prominent sites within the vicinity, indicating the presence of the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines .

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Temple Tank Rejuvenation (Only cleaning of the tank)	200 sqm
2	Signage Package 1	1
3	Technology Package 1	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple Tank cleaning	0 (Included in OPEX)
2	Signage Package 1	1
3	Technology Package 1	1
Total		INR 1 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- All revenues are unescalated.*

d) *Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of

broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 1 Lakh.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple Tank cleaning	0	Y0 – Y2	HR&CE
2	Signage Package 1	1	Y0 – Y2	HR&CE
3	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 1 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 45¹⁴² man-days of construction labour (spread across 1-2 years of implementation)

¹⁴² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁴³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 115 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 74 Cr. at the site¹⁴⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

○ Assumed cost of labour assumed for computation = INR 700 per day

• Cumulative labour man-days = 30% * CAPEX / 700

¹⁴³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁴⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 36-2: Proposed Master Plan – Ninra Narayana Perumal Temple



37. Adi Jagannatha Perumal Temple, Thirupullani

Site Details

District	Ramanathapuram
Name of Site	Adi Jagannatha Perumal Temple
Site No:	Site 250 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	9.2829,78.8249
Land Area:	2.3 acres + 7.7 acres
Peak footfalls:	~2 lakh per month (November & June)
Operator:	Ramanathapuram Samasthanam (Private Trust) & HR & CE Dept.
Site Ownership:	Ramanathapuram Samasthanam (Private Trust).
Tourist Footfall:	Dom. – 3.8 Lakh (2019 - 2020) For. – Nil (2019)
Site Revenues:	INR 60 Lakhs (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	10 km (Ramanathapuram)
b. Airport:	97 km (Madurai)
c. Highway:	0.7 km from SH-49
d. Other:	Nil
Trails featured on:	Ramayana, Divya Desam

Situated near Ramanathapuram, Adi Jagannatha Temple is one of the 108 Divya Desam temples dedicated to Lord Shiva in Tamil Nadu. The temple is of significant religious value due to its historical links with Ramayana. The temple does not receive high footfalls and is dependent on the Ramanathaswamy temple in Rameswaram for visitors. Built in the Dravidian style of architecture, the temple captivates its visitors with its structural beauty. However, this temple is ill-maintained and requires renovation. The temple has high potential to attract tourists, after the temple is maintained well and provided with better amenities.

Existing Condition

Location

The temple is located in Thirupullani, which ~11 km from Ramanathapuram and ~62 km from Rameswaram. The temple can be accessed from NH-32 which connects the temple to the nearby cities / towns. The major important tourist destinations and landmarks around the temple are:

- Uthirakosamangai temple (~11 km)
- Ramanathapuram Palace (~12 km)
- Government Museum, Ramanathapuram (~11 km)
- Ramanathaswamy temple (~62 km)

Existing Layout

Located in a calm and peaceful surrounding, Adi Jagannatha Temple is built in the Dravidian style of architecture, covering an area of 2.3 acres. The temple is however in an ill-maintained state and needs revamping. The temple is located next to a large temple tank surrounded by vacant land. Apart from the main shrine, the temple complex houses the mandapam, temple office, store room, toilet block, RO plant and a well.

Existing Uses

- The temple is a pilgrim destination and is majorly visited by pilgrims coming from the much more famous Ramanathaswamy Temple. This temple is mainly used to offer prayers to Lord Shiva.
- The vacant land near the temple site is used as a paid parking lot, where the fees are collected by local panchayat.
- The vacant land near the temple tank is used by locals to play sports and hold cultural events.

Other Land Available

The temple complex occupies an area of ~2.3 acres. Including the temple complex, the temple owns around ~10 acres of land in the vicinity. Out of the 10 acres, most of the land is occupied by the temple and temple tank. The remaining land is being used for staff quarters, retail shops and storage facility. Some vacant land is available near the temple tank towards the northern end.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TNHRCE Rules, 1959**
 - a. The allowed set of modifications / additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification / addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR&CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists
 - d. The HR&CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

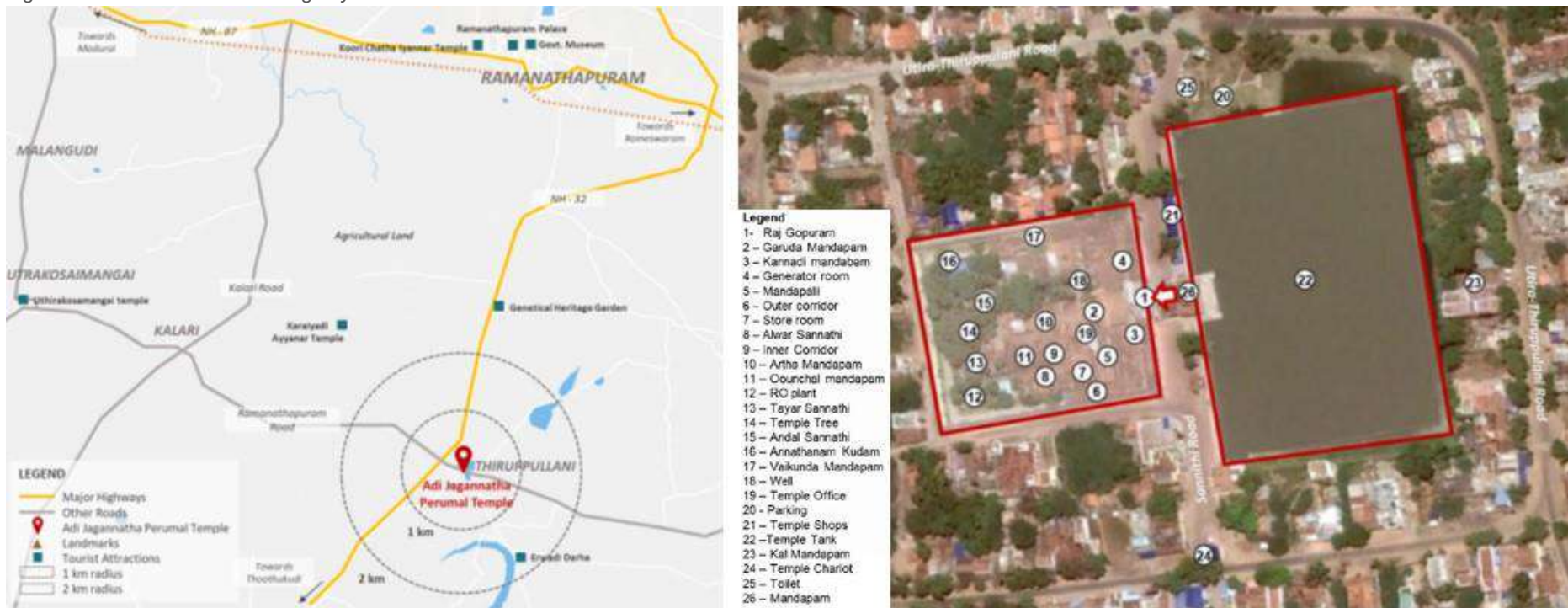
The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The Temple is a popular pilgrim destination for devotees of Lord Vishnu as well as Lord Rama. Pilgrims from all over the country visit this temple as a part of their trip to the Ramanathaswamy temple in Rameswaram. Apart from being an important site in Hindu mythology, the temple is known for its architectural excellence. With tall gopurams, multiple mandapams and beautiful Teerthams the temple houses various architectural elements. With inscriptions and scriptures that date back to the Chola period, this temple is a treat for any history enthusiast.
2. **Accessibility** – The temple is located on the Utira - Thiruppulani Rd about 11 km from Ramanathapuram, ~52 km from Kanyakumari. The temple easily accessible to nearby towns/cities via NH-32.
3. **Amenities** – Very few basic tourist amenities are available within and around the temple. The condition of existing amenities is inadequate. Signages present in the site are in Tamil language. Directional signage needs improvement.
 - Designated parking lot near the temple tank with a capacity of ~30 cars.
 - The toilet facility within the premises is inadequate and needs reconstruction.
 - No wayfinding or informational signages are present within or around the site
 - Insufficient number of F&B kiosks are there within the temple site.
 - Many temple buildings are in dilapidated condition and need conservation.
4. **Awareness** – The site is visited mainly by locals and few regional tourists, mainly from Tamil Nadu, Andhra Pradesh, Kerala, Karnataka. It is recommended by renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc.
5. **Activities** – On normal days, the temple does not offer any activities. The priests perform rituals (Poojas) on daily basis.

6. **Accommodation** – There are no accommodation options available for pilgrims near the temple site. The nearest lodging options are available in Ramanathapuram, which is ~11 km from the site. The town mostly has budget hotels with room tariffs ranging from INR 700 to INR 1,900 .

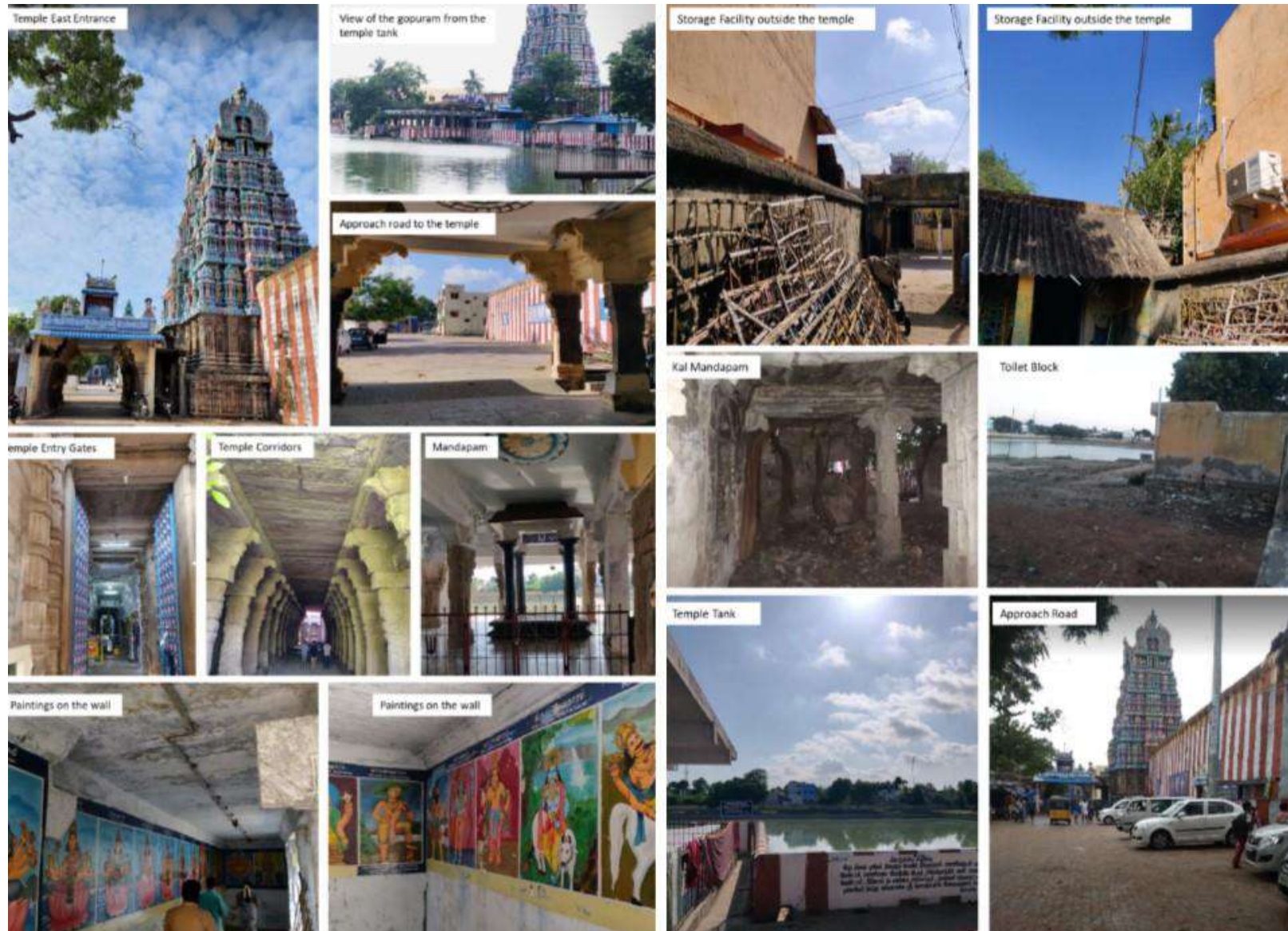
7. **Association with Community** – The temple is visited on a daily basis by the locals. During the peak seasons, especially during the 10-day chariot festival, most locals participate in the temple activities. Locals come up as volunteers for security during festive season.

Figure 37-1: Location and Existing Layout



Site Pictures





Vision for the Site

The temple holds a religious value as it is one of the oldest Shiva Temples and one of 108 Divya Desams. Considering the existing advantages of the temple, such as:

- Location of the temple (The temple is placed strategically next to the temple tank, providing a picturesque view.)
- Availability of land (The temple has vacant land available for interventions in close proximity.)

As well as its weaknesses and limitations, such as:

- Dilapidated structures (Some of the structure within the temple complex are in dilapidated condition and need renovation)
- Low footfalls (The temple, despite being historically and architecturally significant, depends on Ramanathaswamy Temple for pilgrim footfall.)

The temple site is envisioned to be developed for improved visitor experience by improving the existing structures and addition of public amenities to the existing infrastructure.

- **Target Visitor** – The site is largely a pilgrim site, with fair number of footfalls from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **very Low Tourism Site** with **Low HVT potential**. Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)
---------	----------------------------

	Current	Y5 (P)	Y10 (P)
Domestic	380	752	1,309
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	9,060		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through revamping the temple structures and adding missing public amenities.
- The site to be developed as a community congregation space for pilgrims and locals.

Hard Interventions

1. **Renovation of Boundary Wall** – The boundary wall of the temple is in dilapidated condition and needs renovation. The temple boundary wall to be rebuilt as per the design guidelines.

Infrastructure Created: ~370 m of brick wall

2. **Temple Tank Rejuvenation** - The temple tank is located on the eastern side, towards the entrance of the temple site. As an added attraction, the water tank can be developed into a landscaped garden, with additional elements of seating, lighting fixtures along the tank. The temple tank would be cleaned and revived to function as a Community congregation space, and host cultural events.

Infrastructure Created: ~570 sqm of soft landscaped areas, 17,500 sqm of tank cleaning

3. Amenities Block – A Facilitation Centre with an inquiry desk, luggage room, changing room, and rest / waiting area for visitors' convenience, on the ground floor. This development will be as per the design guidelines.

Infrastructure Created: ~150 sqm of BUA

4. Yatri Niwas – An affordable accommodation facility for pilgrims touring the temples can be developed on the vacant land available near the temple site. Provision of Yatri Niwas in proximity to the site could enhance the overall tourist experience. A small facility of 8 – 10 keys would be provided on upper floors of the proposed Amenity block, detailed as per the design guidelines.

Infrastructure Created: ~300 sqm of BUA

5. Public Plaza – The temple has available vacant land nearby, which can be used to create space for public gatherings. A paved public plaza close to the parking area would be created for events and functions. The plaza could be used by regulated vendors to setup F & B kiosks, which would be an added attraction for the temple. The open space could also be used as a holding area during peak season.

Infrastructure Created: ~1100 sqm of paved plaza



6. Parking – The vacant land near the temple tank is designated for parking cars and buses. The access street is also used by visitors for parking their private vehicles. This vacant land parcel could be developed into a paved parking lot with organised car parking of ~30 cars. An additional car parking of 25 cars, to be created near the proposed Amenities block and Yatri Niwas, for the visitors using the accommodation facility.

Infrastructure Created: ~800 sqm of paved parking near Temple Tank, ~ 840 sqm of paved parking near proposed Amenities block

7. Renovation of Mandapam – The structures inside the temple complex in dilapidated condition and need renovation. The Mandapam could be remodelled to enhance its aesthetic value. The supporting pillars could be refurbished to strengthen the structural components of the Mandapam.

Infrastructure Created: ~360 sqm of BUA

8. Recreational Space - A landscaped garden to be developed near the proposed Amenities block and Yatri Niwas. A public recreation space, which can be used by pilgrims as well as locals. The garden to be equipped with additional elements such as naturally shaded seating, dustbins etc. The garden to be detailed as per the design guidelines.

Infrastructure Created: ~350 sqm of landscaped area



Soft Interventions

1. Site Promotion – Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events,

associated festivals, etc. which can help publicize, increase awareness by integrating it as part of Ramanathapuram and Rameswaram circuits.

2. **Temple building conservation** - The temple, built in Dravidian architectural style, is of significant importance. Being under the influence of various dynasties, the temple houses various inscriptions and paintings depicting the rich cultural history. Preservation of the ancient sculptures, inscriptions, and paintings (Mooligai paintings - made from natural herbs) within the temple is required. Conservation measures have to be adopted to preserve the 'Elandhai maram' – an endangered species of plant within the temple premise.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
2. **Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per design guidelines .
3. **Streetlighting** – Streetlights could be installed at all sites that are accessible after sunset, to ensure safety and security. Ornamental light-post with energy-efficient luminaries and solar panel integrated system could be installed. The fixtures to be installed as per design guidelines .
4. **Technology Interventions (Package 1)** - A basic package of technology integration could be installed at the temple site. These include:
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Renovation of Boundary Wall	370m
2	Amenities Block	150 sqm
3	Yatri Niwas	300 sqm
4	Temple tank rejuvenation <ul style="list-style-type: none"> • Cleaning of temple tank • Landscaping 	1100 sqm 130 m
5	Public Plaza	1100 sqm
6	Parking <ul style="list-style-type: none"> • Amenities Block Parking • Public Plaza Parking 	840 sqm 800 sqm
7	Renovation of Mandapam and Toilet Block	360 sqm
8	Recreational Space	350 sqm
9	Signage Package 1	1
10	Dustbins	2
11	Streetlights	10
12	Technology (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Boundary wall renovation	20
2	Facilitation centre (Type 1)	16
3	Yatri Niwas	150
5	Parking	26
6	Paved area	3

#	Project Component	Cost (INR Lakhs)
7	Landscaped area	1
8	Temple tank cleaning	0 (Included in OPEX)
9	Mandapam renovation	36
10	Streetlights	4
11	Signage -1	1
12	Technology - 1	1
Total		INR 2.5 – 3 Cr

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted in this computation.
- Estimated revenue projections are pegged at **Y5** (end of short-term).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs p.a.
- Yatri Niwas** – 10 keys with average yearly occupancy of 60%, at INR 1750 per room and additional revenues of 20% over room revenues.
- Parking** – 55 ECS at 30% occupancy per day with 2 rotations, at INR 15 / ECS.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 45 Lakhs.

Note that the following existing revenues, if any, are not included:

- Prasadam sale
- Puja tickets

- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan. Any existing OPEX is not considered in this section.
- The expense projections are pegged at **Y5** (end of short-term).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - Helpdesk staff** at the facilitation centre.
 - security personnel** each at the parking and the Yatri niwas.
 - Administration staff** to overlook the operations of the Yatri niwas.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses

such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 40 Lakhs*.

Note the following existing OPEX, if any, are not considered:

4. Salaries and perks of existing employees
5. O&M cost of existing site and facilities
6. Regulatory fee, if any

Phasing & Funding Agencies

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

¹⁴⁵ The development of the proposed component can be taken up at later phases based on the increase in future footfalls.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the conservative protocols of the Ramanathapuram Samasthanam (Temple Trust), PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by Temple Trust itself.

However, it is recommended to give out operations and management of the Yatri niwas at the site to private operators for better efficiency and long-term sustainability.

Phasing of Development

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Boundary wall renovation	20	Y0 – Y2	Temple Trust
2	Facilitation centre (Type 1)	16	Y0 – Y2	Temple Trust
3	Yatri Niwas ¹⁴⁵	150	Y5 – Y7	PPP - OMT
5	Parking	26	Y0 – Y2	Temple Trust
6	Paved area	3	Y0 – Y2	Temple Trust
7	Landscaped area	1	Y0 – Y2	Temple Trust
8	Temple tank cleaning	0	Y0 – Y2	Temple Trust
9	Mandapam renovation	36	Y0 – Y2	Temple Trust
10	Streetlights	4	Y0 – Y2	Temple Trust
11	Signage -1	1	Y0 – Y2	Temple Trust
12	Technology - 1	1	Y0 – Y2	Temple Trust
Total		INR 2.5 - 3 Cr		

Impact on Communities:

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 10,900¹⁴⁶ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 7.2 man-days per day
- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁴⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 27,300 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site. It is expected that the additional visitors will generate an additional spending of INR 131 Cr. at the site¹⁴⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹⁴⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁴⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁴⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 37-2: Proposed Master Plan – Adi Jagannatha Perumal Temple



38. Thiru Varagunamangai Perumal Temple -, Thoothukudi

Site Details

District	Thoothukudi
Name of Site	Thiru Varagunamangai Perumal Temple, Chandran Sthalam
Site No:	Site 261A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6370, 77.9240
Land Area:	0.9 acres + 5 acres + 35 acres
Peak footfalls:	10,000 per day (May – June)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 96,500 (2019 - 2020) For. – 150 (2019 - 2020)
Site Revenues:	INR 13 Lakhs (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	3 km (Srivaikuntam)
b. Airport:	24 km (Tuticorin)
c. Highway:	3 km from SH-40
Trails featured on:	Divya Desam

Thiru Varagunamangai Perumal Temple is the second of the Navagraha temples and is known for “horoscope correction” pooja for planet moon. The temple is majorly visited by people residing in and around the region. The temple is remotely located in lush green vegetation and is currently incurring great revenue losses. Furthermore, the temple is small and not as architecturally significant as other Navagraha temples. Therefore, it is more dependent on other Navagraha temples for tourist footfalls and does not hold much potential as a standalone site. The site can be developed for improved visitor experience and tourist amenities for Navagraha circuit.

Existing Condition

Location

Thiru Varagunamangai Perumal Temple is located in Natham on the northern side of Thamirabarani River. It is located 24 km from Tirunelveli in Thoothukudi district and about ~2 kms East from Srivaikuntam in the Tirunelveli-Thiruchendur route in Tamil Nadu. Other Navagraha temples located nearby are –

- Thirupulingudi Perumal Temple– ~1 Km
- Vaikuntanathan Perumal Temple– ~1.6 km
- Alwarthirunagari Perumal Temple– ~4 km
- Sri Vaithamanidhi Perumal Temple– ~5 km

Existing Layout

The temple occupies an area of ~0.9 acres, enclosed by a granite wall. The temple complex houses a kitchen, step well and a garden, apart from the main shrine. The toilet block is located outside the temple complex, opposite to the Rajagopuram, along with a storeroom. The last ~200m access pathway to the temple is an unpaved road, which is also used as the parking area. A stepwell is located to the north of the

main temple. The temple also houses palm trees in the west and the south across the main road.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. It has 6 daily rituals and few events during festive days. The temple is maintained and administered by the TVS Trust and HR & CE Department. The temple has the following infrastructure dedicated for public services.

- Events – mandapams
- Toilets

Other Land Available

In addition to the temple complex of 0.9 acre, the temple also owns 5 acres land. This area also has palm trees in the north which can be developed into a garden area. The temple also owns 0.9 acres in the west and 1.3 acres of palm trees in the south across the road.

In addition to these 6 acres of land adjacent to the temple, the temple also owns 35 acres of agricultural land 5 km away from the temple complex.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

3. **ASI Regulations** – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:
 - a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to 100 m in all directions)
 - b. Reconstruction or repairs or renovation of existing buildings within the prohibited area, requires prior permission from the Competent Authority under the act.
 - c. Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

Key Sensitivities

There is no specific environmental/ social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Thiru Varagunamangai Perumal Temple is the second of the Nava Thirupathi Kshetras, dedicated to Lord Vishnu. This temple is dedicated to the moon and also classified as one of the 108 Divya Desams. Srivaikuntam temple and Thirupulingudi Perumal Temple, also one of the Nava Tirupati temples is located at a distance of 1 km and can be easily visited along with Thiru Varagunamangai Perumal Temple.
2. **Accessibility** – The Thiru Varagunamangai Perumal Temple can be accessed from Tirunelveli and Thiruchendur via SH 40 and Srivaikuntam-Eral road. Bus ply at regular interval from Srivaikuntam. It is majorly accessed through private vehicles. The last ~300 m road leading up to the temple is narrow and unpaved.

3. **Amenities** – Few basic tourist amenities are available within and around the temple site.

- No tourist information centre is available.
- No wayfinding signages or informative signage boards are available for the site.
- No luggage, cloak room or free drinking water facilities are available for pilgrims.
- No drinking water facility available near temple site.
- No retail or F&B kiosks are present near the temple site.
- No divyaang friendly infrastructure is present within the temple complex.
- Inadequate condition of dustbins in temple complex.

Parking- The vacant land near the temple site is currently used for parking.

4. **Awareness** – The temple ranks 5th in the Navagraha temples majorly visited by locals from nearby villages. During festive season, it is majorly visited by domestic tourist residing in Tamil Nadu, Karnataka and Andhra Pradesh and foreign tourist from Sri Lanka, Malaysia, and Japan. The temple is yet to find mention in popular international travel journals such as Lonely Planet and CN Traveller. A common website is maintained by the Hindu Religious & Charitable Endowments Department for the Nava Tirupati temples.

5. **Activities** – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as music, dance recitals, etc. within the temple. There are tour guides available at Alwarthirunagari Perumal Temple for the entire Navagraha circuit, covering this temple as well

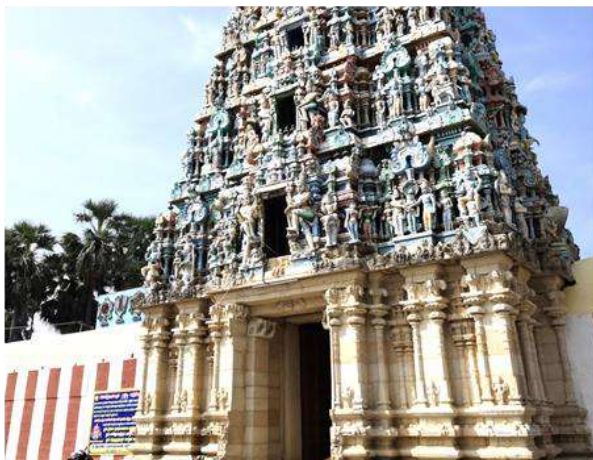
6. **Accommodation** – There is no accommodation facility available nearby for visitors and tourists. Since the time spent at the temple is not more than 1 hour (on non-festive occasions) and 1.5 hour (on festive occasions), visitors tend to either return to Tirunelveli/Srivaikuntam for stay or other Navagraha temples after visiting this temple.

7. **Association with Community** – Thiru Varagunamangai Perumal Temple is located in a remote area with hardly any habitation around. The daily footfall in the temple is extremely low. Therefore, there is limited involvement of the community inside the temple. Locals are seen drinking liquor in the temple surrounding areas at night.

Figure 38-1: Location and Existing Layout



Site Pictures



Vision for the Site

The temple holds a religious value as it is the second of the Nava Thirupathi Kshetras, the nine temples revered by Azhwar saints, dedicated to Lord Vishnu. It is also classified as one of the 108 Divya Desams.

Considering the existing site situation for the temple as:

- The locational setting of the temple: Remotely located amidst the rural setup, in outskirts of Srivaikuntam.
- Connectivity: The Navagraha temples are located at ~1.5 - 2 hours travel distance from Srivaikuntam, which can be the starting point due to presence of Railway Network.
- Proximity with other Navagraha temples: The temple is located at a distance of ~2 km radius from Srivaikuntanathan Perumal Temple and Thirupuliyangudi Perumal Temple.
- Availability of land: The temple has vacant land available for development of amenities for pilgrims visiting the Navagraha circuit.

As well as the weaknesses and limitations associated with the site such as:

- The temple is not well known and dependent on other Navagraha temples for tourist footfalls and does not hold much potential as a standalone site.
- The temple structure lacks in maintenance due to lack of funds.

The temple site is envisioned to be developed by improving the site's overall appearance and vibrancy, as well as for development of pilgrim facility for Navagraha circuit. Development of new facilities for pilgrims can be used as opportunity to generate additional revenue for the temple.

- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	96	223	442
High Value Tourists (HVT) (Both domestic and foreign)	0	1	2
Maximum Carrying Capacity	3,545		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through improvement in site surroundings and aesthetics. Addition of basic amenities to improve overall visitor experience.
- Developing accommodation facilities, to be used commonly for the Navagraha circuit.

Hard Interventions

1. **Yatri Niwas** – Due to close proximity from Srivaikuntam, which is connected via railway network, an accommodation facility can be developed for pilgrims of Navagraha circuit. An affordable accommodation facility for pilgrims touring the Navagraha temples can be developed on the vacant land available near the temple site. A small facility of 8 – 10 keys would also be an added facility for the 'Cultural Hall' proposed in Srivaikuntanathan Perumal Temple, located ~2 km away. The tourist accommodation facility would act as a source of additional revenue for the temple.

Infrastructure Created: ~ 150 Sqm of BUA



Yatri Nivas

2. **F & B Kiosk** - The temple currently does not have any retail activity near temple site. F & B kiosk could be developed near the temple, which can be leased to local residents. The kiosk would generate additional revenue for the temple and would be added facility to the proposed Yatri Niwas. The kiosks would be developed for pilgrims as well as locals' convenience, as per the design guidelines.

Infrastructure Created: 2 units of 3 sqm each

3. **Temple Renovation and Maintenance** – The temple is 5000 years old and relatively under-developed compared to other temples in Navagraha Circuit. Hence requires the renovation and maintenance of the buildings in temple complex.
 - Proper fencing to be developed around the temple complex to avoid local interference and misuse of temple property.

- Paved walkway to developed round the temple pragharam, for ease of movement of pilgrims. Walkway of standard width of 2m to developed as per design guidelines.

Infrastructure Created: ~450 m of fencing, ~150 sqm of paved walkway

Soft Interventions

1. **Site Promotion** – As second in importance in the Nava Tirupati, the temple needs to be promoted to a wider audience. Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness about Navagraha Temples.
2. **Ticketed Parking** – The vacant land parcels near temple site is currently used as unpaved parking place for the temple. The vacant land parcels can be used as a dedicated parking spot for the temple. The ticketed parking facility would add on to the temple funds.
3. **General Landscaping - Strategic** tree plantation along the proposed paved pathway to create more shaded areas and make the site attractive. Resting areas in form of benches to be placed at desired location.
4. **Temple Security Personnel** – The temple area is often misused by locals for drinking liquor. A security guard at the site would prevent such activities on the temple site.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
2. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines.
3. **Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines in glossary of interventions.

4. **Streetlights** – The area has insufficient lighting in and around the temple. Provision of streetlights in and around the temple would ensure safety during night.
5. **Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Yatri Niwas	150 Sqm
2	F & B Kiosk	6 sqm
3	Fencing	450 m
4	Paved Walkway	150 sqm
5	Signage (Package 1)	1
6	Drinking Water Station	1
7	Dustbins	2
8	Streetlights	5
9	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Yatri Nivas	150
2	F&B kiosks	3
3	Fencing	14
4	Paved Walkway	3
5	Signage (Package 1)	1
6	Drinking Water Station	3
7	Dustbins	1
8	Streetlights	1
9	Technology Interventions (Package 1)	1
Total		INR 175 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **F&B Kiosks** – Captures 2 kiosks each to be rented out at INR 1.5 Lakhs per annum.
2. **Yatri Niwas** – Capturing 10 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 45 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** for the retail kiosks.
 - b. A **security personnel** at the Yatri niwas.
 - c. An **Administration staff** to overlook the operations of the Yatri niwas.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a

variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 25 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple as well as the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the 3-year lease cap implemented by the HR & CE dept., PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR & CE dept. itself.

However, it is recommended to give out operations and management of the Yatri niwas at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Yatri Niwas ¹⁴⁹	150	Y5 – Y7	PPP
2	F&B kiosks	3	Y0 – Y2	HR & CE
3	Fencing	14	Y0 – Y2	HR & CE
4	Paved Walkway	3	Y0 – Y2	HR & CE
5	Signage (Package 1)	1	Y0 – Y2	HR & CE
6	Drinking Water Station	3	Y0 – Y2	HR & CE
7	Dustbins	1	Y0 – Y2	HR & CE
8	Streetlights	1	Y0 – Y2	HR & CE

¹⁴⁹ The development of the proposed component can be taken up at later phases based on the increase in future footfalls.

¹⁵⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
9	Technology Interventions	1	Y0 – Y2	HR & CE
Total		INR 175 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 7,500¹⁵⁰ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 5 man – days per day¹⁵¹
- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁵²
- Retail and F&B spaces = 5 man-days per day¹⁵³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of

○ Assumed cost of labour assumed for computation = INR 700 per day

• Cumulative labour man-days = 30% * CAPEX / 700

¹⁵¹ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

¹⁵² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁵³ Assuming average 2.5 persons per kiosk / shop

2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 18,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 44 Cr. at the site¹⁵⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹⁵⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 38-2: Proposed Master Plan – Thiru Varagunamangai Perumal Temple



39. Srivaikuntanathan Perumal Temple- Suryan Sthalam, Thoothukudi

Site Details

District	Thoothukudi
Name of Site	Srivaikuntanathan Perumal Temple
Site No:	Site 261B of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6311, 77.9095
Land Area:	5 acres + 2.3 acres + 35 acres
Peak footfalls:	25,000 per day (May – June)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 3.4 Lakhs (2019 - 2020) For. – 233 (2019 - 2020)
Site Revenues:	INR 13 Lakhs (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	1.5 km (Srivaikuntam)
b. Airport:	24 km (Tuticorin)
c. Highway:	1 km from SH-40
Trails featured on:	Divya Desam

Srivaikuntanathan Perumal Temple is the first of the Navagraha temples. The temple is majorly visited by people residing in and around the region. The temple holds immense potential to act as a nodal station along with Thiru Varagunamangai Perumal Temple, for the 9 temples with developed facilities of conveyance, information centre and tour guides.

Existing Condition

Location

Srivaikuntanathan Perumal Temple is in Srivaikuntam, a small town in Thoothukudi district on the northern side of Thamirabarani River. It is located 22 km from Tirunelveli on the Tirunelveli-Thiruchendur route in Tamil Nadu. Other Navagraha temples located nearby are:

- Alwarthirunagari Perumal Temple – ~3.5 Km
- Sri Kailasanathar Temple – ~0.5 km
- Sri Vaithamanidhi Perumal Temple – ~5 km
- Vijayasana Perumal Temple – ~1.6 km
- ThiruPulingudi Perumal Temple – ~2.6 km

Existing Layout

The temple occupies an area of 5 acres, enclosed by a granite wall. The temple complex houses a cow shed, well and temple office (HR & CE), apart from the main shrine. The toilet block is located outside the temple complex at two locations. The temple is surrounded by dense residential setup on three sides and river Thamirabarani on the fourth (western) side. The temple tank is located ~ 200 m north of the temple site and is accessed by a narrow unpaved pathway, shaded with dense trees, along the river.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. It has 6 daily rituals and few events during festive days. The temple is maintained and administered by the TVS Trust and HR & CE Department. The temple has the following infrastructure dedicated for public services.

- Events –mandapams
- Toilets & Administrative office

Other Land Available

In addition to the temple complex of 5 acres, the temple also owns 2.3 acres land to the north of the complex with the temple tank and 35 acres of agriculture land available 4 km away.

Master Planning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019 – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

3. ASI Regulations – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:

- a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to 100 m in all directions)
- b. Reconstruction or repairs or renovation of existing buildings within the prohibited area, requires prior permission from the Competent Authority under the act.
- c. Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – Srivaikuntanathan Perumal Temple is the 1st in nine Navagraha temples and also one of the 108 Divyadesams, referred as Surya Sthalam. The temple overlooks Thamirabarani river with clean flowing water, thus providing picturesque views. Thiru Varagunamangai Perumal Temple and ThiruPulingudi Perumal Temple, also one of the Nava Tirupati temples are located within ~3 km radius and can be easily visited along with Thiru Varagunamangai Perumal Temple.
- 2. Accessibility** – The Srivaikuntanathan Perumal Temple can be accessed from Tirunelveli and Thiruchendur via SH 40 and Srivaikuntam-Eral road. It is majorly accessed through private/ rental vehicles.
- 3. Amenities** – Few basic tourist amenities are available within and around the temple site.
 - No tourist information centre is available.
 - No wayfinding signages or informative signage boards are available for the site. The signage present inside the temple for idols is in Tamil language.

- No luggage, cloak room or free drinking water facilities are available for pilgrims.
- No drinking water facility available near temple site.
- No retail or F&B kiosks are present near the temple site.
- No divyaang friendly infrastructure is present within the temple complex.

Parking- No parking available within temple complex. The access road is currently used for parking.

4. **Awareness** – The temple ranks 1st in the Navagraha temples and is majorly visited by devotees from the neighbouring districts. During festive season, it is majorly visited by domestic tourist residing in Tamil Nadu, Karnataka and Andhra Pradesh and foreign tourist from south east Asian countries and Japan. The temple finds mention in popular international travel journals such as Lonely Planet and CN Traveller. A common website is maintained by the Hindu Religious & Charitable Endowments Department for the Nava Tirupati temples.
5. **Activities** – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as music, dance recitals, etc. within the temple. There are 5 tour guides available at site for the entire Navagraha circuit, covering this temple as well.
6. **Accommodation** – There are few low budget accommodation facilities available nearby for visitors like dormitories and budget hotel with fixed tariff for A/C rooms as INR 1200 and normal rooms ranging from INR 750 to INR 1000. A wider range of options and 3- star hotels are available in Tirunelveli and Thiruchendur.
7. **Association with Community** – There is limited involvement of the community in the temple. Locals conduct marriages in the temple after receiving official certification from the government. The Thamirabarani river is used for bathing purposes by locals.

Figure 39-1: Location and Existing Layout



Site Pictures





Vision for the Site

The temple holds a religious value as it is the first of the Nava Thirupathi Kshetras, the nine temples revered by Azhwar saints, dedicated to Lord Vishnu. It is also classified as one of the 108 Divya Desams.

Considering the existing site situation for the temple as:

- The locational setting of the temple: located in the centre of Srivaikuntam city, near the riverbank with picturesque views.
- Connectivity: The Navagraha temples are located at ~1.5 - 2 hours travel distance from Srivaikuntam, which can be the starting point due to presence of Railway Network.
- Proximity with other Navagraha temples: The temple is located at a distance of ~3 km radius from ThiruPulingudi Perumal Temple and Thirupuliyangudi Perumal Temple.

The temple site is envisioned to be developed by improving the site's overall appearance and vibrancy, as well as for development of pilgrim facility for Navagraha circuit. Development of new facilities for pilgrims can be used as opportunity to generate additional revenue for the temple.

- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	340	788	1,561
High Value Tourists (HVT) (Both domestic and foreign)	1	1	2
Maximum Carrying Capacity	19,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through improvement in site surroundings and aesthetics. Addition of basic amenities to improve overall visitor experience.
- Developing community congregation facilities, which could be used by locals and pilgrims.

Hard Interventions

1. **Cultural Hall** – The mandapam in the temple site is used to host marriage functions for locals and pilgrims. A cultural facility to be developed within the temple complex to accommodate such gatherings. The hall would host gatherings in the cultural event like festivals and marriage celebrations. The cultural hall would be developed with basic infrastructure including toilet and drinking water facility. The added accommodation facility proposed in the Thiru Varagunamangai Perumal Temple can be used for hosting visitors.

Infrastructure Created: 150 sqm of BUA

2. **F & B Kiosk** - The temple currently does not have any retail activity within the temple site. F & B kiosk could be developed near the temple, which can be leased to local residents. The kiosk would generate additional revenue for the temple. The kiosks would be developed for pilgrims as well as locals' convenience, as per the design guidelines.

Infrastructure Created: 2 kiosks of ~9 sqm of BUA

3. Footwear Stand – A footwear stand to be provided at the temple entrance for the convenience of pilgrims. A module of footwear stands to be placed as per the design guidelines in glossary of interventions.

4. Temple Tank Rejuvenation – The area towards north of the temple houses the temple tank. As an added attraction, the water tank can be developed into a landscaped garden, with additional elements of pathways, lighting fixtures along the tank. Traditionally, the tanks were used to recharge the aquifer and maintain the ecological cycle. The temple tank would be replenished through rainwater harvesting measures and revived for same purposes. Alternatively, it could also function as a Community congregation space, and host cultural events.

Infrastructure Created: ~200 m of landscaping

5. Paved Pathway to Temple Tank - The temple tank is accessed from the temple area through an unpaved pathway running parallel to the river. The natural setting and picturesque views provide an opportunity to develop the trail as an added attraction to the temple.

Infrastructure Created: ~200 sqm of paved pathway

Soft Interventions

1. Site Promotion – As first in Navagraha Temples, the temple needs to be promoted to a wider audience. Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness about Navagraha Temples.

2. Ticketed Parking – The access roads to the temple site are currently used as parking place for the temple. The parking could be managed and charged by temple authority. The minimal charges levied would add to the temple revenue.

3. General Landscaping - Strategic tree plantation along the proposed paved pathway to create more shaded areas and make the site attractive. Resting areas in form of benches to be placed at desired location.

4. Temple Renovation and Maintenance – The temple is an older site and requires renovation and maintenance. The temple houses some ancient

paintings and carvings on walls, which are fading away. The restoration would attract more footfall in the temple.

Amenities Plan

1. Signage (Package 1) – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.

2. Drinking-Water Station – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines.

3. Dustbins – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines.

4. Streetlights – The area has insufficient lighting in and around the temple. Provision of solar streetlights in and around the temple would ensure safety during night.

5. Technology Interventions (Package 1): A basic package of technology integration could be installed at the temple site. These include:

- Electronic Visitor Counter at entry point
- TN Assist App integration at site, with internet connection and QR scanner
- CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Cultural Hall	150 Sqm
2	F & B Kiosk	9 sqm each
3	Footwear Stand	1 m
4	Temple Tank Rejuvenation <ul style="list-style-type: none"> • Cleaning of the tank 	3000 Sqm 200 m

#	Project Component	Scale
	• Landscaping	
5	Paved Pathway	200 sqm
6	Signage (Package 1)	1
7	Drinking Water Station	1
8	Dustbins	2
9	Solar Streetlights	5
10	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Cultural hall	40
2	F&B kiosks	3
3	Footwear stand	5
4	Temple tank landscaping	4
5	Paved Walkway	4
6	Signage (Package 1)	1
7	Drinking Water Station	3
8	Dustbins	1
9	Streetlights	1
10	Technology Interventions (Package 1)	1
Total		INR 60 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

- Kiosks** – Captures 2 kiosks, each to be rented out at INR 2 Lakhs per annum.
- Space on Hire** – Capturing 4 events per month at INR ~ 5,000 per event.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.

- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
 d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. An **Admin staff** to manage the operations of the Cultural hall.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
 The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 5 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple as well as the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the conservative protocols of the Temple Trust, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by Temple Trust itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Cultural hall	40	Y0 – Y2	Temple Trust
2	F&B kiosks	3	Y0 – Y2	Temple Trust
3	Footwear stand	5	Y0 – Y2	Temple Trust
4	Temple tank landscaping	4	Y0 – Y2	Temple Trust
5	Paved Walkway	4	Y0 – Y2	Temple Trust
6	Signage (Package 1)	1	Y0 – Y2	Temple Trust
7	Drinking Water Station	3	Y0 – Y2	Temple Trust

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
8	Dustbins	1	Y0 – Y2	Temple Trust
9	Streetlights	1	Y0 – Y2	Temple Trust
10	Technology Interventions (Package 1)	1	Y0 – Y2	Temple Trust
Total		INR 60 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,500¹⁵⁵ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁵⁶
- Retail and F&B spaces = 5 man-days per day¹⁵⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 6,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 155 Cr. at the site¹⁵⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

¹⁵⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁵⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁵⁷ Assuming average 2.5 persons per kiosk / shop

¹⁵⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 39-2: Proposed Master Plan – Srivaikuntanathan Perumal Temple



40. Thirupuliyangudi Perumal Temple- Bhudhan Sthalam, Thoothukudi

Site Details

District	Thoothukudi
Name of Site	Thirupuliyangudi Perumal Temple
Site No:	Site 261C of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6398, 77.9325
Land Area:	0.9 acres + 3 acres
Peak footfalls:	5,000 per day (May – June, September, December - January)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 66,500 (2019 - 2020) For. – 100 (2019 - 2020)
Site Revenues:	INR 13 Lakhs (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	3 km (Srivaikuntam)
b. Airport:	37 km (Tuticorin)
c. Highway:	4 km from SH-40
d. Other:	Nil
Trails featured on:	Divya Desam

Thirupuliyangudi Perumal Temple is the third of the Navagraha temples and is known for “horoscope correction” pooja for planet mercury. The temple is majorly visited by people residing in and around the region. The temple is remotely located in lush green vegetation and is currently incurring great revenue losses. Furthermore, the temple is small and not as architecturally significant as other Navagraha temples. Therefore, it is more dependent on other Navagraha temples for tourist footfalls and does not hold much potential as a standalone site. The site can be developed for improved visitor experience.

Existing Condition

Location

Thirupuliyangudi Perumal Temple is Located in Thirupuliyangudi on the northern side of Thamirabarani River. It is located 35 km from Tirunelveli in Thoothukudi district and about ~3 kms East from Srivaikuntam on the Tirunelveli-Thiruchendur route in Tamil Nadu. Other Navagraha temples located nearby are:

- Thiru Varagunamangai Perumal Temple – ~1.1 Km
- Vaikuntanathan Perumal Temple– ~2.6 km
- Alwarthirunagari Perumal Temple– ~3.5 km
- Sri Vaithamanidhi Perumal Temple– ~5 km

Existing Layout

The temple occupies an area of 0.9 acres, enclosed by a granite wall. The temple complex houses a kitchen, cow shed and a storeroom, apart from the main shrine. The toilet block is located outside the temple complex, near the main entrance. The temple is surrounded by agricultural land and some residential settlement. The temple also owns a small temple- Puliangudi Amman temple located on the north western side.

The temple tank is located towards north of the temple site and is accessed by unpaved pathway, shaded with dense trees.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. It has 6 daily rituals and few events during festive days. The temple is maintained and administered by the TVS Trust and HR & CE Department. The temple has the following infrastructure dedicated for public services.

- Events –mandapams
- Toilets
- Public Hall
- Temple Tank

Other Land Available

In addition to the temple complex of 0.9 acre, the temple also owns 3 acres of temple land with temple precinct, temple tank and public hall (stores and toilet block). The temple also owns a small temple- Puliangudi Amman temple on the north western side covering an area of 0.04 acres.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

3. ASI Regulations – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:

- a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to 100 m in all directions)
- b. Reconstruction or repairs or renovation of existing buildings within the prohibited area, requires prior permission from the Competent Authority under the act.
- c. Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

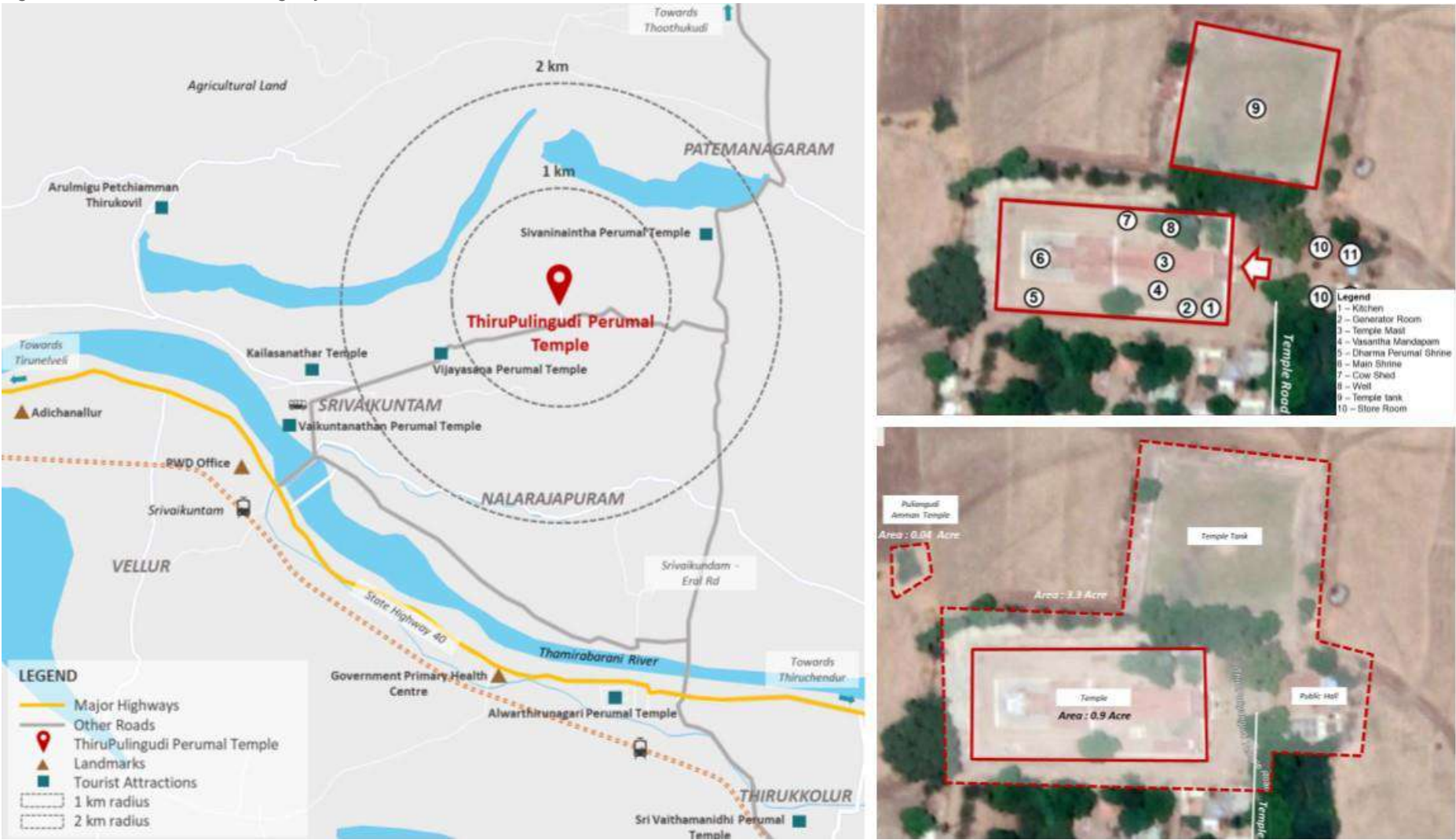
1. **Attraction** – Thirupuliyangudi Perumal Temple is the 3rd in nine Navagraha temples and also one of the 108 Divya Desams, referred as Bhudhan Sthalam. Thiru Varagunamangai Perumal Temple and Srivaikuntanathan Perumal Temple, also one of the Nava Tirupati temples are located within ~3 km radius and can be easily visited along with Thiru Varagunamangai Perumal Temple.
2. **Accessibility** – Thirupuliyangudi Perumal Temple can be accessed from Tirunelveli and Thiruchendur via SH 40 and Srivaikuntam-Eral road. It is majorly accessed through private/ rental vehicles.
3. **Amenities** – Few basic tourist amenities are available within and around the temple site.
 - No tourist information centre is available.

- No wayfinding signages or informative signage boards are available for the site. The signage present inside the temple for idols is in Tamil language.
- No luggage, cloak room or free drinking water facilities are available for pilgrims.
- No RO drinking water facility available near temple site.
- No retail or F&B kiosks are present near the temple site.
- No divyaang friendly infrastructure is present within the temple complex.

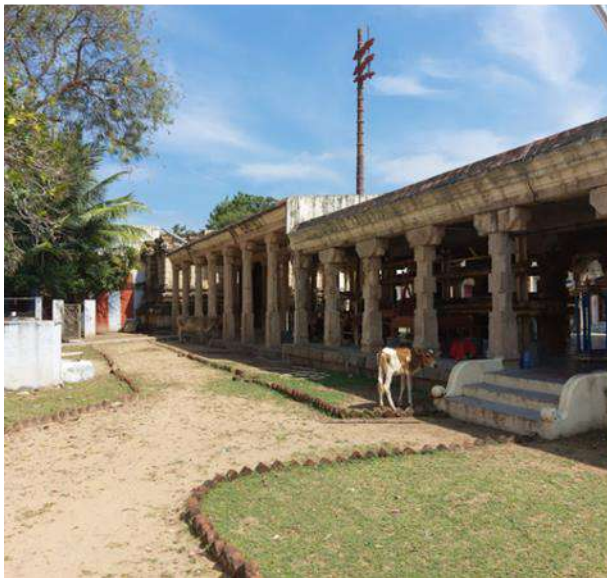
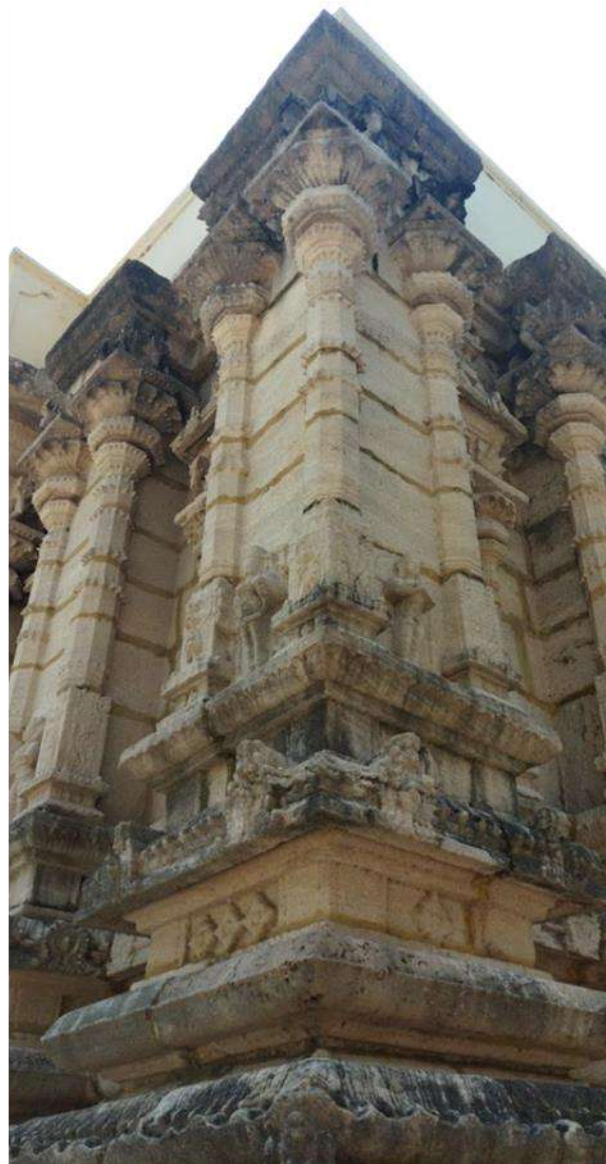
Parking- The vacant land near the temple site is currently used for parking.

4. **Awareness** – The temple ranks 3rd in the Navagraha temples and is majorly visited by devotees from the neighbouring districts. During festive season, it is majorly visited by domestic tourist residing in Tamil Nadu, Karnataka and Andhra Pradesh and foreign tourist from south east Asian countries and Japan. The temple finds mention in popular international travel journals such as Lonely Planet and CN Traveller. A common website is maintained by the Hindu Religious & Charitable Endowments Department for the Nava Tirupati temples.
5. **Activities** – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as music, dance recitals, etc. within the temple. There are 5 tour guides available at site for the entire Navagraha circuit, covering this temple as well.
6. **Accommodation** – There is no accommodation facility available nearby for visitors and tourists. Since the time spent at the temple is not more than 1 hour (on non-festive occasions) and 1.5 hour (on festive occasions), visitors tend to either return to Tirunelveli/Srivaikuntam for stay or other Navagraha temples after visiting this temple.
7. **Association with Community** – The temple is located in a remote area with hardly any habitation around. The daily footfall in the temple is extremely low. Therefore, there is limited involvement of the community inside the temple. Locals are seen drinking liquor in the temple surrounding areas at night.

Figure 40-1: Location and Existing Layout



Site Pictures



Vision for the Site

The temple holds a religious value as it is the Third of the Navagrahas, the nine temples revered by Azhwar saints, dedicated to Lord Vishnu. It is also classified as one of the 108 Divya Desams.

Considering the existing site situation for the temple as:

- The locational setting of the temple: Remotely located amidst the rural setup, in outskirts of Srivaikuntam.
- Connectivity: The other Navagraha temples are located at ~1.5 - 2 hours travel distance from Srivaikuntam, which can be the starting point due to presence of Railway Network.
- Proximity with other Navagraha temples: The temple is located at a distance of ~3 km radius from Srivaikuntanathan Perumal Temple and Thiru Varagunamangai Perumal Temple
- Availability of land: The temple has vacant land available for development of amenities for pilgrims visiting the Navagraha circuit.

As well as the weaknesses and limitations associated with the site such as:

- The temple is not well known and dependent on other Navagraha temples for tourist footfalls and does not hold much potential as a standalone site.
- The temple structure lacks in maintenance due to lack of funds.

The temple site is envisioned to be developed by improving the site's overall appearance and vibrancy. Upgradation of existing facilities and improving connectivity would attract more visitors.

- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	66	154	305
High Value Tourists (HVT) (Both domestic and foreign)	0	0	1
Maximum Carrying Capacity	3,545		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through improvement in site surroundings and aesthetics. Addition of basic amenities to improve overall visitor experience.
- Developing community congregation facilities, which could be used by locals and pilgrims.

Hard Interventions

1. **Upgradation of Public Hall** – Upgradation and maintenance of public hall which houses storage, kitchen area and toilets. Addition of waiting area and administrative office to the facility
Infrastructure Created: 300 sqm of BUA

- 2. Paved Access Road - The** temple is accessed through a narrow unpaved pathway which forms an uninviting entrance. A paved ~200m pathway to be created for easy and welcoming access to the temple site.

Infrastructure Created: 170 sqm of paved road

- 3. Renovation of Boundary Wall-** The boundary wall of the temple is in dilapidated condition and needs renovation. The temple boundary wall to be rebuilt as per the design guidelines

Infrastructure Created: ~250 m of brick wall

- 4. Footwear Stand –** A footwear stand to be provided at the temple entrance for the convenience of pilgrims. A footwear stands to be placed near entrance as per the design guidelines in Glossary of interventions.

- 5. Temple Tank Rejuvenation –** The temple tank is located in the northern side, of the temple site. As an added attraction, the water tank can be developed into a landscaped garden, with additional elements of seating, lighting fixtures along the tank. The temple tank would be cleaned and revived to function as a Community congregation space.

Infrastructure Created: ~220 m of soft landscaped areas, 3200 sqm of tank cleaning

Soft Interventions

- 1. Site Promotion –** As first in Navagraha Temples, the temple needs to be promoted to a wider audience. Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness about Navagraha Temples.
- 2. Ticketed Parking –** The access roads to the temple site are currently used as parking place for the temple. The parking could be managed and charged by temple authority. The minimal charges levied would add to the temple revenue.
- 3. General Landscaping - Strategic** tree plantation along the proposed paved pathway to create more shaded areas and make the site attractive. Resting areas in form of benches to be placed at desired location.

- 4. Temple Renovation and Maintenance –** The temple is an older site and requires renovation and maintenance. The temple houses some ancient paintings and carvings on walls, which are fading away. The restoration would attract more footfall in the temple.

- 5. Security Personnel -** The temple area is often misused by locals for drinking liquor. A security guard at the site would prevent such activities on the temple site.

Amenities Plan

- 1. Signage (Package 1) –** Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines in Glossary of interventions.

- 2. Drinking-Water Station –** Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines in Glossary of Interventions.

- 3. Dustbins –** Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines.

- 4. Streetlights –** The area has insufficient lighting in and around the temple. Provision of solar streetlights in and around the temple would ensure safety during night.

- 5. Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:

- Electronic Visitor Counter at entry point
- TN Assist App integration at site, with internet connection and QR scanner
- CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Upgradation of Public Hall	300 Sqm
2	Paved Access Road	170 sqm
3	Footwear Stand	1
4	Temple Tank Rejuvenation <ul style="list-style-type: none"> Cleaning of the tank Landscaping 	3200 sqm 220 m
5	Renovation of Boundary Wall	220 m
6	Signage (Package 1)	1
7	Drinking Water Station	1
8	Dustbins	2
9	Solar Streetlights	5
10	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Public Hall renovation	48
2	Paved access road	5
3	F&B kiosks	3
4	Footwear stand	3
5	Temple tank landscaping	4
6	Boundary wall Renovation	12
7	Signage (Package 1)	1
8	Drinking Water Station	3
9	Dustbins	1

#	Project Component	Cost (INR Lakhs)
10	Streetlights	1
11	Technology Interventions (Package 1)	1
Total		INR 80 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

- Kiosks** – Captures 2 kiosks, each to be rented out at INR 2 Lakhs per annum.
- Space on Hire** – Capturing 4 events per month at INR ~ 10,000 per event.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 10 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. An **Admin staff** to manage the operations of the public hall.
 - b. A **helpdesk staff** at the footwear stand
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 10 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple as well as the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the conservative protocols of the Temple Trust, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by Temple Trust itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Public Hall renovation	48	Y0 – Y2	Temple Trust
2	Paved access road	5	Y0 – Y2	Temple Trust
3	F&B kiosks	3	Y0 – Y2	Temple Trust
4	Footwear stand	5	Y0 – Y2	Temple Trust
5	Temple tank landscaping	4	Y0 – Y2	Temple Trust
6	Boundary wall	12	Y0 – Y2	Temple Trust
7	Signage (Package 1)	1	Y0 – Y2	Temple Trust
8	Drinking Water Station	3	Y0 – Y2	Temple Trust
9	Dustbins	1	Y0 – Y2	Temple Trust
10	Streetlights	1	Y0 – Y2	Temple Trust
11	Technology Interventions	1	Y0 – Y2	Temple Trust
Total		INR 85 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,650¹⁵⁹ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁶⁰

¹⁵⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 9,100 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 30 Cr. at the site¹⁶¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁶⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁶¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 40-2: Proposed Master Plan – Thirupuliyangudi Perumal Temple



41. Sri Srinivasa Perumal Temple- Ketu Shethram, Thoothukudi

Site Details

District	Thoothukudi
Name of Site	Sri Thirutholaivillimangalam Irattai Thirupathi ri Srinivasa Perumal Temple
Site No:	Site 262A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6092, 77.9728
Land Area:	0.95 acres + 5.9 acres + 2.4 acres
Peak footfalls:	8,000 per day (May – June)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 51,650(2019 - 2020) For. – 120 (2019 - 2020)
Site Revenues:	INR 1.45 Lakhs (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	6 km (Alwarthirunagari)
b. Airport:	24 km (Tirunelveli)
c. Highway:	5.5 m from SH-40
Trails featured on:	Divya Desam

Sri Srinivasa Perumal Temple is one of the Irattai Thiruppathy temples (Twin Thirupathi) and fourth among the Navagraha temples. The temples are majorly visited by local and regional pilgrims. The temple is remotely located in a thick forest and not well connected to major nearby area via public transport. The temple is located ~200m from Sri Aravindalochaar Temple (Twin Thirupathi temple) which is also operated by TVS Trust. The main attraction point apart from the temple is the presence of Navagraha TVS Museum and Thamirabarani River. The temple has potential to draw large tourist footfalls with improved accessibility, lodging and eating facilities near the site. The site can be developed for improved visitor experience and community congregation spaces.

Existing Condition

Location

Sri Srinivasa Perumal temple is located in Tholavillimangalam, a small village on the northern banks of Thamirabarani river. It is located 30 km from Tirunelveli in Thoothukudi district the temple is situated in a thick forest with no habitation around. Small shrines located nearby are:

- Sri Aravindalochanar Temple – ~0.2 Km
- Alwarthirunagari Perumal Temple – ~3 Km
- Thiru Makara Nedunkulai Kaather Perumal Temple – ~1.3 km
- Sri Kailasanathar Temple – ~1.6 km
- Sri Vaithamanidhi Perumal Temple – ~2 km
- Swamy Mayakoothar Temple – ~3.2 km

Existing Layout

The temple occupies an area of ~0.95 acres, enclosed by a granite wall. The wall encloses the main shrines, cow shed, pillared halls and garden within the temple. The temple is located ~200 m from Sri Aravindalochaar temple, one of the Irattai

Thiruppathy temples (Twin Thirupathi) maintained by the same trust. The common amenities for the twin temples include Navagraha museum, staff quarters and a VIP guest house.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. It has 6 daily rituals and few events during festive days. The temple is maintained and administered by the TVS Trust and HR & CE Department. It has well maintained pathways inside the temple complex. Major amenities like parking, waiting areas and toilets are provided in close proximity to the site on temple owned land.

Other Land Available

In addition to the temple complex, the temple also owns 5.9 acres land to the north of the complex under temple name and 2.4 acres land to the northeast of the complex owned by TVS Trust. The land owned by the TVS Trust houses a Navagraha museum which details out the history of all the nine temples and also has staff quarters and office blocks maintained and used by the members of the TVS Trust.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

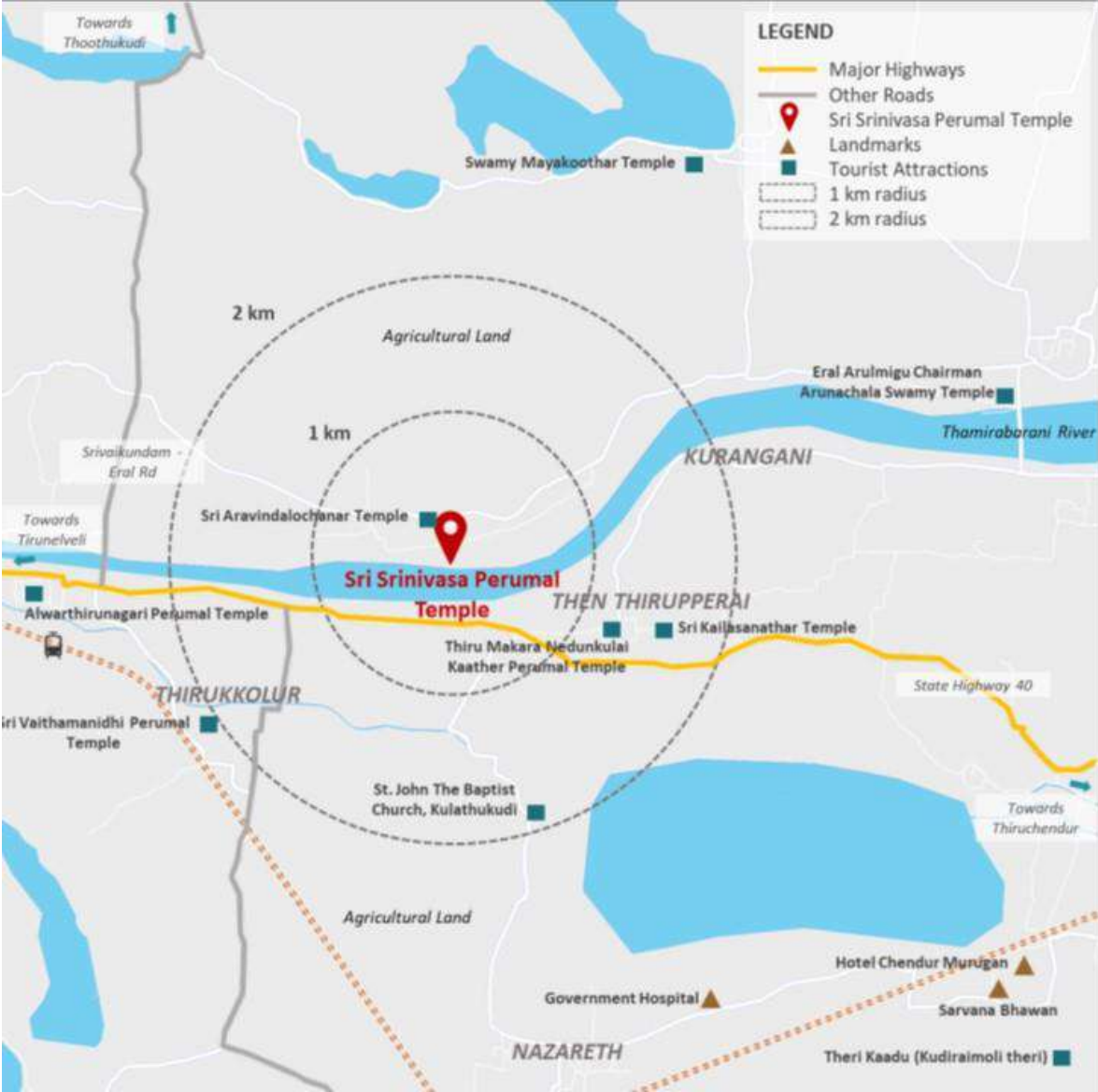
The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Sri Srinivasa Perumal Temple is one of the Irattai Thiruppathy temples located at a distance of ~200 m from Sri Aravindalochaar temple. It is 4th in nine Navagraha temples and also one of the 108 Divyadesams, referred as Ketu Sthalam. The temple is overlooking the Thamirabarani river with clean flowing water, thus providing picturesque views. TVS Museum for all 9 Navagraha temples is one of the major attraction points, located within 200 m from the temple.
2. **Accessibility** – The temple can be accessed from Tirunelveli and Thiruchendur via SH 40 and Srivaikuntam-Eral road. There is no public transport access to the site. The last ~300 m road leading up to the temple is narrow and unpaved.
3. **Amenities** – Few basic tourist amenities are available within the temple site.
 - The wayfinding signages and informative signage boards are available for the site but in Tamil language.
 - No luggage, cloak room, toilets or free drinking water facilities are available for pilgrims.
 - No retail or F&B kiosks are present near the temple site.
 - No divyang friendly infrastructure is present within the temple complex.
 - Upkeep of surrounding streets is average. Garbage is dumped near the river and some areas outside the temple have littering.
 - The access road lacks in adequate street lighting.

Parking- The vacant land, maintained by TVS trust, near the temple site is used as unpaved parking space. Parking lot has a capacity of 100 cars and is free of cost.

4. **Awareness** – The temple ranks 4th in the Navagraha temples majorly visited by locals from nearby villages. No foreign visitors are seen on the site on non-festive occasions. During festive season, it is majorly visited by domestic tourist residing in Tamil Nadu, Karnataka and Andhra Pradesh and foreign tourist from south east Asian countries
5. **Activities** – On normal days, the temples do not offer any activities. Intermittently, there are some activities such as music, dance recitals, etc. within the temple. There are tour guides available at Alwarthirunagari Perumal Temple for the entire Navagraha circuit, also covers the temple site. Tamil Nadu Tourism Department offers tours on first and third Fridays. The land owned by the TVS Trust houses a Navagraha museum which details out the history of all the nine temples
6. **Accommodation** – TVS staff quarters and guest house are available outside the temple for government officials. There is no accommodation facility available nearby for visitors. Since the time spent at the temple is not more than 1 hour (on non-festive occasions) and 1.5 hour (on festive occasions), visitors tend to either return to Tirunelveli or other Navagraha temples after visiting this temple.
7. **Association with Community** – The temple is located in a remote area with hardly any habitation around. The daily footfall in the temple is extremely low. Therefore, there is limited involvement of the community inside the temple.

Figure 41-1: Location and Existing Layout



Site Pictures



Vision for the Site

The temple holds a religious value as it is one of the Nava Thirupathi kshetras (twin Thirupathi) and Navagraha temples, the nine temples revered by Azhwar saints and also one of the 108 Divya Desams

- Due to rural and segregated setting of the site, the level of interventions is limited to improvement of connectivity and upgradation of site infrastructure. The addition of amenities for visitors can be taken up in future developments when the visitor footfall increases in the temple.
- The vision for the site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex.
- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	51	119	236
High Value Tourists (HVT) (Both domestic and foreign)	0	0	1
Maximum Carrying Capacity	3,742		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality

of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through improving connectivity and revamping existing amenities.
- Developing the temple in consolidated manner with the existing facilities i.e. twin temple of Sri Aravindalochaar temple, TVS Museum and other vacant land.

Hard Interventions

1. **Tourist Facilitation Centre Type 1** – A small facility in addition to the existing tourist information facility in TVS museum. A luggage room, and rest/waiting area can be developed for tourist convenience and ease at the site. This development will be as per the design guidelines mentioned in glossary of interventions. The facility is common for the twin temples ie. Sri Srinivasa Perumal Temple and Sri Aravindalochaar temple.

Infrastructure Created: ~150 sqm of BUA

2. **Paved Pathway:** A paved asphalt pathway, starting from Srivikundam – Eral Road, connecting the TVS museum, temple site and Sri Aravindalochanar temple. Walkway with footpaths of standard width of 2m with paver blocks, as per the design guidelines in glossary of interventions the facility is common for the twin temples ie. Sri Srinivasa Perumal Temple and Sri Aravindalochaar temple.

Infrastructure Created: ~496 sqm of paved road

3. **Ticketed Parking** – The vacant land parcels near temple site is currently used as unpaved parking place for the twin temples and museum. One of the vacant land parcels can be used as a dedicated parking spot for twin temples and the museum. The ticketed parking facility for 20 cars would add on to the TVS funds.

Infrastructure Created: ~500 sqm of paved area

*Paved Pathway*

Soft Interventions

1. **Site Promotion** – Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness about Navagraha Temples.
2. **General Landscaping - Strategic** tree plantation along the proposed paved pathway to create more shaded areas and make the site attractive. Resting areas in form of benches to be placed at desired location.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in glossary of interventions.
2. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines in glossary of interventions.
3. **Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines in glossary of interventions.

4. **Benches** – **Five** Benches to be placed in the proposed pathway between the twin temples and the museum. The benches would be used a common facility, as resting space between the twin temples.

5. **Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:

- Electronic Visitor Counter at entry point
- TN Assist App integration at site, with internet connection and QR scanner
- CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
Common Facilities		
1	Tourist Facilitation Centre Type 1	150 Sqm
2	Paved Pathway (Asphalt)	496 sqm
3	Paved Parking	500 sqm
4	Benches	5
Sri Srinivasa Perumal Temple		
1	Signage Package 1	1
2	Drinking Water Station	1
3	Dustbins	2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre Type 1	16
2	Paved Pathway (Asphalt)	15
3	Paved Parking	8
4	Benches	1
5	Signage (Package 1)	1
6	Drinking Water Station	3
7	Dustbins	1
Total		INR 45 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 2 Lakhs per annum.
- Parking** – Capturing 25 ECS at 30% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **Helpdesk staff** at the facilitation centre.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 10 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Sub-projects which can be taken up by the local governing body/ Town panchayat

The last mile connectivity to the temple is poor and has been raised as a repeated concern by the local residents frequently visiting the temple and by the pilgrims alike. Since this is out of the temple’s scope, it has to be taken up by the local governing body/ town panchayat to address the concerns of its constituents.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Tourist Facilitation Centre Type 1	16	Y0 – Y2	HR&CE
2	Paved Pathway (Asphalt)	15	Y0 – Y2	Local governing body/ Town panchayat
3	Paved Parking	8	Y0 – Y2	HR&CE
4	Benches	1	Y0 – Y2	HR&CE
5	Signage (Package 1)	1	Y0 – Y2	HR&CE
6	Drinking Water Station	3	Y0 – Y2	HR&CE
7	Dustbins	1	Y0 – Y2	HR&CE
Total		INR 45 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,900¹⁶² man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁶³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 4,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site. It is expected that in future the visitor footfalls to the site shall be 119,000 in Y5 and 235,000 Y10, as against current footfall of 51,000 p.a.

Further, the share of High Value Tourists (both foreign and domestic) is expected to increase to 2,000 in 10.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 25 Cr. at the site¹⁶⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.

¹⁶² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁶³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁶⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 41-2: Proposed Master Plan – Thirutholaivillimangalam Irattai Thirupathi Sri Srinivasa Perumal Temple- Ketu Shethram, Thoothukudi



42. Aravindalochaar Temple- Rahu Shethtram, Thoothukudi

Site Details

District	Thoothukudi
Name of Site	Sri Thirutholaivillimangalam Irattai Thirupathi Aravindalochaar Temple
Site No:	Site 262B of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6120, 77.9723
Land Area:	0.95 acres + 5.9 acres + 2.4 acres
Peak footfalls:	8,000 per day (May – June)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 51,650(2019 - 2020) For. – 120 (2019 - 2020)
Site Revenues:	INR 1.45 Lakhs (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	6 km (Alwarthirunagari)
b. Airport:	24 km (Tirunelveli)
c. Highway:	5.5 m from SH-40
Trails featured on:	Divya Desam

Sri Aravindalochaar Temple is one of the Irattai Thiruppathy temples (Twin Thirupathi) and fifth among the Navagraha temples. The temples are majorly visited by local and regional pilgrims. The temple is remotely located in a thick forest and not well connected to major nearby area via public transport. The temple is located ~200m from Sri Srinivasa Perumal temple (Twin Thirupathi temple) which is also operated by TVS Trust. The main attraction point apart from the temple is the presence of Navagraha TVS Museum and Thamirabarani River. The temple has potential to draw large tourist footfalls with improved accessibility, lodging and eating facilities near the site. The site can be developed for improved visitor experience and community congregation spaces.

Existing Condition

Location

Sri Aravindalochaar Temple is located in Tholavillimangalam, a small village on the northern banks of Thamirabarani river. It is located 30 km from Tirunelveli in Thoothukudi district the temple is situated in a thick forest with no habitation around. Small shrines located nearby are:

- Sri Srinivasa Perumal temple – ~0.2 Km
- Alwarthirunagari Perumal Temple – ~3 Km
- Thiru Makara Nedunkulai Kaather Perumal Temple – ~1.3 km
- Sri Kailasanathar Temple – ~1.6 km
- Sri Vaithamanidhi Perumal Temple – ~2 km
- Swamy Mayakoothar Temple – ~3.2 km

Existing Layout

The temple occupies an area of ~0.95 acres, enclosed by a granite wall. The wall encloses the main shrines, generator room and pillared halls within the temple. The temple is located ~200 m from Sri Srinivasa Perumal temple, one of the Irattai

Thiruppathy temples (Twin Thirupathi) maintained by the same trust. The common amenities for the twin temples include Navagraha museum, staff quarters and a VIP guest house.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. It has 6 daily rituals and few events during festive days. The temple is maintained and administered by the TVS Trust and HR & CE Department. It has well maintained pathways inside the temple complex. Major amenities like parking, waiting areas and toilets are provided in close proximity to the site on temple owned land.

Other Land Available

In addition to the temple complex, the temple also owns 5.9 acres land to the north of the complex under temple name and 2.4 acres land to the northeast of the complex owned by TVS Trust. The land owned by the TVS Trust houses a Navagraha museum which details out the history of all the nine temples and also has staff quarters and office blocks maintained and used by the members of the TVS Trust.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

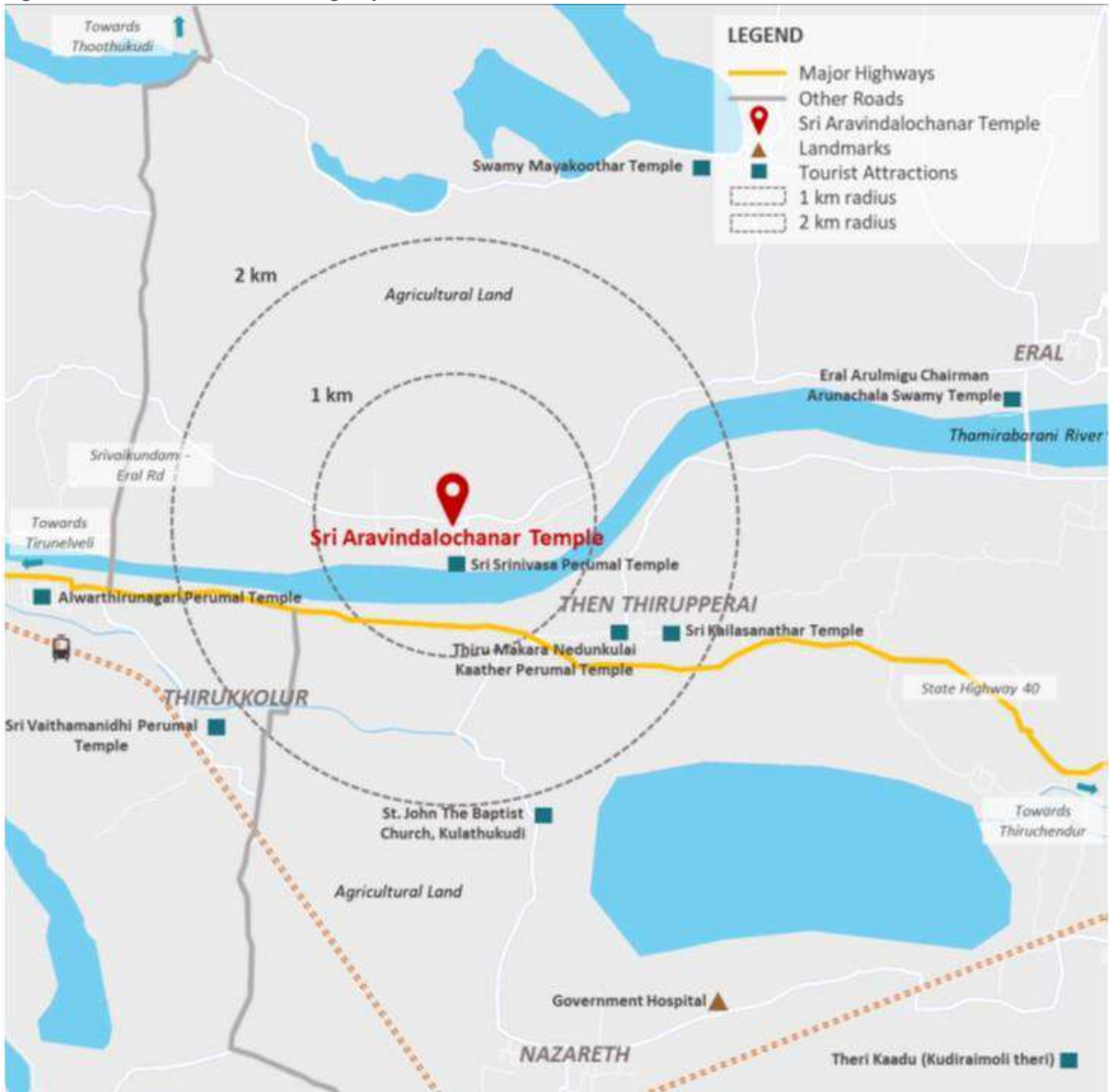
The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Sri Aravindalochaar Perumal Temple is one of the Irattai Thiruppathy temples located at a distance of ~200 m from Sri Srinivasa temple. It is 5th in nine Navagraha temples and also one of the 108 Divyadesams, referred as Rahu Sthalam. The temple is overlooking the Thamirabarani river with clean flowing water, thus providing picturesque views. TVS Museum for all 9 Navagraha temples is one of the major attraction points, located within 200 m from the temple.
2. **Accessibility** – The temple can be accessed from Tirunelveli and Thiruchendur via SH 40 and Srivaikuntam-Eral road. There is no public transport access to the site. The last ~100 m road leading up to the temple is narrow and unpaved.
3. **Amenities** – Few basic tourist amenities are available within the temple site.
 - The wayfinding signages and informative signage boards are available for the site but in Tamil language.
 - No luggage, cloak room, toilets or free drinking water facilities are available for pilgrims.
 - No retail or F&B kiosks are present near the temple site.
 - No divyang friendly infrastructure is present within the temple complex.
 - Upkeep of surrounding streets is average. Garbage is dumped near the river and some areas outside the temple have littering.
 - The access road lacks in adequate street lighting.

Parking- The vacant land, maintained by TVS trust, near the temple site is used as unpaved parking space. Parking lot has a capacity of 100 cars and is free of cost.

4. **Awareness** – The temple ranks 5th in the Navagraha temples majorly visited by locals from nearby villages. No foreign visitors are seen on the site on non-festive occasions. During festive season, it is majorly visited by domestic tourist residing in Tamil Nadu, Karnataka and Andhra Pradesh and foreign tourist from south east Asian countries
5. **Activities** – On normal days, the temples do not offer any activities. Intermittently, there are some activities such as music, dance recitals, etc. within the temple. There are tour guides available at Alwarthirunagari Perumal Temple for the entire Navagraha circuit, also covers the temple site. Tamil Nadu Tourism Department offers tours on first and third Fridays. The land owned by the TVS Trust houses a Navagraha museum which details out the history of all the nine temples
6. **Accommodation** – TVS staff quarters and guest house are available outside the temple for government officials. There is no accommodation facility available nearby for visitors. Since the time spent at the temple is not more than 1 hour (on non-festive occasions) and 1.5 hour (on festive occasions), visitors tend to either return to Tirunelveli or other Navagraha temples after visiting this temple.
7. **Association with Community** – The temple is located in a remote area with hardly any habitation around. The daily footfall in the temple is extremely low. Therefore, there is limited involvement of the community inside the temple.

Figure 42-1: Location and Existing Layout



Site Pictures



Vision for the Site

The temple holds a religious value as it is one of the Nava Thirupathi kshetras (twin Thirupathi) and Navagraha temples, the nine temples revered by Azhwar saints and also one of the 108 Divya Desams

- Due to rural and segregated setting of the site, the level of interventions is limited to improvement of connectivity and upgradation of site infrastructure. The addition of amenities for visitors can be taken up in future developments when the visitor footfall increases in the temple.
- The vision for the site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex.
- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	51	119	236
High Value Tourists (HVT) (Both domestic and foreign)	0	0	1
Maximum Carrying Capacity	3,742		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality

of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through improving connectivity and revamping existing amenities.
- Developing the temple in consolidated manner with the existing facilities i.e. twin temple of Sri Srinivasa Perumal temple, TVS Museum and other vacant land.

Hard Interventions

The Hard interventions made are the common facilities proposed for the twin temples. The facilities are developed on the temple/ TVS trust land. The interventions proposed are detailed in chapter of site no. 261 A of this report. The interventions include:

1. Tourist Facilitation Centre Type 1
2. Paved Pathway
3. Ticketed Parking

Soft Interventions

1. **Site Promotion** – Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness about Navagraha Temples.
2. **General Landscaping - Strategic** tree plantation along the proposed paved pathway to create more shaded areas and make the site attractive. Resting areas in form of benches to be placed at desired location.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.

2. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines.
3. **Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines.
4. **Benches – Five Benches** to be placed in the proposed pathway between the twin temples and the museum. The benches would be used a common facility, as resting space between the twin temples. The benches to be detailed as per the design guidelines.
5. **Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Signage Package 1	1
2	Drinking Water Station	1
3	Dustbins	2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Dustbins	1
2	Drinking Water Station	3
3	Signage Package 1	1
Total		INR 5 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
- Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
- Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area,

toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

- Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

- Salaries and perks of existing employees
- O&M cost of existing site and facilities
- Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 1 Lakh.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Dustbins	1	Y0 – Y2	HR&CE
2	Drinking Water Station	3	Y0 – Y2	HR&CE
3	Signage Package 1	1	Y0 – Y2	HR&CE
Total		INR 5 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 215¹⁶⁵ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁶⁶

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 550 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 25 Cr. at the site¹⁶⁷.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

¹⁶⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁶⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁶⁷ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 42-2: Proposed Master Plan - Thirutholaivillimangalam Irattai Thirupathi Aravindalochaar Temple- Rahu Sheththram, Thoothukudi



43. Tirukulandhai Sri Mayakoothar Permul Temple- Sani Sthalam, Thoothukudi

Site Details

District:	Thoothukudi
Name of Site	Sri Mayakoothar Permul Temple
Site No:	Site 262C of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6418, 77.9937
Land Area:	~1 acre (Temple) ~9.1 acres (Additional Land)
Peak footfalls:	~10,000 per day (May – June, September)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 73,650 (2019 – 20) For – 165 (2019 – 20)
Site Revenues:	INR 14.6 lakhs (2019 – 20)
Site Orientation:	Pilgrim and Tourists
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~16 km from Srivaikuntam Railway Station
b. Airport:	~25 km from Tuticorin Airport
c. Highway:	~10 km from SH 40 and SH 93
d. Other:	Nil
Trails featured on:	Divya Desam

Sri Mayakoothar Permul Temple ranks 6th in the Navagraha temples and is known for “horoscope correction” pooja for planet Saturn. The temple is majorly visited by people residing in and around the region. The temple is 6 km away from other Navagraha temples. Being one of the 108 Divya Desam, the temple has very less popularity and footfall compared to other Divya Desam temples and lacks in providing some basic facilities to its visitors. Therefore, the scope of interventions includes the development of an amenity block having an inquiry desk, drinking water station, luggage/ cloakroom, temple-ware retail kiosks along with a landscaped garden and pathways having seating areas for visitors to relax. Besides the maintenance of existing infrastructure such as toilets, construction of boundary wall enclosing temple and temple tank is envisioned for visitors’ safety. Appropriate marketing and promotion for the temple’s visibility will be done to enhance tourist footfall.

Existing Condition

Location

Sri Mayakoothar Permul Temple is located in Perungulam, a panchayat town on the northern banks of the Thamirabarani River. It is located 33 km from Tirunelveli in Thoothukudi district and about 12 km North-East of Srivaikuntam on the Tirunelveli-Thiruchendur route in Tamil Nadu. The temple is surrounded by agricultural land on all four sides. Other Navagraha temples located nearby are Alwarthirunagari Permul Temple (~2 Km), Sri Srinivasa Permul Temple (~3 km), Sri Aravindalochanar Temple (~3 km), and Thiru Makara Nedunkulai Kaather Permul Temple (~2.2 km).

Existing Layout

The temple covers an area of 1 acre enclosed in a granite wall with 2 prakarams. Other prominent features of the temple include:

- The temple has a 3 tier Rajagopuram and a mandapa located in its front.
- Dwajasthambam, Balipedam, and Garudan are immediately after the Rajagopuram.
- The sanctum sanctorum consists of a sanctum, antarala, Arthamandapam, and a Mahamandapam.
- The primary deity of this temple is Lord Mayakoothar Perumal (Lord Vishnu) facing east direction and also named as Lord Srinivasa Perumal.
- There is no separate Sannadhi for Thayar. It was said that Sri Lakshmi resides on the chest of moolavar.
- 'Goddess Kulanthai Valli Thaayar' and 'Goddess Alarmel Mangai Thaayar' are found on both sides of Lord Srinivasa Perumal.
- At this temple, Garuda (vehicle of Vishnu) is co-located along with Lord Vishnu.
- Sri Mayakoothar Perumal Temple has a big lake and hence this temple is popularly called 'Perungulam'.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. It has 6 daily rituals and few events during the festive days of Puratasi, Vaikunda Yegadesi, Garuda Sevai Utsavam, Panguni Brama Utchavam (5th day festival), and Theppa Thiruvalla (12th day festival).

Other Land

In addition to the temple complex of 1 acre, the temple also owns 4.7 acres of surrounding land which houses a small Hanuman shrine and Annadhanam. There is also 4 acres of vacant land available in front of the temple surrounding the 0.4-acre of the temple tank.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction –** Sri Mayakoothar Perumal Temple is one of the Nava Thirupathi Kshetras, dedicated to Lord Vishnu and also classified as one of the 108 Divya Desams. Devotees worship in this temple for relief from the adverse effects of the planet Saturn in their life. There is no separate Navagraha shrine here since it is believed that Lord Vishnu is controlling the planets in the respective temples. The other Navagraha temples are located 6 km away. The temple is overlooking preocular. Apart from the Navagraha temples and Perukulam lake, the site does not offer any other attraction to attract or engage tourists.
- 2. Accessibility –** The temple can be accessed from Tirunelveli and Thiruchendur via SH 40. Buses ply at regular intervals from the Srivaikuntam bus stand which is 12 km away from the site. Perungulam does not have a railway station of its own. The nearest train stations are Srivaikuntam Railway station, Alwar Tirunagri Railway Station, Tirunelveli railway junction at a distance of ~14 km, ~10 km, and ~35 km respectively. The site can be reached through Tuticorin Domestic airport which is ~16 km away. The nearest major airport from the site is Madurai International Airport, located ~165 km away from the site. The major modes of transport people use to commute to the site are private/ rental vehicles.

3. Amenities – The condition of tourist amenities within and around the temple is quite poor. The site lacks the following facilities:

- No tourist Information center.
- No information signages.
- No drinking water facility inside the temple.
- Only 4 working CCTV's out of 12
- No security guards
- No compound wall
- Insufficient street lighting.
- No retail/food outlets
- No footwear stand.
- No luggage/cloakroom.
- No ramps and wheelchairs on the site

Parking – There is no designated parking available within or outside the temple complex. Currently, vehicles are parked on-street outside the temple premises.

4. Awareness – The temple lacks much popularity. It ranks 6th in the Navagraha temples and is majorly visited by locals from nearby villages. During the festive season, it is majorly visited by domestic tourists residing in Tamil Nadu, Karnataka, Andhra Pradesh, and Kerala and foreign tourists from South-Asian countries and France. The temple is yet to find mention in popular international travel journals such as Lonely Planet and CN Traveller. A common website is maintained by the Hindu Religious & Charitable Endowments Department for the Nava Tirupati temples.

5. Activities – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as music, dance recitals, etc. within the temple. The Garuda Sevai festival in the month of Vaikasi (May-Jun) is a spectacular event in which festival image idols from the Nava Thirupathi shrines in the area are brought on Garuda Vahana (sacred vehicle). The utsavar (festival deity) of Nammalvar is taken in a palanquin to each of the 9 temples, through the paddy fields in the area. His Paasurams (poems) dedicated to each of the 9 Divyadesams are chanted in the respective shrines. This is the most important festival for the Navagrahas, and it draws thousands of visitors.

There are tour guides available at Alwarthirunagari Perumal Temple for the entire Navagraha circuit, covering this temple as well. During festive seasons, for those in Chennai, Tamil Nadu Tourism Department offers a tour. On the first and third Fridays of the month. The bus leaves Chennai and returns on Wednesday morning. The charges per head are INR 1,100, which includes boarding and lodging,

6. Accommodation – There is no accommodation facility available nearby for visitors and tourists. Since the time spent at the temple is not more than 1 hour (on non-festive occasions) and 1.5 hours (on festive occasions), visitors tend to either return to Tirunelveli/Srivaikuntam for a stay or other Navagraha temples after visiting this temple.

7. Association with Community – The temple is located in a remote area in a small town. The daily footfall in the temple is extremely low. Therefore, there is limited involvement of the community inside the temple, except locals put up retail shops, and volunteer themselves for security and crowd management of the temple during peak/festive seasons. There are beggars, and hawkers on the approach road and surrounding areas. Some locals regularly drink alcohol and play cards around the temple tank and eventually throw empty alcohol bottles into the tank resulting in sabotaging the temple environment.

Figure 43-1: Location & Existing Layout



Site Pictures



Vision for the Site

Sri Mayakoothar Perumal Temple ranks 6th in the Navagraha temples and is known for “horoscope correction” pooja for planet Saturn. The temple is majorly visited by people residing in and around the region. Though the temple is 6 km away from other Navagraha temples. Being one of the 108 Divya Desam, the temple has very less popularity and footfall compared to other Divya Desam temples.

The temple complex has the potential to enhance its facilities considering the availability of the huge vacant land around the temple complex. It has a good opportunity to provide the needed amenities to enhance the visitor's experience and ease on the site.

The vision for the site is to improve visitor's experience and convenience by improving facilities on the site. Therefore, the development of an amenity block having an inquiry desk, drinking water station, luggage/ cloakroom, temple-ware retail kiosks on the site is proposed for visitors' convenience. To enhance activities around the site, a landscaped garden around the temple and pathways around the temple tank will be developed that will have seating areas for visitors to relax. Besides the maintenance of existing infrastructure such as toilets, construction of boundary wall enclosing temple and temple tank is envisioned for visitors' safety.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	73	169	334
High Value Tourists (HVT) (Both domestic and foreign)	1	3	6
Maximum Carrying Capacity	3,939		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious significance and its popularity among devotees, the concept of the masterplan includes:

- **Improving pilgrims' experience** at the temple – through improved basic amenities of inquiry desk, luggage room, drinking water station, wheelchair, shoe stand, parking and streetlighting on the site.
- **Enhancing interactive spaces on the site** with development of landscaped gardens, paved pathways along temple tank, and temple-ware retail kiosks. Besides provision of information kiosks and guided tours on the site.
- **Enhancing security of the visitors** by construction of boundary wall, maintenance of CCTVs and deployment of security guards on the site.
- **Improving tourist footfall** through signages, appropriate marketing and promotion.

Hard Interventions

1. **Amenity Block** – A small amenity block with an inquiry desk, luggage room, toilets, drinking water station, a wheelchair, a shoe stand, and a temple-ware retail shop will be developed for tourist convenience and ease at the site. The amenity block can be placed on the north side of the temple. *Infrastructure Created: ~150 sqm of building.*

- 2. Development of storage room** – The temple complex has an Annadhanam area that lacks a storage facility. Therefore, a storage room is proposed to be developed adjacent to the existing Annadhanam building on the south side of the temple.

Infrastructure Created: ~30 sqm of storage room.

- 3. Rejuvenation of temple tank** – The temple has a beautiful and huge temple tank with steps. However, a layer of algae and vegetation covers the tank water and steps. Therefore, cleaning of water and steps is proposed along with the construction of a paved pathway around the temple tank. As some locals create nuisance around the tank, therefore a boundary wall with a gate enclosing the tank is also proposed. Entry to the temple tank can be regulated by guards deployed on the site.

Infrastructure Created: ~250 m long and ~2 m wide pathway. 180 m long and 2 m high boundary wall with an Aluminium Gate.

- 4. Boundary wall construction** – The temple lacks a boundary wall because of which some locals create nuisance around the site. Therefore, construction of boundary wall enclosing temple, proposed amenity block, Annadhanam, proposed landscaped garden and toilets is proposed. The temple boundary wall will have one gate each on the north and east sides of the temple, giving access from two sides. Entry to the temple and temple tank can be regulated by guards deployed on the site.

Infrastructure Created: ~550 m long and ~2 m high boundary wall with 2 Aluminium Gates.

- 5. Landscaped Garden**– Temple has a huge vacant land parcel on both sides of the temple that is proposed to be developed as a landscaped garden. The landscaped gardens will be used as an engaging space for visitors to relax, sit and spend more time around the temple. Moreover, the garden can be used by the local community as a recreational space for daily walks. Shaded-seating areas will be provided for visitor's convenience. The landscaping will be done using native flora requiring lesser care.

Infrastructure Created – A ~3900 sqm of landscaped garden and 500 m of pathways (2 m wide) with 3 number of shaded-benches.



Amenity Block



Pathways along Temple Pond



Landscaped Garden

Soft Interventions

- 1. Maintenance of existing toilet block** – The temple has a toilet block that is not well-maintained. Therefore, regular cleaning and maintenance of toilet block are suggested for the convenience of visitors.
- 2. Marketing and Promotion** – The temple has poor awareness and is mostly visited by the locals and pilgrims. As one of the Nava Tirupati, the temple needs to be promoted to a wider audience of domestic and foreign tourists. Directional and illustrative signages along the approach road, railway station, and bus stand of Srivaikuntam shall be erected. Information kiosks should be installed at all the Navagraha temples. These kiosks shall provide free information brochures and maps of all the Nava Tirupati temples to the tourists. A guided one-day tour to all these temples shall be organised. To attract more footfall brochures and signages shall be provided at Tuticorin Airport and railway station.
- 3. Guided Tours** – A self-guided audio tour provision shall be present on the site to portray the rich history of the site. Licensed guides can be deployed on the site to guide the visitors about the history and significance of the temple.
- 4. Community Engagement** – The local community is involved in the everyday activities of the temple. Locals can also be engaged by training and deploying them as guards and tour guides on the site. Moreover, the landscaped garden and paved pathways around the temple tank can be used by locals as recreational spaces for relaxing and daily walks.
- 5. Improving safety and security** – The temple premises are not guarded by any security guard resulting in nuisance by some people around the site. Moreover, the site has 12 CCTV's out of which only 4 are in working condition. Therefore, along with maintenance of CCTV's, it is suggested to deploy guards on the site to prevent any mishappening with temple infrastructure and visitors. The local community shall be engaged by training and deploying them as guards. This will also generate employment opportunities on the site.

Amenities Plan

- 1. Signage** – Directional signages should be installed on the approach road, railway station, and bus stand of Srivaikuntam. Further, illustrative signages and boards imparting the historic background of the legend associated with the

temple should be installed erected within the site at the appropriate place. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.

- 2. Parking** – There is no designated parking on the site. Currently, vehicles are parked randomly on the vacant land adjacent to the temple. Therefore, to regulate the parking, a designated parking area is proposed on the west side of the temple tank. The parking will be regulated and charged. The ticketed parking will also improve the revenue of the temple. *Infrastructure Created – ~400 sqm Paved Parking areas with a total of 20 ECS.*
- 3. Technology Interventions** – For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 - The package shall exclude CCTV's as there is a sufficient number of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Amenity Block	150 sqm
2	Storage room	30 sqm
3	Rejuvenation of Temple Tank <ul style="list-style-type: none"> • Paved Pathway (~2m wide) • Boundary wall around tank (2 m height) • Aluminium gate 	250 m 180 m 1
4	Construction of boundary wall (2 m height) Aluminium Gate	550 m 2
5	Landscaped Garden	

#	Project Component	Scale
	<ul style="list-style-type: none"> Soft landscaping Paved Pathway (2m wide) Shaded-seating area (canopy-style) 	3900 sqm 500 m 3
6	Signage Package 1	1
7	Parking (paved parking yard of 400 sqm)	20 ECS
8	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Amenity block - Toilet	5
2	Amenity block - Drinking water station	3
3	Storage room	5
4	Landscaping	4
5	Paved walkway	10
6	Parking	6
7	Boundary wall	40
8	Gate complex	6
9	Signage Package 1	1
10	Technology Package 1	1
Total		INR 75 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

- Parking** – Capturing 40 ECS at 40% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1 Lakh.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).

d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** at the toilet block.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 5 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Hence are to be implemented and funded by HR & CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity block - Toilet	5	Y0 – Y2	HR & CE
2	Amenity block - Drinking water station	3	Y0 – Y2	HR & CE
3	Storage room	5	Y0 – Y2	HR & CE
4	Landscaping	4	Y0 – Y2	HR & CE
5	Paved walkway	10	Y0 – Y2	HR & CE
6	Parking	6	Y0 – Y2	HR & CE
7	Boundary wall	40	Y0 – Y2	HR & CE
8	Gate complex	6	Y0 – Y2	HR & CE
9	Signage Package 1	1	Y0 – Y2	HR & CE

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
10	Technology Package 1	1	Y0 – Y2	HR & CE
Total		INR 75 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,200¹⁶⁸ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁶⁹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 8,000 man-days.

Increased tourist footfall

¹⁶⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 35 Cr. at the site¹⁷⁰.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.

○ Assumed cost of labour assumed for computation = INR 700 per day

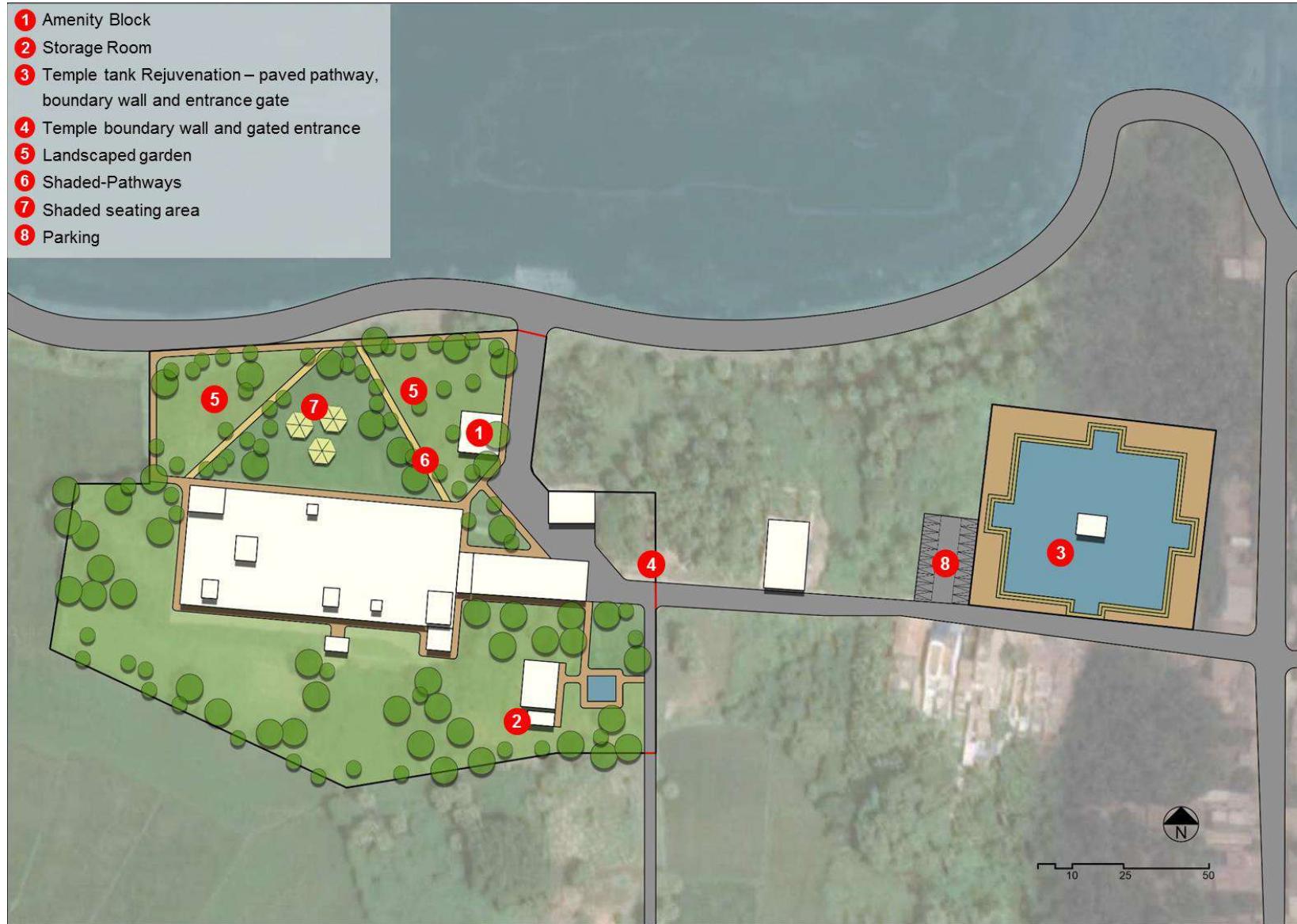
- Cumulative labour man-days = 30% * CAPEX / 700

¹⁶⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁷⁰ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 43-2: Proposed Master Plan – Tirukulandhai Sri Mayakoothar Permul Temple- Sani Sthalam, Thoothukudi



44. Alwarthirunagari Perumal Temple- Guru Sthalam, Thoothukudi

Site Details

District:	Thoothukudi
Name of Site	Alwarthirunagari Perumal Temple
Site No:	Site 263A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6070, 77.9379
Land Area:	~5.3 acres (Temple) ~1 acre (Temple Tank)
Peak footfalls:	~50,000 per day (May – June, September)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 4.8 lakhs (2019 – 20) For – 1,316 (2019 – 20)
Site Revenues:	INR 6.91 lakhs (2019 – 20)
Site Orientation:	Pilgrim and Tourist
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~1.5 km from Alwar Srivaikuntam railway station
b. Airport:	~24 km from Tuticorin Airport
c. Highway:	~450 m from SH 40 ~700 m from SH 93
d. Other:	Nil
Trails featured on:	Divya Desam

Alwarthirunagari Perumal Temple marks the birthplace of Nammalvar (prominent among 12 Azhvars) and is one of the 108 Divya Desam temples. It is the most important temple among the 9 Navagraha temples and is dedicated to Jupiter. The temple is majorly visited by people residing in and around the region. The temple is a well connected via public transport and is overlooking the Thamirabarani River. Though the temple has most of the facilities, yet it lacks in providing a good experience to its visitors. Therefore, the scope of interventions includes the development of an amenity block having an inquiry desk, drinking water station, luggage/ cloakroom, temple-ware retail kiosks along with a pedestrianised entrance plaza having shaded- seating areas and a community toilet for convenience of visitors. Paved pathways around both temple tanks are proposed to enhance engaging spaces in and around the temple. Besides the maintenance of existing infrastructure such as toilets and Nandavanam, a designated parking area will be developed to regulate parking and thus prevent on-street parking resulting in congestion of approach roads. Appropriate marketing and promotion for the temple's visibility will be done to enhance tourist footfall.

Existing Condition

Location

Azharthirunagari Perumal Temple is located on the southern side of Thamirabarani River in a small village, Thirukkolor. It is located 26 km from Tirunelveli in the Thoothukudi district, about 5 km East from Srivaikuntam, on the Tirunelveli-Thiruchendur route. The temple is surrounded by dense mixed-use development. Other Navagraha temples located in proximity are Sri Vaithamanidhi Perumal Temple (~2 Km), Sri Srinivasa Perumal Temple (~3.5 km), and Sri Aravindalochanar Temple (~3.5 km).

Existing Layout

The temple occupies an area of 5.3 acres. A granite wall surrounds the temple, enclosing all its shrines and two of its waterbodies.

- The Rajagopuram, temple's gateway tower is 95 ft (29 m) tall with 5 tiers. There are 3 Praharams around the temple.
- The Swamyabhu murti of Vishnu worshipped as Aathinathan faces east and is in a standing posture. The feet of the murti are buried under the earth.
- Goddess Lakshmi and Bhudevi are worshipped here as Aathinathanayaki and Thirukkurukornayaki in two separate shrines.
- The sacred water body in the temple is known as Brahma Theertham.
- This Sthala Vriksham in this holy temple is the Tamarind tree. This tree is called "Puliyalwar". This tree gives flowers but not fruits.
- There is a stone Nadaswaram at this temple, which is played out on special occasions.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. The temple follows the Thenkalai tradition of worship. It has 6 daily rituals and few events during the festive days of Puratasi, Vaikunda Yegadesi, Garuda Sevai Utsavam, and Chithirai (5th day). The temple has the following infrastructure dedicated for other uses such as:

- Mandapams for events and rituals
- Toilets
- Administrative Office
- Nandavanam
- Retail Shops

Other Land

In addition to the temple complex of 5.3 acres, the temple also owns 1 acre temple tank on the western side of the complex along the Thamarani river. This temple tank is a shared property between Alwarthirunagari Permal temple and Sivalaperi Sudalai Mada Samy Kovil.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Alwarthirunagiri Perumal Temple is one of the most important temples in nine Navagraha temples and also one of the 108 Divyadesams, referred to as Guru Sthalam. Devotees worship in this temple for relief from the adverse effects of Jupiter in their life. The temple marks the birthplace of Nammalvar, the revered Azhwar saint. The temple overlooks the Thamirabarani river with clean flowing water, thus providing picturesque views. Apart from its proximity to the other Navagraha temples and the Thamirabarani River, the temple does not have any attraction point for the tourist's engagement.

2. Accessibility – The temple can be accessed from Tirunelveli and Thiruchendur via SH 40. The site has good public transportation accessibility. The bus stand is available at a distance of ~600 m from the site. Thirukkolor does not have a railway station of its own. The nearest train stations are Srivaikuntam railway station and Tirunelveli railway junction at a distance of ~1.5 km, and ~35 km respectively. The site can be reached through Tuticorin Domestic airport which is ~24 km away. The nearest international major airport from the site is Madurai International Airport, located ~165 km away from the site. The major modes of transport people use to commute to the site are private/ rental vehicles.

3. Amenities – The condition of tourist amenities within and around the temple is quite poor. The site lacks the following facilities:

- No tourist Information center.
- No information and directional signages.
- No drinking water facility.
- No luggage/cloakroom.
- No ramps and wheelchairs on the site.
- Inadequate streetlighting.
- No shaded/ seating area outside temple premises.
- No dustbins outside the temple.
- No public toilets around the site.

Parking – There is no designated parking available on the temple complex. Currently, vehicles are parked outside the temple premises on the additional land owned by the temple.

4. Awareness – The temple ranks 9th and is one of the most important temples in the Navagraha circuit. It is majorly visited by devotees from the neighbouring districts. Foreign visitors are hardly seen on the site on non-festive occasions. During the festive season, it is majorly visited by domestic tourists residing in Tamil Nadu, Karnataka, and Andhra Pradesh and foreign tourists from south east Asian countries and Japan. The temple finds mention in popular international travel journals such as Lonely Planet and CN Traveller. A common website is maintained by the Hindu Religious & Charitable Endowments Department for the Nava Tirupati temples.

5. Activities – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as music and dance recitals within the temple. The ten-day annual Brahmotsavam during the Tamil month of Chittirai (April - May) and the Garuda Sevai festival in the month of Vaikasi (May-Jun) is a spectacular event in which festival image idols from the Nava Thirupathi shrines in the area are brought on Garuda Vahana (sacred vehicle). The Utsavar (festival deity) of Nammalvar is taken in a palanquin to each of the 9 temples, through the paddy fields in the area. Paasurams(poems) dedicated to each of the 9 Divyadesams are chanted in the respective shrines. This is the most important festival for the Navagrahas and draws thousands of visitors.

There are tour guides available at Alwarthirunagari Perumal Temple for the entire Navagraha circuit. These guides offer tours and information in Tamil, English, and Malayalam language and charge INR 1000 per person. During festive seasons, for those in Chennai, Tamil Nadu Tourism Department offers a tour. On the first and third Fridays of the month. The bus leaves Chennai and returns on Wednesday morning. The charges per head are INR 1,100, which includes boarding and lodging. Moreover, there are day tours from Tirunelveli for INR 150 on festival days and Saturdays.

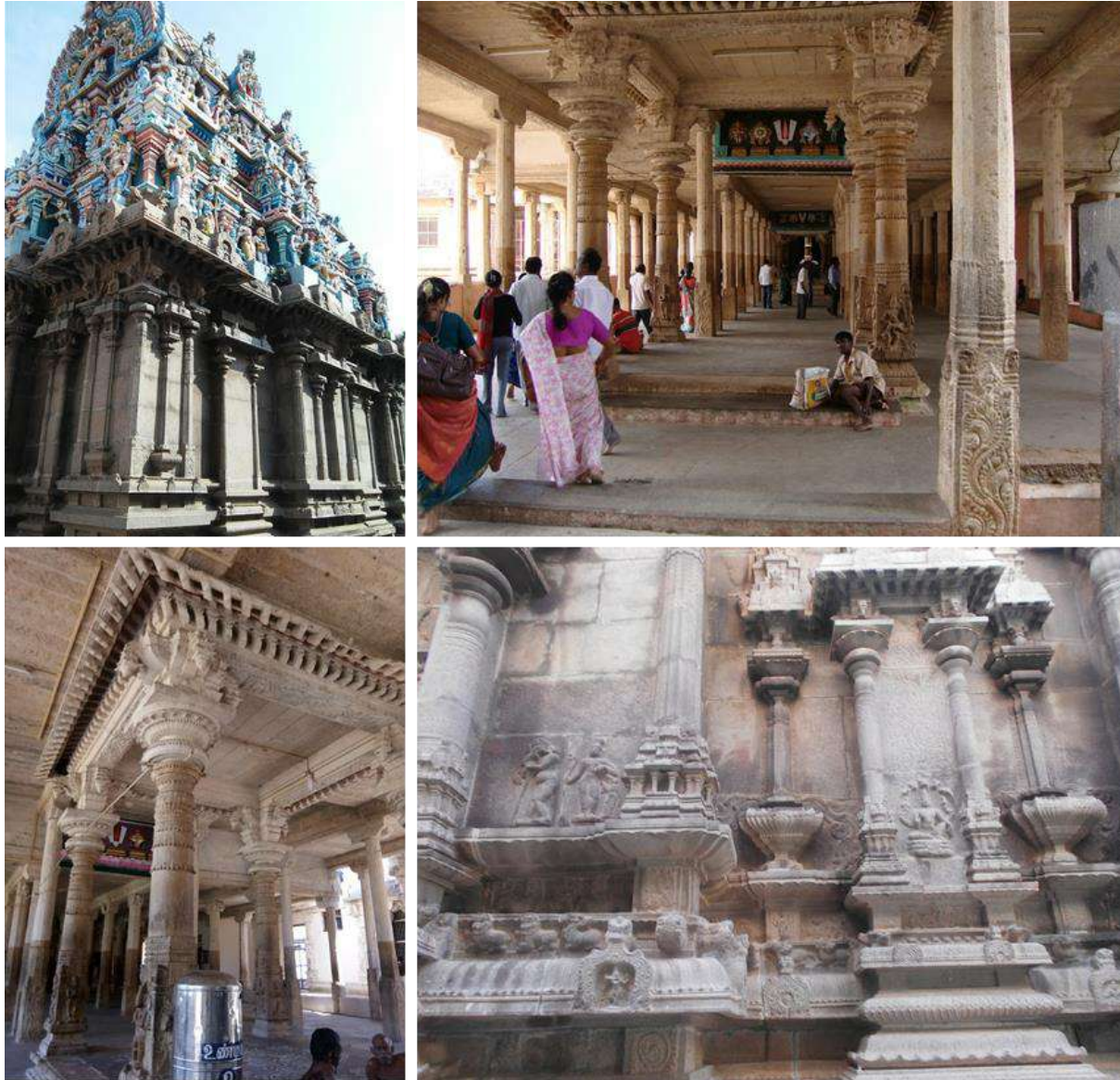
6. Accommodation – The temple mandapam is open for night stays for tourists at INR 100 per head. There is no proper accommodation facility available nearby for visitors and tourists. The nearest accommodation is in Srivaikuntam with few low budget accommodation facilities like dormitories and budget hotels with a fixed tariff for A/C rooms as INR 1200 and normal rooms ranging from INR 750 to INR 1000. A wider range of options and 3- star hotels are available in Tirunelveli and Thiruchendur.

7. Association with Community – In Alwarthirunagiri Perumal Temple, there is limited involvement of the community inside the temple, except locals put up retail shops, and volunteer themselves for security and crowd management of the temple during peak/festive seasons. There are beggars, and hawkers on the approach road and surrounding areas.

Figure 44-1: Location & Existing Layout



Site Pictures



Vision for the Site

The temple is considered the birthplace of Nammazhwar and considered the most prominent among the twelve Azhwar Saints. It is one of the 108 Divyadesam and is also associated with Ramayana. Even though being an important temple having rich historical and religious significance, the temple has very less popularity and footfall compared to other Divya Desam temples.

The temple complex has limited potential to enhance its facilities considering the non-availability of the vacant land. However, with limited land inside and outside the temple boundary, the temple has the opportunity to provide the needed amenities to enhance the visitor's experience and ease on the site.

The vision for the site is to improve visitor's experience and convenience by improving facilities on the site. Therefore, the development of an amenity block having an inquiry desk, drinking water station, luggage/ cloakroom, and temple-ware retail kiosks on the site is proposed for visitors' convenience. To enhance activities around the site, a pedestrianised entrance plaza is proposed which will act as an interactive and relaxing space for tourists. This area will also have a community toilet and shaded-seating areas for visitors and locals. Besides the maintenance of existing infrastructure such as toilets and Nandavanam, a designated parking area is proposed to prevent on-street parking leading to congestion of approach roads.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	479	1,110	2,199
High Value Tourists (HVT) (Both domestic and foreign)	3	6	12
Maximum Carrying Capacity	20,876		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious significance and its popularity among devotees, the concept of the masterplan includes:

- **Improving pilgrims' experience** at the temple – through improved basic amenities of inquiry desk, luggage room, drinking water station, wheelchair, and designated parking area on the site.
- **Enhancing interactive spaces on the site** with development of paved entrance plaza, and paved pathways around the temple tanks. Besides provision of information kiosks and guided tours on the site.
- **Maintaining existing infrastructure** of toilets and Nandavanam for tourist's convenience and to improve aesthetic appeal of the temple.
- **Improving tourist footfall** through signages, appropriate marketing and promotion.

Hard Interventions

1. **Amenity Block** – A small amenity block with an inquiry desk, luggage room, drinking water station, a wheelchair, and a temple-ware retail shop will be developed for tourist convenience and ease at the site. The amenity block can be placed adjacent to the temple office.

Infrastructure Created: ~100 sqm of building.

- 2. Pedestrianized entrance plaza** – The temple is located in a densely developed neighbourhood and does not have much space outside the temple for visitors to engage or relax. Therefore, the buffer space between the approach road and temple entrance is proposed to be pedestrianised by restricting the parking and vehicular movement with the use of bollards. A paved plaza will be developed which will include shaded-seating areas and a community toilet. This space will engage tourists with the surrounding temple-owned shops and thus will increase the temple's revenue.

Infrastructure Created: ~50 sqm of community toilet and 300 sqm of the paved public plaza along with 3 canopy-style seating areas.

- 3. Rejuvenation of temple tank** – The temple has two beautiful temple tanks with steps. One temple tank is located within the temple premises while the second one is located outside the temple boundary on its western side. Both of these tanks have a layer of algae and vegetation covering the tank water and steps. Therefore, cleaning of water and steps is proposed along with the construction of a paved pathway around both the temple tank to enhance the activities around it.

Infrastructure Created: 370 m long and 2 m wide pathways around the temple tanks.

Soft Interventions

- 1. Maintenance of existing toilet block** – The temple has a toilet block that is not well-maintained. Therefore, regular cleaning and maintenance of toilet block are suggested for the convenience of visitors.
- 2. Maintenance of Nandavanam** – The temple has a huge Nandavanam (traditional garden) located on the western side of the temple. The Nandavanam is not maintained well, therefore, regular cleaning and gardening of Nandavanam is suggested to restore its original beauty and enhance the aesthetics of the temple premises.
- 3. Marketing and Promotion** – The temple is less popular as compared to other Divya Desam temples and is mostly visited by the locals and pilgrims. As one of the most important Nava Tirupati, the temple needs to be promoted to a wider audience of domestic and foreign tourists. Directional and illustrative signages along the approach road, railway station, and bus stand of Srivaikuntam and

Alwarthirunagari shall be erected. Information kiosks should be installed at all the Navagraha temples. These kiosks shall provide free information brochures and maps of all the Nava Tirupati temples to the tourists. A guided one-day tour to all these temples shall be organised. To attract more footfall brochures and signages shall be provided at Tuticorin Airport and railway station.



Amenity Block with inquiry desk, luggage room and drinking water kiosk.



Pedestrianized paved entrance plaza with benches

4. Guided Tours – A self-guided audio tour provision shall be present on the site to portray the rich history of the site. Licensed guides can be deployed on the site to guide the visitors about the history and significance of the temple.

5. Community Engagement – The local community is involved in the everyday activities of the temple. Locals can also be engaged by training and deploying them as guards and tour guides on the site. Moreover, the community toilet and paved public plaza can be used by locals and thus enhance their involvement with the site.

Amenities Plan

1. Signage – Directional signages should be installed on the approach road, railway station, and bus stand of Srivaikuntam and Alwarthirunagari. Further, illustrative signages and boards imparting the historic background of the legend associated with the temple should be installed erected within the site at the appropriate place. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.

2. Parking – There is no designated parking on the site. Currently, vehicles are parked on-street, resulting in congestion on the approach roads. Therefore, to regulate the parking, a designated parking area is proposed along the south-eastern wall of the temple.

Infrastructure Created – 250 sqm Paved Parking areas with a total of 12 ECS.

3. Technology Interventions – For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:

- Free WiFi
- Compatibility with TN Assist App
- The package shall include CCTV's only near entrance gate as there are sufficient number of CCTV's within the temple premises.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Amenity Block	100 sqm
2	Pedestrianized entrance plaza <ul style="list-style-type: none"> • Community Toilet • Paved Plaza • Shaded-seating area (Canopy-style) 	50 sqm 300 sqm 3
3	Rejuvenation of temple tank <ul style="list-style-type: none"> • Construction of Paved pathway around the tank (2 m wide) 	370 m
4	Signage Package 1	1
5	Parking (250 sqm paved parking yard)	12 ECS
6	Technology Package 1 (CCTV's only on the gate)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Amenity block - Toilet	5
2	Amenity block - Drinking water station	3
3	Amenity block - Storage room	5
4	paved plaza	1
5	Shaded Seating area	1
6	Paved walkway	7
7	Parking	4
8	Signage Package 1	1

#	Project Component	Cost (INR Lakhs)
9	Technology Package 1	1
Total		INR 30 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Parking** – Capturing 25 ECS at 30% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1 Lakh.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **Helpdesk staff** at the amenity block.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
- Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and

responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 5 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

¹⁷¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity block - Toilet	5	Y0 – Y2	HR&CE
2	Amenity block - Drinking water station	3	Y0 – Y2	HR&CE
3	Amenity block - Storage room	5	Y0 – Y2	HR&CE
4	paved plaza	1	Y0 – Y2	HR&CE
5	Shaded Seating area	1	Y0 – Y2	HR&CE
6	Paved walkway	7	Y0 – Y2	HR&CE
7	Parking	4	Y0 – Y2	HR&CE
8	Signage Package 1	1	Y0 – Y2	HR&CE
9	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 30 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,300¹⁷¹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁷²

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labour assumed for computation = *INR 700* per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹⁷² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 3,200 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 221 Cr. at the site¹⁷³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹⁷³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 44-2: Proposed Master Plan – Alwarthirunagari Perumal Temple- Guru Sthalam, Thoothukudi



45. Thirukkolor Sri Vaithamanidhi Perumal Temple- Sevvai Sthalam, Thoothukudi

Site Details

District:	Thoothukudi
Name of Site	Sri Vaithamanidhi Perumal Temple
Site No:	Site 263B of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.5968, 77.9575
Land Area:	~2.5 acres (Temple) ~1.5 acres (Additional Land)
Peak footfalls:	~11,500 per day (May – June, September)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 84,500 (2019 – 20) For – 210 (2019 – 20)
Site Revenues:	INR 3.61 lakhs (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~3 km from Alwar Tirunagari Railway Station
b. Airport:	~25 km from Tuticorin Airport
c. Highway:	~1.2 km from SH 40 ~1.4 km from SH 93
d. Other:	Nil
Trails featured on:	Divya Desam

Sri Vaithamanidhi Perumal Temple is one of the 108 Divya Desam temples and ranks 8th in the Navagraha temples. Popularly known for “horoscope correction” pooja for planet Mars. The temple is majorly visited by people residing in and around the region. The temple is more dependent on other Navagraha temples for tourist footfalls and does not hold much potential as a standalone site as it lacks in providing basic facilities to its visitors. Therefore, the scope of interventions includes the development of an amenity block having an inquiry desk, drinking water station, luggage/ cloakroom, temple-ware retail kiosks along with a landscaped garden and pathways having seating areas for visitors to relax. Besides the maintenance of existing infrastructure such as toilets and Nandavanam, construction of boundary wall enclosing proposed and existing amenities on the additional available land in front of the temple is envisioned for visitors’ safety. Appropriate marketing and promotion for the temple’s visibility will be done to enhance tourist footfall.

Existing Condition

Location

Sri Vaithamanidhi Perumal Temple is located on the southern side of Thamirabarani River in a small village, Thirukkolor. It is located 29 km from Tirunelveli in Thoothukudi district, about 8 km East from Srivaikuntam, and 4 km from Alwarthirunagari on the Tirunelveli-Thiruchendur route. The temple is surrounded by sparse mixed-use development and agricultural lands. Other Navagraha temples located in proximity are Alwarthirunagari Perumal Temple (~2 Km), Sri Srinivasa Perumal Temple (~3 km), Sri Aravindalochanar Temple (~3 km), Thiru Makara, and Nedunkulai Kaather Perumal Temple (~2.2 km).

Existing Layout

The temple covers an area of 2.5 acres enclosed in a granite wall with 2 Prakarams.

- The temple is facing east with a Rajagopuram base (Mottai gopuram)
- Dwajasthamba, Balipeda and Garudan are after the Rajagopuram base under a mandapa.
- The sanctum sanctorum consists of Sanctum, Antarala, and Arthamandapam.
- Moolavar is in Sayana posture on Adhisheshan and its hood forms like an umbrella.
- In the sanctum, Vaithamanidhi Perumal is in a reclining pose with the wooden measurement tool (Marakkal) as his pillow to measure the wealth and looking at the palm of his left hand to watch over the location of the wealth.
- The Pushkarani (tank) is called Gubera Pushkarani and since he was a devotee of Haran (Lord Shiva), the Vimaanam is called "Sri Hara Vimaanam".
- The Sthala vriksham of the temple is called Srikara vriksham.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. It has 6 daily rituals and few events during the festive days of Puratasi, Vaikunda Yegadesi, and Garuda Sevai Utsavam. The temple has the following infrastructure dedicated for other uses such as:

- Mandapams for events
- Additional land used for parking
- A primary school
- Storage area for rice and paddy
- A kitchen

Other Land

In addition to the temple complex of 2.5 acres, the temple also owns 1.5 acres of land in front of the temple. This area houses a temple car, a primary school, a space for storing rice and paddy by the farmers, a kitchen, and is used for parking by visitors.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction – Sri Vaithamanidhi Perumal Temple is one of the Nava Thirupathi Kshetras, dedicated to Lord Vishnu and also classified as one of the 108 Divya Desams. Devotees worship in this temple for relief from the adverse effects of the planet mars in their life. Childless couples pray here for children and parents pray for their child's academic excellence. It is believed that people who pray here are blessed with all kinds of wealth. Alwarthirunagari Perumal temple and Thiru Makara Nedunkulai Kaather Perumal Temple, also one of the Nava Tirupati temples located within 2 km. Apart from its proximity to the other Navagraha temples and the Thamirabarani River, the temple does not have any attraction point for the tourist's engagement.

2. Accessibility – The temple can be accessed from Tirunelveli and Thiruchendur via SH 40. Buses ply at regular intervals from the Alwarthirunagari at a cost of INR 10. The bus stand is available at a distance of ~1 km. Thirukkolur does not have a railway station of its own. The nearest train stations are Alwar Tirunagiri

Railway Station, Tirunelveli railway junction at a distance of ~3 km, and ~35 km respectively. The site can be reached through Tuticorin Domestic airport which is ~25 km away. The nearest international major airport from the site is Madurai International Airport, located ~165 km away from the site. The major modes of transport people use to commute to the site are private/ rental vehicles.

3. Amenities – The condition of tourist amenities within and around the temple is quite poor. The site lacks the following facilities:

- No tourist Information center.
- No information and directional signages.
- No retail/food outlets
- No designated footwear stand.
- Inadequate drinking water facility.
- No luggage/cloakroom.
- No ramps and wheelchairs on the site.

Parking – There is no designated parking available on the temple complex. Currently, vehicles are parked outside the temple premises on the additional land owned by the temple.

4. Awareness – The temple ranks 8th in the Navagraha temples and is majorly visited by locals from the nearby villages. During the festive season, it is majorly visited by domestic tourists residing in Tamil Nadu, Karnataka, Andhra Pradesh, Gujarat, and foreign tourists from South-Asian countries. The temple is yet to find mention in popular international travel journals such as Lonely Planet and CN Traveller. A common website is maintained by the Hindu Religious & Charitable Endowments Department for the Nava Tirupati temples.

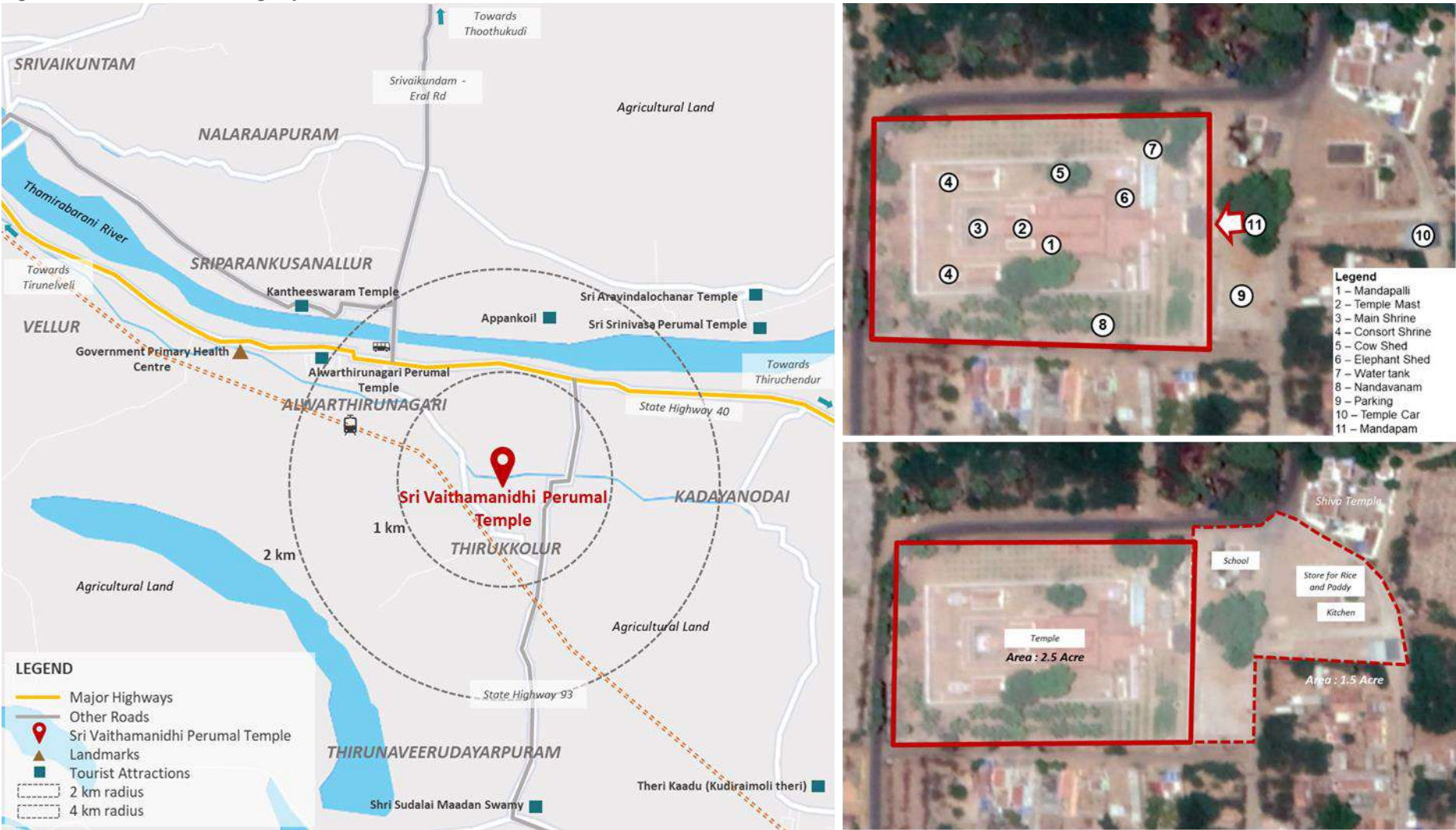
5. Activities – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as music and dance recitals within the temple. The Garuda Sevai festival in the month of Vaikasi (May-Jun) is a spectacular event in which image idols from the Nava Thirupathi shrines in the area are brought on Garuda Vahana (sacred vehicle). The Utsavar (festival deity) of Nammalvar is taken in a palanquin to each of the 9 temples, through the paddy fields in the area. Paasurams(poems) dedicated to each of the 9 Divyadesams are chanted in the respective shrines. This is the most important festival for the Navagrahas and draws thousands of visitors.

There are tour guides available at Alwarthirunagari Perumal Temple for the entire Navagraha circuit, covering this temple as well. During festive seasons, for those in Chennai, Tamil Nadu Tourism Department offers a tour. On the first and third Fridays of the month. The bus leaves Chennai and returns on Wednesday morning. The charges per head are INR 1,100, which includes boarding and lodging.

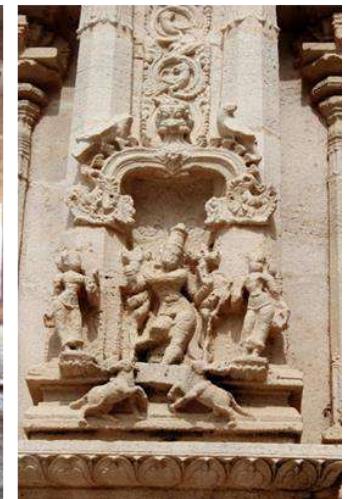
6. Accommodation – There is no accommodation facility available nearby for visitors and tourists. Since the time spent at the temple is not more than 1 hour (on non-festive occasions) and 1.5 hours (on festive occasions), visitors tend to either return to Tirunelveli/Srivaikuntam for a stay or other Navagraha temples after visiting this temple.

7. Association with Community – The temple is located in a remote area in a small town. The daily footfall in the temple is extremely low. Therefore, there is limited involvement of the community inside the temple, except locals put up retail shops, and volunteer themselves for security and crowd management of the temple during peak/festive seasons. There are beggars, and hawkers on the approach road and surrounding areas.

Figure 45-1: Location & Existing Layout



Site Pictures



Vision for the Site

Thirukkolor Perumal Temple is known to be the birthplace of Madhurakavi Alvar, one of the twelve saints of Alwar. The temple is one of the 9 Navagraha temples; dedicated to Planet Mars and is believed for horoscope correction among devotees. It is also believed that people who pray here are blessed with all kinds of wealth. Being one of the 108 Divya Desam, the temple has very less popularity and footfall compared to other Divya Desam temples.

The temple complex has the potential to enhance its facilities considering the availability of the huge vacant land outside the temple complex. It has a good opportunity to provide the needed amenities to enhance the visitor's experience and ease on the site.

The vision for the site is to improve visitor's experience and convenience by improving facilities on the site. Therefore, the development of an amenity block having an inquiry desk, drinking water station, luggage/ cloakroom, temple-ware retail kiosks on the site is proposed for visitors' convenience. To enhance activities around the site, a landscaped garden, children's playground, and pathways on the additional available land outside the temple premises will be developed that will have seating areas for visitors to relax. Besides the maintenance of existing infrastructure such as toilets and Nandavanam, construction of a boundary wall enclosing the existing and proposed amenities on additional land outside the temple premises is envisioned for visitors' safety.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	84	195	387
High Value Tourists (HVT) (Both domestic and foreign)	0	1	2
Maximum Carrying Capacity	9,647		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious significance and its popularity among devotees, the concept of the masterplan includes:

- **Improving pilgrims' experience** at the temple – through improved basic amenities of inquiry desk, luggage room, drinking water station, wheelchair, shoe stand, and parking on the site.
- **Enhancing interactive spaces on the site** with development of landscaped gardens, children's playground and facilitation of Gaushala and Elephant shed tours. Besides provision of information kiosks and guided tours on the site.
- **Enhancing security of the visitors** by construction of boundary wall, gated entrances and deployment of security guards on the site.
- **Improving tourist footfall** through signages, appropriate marketing and promotion.

Hard Interventions

1. **Amenity Block** – A small amenity block with an inquiry desk, luggage room, toilets, drinking water station, a wheelchair, a shoe stand, and a temple-ware retail shop will be developed for tourist convenience and ease at the site. The amenity block can be placed adjacent to the entrance Gopuram.
Infrastructure Created: ~60 sqm of building.
2. **Landscaped Garden**– Temple has a huge vacant land parcel near the entrance which is proposed to be developed as a landscaped garden. The landscaped gardens will be used as an engaging space for visitors to relax, sit and spend more time outside the temple premises. Moreover, the garden can be used by the local community as a recreational space for daily walks. Shaded-seating areas will be provided for visitor's convenience. The landscaping will be done using native flora requiring lesser care.
Infrastructure Created – A ~220 sqm of landscaped garden with 3 number of shaded benches.
3. **Children's Playground** – A primary school is situated on the additional land outside the temple premises which has huge vacant land around it. This land is proposed to be developed as a playground with soft and hard landscaping along with swings for children coming to school.
Infrastructure Created: ~300 sqm of children's playground.
4. **Boundary wall construction** – The additional land in front of the temple lacks a boundary wall. Therefore, construction of boundary wall enclosing the primary school, proposed children's park, kitchen, storage area, temple car, parking, and proposed amenity block is proposed. The temple boundary wall will have one gate each on the north, south and east sides of the temple, giving access from three sides. Entry to the temple premises can be regulated by guards deployed on the site.
Infrastructure Created: 240 m long and 2 m high boundary wall with 3 Aluminium Gates.
5. **Paved Pathways** – Pathways connecting all the proposed and existing amenities such as landscaped garden, children's playground, amenity block, parking, temple car, kitchen, and storage area with temple premises and site



Landscaped Garden



Paved Pathway



Children's Playground

entrances are proposed for ease of movement on the site. Pavement shall be done using material sourced locally.

Infrastructure Created – A 2 m wide paved pathways of 270 m length.

Soft Interventions

- 1. Maintenance of existing toilet block** – The temple has a toilet block that is not well-maintained. Therefore, regular cleaning and maintenance of toilet block are suggested for the convenience of visitors.
- 2. Maintenance of Nandavanam** – The temple has a huge Nandavanam (traditional garden) that is not well-maintained. Therefore, regular cleaning and gardening of Nandavanam is suggested to restore its original beauty and enhance the aesthetics of the temple.
- 3. Marketing and Promotion** – The temple has poor awareness and is mostly visited by the locals and pilgrims. As one of the Nava Tirupati, the temple needs to be promoted to a wider audience of domestic and foreign tourists. Directional and illustrative signages along the approach road, railway station, and bus stand of Alwarthirunagari shall be erected. Information kiosks should be installed at all the Navagraha temples. These kiosks shall provide free information brochures and maps of all the Nava Tirupati temples to the tourists. A guided one-day tour to all these temples shall be organised. To attract more footfall brochures and signages shall be provided at Tuticorin Airport and railway station.
- 4. Guided Tours** – A self-guided audio tour provision shall be present on the site to portray the rich history of the site. Licensed guides can be deployed on the site to guide the visitors about the history and significance of the temple.
- 5. Community Engagement** – The local community is involved in the everyday activities of the temple. Locals can also be engaged by training and deploying them as guards and tour guides on the site. Moreover, the landscaped garden, children's playground and paved pathways outside the temple can be used by locals as recreational spaces for relaxing and daily walks.
- 6. Gaushala and Elephant shed promotion/tour** – The temple has both Gaushala and Elephant shed that can be used to create an attraction point for the tourists visiting the site. The elephant shed can be promoted among visitors for tours to

see magnificent elephants and gaushala can be promoted to buy fresh-dairy products by locals and visitors. This will enhance both revenue and engagement on the site.

Amenities Plan

- 1. Signage** – Directional signages should be installed on the approach road, railway station, and bus stand of Alwarthirunagari. Further, illustrative signages and boards imparting the historic background of the legend associated with the temple should be installed erected within the site at the appropriate place. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
- 2. Parking** – There is no designated parking on the site. Currently, vehicles are parked randomly on the vacant land in front of the temple. Therefore, to regulate the parking, a designated parking area is proposed on the south-east side of the temple.
Infrastructure Created – 280 sqm Paved Parking areas with a total of 14 ECS.
- 3. Technology Interventions** – For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 - The package shall exclude CCTV's as there is a sufficient number of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Amenity Block	60 sqm
2	Landscaped garden	220 sqm
3	Shaded-seating area (Canopy-style)	3

#	Project Component	Scale
4	Children's Playground	300 sqm
5	Boundary wall construction (2 m height)	240 m
6	Paved Pathway (2m wide)	270 m
7	Signage Package 1	1
8	Parking (280 sqm paved parking yard)	14 ECS
9	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Amenity Block - Toilet	5
2	Amenity Block - Drinking water station	3
3	Amenity Block - store room	5
4	Landscaped garden	1
5	Shaded seating	1
6	Children's Playground	5
7	Boundary wall construction (2 m height)	13
8	Paved Pathway (2m wide)	4
9	Signage Package 1	1
10	Parking (280 sqm paved parking yard)	4
11	Technology Package 1 (Exclude CCTV's)	1
Total		INR 40 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Parking** – Capturing 15 ECS at 40% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1 Lakh.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.

- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
 d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** at the amenity block.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
 The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 5 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity Block - Toilet	5	Y0 – Y2	HR&CE
2	Amenity Block - Drinking water	3	Y0 – Y2	HR&CE
3	Amenity Block - store room	5	Y0 – Y2	HR&CE
4	Landscaped garden	1	Y0 – Y2	HR&CE
5	Shaded seating	1	Y0 – Y2	HR&CE
6	Children's Playground	5	Y0 – Y2	HR&CE
7	Boundary wall construction	13	Y0 – Y2	HR&CE

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
8	Paved Pathway (2m wide)	4	Y0 – Y2	HR&CE
9	Signage Package 1	1	Y0 – Y2	HR&CE
10	Parking	4	Y0 – Y2	HR&CE
11	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 40 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,700¹⁷⁴ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁷⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of

2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 4,300 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 40 Cr. at the site¹⁷⁶.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

¹⁷⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁷⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁷⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 45-2: Proposed Master Plan – Thirukkolor Sri Vaithamanidhi Permual Temple- Sevvai Sthalam, Thoothukudi



46. Thiru Makara Nedunkulai Kaather Perumal Temple- Sukra Sthalam, Thoothukudi

Site Details

District	Thoothukudi
Name of Site	Then Thirupperai Thiru Makara Nedunkulai Kaather Perumal Temple
Site No:	Site 263C of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6032, 77.9859
Land Area:	3.65 acres + 0.4 acres
Peak footfalls:	10,000 per day (May – June, September)
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 2.84 lakhs (2019 - 2020) For. – 384 (2019 - 2020)
Site Revenues:	INR 4.5 Lakhs (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	7.5 km (Alwar Tirunagri)
b. Airport:	22 km (Tuticorin)
c. Highway:	0.5 km from SH-40
Trails featured on:	Divya Desam

Thiru Makara Nedunkulai Kaather Perumal Temple is the 7th of the Navagraha temples and is known for “horoscope correction” pooja for planet Saturn. The temple is located amidst a small settlement and is majorly visited by people residing in and around the region. Furthermore, the temple is small and not as architecturally significant as other Navagraha temples. Therefore, it is more dependent on other Navagraha temples for tourist footfalls and does not hold much potential as a standalone site. The site can be developed for improved visitor experience and tourist amenities for Navagraha circuit.

Existing Condition

Location

Thiru Makara Nedunkulai Kaather Perumal Temple is located in Then Thirupperai, a panchayat town in Thoothukudi district on the southern bank of Thamirabarani River. It is located 31 km from Tirunelveli and about 27 kms East of Srivaikuntam and 5 km from Alwar Thirunagari on the Tirunelveli-Thiruchendur route in Tamil Nadu. Other Navagraha temples located nearby are:

- Alwarthirunagari Perumal Temple– ~4 Km
- Sri Vaithamanidhi Perumal Temple– ~3 Km
- Sri Srinivasa Perumal Temple– ~1.2 km
- Sri Aravindalochanar Temple– ~1.2 km
- Swamy Mayakoothar Temple – ~3.2 km

Existing Layout

The temple occupies an area of ~3.65 acres, enclosed by a granite wall. The temple complex houses a cow shed, mandapam, temple office and garden, apart from the main shrine. Unlike other south Indian temples, the temple does not have a Rajagopuram, the temple’s gateway tower and the entrance are marked through

Mandapam. The temple is accessed through a narrow street, which is also used for parking.

Existing Uses

The temple is currently used for poojas conducted by devotees from the nearby villages. It has an old mandapam used as a waiting area by the public and also for storing temple cars and other festival items. The temple conducts 6 daily rituals and few events during festive days

Other Land Available

In addition to the temple complex of 3.65 acre, the temple also owns 0.4 acre of land in rear side of the temple.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/ social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Thiru Makara Nedunkalai Kaather Perumal temple is one of the Nava Thirupathi Kshetras, dedicated to Lord Vishnu and also classified as one of the 108 Divya Desams. Devotees worship in this temple for relief from the adverse effects of the planet Venus in their life. Alwarthirunagari Perumal temple and Sri Vaithamanidhi Perumal Temple, also one of the Nava Tirupati temples located within 5 km and can be easily visited along with Sri Vaithamanidhi Perumal Temple via SH 40.
2. **Accessibility** – The Thiru Makara Nedunkalai Kaather Perumal temple can be accessed from Tirunelveli and Thiruchendur via SH 40. Bus ply at regular interval from Srivaikuntam. It is majorly accessed through private vehicles.
3. **Amenities** – Few basic tourist amenities are available within and around the temple site.
 - No tourist information centre is available.
 - No wayfinding signages or informative signage boards are available for the site.
 - No toilets present within or around the temple complex,
 - No luggage, cloak room or free drinking water facilities are available for pilgrims.
 - No drinking water facility available near temple site.
 - No retail or F&B kiosks are present near the temple site.
 - No divyaang friendly infrastructure is present within the temple complex.
 - Inadequate condition of dustbins in temple complex.

Parking- No parking available near the temple site. The access road is used for parking vehicles visiting the temple.

4. **Awareness** – The temple ranks 7th in the Navagraha temples majorly visited by locals from nearby villages. During festive season, it is majorly visited by domestic tourist residing in Tamil Nadu, Karnataka, and Andhra Pradesh. The temple is yet to find mention in popular international travel journals such as Lonely Planet and CN Traveller. A common website is maintained by the Hindu

Religious & Charitable Endowments Department for the Nava Tirupati temples.

5. **Activities** – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as music, dance recitals, etc. within the temple. There are tour guides available at Alwarthirunagari Perumal Temple for the entire Navagraha circuit, covering this temple as well
6. **Accommodation** – There is no accommodation facility available nearby for visitors and tourists. Since the time spent at the temple is not more than 1 hour (on non-festive occasions) and 1.5 hour (on festive occasions), visitors tend to either return to Tirunelveli/Srivaikuntam for stay or other Navagraha temples after visiting this temple.
7. **Association with Community** – Thiru Varagunamangai Perumal Temple is located in a remote area with lesser habitation around. The daily footfall in the temple is low. Therefore, there is limited involvement of the community inside the temple, except locals put up retail shops during festivals near the temple. Locals also volunteer themselves for security and crowd management of the temple during peak season.

Figure 46-1: Location and Existing Layout



Site Pictures



Vision for the Site

The temple holds a religious value as it is the seventh of the Nava Thirupathi Kshetras, the nine temples revered by Azhwar saints, dedicated to Lord Vishnu. It is also classified as one of the 108 Divya Desams.

Considering the existing site situation for the temple as:

- The locational setting of the temple: Remotely located amidst the residential setup, in a panchayat town.
- Proximity with other Navagraha temples: The temple is located at a distance of ~1.2 km from Sri Srinivasa Perumal Temple and Sri Aravindalochanar Temple (Twin Thirupathi).
- Availability of land: The temple has vacant land available for development of amenities for pilgrims visiting the Navagraha circuit.

As well as the weaknesses and limitations associated with the site such as:

- The temple is visited mainly by local and some regional pilgrims and receives a low footfall as compared to other Navagraha temples.

The temple site is envisioned to be developed for improving the overall temple appearance and improve the visitor experience.

- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	284	658	1,303
High Value Tourists (HVT) (Both domestic and foreign)	1	2	4
Maximum Carrying Capacity	20,876		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through improvement in site surroundings and aesthetics. Addition of basic amenities to improve overall visitor experience.
- Developing basic amenities within and around the site to improve site conditions.

Hard Interventions

1. **Community Toilet** – Currently, the temple complex lacks in toilet facilities for pilgrims visiting the temple. A community toilet block to be installed outside the temple complex, near the mandapam at the temple entrance. A toilet block with separate units for male, female and divyaang, to be provided. The unit to be detailed as per design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Infrastructure Created: ~ 30 Sqm of BUA

2. **Paved Walkway** - A safe pedestrian pathway from the proposed parking area to the entrance gateway of the temple. Walkway with standard width of 2m with paver blocks, as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Infrastructure Created: 380 m of paved walkway

Soft Interventions

1. **Site Promotion** – As seventh in importance in the Nava Tirupati, the temple needs to be promoted to a wider audience. Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness about Navagraha Temples.
2. **Temple Renovation and Maintenance** – The temple is old and requires renovation and maintenance of the buildings in temple complex. The temple office and Nandavanam to be renovated and maintained to make the temple more attractive to visitors. This would help in increasing the pilgrim footfall in the temple.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
2. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
3. **Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
4. **Streetlights** – The area has insufficient lighting in and around the temple. Provision of streetlights in and around the temple would ensure safety during night. The proposed pathway from the proposed parking area to the temple entrance, to be provided with streetlights.
5. **Parking** – The access road to the temple complex is currently used as parking by the visitors. The vacant temple land at the back of temple to be used as unpaved parking lot. This would decongest the access road during the peak season, which otherwise would be congested.

6. **Benches** - The Mandapam at the entrance to the temple complex also serves as the waiting area for pilgrims. Benches to be placed in the Mandapam for the ease of the visitors. The benches would be used a common facility, as resting space between the twin temples. The benches to be detailed as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
7. **Footwear Stand** - A footwear stand to be provided at the temple entrance for the convenience of pilgrims. A module of footwear stands to be placed as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
8. **Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site.
These include:
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Community Toilet	30 Sqm
2	Paved Walkway	380 m
3	Signage (Package 1)	1
4	Drinking Water Station	1
5	Dustbins	2
6	Streetlights	380 m
7	Benches	4
8	Footwear Stand	1

#	Project Component	Scale
9	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Community Toilet	5
2	Drinking water station	3
3	Footwear stand	3
4	Dustbins	1
5	Paved walkway	8
6	Streetlights	6
7	Benches	1
8	Signage Package 1	1
9	Technology Package 1	1
Total		INR 25 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.

- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** at the amenity block.

2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Community Toilet	5	Y0 – Y2	HR&CE
2	Drinking water station	3	Y0 – Y2	HR&CE
3	Footwear stand	3	Y0 – Y2	HR&CE
4	Dustbins	1	Y0 – Y2	HR&CE
5	Paved walkway	8	Y0 – Y2	HR&CE
6	Streetlights	6	Y0 – Y2	HR&CE
7	Benches	1	Y0 – Y2	HR&CE
8	Signage Package 1	1	Y0 – Y2	HR&CE
9	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 25 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,100¹⁷⁷ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁷⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 2,700 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 130 Cr. at the site¹⁷⁹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

¹⁷⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁷⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁷⁹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 46-2: Proposed Master Plan – Then Thirupperai Thiru Makara Nedunkulai Kaather Perumal Temple- Sukra Sthalam, Thoothukudi



47. Sri Nambi Rayar Temple, Thirukkurungudi

Site Details

District	Tirunelveli
Name of Site	Sri Nambi Rayar Temple
Site No:	Site 270 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.4336,77.4975
Land Area:	~13 acres (Main Temple), ~0.8 acres (Hill temple)
Peak footfalls:	50,000 per month (February-March)
Operator:	Thiru Jeeyar Math
Site Ownership:	Thiru Jeeyar Math
Tourist Footfall:	Dom. – 2.6 lakhs (2019 - 20) For. – NA
Site Revenues:	30 Lakh (2019 – 20)
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~12 km from Vallur Railway Station
b. Airport:	~77 km from Tuticorin Airport
c. Highway:	~500 m from SH-177, 7.5 km from NH-44
d. Other:	Nil
Trails featured on:	Divya Desam

Sri Nambirayar temple is one of the 108 Divya Desam temples, a sacred place of worship for the Vaishnavites. The Vaishnava Nambi temple is an architectural marvel with many beautiful sculptures and carvings found within the temple. In addition to this, the Thirumalai Nambi hill Temple offers tourists beautiful views of the valley and is a popular pilgrim. However, the site doesn't attract high tourist footfalls due to a lack of awareness and basic tourist infrastructure. The scope of intervention for this site is limited to the provision of pilgrim's convenience.

Existing Condition

Location

Sri Nambirayar temple is located on the foothills of the western ghat in a small town called Thirukkurungudi in Tirunelveli district. The town of Thirukkurungudi has been formed around this temple since its inception about 2000 years ago. The temple is located ~40 km from Kanyakumari and ~46 km from Tirunelveli. The major important tourist destination and landmarks around the temple are Arulmigu Sri Subrahmanya Swamy Temple, Arulmigu Nelliappar Temple, Nagaraja Temple and Thanumalayan Temple.

Existing Layout

Nambirayar temple consists of two temples namely Vaishnava Nambi temple and Thirumalai Nambi Temple. The Vaishnava Nambi temple is situated in the heart of Thirukkurungudi town, while Thirumalai Nambi temple is situated on a hilltop. A check post is located at the foothill, from here onwards no private vehicles are allowed to go further. People wanting to visit the temple can only travel in jeeps operated by private operators in the town. These jeeps carry 6-7 people in one trip at a nominal charge.

Vaishnava Nambi Temple (Main Temple)– The temple occupies a land area of ~13 acres. It has five prakarams and all the shrines are enclosed in the first two enclosures. There are several halls, that have sculpted pillars from the Nayak period.

Also, there is a shrine dedicated to Lord Shiva in the temple, which is an unusual feature in Vishnu temples. The other prominent features of the temple are:

- A granite wall surrounding the temple, enclosing all its shrines and two temple tanks.
- The temple has a flat entrance tower at the entry point of the outer precinct towards the eastern side.
- The Rajagopuram, at the entrance of the temple precinct, is 110 ft tall.
- The outer precinct houses the Thiru Jeeyar Mutt along with large open spaces and an elephant shed. The outer precinct also consists of large open spaces that act as resting ground for the temple elephants.
- The inner precinct houses the main deity and a few other shrines of the temple.
- There is a festival hall in the second precinct of the temple facing South, that has sculpted pillars indicating various Hindu legends.

Thirumalai Nambi Temple (Hill Temple) – The temple is situated on a hilltop, located at a distance of ~8km from the Vaishnava Nambi temple. This temple can only be accessed with prior permission, as it lies in the reserved forest region. The other prominent features of the temple are as follows:

- The temple is situated on a hill amidst a beautiful waterfall.
- The vehicles only go up to a certain point. From this point, the uphill journey to the temple has to be covered on foot via steps.
- Tourists can access the waterfalls just before entry to the temple.
- The temple is comparatively small and consists of a sanctum that houses the main deity.

Existing Uses

Nambirayar temple enjoys popularity mostly among locals and pilgrims from nearby areas. The temple is believed to have a very peaceful and calm surrounding. In addition to the main deity, the temple also houses various other deities. The site is currently used for religious purposes mainly. Some of the festivals conducted at the site are Ekadasi, Panguni Brahmotsav (March-April), Atheira utsavam, Kaisega nadagam and Chithirai Vasanth (April-May). Various uses housed in Vaishnava Nambi temple include:

- Thiru Jeeyar Math – inside the temple complex.
- Resting area and eating sheds for the temple elephants.
- Rituals at the 1 small temple tank within the temple complex.

Other Land Available

The Vaishnava Nambi temple has ~28 acres of vacant land available within the village area, with around 7 temples sharing these vacant lands. Out of this, the temple has a ~2-acre land parcel near the temple tank. This plot is currently vacant. Further, the hill temple has ~250 acres of land area under the temple's ownership. This land can only be used for development purposes after obtaining a NOC from the forest department.

Masterplanning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

Thirumalai Nambi Temple is located on a hilltop under the reserve forest area, therefore no development can be done without the permission of the forest department.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Nambirayar is visited by pilgrims, mainly locals who worship Lord Vishnu. The unique aspect of this temple is the 'math' in the Vaishnava Nambi temple premises, where people come to visit a sage/guru who has taken penance at this place. Further, with beautiful Dravidian style architecture, the main temple has multiple mandapams, beautiful scriptures that date back thousands of years and 2 magnificent elephants that grace the temple with their presence.

Other than that, the hill temple is also a very popular tourist attraction. The temple is situated on a hilltop that offers a picturesque view. There is also a waterfall near the temple. It is said that the water in this fall is crystal clear and has herbal values to it. In addition to its scenic beauty, it is also believed that Lord Hanuman leaped to Lanka from this place to search for Sita.

2. **Accessibility** – The main temple is located on the Eruvadi - Thirukkurungudi road that connects the site to nearby towns/cities. The temple can also be accessed from the west via SH-177. The hill temple can be reached from the main temple via Nambi-Kovil road which connects to the SH-177 near the temple. The nearest bus stand and auto stand are located within ~500m from the site. The major modes of transport people use to commute to the site include private vehicles (own or hired), private buses and taxis.

Parking – There is no designated parking space available at the main temple, vehicles are usually parked on the streets. At the hilltop temple, No private vehicles are allowed beyond the check post. There is no designated parking space available at the temple, only drop-in/drop-off points are present.

3. **Amenities** – The visitor amenities within and around the temple are well maintained but need some improvements.
- The main temple has 1 block for toilets with no demarcation of gender. The hill top temple doesn't have any toilet facility.
 - Free drinking water facility available at the main temple without RO purification. There is no drinking water facility available at the hill top temple
 - The site premise is cleaned regularly and adequate dustbins are provided.
 - At the main temple, 12 CCTV cameras cover the entry/exit points and the key tourist attraction points. Further, 4 security guards service the temple site. At the hill top temple, entry is not allowed after 6 pm for safety reasons. Few security guards servicing the site, but no provision of CCTV cameras. Also, there are no barricades or safety measures near the falls/stream area
 - There is sufficient street lighting inside the main temple premises. However, no street lights are provided along the way to the hill top temple.
 - There are not sufficient signages around the site. The signages are only present at entry/exit points and key points.
 - The main temple does not have ramps or wheelchair facilities. At the Hill top temple, from the vehicular drop-off point, visitors have to take steps to the hill to reach the temple, no ramps are provided.
 - There are 2-3 small restaurants or F&B outlets available around the site at affordable prices.
 - There is no luggage/cloakroom available on the temple premises.

4. **Awareness-** The temple mostly attracts regional tourists. The site is visited mainly by locals and domestic tourists, with visitors originating from Tamil Nadu, Andhra Pradesh, Kerala and Karnataka. It is recommended by renowned travel referral / review aggregators TripAdvisor etc.
5. **Activities-** The temple priests perform pooja (rituals) on a daily basis and during festivals. Cultural and folk shows are organised by the temple authority during the peak seasons, especially during Ekadashi. These shows are generally 4-5 hours long and are free of charge. These shows are arranged at the temple and are showcased in Tamil language only. Other than that, there aren't any regular activities happening in the temple premise.
6. **Accommodation-** There aren't many lodging facilities available in Thirukkurungudi. There is a dormitory facility available near the temple which only has 3-4 rooms with 15 pax capacity per room. The nearest town with lodging facilities Valliyur has 3-4 budget hotel with room tariff ranging from INR 600 to INR 1500. For decent options for accommodation, the nearest lodging options are available either in Tirunelveli, (~45km) or in Nagercoil (~42 km). Both these cities have lodging options ranging from budget hotels to luxury hotels. The average room tariffs range from INR 700 to INR 2000.
7. **Association with Community-** The temple is visited on a daily basis by many locals. During the peak seasons, especially during Ekadashi the temple organises various cultural and folk shows for the visitors. This is when the locals take part in these shows by enacting the town's history. This is a tradition that is followed every year by the local community.

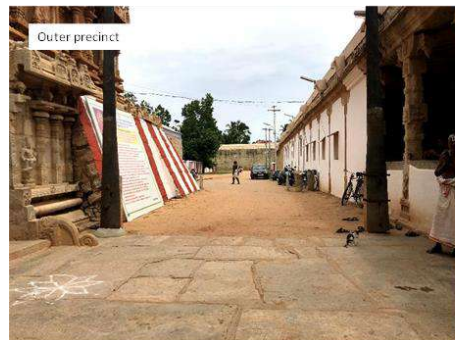
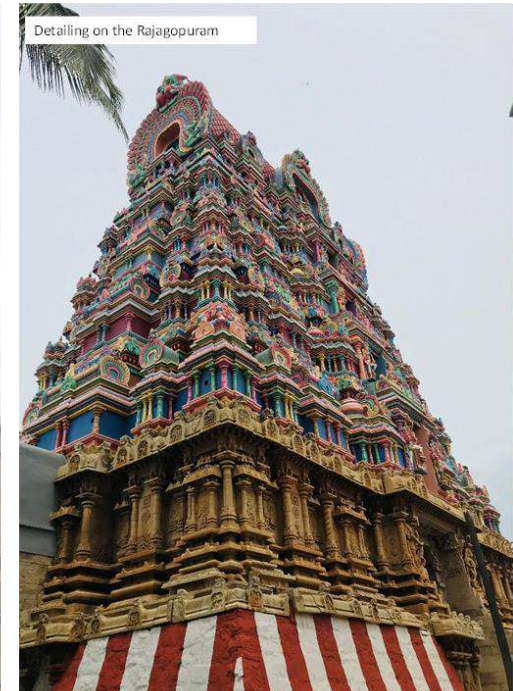
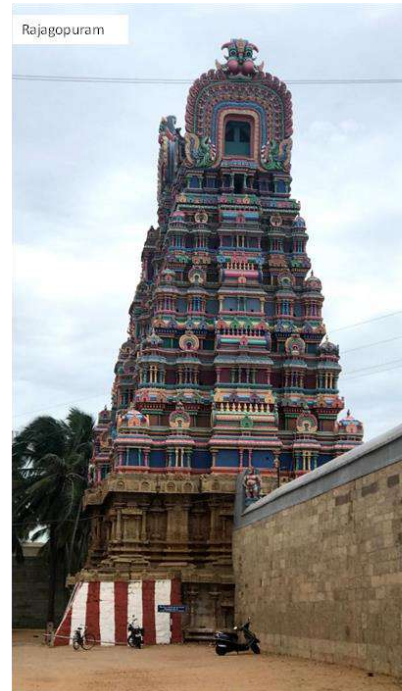
Figure 47-1: Location & Existing Layout, Sri Nambi Rayar Temple



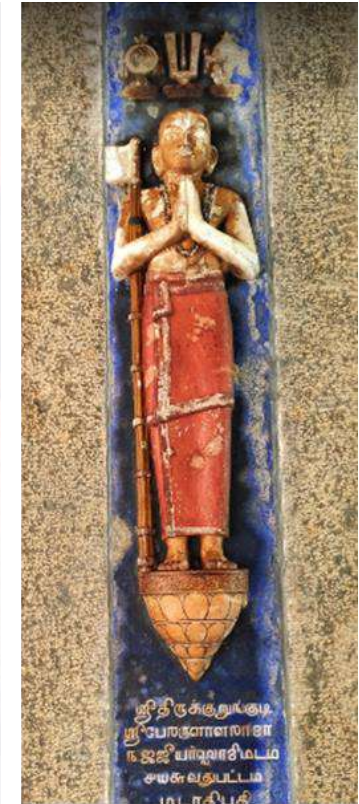
Figure 47-2: Other Temple Lands



Site Pictures







Vision for the Site

Nambirayar temple is located on the foothills of the western ghat providing a picturesque view from the hilltop temple. The site is well-connected to major cities like Tirunelveli and Nagercoil.

Although the temple is well-maintained, it is lacking with few basic amenities such as parking, signages, waiting area, etc.

The temple has the potential to be developed into a popular tourist attraction due to the locational advantage, presence of a waterfall and picturesque view that will enhance the visitor's experience.

The vision for the site is to develop it as a tourist destination by improving existing infrastructure and basic amenities and effectively utilizing the available vacant parcels of land near the main temple complex.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a very low tourism site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	260	361	470
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	54,357		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious and architectural significance and its popularity among pilgrims and domestic tourists, the concept of the master plan includes:

- **Improving pilgrims' experience** at the temple – through improved basic amenities of drinking water, seating area and parking.
- **Improving access** around both the temples by the installation of signages in all languages along with layout maps showing the location and connectivity between the temples.
- **Providing safety measures** around the Thirumalai Nambi Temple (hill temple).
- Developing an **interactive space** for the local community.

Hard Interventions

1. **Tourist Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, rest/waiting room, galleries to display and showcase temple importance and architecture, shoe stand and cloakroom. It will be a standalone building placed at the available vacant land adjacent to the temple tank. This development will be as per the design guidelines.

Infrastructure Created: ~150 sqm of BUA

2. **Community Park** – A community park can be provided on the available vacant land. The existing trees will be retained along with providing the necessary amenities.

- The park could be used by the locals as well as pilgrims, for rejuvenation and recreation purposes.
- Paved Walkways, children's play area, benches and streetlights can be provided according to the context of existing trees.
- The design guidelines for community park infrastructure are mentioned in Glossary of interventions.

Infrastructure Created:

- *Paved walkway ~250 m. length and 3m wide*
- *Soft landscaping ~2900 sqm*
- *Temporary Seating ~5 units*

3. **Parking** – There is no designated parking area, all the vehicles are parked on the street. Therefore, a parking area is proposed on the vacant land near the proposed facilitation center.

Infrastructure Created – 800 sqm Paved Parking areas with a total of 45 ECS.



Reference images for Community Park



Reference images for Parking Area

Soft Interventions

- 1. Marketing and Promotion** – Although the temple has many attractions such as the waterfall near the hill temple, beautiful sculptures and carvings at the Vaishnava Nambi temple, temple elephants and the math, it has low footfall compared to other Divyadesams. To enhance the visibility of the temple, it has to be marketed well. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites will help to enhance tourist footfall and attract high-value tourists.
- 2. Guided Tours-** Tour guides or audio-visual tours could be arranged on site to improve the overall tourist experience. This could also provide an opportunity for the local community to engage in temple activities.
- 3. Safety around the Waterfall Area-** Currently, there are no barricades or safety measures near the falls/stream area on the hill temple. Fences or barriers should be provided along with warnings or instructions posted at the waterfall. Observation platforms can also be created for tourists' safety and enjoyment of the waterfall.

- 4. Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “Own your Street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.

Amenities Plan

- 1. Signage (Package 2)** – Signages can be installed along the approach roads, around the hill temple and main temple as well. Signage Package 2 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines .
- 2. Drinking Water Station-** Unavailability of free drinking water is one of the issues at the Thirumalai Nambi temple (hill temple) site. Hence, 1 drinking water station with RO water coolers should be installed at a strategic location within the temple.
- 3. Technology Interventions (Package 1):** A basic package of technology integration could be installed at the hill temple site. These shall include:
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Tourist Facilitation Centre (Type 1)	1
2	Community Park- <ul style="list-style-type: none"> • Paved walkway • Soft landscaping • Temporary Seating • Streetlight 	250 m 2900 sqm 5 5
3	Parking	45 ECS
4	Signage (Package 2)	1
5	Drinking Water Station	1

#	Project Component	Scale
6	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Community park - paved walkway	5
2	Community park - Landscaping	2
3	Community park - Seating	1
4	Community park - Streetlights	1
5	Parking	13
6	Drinking water station	3
7	Signage Package 2	3
8	Technology Package 1	1
9	Tourist Facilitation Center (Type 1)	16
Total		INR 45 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.

- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

- Parking** – Capturing 45 ECS at 30% occupancy per day with 2 rotations at INR 15 per ECS.
- Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** at the facilitation centre.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 10 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by the Thiru Jeeyar Math (Temple Trust) itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Community park - paved walkway	5	Y0 – Y2	Temple Trust
2	Community park - Landscaping	2	Y0 – Y2	Temple Trust
3	Community park - Seating	1	Y0 – Y2	Temple Trust
4	Community park - Streetlights	1	Y0 – Y2	Temple Trust
5	Parking	13	Y0 – Y2	Temple Trust
6	Drinking water station	3	Y0 – Y2	Temple Trust
7	Signage Package 2	3	Y0 – Y2	Temple Trust
8	Technology Package 1	1	Y0 – Y2	Temple Trust
9	Tourist Facilitation Centre (Type 1)	16	Y0 – Y2	Temple Trust
Total		INR 45 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,900¹⁸⁰ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days per day¹⁸¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 4,900 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 45 Cr. at the site¹⁸².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

¹⁸⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

◦ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁸¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁸² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 47-3: Proposed Master Plan – Sri Nambi Rayar Temple



48. Vaanamaamalai - Sri Thothatrinatha Perumal Temple

Site Details

District	Tirunelveli
Name of Site	Sri Thothatrinatha Perumal Temple
Site No:	Site 274 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6166, 77.9333
Land Area:	4.75 acres+ 0.8-acre other lands
Peak footfalls:	10,000 per day (January- April)
Operator:	Jeeyar Trust
Site Ownership:	Jeeyar Trust
Tourist Footfall:	Dom. – 1.2 lakhs (2019 - 20) For. – 1,100 (2019 – 20)
Site Revenues:	32 Lakhs (2019 – 20)
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~1 km from Nanguneri Railway Station
b. Airport:	~179 km from Madurai Airport
c. Highway:	1 km from SH-92, ~900m from NH-44
Trails featured on:	Divya Desam

Sri Thothatrinatha Perumal Temple, Vaanamaamalai is one of the Divyadesam temples and Sywayambu Kshetrams dedicated to Lord Vishnu. The temple is known for its oil tank which is believed to have some medicinal value. Though the temple is visited by a huge domestic crowd from nearby states and Nepal in the festive season, it faces backlash from the local community for caste discrimination to access the temple. The scope for interventions at the temple is limited to the provision of basic infrastructure with upgraded facilities.

Existing Condition

Location

The temple is located centrally in the town of Vaanamaamalai or Totadrikshetram (Nanguneri) in Tirunelveli district. Located on the Chennai–Villupuram–Trichy–Kanyakumari Highway, the town enjoys excellent connectivity. All the buses on the Tirunelveli to Nagercoil route pass through the town. The major important tourist sites around the temple are Thevar Statue and Sri Thirunageshwarar Temple.

Existing Layout and Uses

The town was surrounded by four lakes and hence the name Nanguneri. However, currently, only one lake is present. The temple, constructed in Dravidian architecture covers an area of 4.75 acres and has the following prominent characteristics:

- The temple has a main entrance from the eastern side followed by a 7-tiered Rajagopuram. It also has a rear entry from the temple tank area as well.
- The compound has two prakarams (closed precincts) ornamented by numerous mandapam with beautifully sculpted pillars - Pandhal Mandapam at the entrance, Sevvanthi Mandapam and Veerappa Naayakkar Mandapam in the main sanctum, etc.

- The shrine of the presiding deity, located axially to the gateway tower towards the north, is approached through Ardha Mandapam and Maha Mandapam.
- The temple complex also houses a Golden Chariot and Golden Chapparam (another kind of vehicle) which are taken out during festivals.
- The Vimana has Nanda Vardana design.
- The complex houses an oil well (25 ft high and 15 ft wide) that stores the oil which is used to perform abhishek to the deity throughout the year.
- The temple complex also houses many other shrines, sannadhis and a festival hall as well.
- There are numerous inscriptions in the temple complex, the oldest being from 1236 AD. These inscriptions provide an insight into the temple's past endowments, gifts and patronages received.
- The temple tanks are Setruthamarai Theertham, which is devoid of water and contains only oil and clay, another tank is Indra Theertham.

The site primarily serves as a temple attracting tourists from all over the country. It is also visited by people seeking medical relief. The site serves as the headquarter for Vaanamaamalai Mutt. Other facilities include the administration office, Golden Chariot Temple Car and Golden Chapparam and ticket counter. Some of the festivals conducted at the site are Chittirai Chariot Festival, Brahmotsava (12 days), Purattasi and Vaikuntha Ekadasi.

Other Land Available

Apart from 4.75 acres of the temple complex, a temple tank of 0.8 acres available on the western side of the temple. The temple has a rear entry to access the temple tank. There is also a Vishnu temple adjacent to the temple tank.

Masterplanning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

There is caste-based discrimination to access the temple, several community riots have also been recorded at the site due to this issue.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The site serves as the headquarters for the 600-year-old Vaanamaamalai Mutt. The temple is one of the 108 Divyadesams and one of the eight Swayambhu Kshetrams (deity manifested on its own). Unlike the traditional temples which have one Swayambumurthis (self-manifested deities), this temple has eleven. The temple finds mention in ancient Tamil verse, Divya Prabhanda. The oil from the oil well in the complex is believed to have many medicinal properties and can cure skin diseases. Many of the festivals organized here are unique in the way they are celebrated as compared to other Divyadesams.
- 2. Accessibility** – The temple is located centrally in the town of Vaanamaamalai or Totadrikshetram (Nanguneri) on the Chennai – Villupuram – Trichy – Kanyakumari Highway and can thus be accessed via wide urban roads. The average fare to reach the temple from the city is INR 26 by bus. The nearest bus stop and auto stand are located within 500m from the site. The major modes of transport people use to commute to the site include tourist/public bus, auto-rickshaw, taxi, and private/hired transport.

Parking – There is no developed parking space available, vehicles are usually parked outside the temple complex.
- 3. Amenities** – The temple is equipped with a few basic-level amenities within and around the temple.
 - There is no tourist information centre available.
 - No direction, informational, layout signage boards available. A board in English, Hindi and Tamil indicating the name of the temple present at the entrance.
 - A toilet block is located outside the temple complex.
 - Divyang friendly measures like wheelchairs are provided
 - No drinking water facility available.

- The temple premise is adequately clean with 2 cleaning staff deployed in two shifts. 30 small dustbins are installed and are regularly cleared.
- The site boundaries are walled with 20 CCTVs installed at entry/exit points and some other locations. 3 security guards are also deployed.
- Lighting arrangement is lacking in most of the key areas and poorly maintained by the panchayat.
- There is no fire safety equipment provided
- The temple gets overcrowded during the peak season and priority queues deployed using wooden stacks
- No resting areas (Luggage/Cloak Rooms, Footwear Stall, Ticketed Lockers or Non-Ticketed Waiting Area) are provided.
- A backup power facility is available.

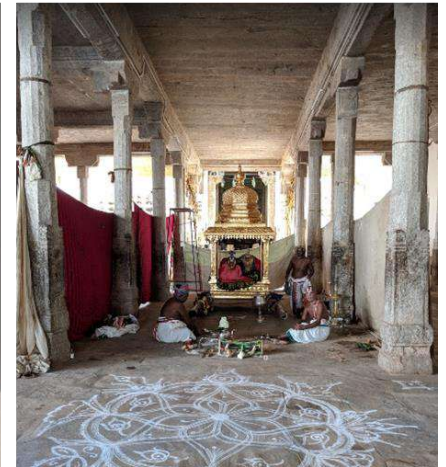
Activities like temple walks and retail stores selling the local delicacies are some of the employment generation activities the local community can take up.

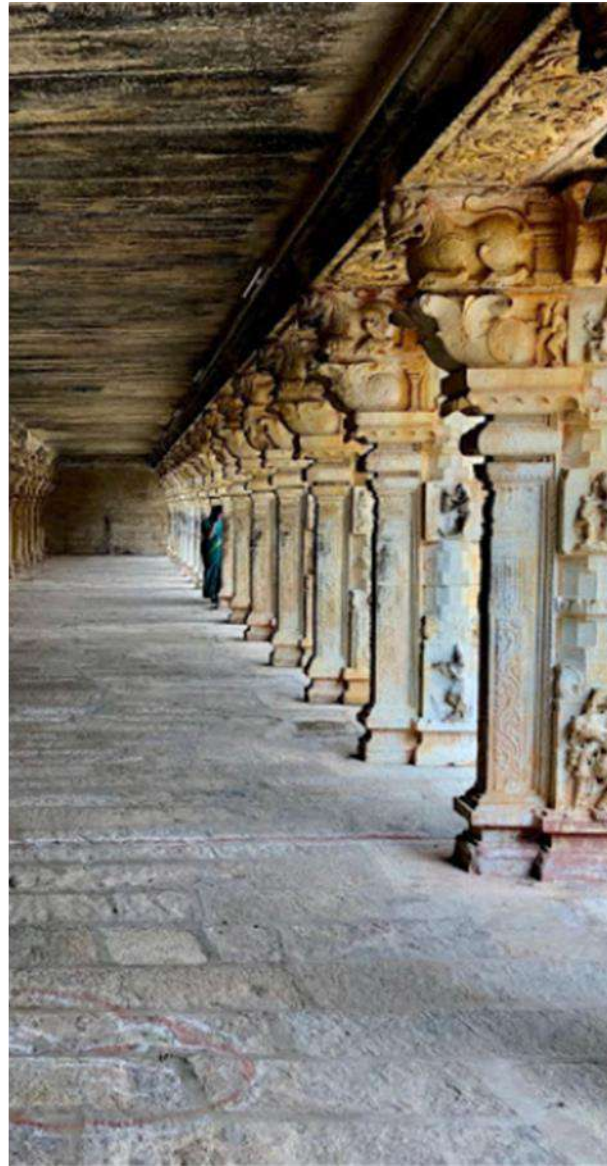
- 4. Awareness** - The temple is popular with regional pilgrims and draws huge crowds during the peak season. It is frequently visited by solo travellers, families, and large groups. In 2019 it witnessed a footfall of ~1.2 lakhs, all domestic travellers, mostly from Tamil Nadu, Karnataka, Kerala, and Andhra Pradesh. Sometimes the temple receives foreign tourists from Sri Lanka, Japan, Malaysia, and Nepal. The temple finds mention in popular travel journals like Trip Advisor. The temple also has an online website managed by Vaanamaamalai Mutt which provides details about the temple. Additionally, a YouTube channel giving a visual tour of the site has been started.
- 5. Activities** - The tourists mostly visit the temple for regular darshan and to seek medical relief. The site also serves as the headquarters for Vaanamaamalai Mutt.
- 6. Accommodation-** No accommodation facility is available around the site. Tirunelveli, 30 km away hosts a variety of accommodation facilities from the budget hotels with an average room charge of INR 1,500 to 3-star hotels with an average tariff of INR 2500 for double room AC.
- 7. Association with Community-** The temple is remotely located with an average low footfall. The involvement of the community is limited inside the temple. Some local people volunteer themselves for the cleaning of the temple. Due to caste-based discrimination, people have often shown displeasure towards the temple authorities and avoided visiting the temple.

Figure 48-1: Location & Existing Layout, Sri Thothatrinatha Perumal Temple



Site Pictures





Vision for the Site

The Vaanamaamalai Perumal Temple, also known as Arulmigu Sree Vaanamaamalai Totatri Perumal Temple, dedicated to Vishnu is one of the eight Swayambhu Kshetrams – the 8 Vishnu temples, where the deity manifested on its own.

Given the religious significance of the temple and other features, such as:

- The temple site is located along A large lake (Jeeyar Uttu), providing a serene and beautiful view on its northern side.
- Serves as the Head Quarters for the 600 – year old Vaanamaamalai Mutt.

And taking into cognizance its weaknesses, such as:

- Overcrowding during peak season.
- Lack of basic amenities like toilet blocks, drinking water.
- Absence of Luggage/ Cloak Rooms especially for tourists visiting by public transport.

The temple can be developed as a regional pilgrim destination by enhancing the visitors' experience and improving existing conditions.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyang and elderly).

- **Tourist Projections** – The site is categorized as a very low tourism site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	119	165	215
High Value Tourists (HVT) (Both domestic and foreign)	2	3	4
Maximum Carrying Capacity	18,709		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given that the site is popular and religiously significant, interventions should be planned with the perspective of improving the visitor's experience and correcting problems currently existing on site.

The objectives of master planning at this site include:

- **Maintenance and conservation** of temple infrastructure such as the temple chariot, the oil well, etc.
- **Provision of amenities** in and around the temple
- **Crowd control measures** to reduce the congestion during the peak seasons

Hard Interventions

1. **Temple Wares (Pooja items, Prashadam)** - 1 temple ware kiosk is suggested inside the temple complex, near the Rajagopuram, for pooja items and prashadam.

Infrastructure Created: 3mX3m module (1 unit)

2. **Resting Space with Garden Area-** A available land on the south-eastern side of the temple complex, near the rajagopuram can be developed as a resting cum garden area. The garden will be developed with proper landscape and seating arrangement. It will have temporary shaded areas in the form of canopy structures or gazebos, tensile sit-outs adorned with beautifully carved pathways. The landscaping will feature native and religious flowers and bushes, and should,

as far as possible, be the least maintenance-oriented and be self-sustainable. This shall thus create a visual treat for the visitors.

Infrastructure Created:

- *Softscape – 900 sqm*
- *Footpath – 120 m*
- *Temporary Seating – 4*
- *Streetlights- 2*

3. **Cloak Room Kiosk-** The major modes of transport people use to commute to the site include buses and auto/taxi services. A **kiosk** can be proposed as a luggage/cloakroom for tourists visiting by public transport.

Infrastructure Created: 3mX3m module (1 unit)



Reference images for Resting Space with Garden Area

Soft Interventions

1. **Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness.
2. **Crowd Management** – As the temple is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
 - Access timings can be made exclusive for high-value tourists.
3. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “own your street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.

Amenities Plan

1. **Parking-** The temple does not have any designated parking area and the vehicles are usually parked outside the temple complex. There is no vacant land available, hence no parking area is proposed, however, a designated parking space should be developed in consultation with the local bodies.
2. **Signage (Package 1)** – Few direction boards can be installed indicating the directions for the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of interventions.
3. **Drinking Water Station-** Availability of free drinking water is a major issue at this site. Hence, 1 drinking water station with RO water coolers should be installed near the toilet block.
4. **Street-Lighting** – The temple complex is lacking lighting in most key areas. Therefore streetlights should be installed in and around the temple complex.
Infrastructure Created: 10 Units

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Kiosk (3mX3m)	2
2	Resting Space with Garden Area- <ul style="list-style-type: none"> Softscape Footpath Temporary Seating Streetlights 	900 sqm 120m 4 2
3	Signage (Package 1)	1
4	Drinking water station	1
5	Streetlights	10

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Garden - paved walkway	2
2	Garden - Landscaping	1
3	Garden - Seating	1
4	Garden - Streetlights	1
5	Kiosks	3
6	Drinking water station	3
7	Streetlights	1
8	Signage package 1	1
Total		INR 10 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1 Lakh.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 1 Lakh*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple as well as the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by the Thiru Jeeyar Math (Temple Trust) itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Garden - paved walkway	2	Y0 – Y2	Temple Trust
2	Garden - Landscaping	1	Y0 – Y2	Temple Trust
3	Garden - Seating	1	Y0 – Y2	Temple Trust
4	Garden - Streetlights	1	Y0 – Y2	Temple Trust
5	Kiosks	3	Y0 – Y2	Temple Trust
6	Drinking water station	3	Y0 – Y2	Temple Trust
7	Streetlights	1	Y0 – Y2	Temple Trust

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
8	Signage package 1	1	Y0 – Y2	Temple Trust
Total		INR 10 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 450¹⁸³ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁸⁴
- Retail and F&B spaces = 5 man-days per day¹⁸⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 1,100 man-days.

¹⁸³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 20 Cr. at the site¹⁸⁶.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁸⁴ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁸⁵ Assuming average 2.5 persons per kiosk / shop

¹⁸⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 48-2: Proposed Master Plan – Sri Thothatrinatha Perumal Temple



49. Sri Adikesava Perumal Temple, Thiruvattur

Site Details

District	Kanyakumari
Name of Site	Sri Adikesava Perumal Temple
Site No:	Site 287 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.3297, 72.2658
Land Area:	2.25 acres + 0.45 acres Other lands
Peak footfalls:	50,000 per day (December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 42.11 lakhs (2019 - 20) For. – 20,440 (2019 – 20)
Site Revenues:	9.96 Crore
Site Orientation	Pilgrim
Site Potential:	High tourism site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~7 km from Kuzhithurai Railway Station
b. Airport:	~50 km from Trivandrum International Airport
c. Highway:	~500 m from SH-90, ~6km from NH-66
d. Other:	Nil
Trails featured on:	Divya Desam

Sri Adikesava Perumal Temple, an ancient Hindu temple dedicated to Vishnu, is one of the 108 Divya Desams and one of the historic thirteen Divya Deshams of Malai Nadu (Kerala). The presiding deity here is in the form of Ananthapadmabhan/Adikeshava Perumal with his consort Marakathavalli Nachiyar. The temple is closely associated with the famous Sri Anantha Padmanabhaswamy Temple, Thiruvananthapuram. The temple is also known for its architecture and woodwork. Visited by both domestic and foreign tourists, the temple site lacks activities to engage visitors for a longer duration. All the basic tourist facilities are available at the site; hence the scope of intervention is focused on increasing its tourist friendliness with the provision of improved signages, local and/or audio-video guides, etc.

Existing Condition

Location

Sri Adikesava Perumal temple at Thiruvattur is located in Kanyakumari district, ~25 km north-west of Nagercoil and ~45 km from Kanyakumari. Situated ~ 6 km north-east of Marthandam, the temple is surrounded on three sides by rivers (Kothai, Pahralli and Thamirabarani). The major important tourist destinations and landmarks around the temple are Mathur Aqueduct, Chitharal Jain Rock Cut Temple, Thiruparappu Falls and Padmanabhapuram Palace.

Existing Layout and Uses

The temple is located in a picturesque setting, surrounded by rivers on three sides, namely- River Kothai, River Pahralli and River Thamirabarani. Constructed in Dravidian architecture, the temple is built of wooden doors, roofs and pillars. The temple, built in typical Kerala style, stands at an elevation and is surrounded by massive fort-like walls on all four sides. Spreading over an area of 2.25 acres, the temple has two entrance from the east and west side, further, it has the following features:

- The outer hallway of the complex houses a copper flagstaff or Dhvajastambha which was built by the Travencore Royal Family.
- The presiding deity can be viewed through three doors and is in a reclining position (bhujanga sayanam) facing west. The idol is made of 16,008 salagrama stones and hence there is no ritual bathing (abhishekam) at the temple.
- Further, the sanctum is designed in such a way that the rays of the setting sun illuminate the face of the deity in Panguni (March-April) and Purattasi (September-October).
- There is a circulatory passage around the sanctum (Sheevelipura/ Sri Ballipuram) which is lined with 224 ornately carved granite pillars.
- The temple has unique mandapams within the temple complex, The Ottakkal Mandapam (single stone hall), measuring 18 ft wide & 3 ft high, has been built on a single stone. Udaya Marthanda mandapam has exquisite wooden carvings, wherein the highlight is the wedding procession of Lord Ganapathi.
- The temple complex has many beautiful sculptures and important shrines, including the shrine dedicated to Tiruvambadi Krishnan located inside the temple complex.
- There are close to 50 inscriptions inside the temple, written in both Tamil and Sanskrit.

The temple enjoys immense popularity among locals and pilgrims, visited by many on a daily basis for worship. It also has administrative offices, 1 shop selling pooja items and mandapams for temple events, festivities and community functions like marriages. Some of the festivals conducted at the site are Vaikunta Ekadesi, Purattasi (Saturdays Festival), Thiruvonam, Iypasi Thiruvizha, Perunthamirthu Pooja, Kalapa Pooja (12 days) and Panguni Thiruvizha (10 days).

Other Land Available

Other than the area under the main temple complex and its abutting roads, the temple has five small pockets of land. Out of these five, only one land parcel is vacant and available for development. Rest are being used for spaces like dormitory and community school. The vacant land parcel spreads over an area of ~0.45 acres and is accessible via SH-90.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- The HR& CE Dept. owned land can be leased for no more than 3 years.

2. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – Located in a picturesque setting with rivers on three sides, Sri Adikesava Perumal temple is also called "The Srirangam of Chera Kingdom". A popular pilgrimage of Kanyakumari, the temple has various associated legends and beliefs.

Sri Adikesava Perumal temple is closely associated with the famous Sree Anantha Padmanabhaswamy Temple at Thiruvananthapuram, it is said that the Padmanabhaswamy temple deity faces east to see the Thiruvattar Adikesava deity that faces west.

Apart from the religious significance of the temple, the beauty of the temple architecture and sculptures is also widely known. Built in the Dravidian style of architecture, the temple is renowned for its intricate woodwork and carvings. The temple has been built in typical Kerala style and all rituals are performed in Kerala style as well. Another unique feature of the temple is that the rays of the sun fall directly on Lord Adikesava Perumal in March-April and September-October. The attraction value of the temple is added by surrounding rivers. The water body also has religious significance, with the yearly ritual of river bathing during the festival of Iyasi Ekadasi.

2. **Accessibility** - Sri Adikesava Perumal temple is well connected from Attoor Road (SH-3), Thiruvattar-Colachel Road (SH-90) & Thiruvattar-Thingal Nagar Road (SH-180) with well laid-out road connectivity. The site is located at a distance of ~25km from Nagercoil. Tarred roads provide access to the temple with good connectivity. Tiruvattur bus stand is the nearest bus stand located at a distance of ~500m. Auto and Taxi services are also available within ~500m distance from the site.

Parking – Dedicated parking spaces are available outside the temple premises, along the temple street on all four sides.

3. **Amenities** – The temple is a major tourist hub equipped with all the basic facilities with the need for some additions and proper maintenance.
 - The site has a well-maintained toilet block (outside the main temple premises).
 - A free drinking water facility is available within the temple premises.
 - 4 security guards service the site and a metal detector are installed at the entrance.
 - The main temple boundary is walled and there is sufficient street lighting around the site.
 - The site lacks CCTV coverage. Fire safety equipment like fire extinguishers and sand buckets are provided.
 - A backup power facility is available with a 10KV Generator.
 - The site has no wheelchair facility and access ramps to assist the elderly and differently abled.
 - The site lacks proper upkeep and maintenance.

4. **Awareness**- The temple is a famous pilgrimage and attracts a large number of visitors. Immensely popular among locals and tourists, the temple received ~42.31 lakh visitors in 2019. Out of this, 42.11 lakh visitors were domestic visitors and ~20,400 were foreigners. Within India, visitors originate mainly from Tamil Nadu, Kerala and Karnataka. The site is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor etc. Other than that, HR&CE maintains a temple website with relevant information about the temple and its activities.

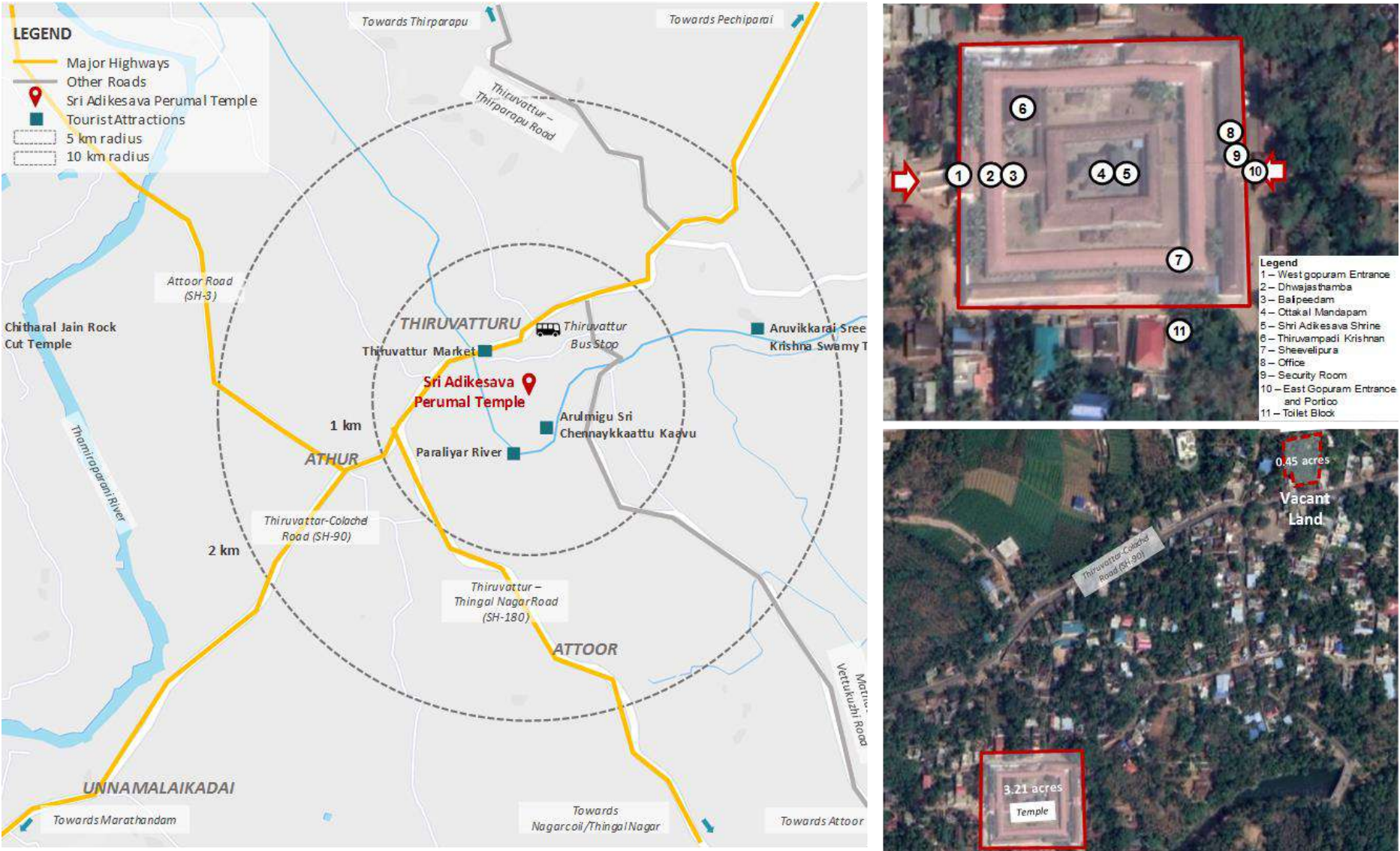
5. **Activities**- The temple performs all poojas in Kerala style and is visited by locals for their daily worship. Intermittently, there are some activities such as weddings, recitals, etc. that are held in temple mandapams. Further, the festivals held at the temple attract large crowds and are a sight to behold.

6. **Accommodation**- The closest accommodation facilities are located in Marthandam and Kulasekharam at a minimum distance of ~7km. The area lacks a variety of accommodation options in the vicinity. For the majority of budget hotels, the tariff for a night's stay ranges from ~INR 700 to ~INR 2000. There are also a few 3–4-star hotels and luxury options for stay, located at a distance of ~15km from the temple.

7. **Association with Community**- The temple is a part of the day-to-day life of locals who visit the temple for daily worship. Occasionally, community events, marriages, festivals, etc. are also hosted at the temple. Apart from this, during festivities, Kathakali performances are conducted with local participation at the temple.

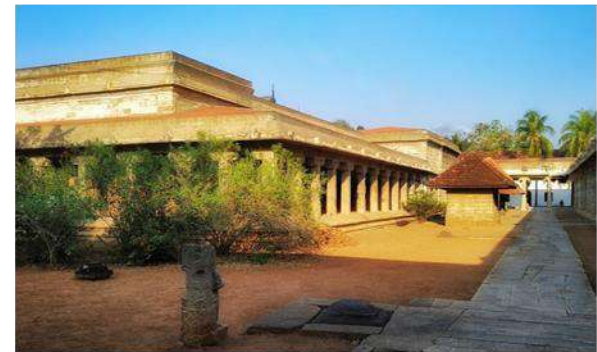
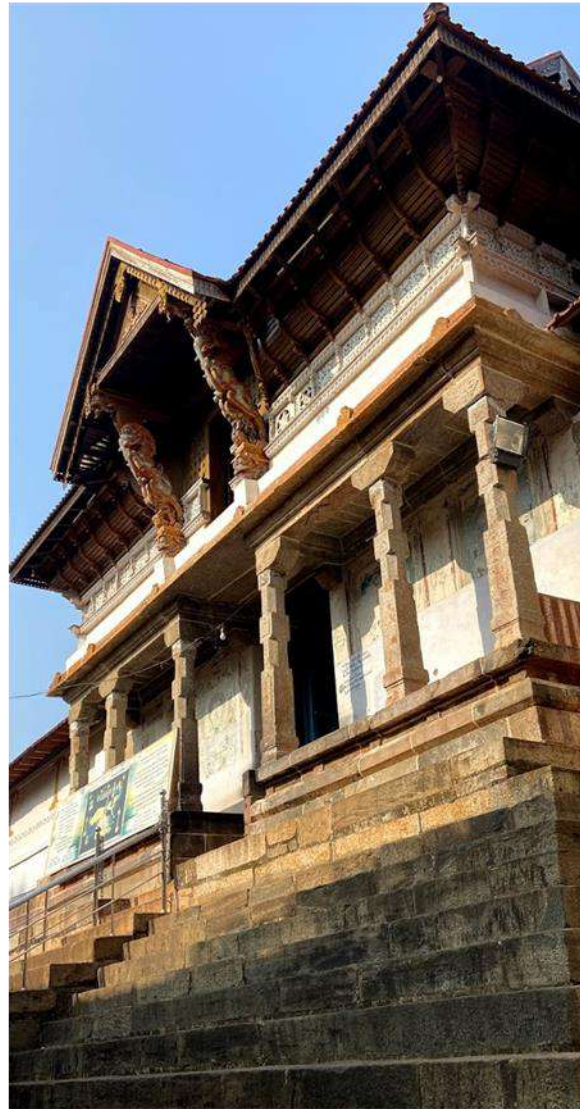
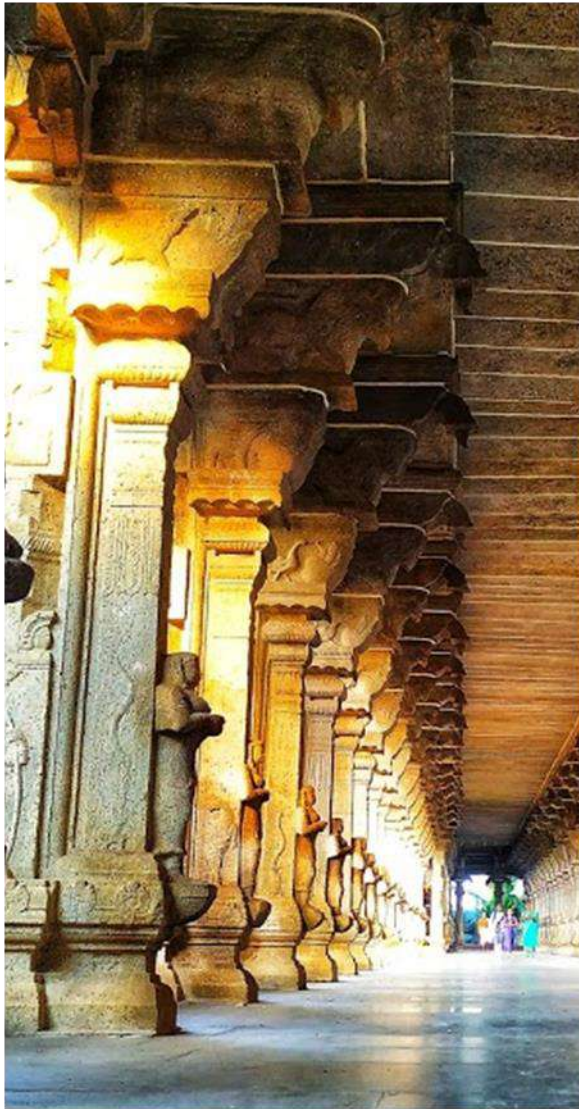
Further, various families and individuals are also dependent on the temple and its visitors for their livelihood. The various ways in which the community is associated include jobs at the temple, auto and taxi drivers, etc.

Figure 49-1: Location & Existing Layout, Sri Adikesava Perumal Temple



Site Pictures





Vision for the Site

Being a popular pilgrim center of the region, Sri Adikesava Perumal Temple enjoys immense popularity among domestic as well as foreign tourists. Situated in a picturesque setting, with rivers flowing on three sides, the temple has excellent connectivity. It also has a rich history, religious beliefs and magnificent architecture. However, it is lacking with proper upkeep and maintenance no associated activities to engage visitors.

The vision for the site is to develop it as a nodal tourist attraction and develop spaces in the town that can engage pilgrims and locals with different activities and improve their overall experience of the town. This can be done by improving existing infrastructure and developing activities for the engagement of tourists.

- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a high tourism site with moderate HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	4191	7773	7773
High Value Tourists (HVT) (Both domestic and foreign)	41	95	95
Maximum Carrying Capacity	7,868		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

Given that the site is a religiously significant temple and a popular pilgrim of the region, interventions will be planned with the perspective of improving the visitors' experience and enhancing the attraction value.

The objectives of master planning at this site include:

- **Improvement in temple infrastructure** by providing information boards, signages, etc.
- **Conservation and accentuation** of the temple's beautiful architecture and woodwork.
- **Promotion of activities** for visitor engagement and local development.

Hard Interventions

Sri Adikesava Perumal Temple enjoys immense popularity with high footfall. The vacant land parcel spreads over an area of ~0.45 acres situated along SH-90 has lush greenery, hence no construction has been proposed there, however it can be utilized in the future as per the requirement. Further, the temple complex is already equipped with sufficient infrastructure and basic facilities. Hence, no hard interventions are proposed for this temple.

Soft Interventions

1. **Monumental lighting shows-** The temple structure is already a visual landmark of the region. Temple's beautiful architecture can be further accentuated and made prominent with monumental lighting. The lighting at night will make the temple premises more attractive.
2. **Riverfront Development-** Sri Adikesava Perumal Temple is surrounded by 3 rivers, providing a picturesque view. The temple authority does not own any land to promote activities near the river area. However, it is suggested that the local authority should develop the riverfront and build connections with the rivers and other associated temples in the surroundings. This would help in holding the tourists for a longer duration and spending more time in the town.
3. **Maintenance and Cleanliness Initiative –** The temple authority should establish a system for proper upkeep and maintenance of the temple. Civic initiatives, along with participation from local communities and pilgrim volunteers can be taken up to keep the temple surroundings clean.
4. **Ease of Accessibility to the Temple –** Currently, there is no infrastructure for elderlies. The level differences and lack of ramps & wheelchairs make movement within the temple difficult for old people and differently abled. It is suggested to Implement access ramps and wheelchair facilities to improve movement for the elderly and differently abled.
5. **Site Management –** The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.
6. **Provision of Facilities-** The temple is lacking with cloakroom, footwear stands, lockers, etc. Hence, an area inside the temple complex near the main entrance could be dedicated to these facilities for the visitors.
7. **Audio-Visual Tour –** Audio-Visual tours on site can be initiated to aware visitors of the significance and importance of the temple's history. These audios will

describe the inscriptions by translating them into the visitor's preferred language. The tours can be self-guided tours with a QR code.

8. **Events-** Organize recitals, cultural performances, folk dances, etc. (like Kathakali) frequently. This would help in attracting more tourists, especially foreigners, as well as increase community participation at the temple.

Amenities Plan

1. **Signage (Package 2) –** Currently, the temple structures are marred by various signages and boards that lack coherence and are not in theme with the temple architecture. Hence, **Package 2** signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines in Vol A.
2. **Technology Intervention (Package 1) –** Being an important tourist destination in the Kanyakumari district, the temple should offer all technological conveniences and employ technological tools for optimal management. These include:
 - Electronic visitor counters & body scanner at entry points
 - TN Assist App integration (internet connection, QR scanner)
 - CCTV coverage across the site.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Signage (Package 2)	1
2	Technology (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Signage Package 2	3
2	Technology Package 1	1
Total		INR 5 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale

- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 1 Lakh*.

Feasibility Assessment and Implementation Plan

Though there are no additional revenues earned through the capital projects, the aforementioned operating expenditure incurred are subject to the maintenance of the basic interventions planned at the temple. These interventions are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

¹⁸⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Signage Package 2	3	Y0 – Y2	HR&CE
2	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 5 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 215¹⁸⁷ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁸⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labour assumed for computation = *INR 700* per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁸⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as 540 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 800 Cr. at the site¹⁸⁹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹⁸⁹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 49-2: Proposed Master Plan – Sri Adikesava Perumal Temple



50. Sri Kuralappa Perumal Temple, Thiruvananthapuram

Site Details

District	Kanyakumari
Name of Site	Sri Kuralappa Perumal Temple
Site No:	Site 294 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.2079,77.4470
Land Area:	0.5 acres+ 5.52 acres other lands
Peak footfalls:	2,000 per day (January, September – October)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 40,000 (2019 - 20) For. – NA (2019 – 20)
Site Revenues:	8 Lakhs
Site Orientation	Pilgrim
Site Potential:	Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~6 km from Nagarcoil Junction
b. Airport:	~80 km from Trivandrum Airport
c. Highway:	~3.3 km from SH-194, ~1.2 km from NH-944
Trails featured on:	Divya Desam

Sri Kuralappa Perumal Temple is one of the 108 Divyadesam temples dedicated to Lord Vishnu and also one of the historic thirteen Divya Deshams of Malai Nadu (Kerala). Lord Vishnu is worshipped here as Thiruvazhmarban along with his consort Lakshmi as Kamalavalli. Built in the Dravidian style of architecture, the temple has beautiful carvings on its vimanas and pillars. The temple also has ancient stone-carved sculptures on its pillars inside the temple precinct. The scope for interventions at the temple focused on increasing the footfall with the provision of basic amenities and tourist infrastructure.

Existing Condition

Location

Located ~5km north of Nagarcoil, the temple is situated on the Thiruppathisaram main road. Thiruppathisaram is easily accessible by NH-944, which connects the site to all the major towns/cities nearby. The major important tourist destination and landmarks around the temple are Nagaraja Temple, Thanumalaya Temple, Suchindram, Padmanabhapuram Palace, Vattakottai Fort, Vivekananda Rock Memorial and Kumari Amman Temple.

Existing Layout and Uses

Sri Kuralappa Perumal Temple is enclosed in a rectangular enclosure surrounded by tall walls. The main entrance is located on the eastern side facing the temple tank outside the temple complex. The central shrine houses the image of the presiding deity, Thiruvazhmarban in a sitting posture. There is no separate shrine for his consort Lakshmi, as she is believed to reside in his chest. Surrounding the presiding deity, are the images of Saptarishis. The images of Rama, Lakshmana and Sita are located to the right of the presiding deity. The image of Thiruvazhmarban is made

out of a compound of lime and granite. The other prominent characteristics of the temple are as follows:

- The shrines of Garuda, Anjaneya, Ramanuja, Vedanta Desika and Azhwars are present in the second precinct (outer precinct)
- The main sanctum is situated in the first precinct, at the centre of the temple complex.
- The temple tank, Soma Theertham is located outside the main temple complex, towards the east.
- A Kalyana Vimana Mandapa located near the tank, houses paintings depicting Dasavatara, the ten avatars of Vishnu.

In addition to the temple's presiding deity, the temple has shrines for various other gods and goddesses. The other uses housed in the site include 1 F&B stall operated by a private party and 1 shop selling pooja items.

The temple follows Thenkalai (Vaishnavism) tradition of worship, and six daily rituals are performed at the temple along with a few major festivals namely Chithirai festival (10-day festival), Puratasi Saturday, Vaikunda ekadasi, Adi Swati and Avani Tiruvonam.

Other Land Available

In addition to the temple complex of 0.5 acres, the temple tank covers an area of ~1.3 acres. Apart from the temple complex and the temple tank, the temple owns an additional ~3.42 acres of agricultural land in close vicinity. The temple also owns 0.8 acres of land adjacent to the temple tank, which is currently being used by a school.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Sri Kuralappa Perumal Temple is the 85th Divyadesam temple dedicated to Vishnu. This makes it a popular tourist destination among locals and regional tourists. The temple is also well known for its religious significance and its beautiful Dravidian style architecture. The 9 feet tall presiding idol at this temple is made of a special element called Katusarkara Yogam, a mixture of stone and lime, coated with mustard and jaggery paste. Dashavathara paintings adorn the Indra Kalyana Mandapam of this temple. Thiruvazhmarban temple is also revered in Nalayira Divya Prabhandam (Tamil Verses) and the 7th–9th century Vaishnava canon, by Nammazhwar.
2. **Accessibility** – The temple is located on the Thiruppathisaram Main Road, around 5km north of Nagarcoil. Thiruppathisaram town can be accessed from nearby settlements via NH-944. The major modes of transport people use to commute to the site include private vehicles (own or hired), private buses and taxis. The nearest bus stop is located within 500m of the site and an auto stand is also available nearby.

Parking – There is no designated parking space available, vehicles are usually parked outside the temple complex.

3. **Amenities** – The temple is equipped with a few basic-level amenities within and around the temple.

- The site has 1 toilet block with 6 washrooms. They are in working condition and well-maintained
- The site does not have any drinking water facility.
- The site premise is cleaned on a daily-basis and adequate dustbins are provided on site.
- The security aspect of the temple is very poor. There are no security guards deployed at the site and no CCTVs are installed at the site.
- There is sufficient street lighting available at the site.
- Fire safety equipment like fire extinguishers (2 nos.) and sand buckets (5 nos.) are provided.
- The site has one retail shop that sells pooja items. This retail outlet is operated by a private entity on a tender basis for 3 years.
- There are 2-3 small restaurants/F&B outlets available around the site at affordable prices. Various small retail shops are also present around the temple selling pooja items, groceries, etc.
- There aren't adequate signages & way findings inside the temple. Few signages present at the temple are in the Tamil language only.
- A backup power facility is available (UPS).
- There are no divyang-friendly measures currently being followed at the site.
- No provision of Tourist Information Centre (TIC) and ticketed luggage/cloakroom.
- The approach road to the site is a single-lane paved road and there are many potholes on this road.

4. **Awareness**- Sri Kuralappa Perumal Temple is mostly visited by locals and domestic tourists, with visitors originating from Tamil Nadu and Kerala. The temple is usually visited by solo travellers during most of the days while large groups and families visit the temple during peak seasons. The temple is visited by the maximum tourists during the 10-day Chithirai festival. It is also recommended by renowned travel referral and review aggregators.

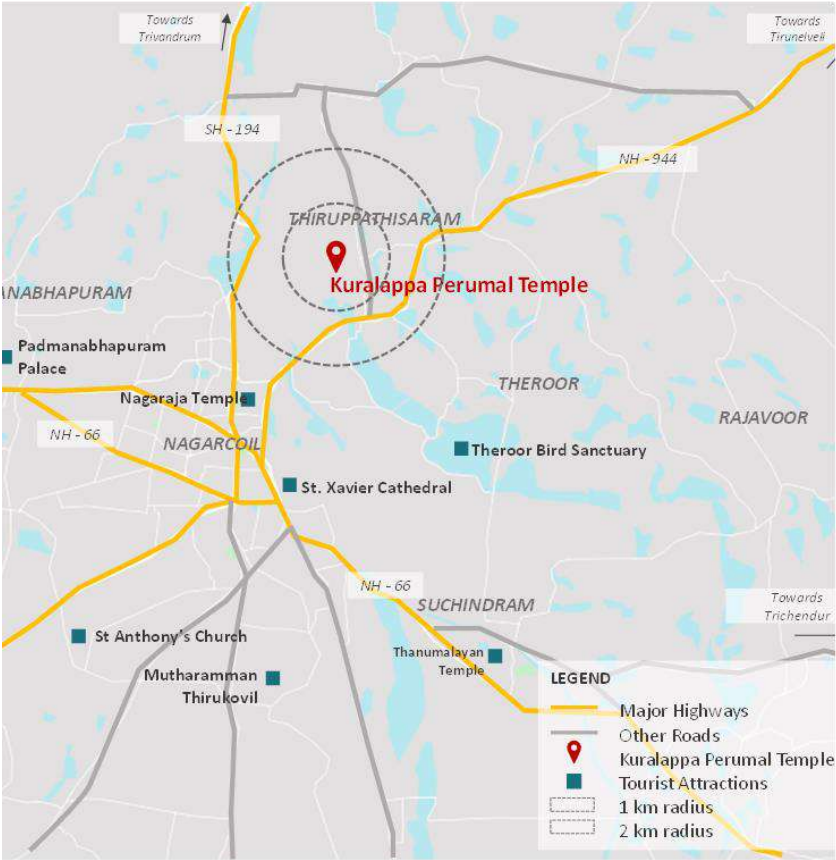
5. **Activities**- The temple priests perform pooja (rituals) on a daily basis and during festivals. Cultural/Folk shows, and audio-visual shows are organised by the temple during the peak seasons or during festival times. These shows are

generally 3 hours long, only showcased in the Tamil language and are free of charge. Most of these shows witness participation from the local community.

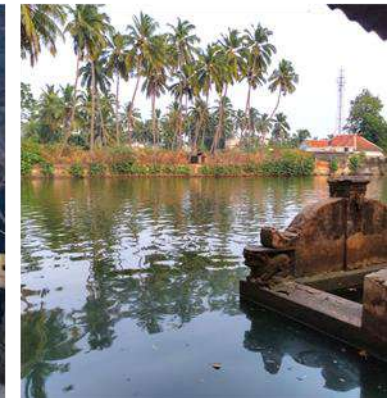
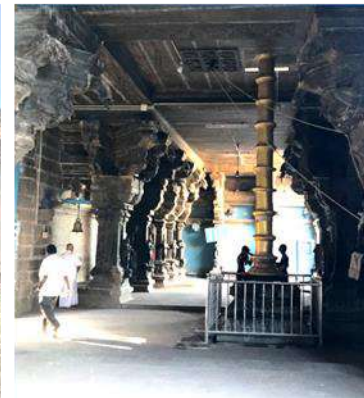
6. **Accommodation**- There are no lodging facilities available within close proximity to the site. The nearest lodging options are available in Nagarcoil, which is around 5-6 km from the site. The lodging options at Nagarcoil range from dormitories, budgeted hotels to luxury hotels. There are 3-4 luxury hotels in Nagarcoil with an average room tariff of INR 2500. Most of the hotels in the city are budget hotels with room tariffs ranging from INR 700 to INR 1500.

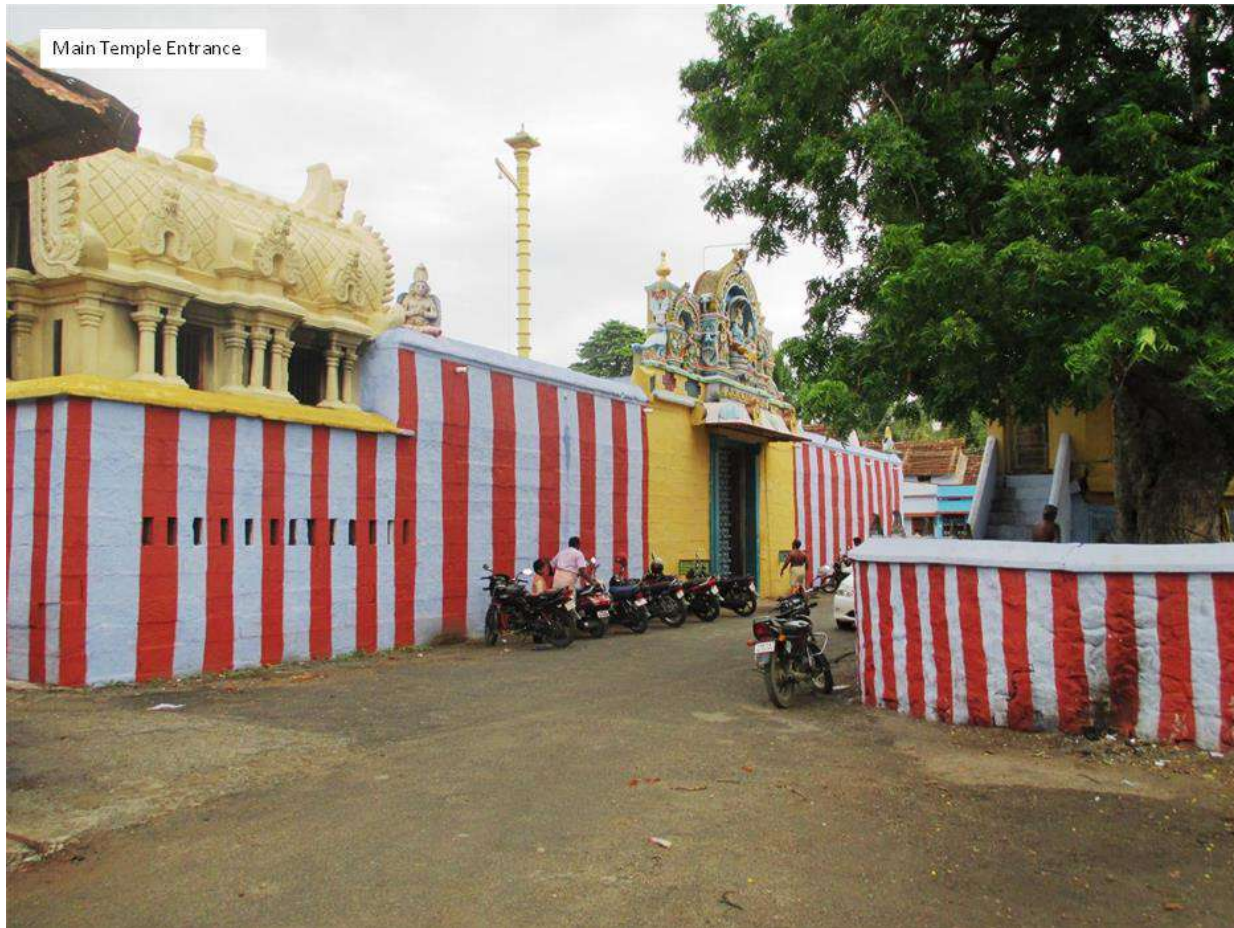
7. **Association with Community**- The temple is visited on a daily basis by the locals. In addition to these locals also participate in the cultural shows organised by the temple during peak seasons.

Figure 50-1: Location & Existing Layout, Sri Kuralappa Perumal Temple



Site Pictures





Vision for the Site

Given the religious significance of the temple and other features, such as:

- Beliefs associated with temple's history and significance
- Dravidian style architecture of the temple
- The temple tank, being the main attraction among visitors

and taking in cognisance its weaknesses, such as:

- The footfall of the temple is low compared to other Divya Desam temples.
- Lack of basic amenities like drinking water facilities, security guards, CCTVs, etc.
- Lack of activities in and around the temple.

The temple can be developed as a regional pilgrim destination by enhancing the visitors' experience and encouraging participation of the local community not only during festival seasons but also during regular days.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a low tourism site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	40	149	410
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	1,969		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given that the site is not an acknowledged tourist destination., interventions should be planned with the perspective of attracting more visitors to the temple and improving the visitors' experience.

The objectives of master planning at this site include:

- Provision of **basic amenities** in and around the site.
- To create a **recreational and vibrant space** around the temple tank for the visitors.
- **Promoting cleanliness** around the site to improve the overall image of the temple.

Hard Interventions

The temple is remotely located with the vacant land being used for various types of activities such as agriculture and school. The temple complex already has sufficient infrastructure in good condition for the projected footfall. Hence, no major hard interventions are proposed for this temple.

1. **Beautification of the Temple Tank-** The temple tank is in good condition with clean water and pukka road around the tank. It is one of the major attractions of the temple with various small retail shops around selling pooja items, F&B and groceries, etc. The area around the temple tank could be developed to create space for people to sit and further engage them to spend more time at the temple. With the provision of seating space, streetlights and dustbins it can become a public space. The development will allow people to be seated and enjoy a meal purchased at the food outlet around the site, pongal prepared by the priests.

Infrastructure Created:

- *Temporary Seatings ~5*
- *Streetlights-5*
- *Dustbin- 2*



Reference images for Temple Tank Beautification

Soft Interventions

- Cleanliness Initiative** - Although the temple is clean, the area surrounding the site is not very clean. Promoting cleanliness around the site could improve the overall image of the temple. Regular pick-up of garbage should be done by the panchayat and civic initiatives, along with participation from local communities and pilgrim volunteers can be taken up to keep the temple surroundings clean.
- Promotion** –The department should promote Sri Kuralappa Perumal Temple and events/activities held here, in the TN Assist app and on its various platforms, following the site changes.

Amenities Plan

- Drinking Water Station-** Availability of free drinking water is a major issue at this site. Hence, 1 drinking water station with RO water coolers should be installed near the toilet block.
- Signage (Package 1)** – Signage Package 1 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of interventions.
- Technology Intervention (Package 1)** –The temple should offer all technological conveniences and employ technological tools for optimal management. These include:
 - Electronic visitor counters & body scanner at entry points.
 - TN Assist App integration (internet connection, QR scanner).

- CCTV coverage across the site.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Beautification of the Temple Tank-	
	• Temporary Seatings	5
	• Streetlights	5
	• Dustbin	2
2	Drinking Water Station	1
3	Signage (Package 1)	1
4	Technology Intervention (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Beautification of the Temple Tank-	
	• Temporary Seatings	
	• Streetlights	
	• Dustbin	1
2	Drinking Water Station	3
3	Signage (Package 1)	1
4	Technology Intervention (Package 1)	1
Total		INR 5 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- b) Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- c) All revenues are unescalated.*
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*

- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 1 Lakh.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Beautification of the Temple Tank- (Temporary Seatings, Streetlights, Dustbin)	1	Y0 – Y2	HR&CE
2	Drinking Water Station	3	Y0 – Y2	HR&CE

¹⁹⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
3	Signage (Package 1)	1	Y0 – Y2	HR&CE
4	Technology Intervention (Package 1)	1	Y0 – Y2	HR&CE
Total		INR 5 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 215¹⁹⁰ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day¹⁹¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 540 man-days.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹⁹¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 40 Cr. at the site¹⁹².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹⁹² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 50-2: Proposed Master Plan – Sri Kuralappa Perumal Temple



THE NAVAGRAHA TRAIL



NAVAGRAHA – NINE GRAHAS

Part of the Navagraha Pilgrimage, the Navagraha temples in Tamil Nadu are a set of Nine Temples dedicated to each of the nine planetary deities. These celestial deities include Surya (Sun), Chandra (Moon), Mangala (Mars), Budha (Mercury), Brihaspati (Jupiter), Shukra (Venus), Shani (Saturn), Rahu (North Lunar Node) and Ketu (South Lunar Node).

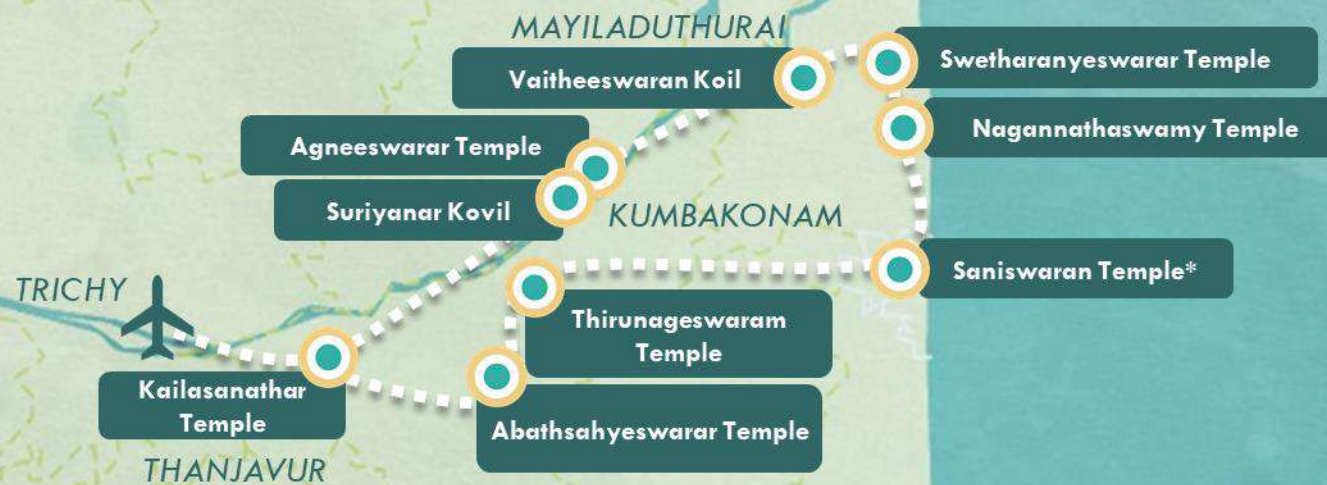
Most of these temples were built during the reign of Medieval Cholas between the 7th and 11th century with later additions from the Vijayanagar period. Constructed in the Dravidian style of architecture, most of these temples have a five-tiered Rajagopuram, the gateway tower and a granite wall enclosing all the shrines of the temple.

It is believed that the planetary deities were cursed by Brahma to dwell in Vellurukku Vanam, the white wildflower jungle and were blessed by Shiva to make it their abode to devotees. Eight of these Navagraha temples are dedicated to lord Shiva. The Surya temple is the only amongst the nine temples that is dedicated entirely to the Graha. Visiting the Navagraha temples is considered to be very auspicious to Hindus.

Target Tourist Segments

The trail could be promoted to pilgrims, across all Indian states and outside (including expats), who worship the planetary deities.

Linkages



Kailasanathar Temple (Moon God), Thingalur - Located near Kumbakonam, the original complex is believed to have been built by Cholas, while the present masonry structure was built by the Nayaks during the 16th century. The temple is dedicated to the Moon-God, however the presiding deity is that of Lord Shiva.

Suriyanar Kovil (Sun God) is a Navagraha temple dedicated to the Sun-God and is situated near Kumbakonam. The presiding deity is Suriyanar, the Sun and his consorts Ushadevi and Pratyusha Devi. Suriyanar Kovil is the only Navagraha temple where the temple is primarily dedicated to a Navagraha and not Lord Shiva.

Agneeswarar Temple (Venus) is a Navagraha temple associated with Sukra (Venus). However, the presiding deity is that of Agniswarar or Lord Shiva. In concordance with the Saivite belief that Shiva is all-pervading, Sukra is believed to be located within the stomach of the idol of Shiva.

Vaitheeswaran Koil (Mars) is a Navagraha temple associated with planet Mars (Angaraka). The presiding deity, Lord Shiva is worshipped as Vaidyanathar or Vaitheeswaran meaning the "God of healing". The holy waters of the Siddhamirtham tank within the temple complex contains nectar, and a holy dip is believed to cure all diseases.

Swetharanyeswarar Temple (Budha - Mercury) is located in Thiruvengkadu, a village in Mayiladuthurai district. Lord Shiva is worshipped here as Swetharanyeswarar, and is represented by a lingam.

Nagannathaswamy Temple (Ketu) is a Navagraha temple located in Keezhaperumpallam, 2 kilometres from Poompuhar. The temple is associated with Ketu, a shadow planet. Lord Shiva, the presiding deity is referred to as Naganatha Swamy.

Tirunallar Saniswaran Temple (Shani) in Cuddalore is the only temple dedicated to Lord Shani. The presiding deity is Lord Darbharanyeswaran, a form of Lord Shiva.

Tirunageswaram Naganathar Temple (Rahu) located near Kumbakonam is associated with planetary deity of Rahu. Lord Shiva is worshipped here as Naganathar. Many serpents, including Adishesha, Takshaka and Karkotaka, worshipped Lord Shiva at this place, leading to the name of the town as "Tirunageswaram".

Abathsahyeswarar Temple (Guru - Jupiter), Alangudi is a Navagraha temple associated with the planetary deity - Guru. As per Hindu legend, Siva consumed deadly poison, giving rise to the name of the town as Alangudi and the deity therefore being termed as Apatsahyeswarar, indicating saviour during hard times.



TRICHY



KAILASANATHAR TEMPLE

THANJAVUR

ABATHSAHYESWARAR TEMPLE

THIRUNAGESWARAR TEMPLE



SURIYANAR KOVIL

AGNEESWARAR TEMPLE



TIRUNALLAR SANISWARAN TEMPLE



VATHEESWARAR KOVIL



MAYILLADUTHURAI

NAGANNATHASWAMY TEMPLE



SWETHARANYESWARAR TEMPLE



The Navagraha Trail

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum
D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
1	110	Thanjavur	Kailasanathar Temple – Chandran (Moon God), Thingalur	Temple	2,050	7	5,310	18	9,815	34	9,850	Medium tourism site	Low HVT Potential
2	112	Thanjavur	Thirunageswaram Temple – Rahu Stalam (Sri Naganatha Swamy Temple)	Temple	785	12	1,755	27	3,380	52	43,330	Very low tourism site	Low HVT Potential
3	125	Thanjavur	Suriyanar Kovil	Temple	1,800	0	4,670	0	5,910	0	5,910	Medium tourism site	Low HVT Potential
4	111	Thanjavur	Agneeswarar Temple – Sukran (Venus), Kanjanoor	Temple	6	0	13	0	25	0	23,635	Very low tourism site	Low HVT Potential
5	81	Mayiladuthurai	Vaitheeswaran Koil	Temple	600	200	1,520	690	3,580	1,630	59,085	Medium tourism site	Moderate HVT Potential
6	85	Mayiladuthurai	Swetharanyeswarar Temple – Budha (Mercury), Thiruvengadu	Temple	360	40	850	95	1,710	190	43,330	Very low tourism site	Low HVT Potential
7	86	Mayiladuthurai	Nagannathaswamy Temple, Keezhaperumpallam – Ketu Sthalam	Temple	495	10	1,170	24	2,350	47	13,785	Very low tourism site	Low HVT Potential
8	89	Thiruvavar	Abathsahyeswarar Temple – Guru (Jupiter), Alangudi	Temple	850	100	2,920	345	7,575	890	39,370	Low tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
1	Kailasanathar Temple – Chandran (Moon God), Thingalur	1.4	HR & CE Dept.	-
2	Thirunageswaram Temple – Rahu Stalam (Sri Naganatha Swamy Temple)	1.8	HR&CE Dept.	-
3	Suriyanar Kovil	0.1 – 0.2	Thiruvadudurai Trust	-
4	Agneeswarar Temple – Sukran (Venus), Kanjanoor	0.01 – 0.05	Madurai Adheenam	-
5	Vaitheeswaran Koil	2.7	Dharmapuram Adhinam Mutt	-
6	Swetharanyeswarar Temple – Budha (Mercury), Thiruvengadu	1.7	HR&CE Dept.	-
7	Nagannathaswamy Temple, Keezhaperumpallam – Ketu Sthalam	5.5	HR&CE Dept.	Yatri Niwas - O&M on PPP
8	Abathsahyeswarar Temple – Guru (Jupiter), Alangudi	0.2 – 0.3	HR & CE Dept.	-

Impact

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment Opportunities

The proposed interventions are planned to:

- Increase visitor comfort and convenience to the tourist sites
 - Increase tourist footfalls at the sites
- Promote higher footfall of high-value tourists – thereby increasing overall spending at the sites.

This tourist spending will directly flow to the local economy and communities.



~60k man-days Construction Jobs



~155 (incremental) man-days per day during operations jobs
(Accommodation, Site maintenance & housekeeping, Activity Operators, Retail and F&B operators, hawkers, vendors etc.)



~145k man-days Indirect & Induced Jobs
created due to multiplier impact of construction and operations jobs

Benefitted Stakeholders



Local Weavers, Craftsmen and Artisans



Security & Maintenance Staff



Temple-ware & Souvenir Vendors



Tour Guides & Operators



Transporters (Taxi/Auto)



Hospitality Staff



Temple Workers

1. Kailasanathar Temple, Thingalur

Site Details

District:	Thanjavur
Name of Site	Kailasanathar Temple
Site No:	Site 110 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.8977, 79.1306
Land Area:	~2.5 acres ~150 acres
Peak footfalls:	~ 3,000 per day (November – December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 20.5 lakhs (2019 – 20) For – 3,688 (2019 – 20)
Site Revenues:	INR 50 lakhs (2019 – 20)
Site Orientation:	Pilgrim and Tourists
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~18 km from Thanjavur Railway Station
b. Airport:	~80 km from Tiruchirappalli International Airport
c. Highway:	~1.6 km from SH 22 ~3.8 km from NH 136 & SH 27
d. Other:	Nil
Trails featured on:	Navagraha

Being one of the nine Navagraha temples dedicated to the Moon, Kailasanathar Temple has significant popularity among tourists and pilgrims. While the temple is well-maintained, it lacks certain public amenities to cater to the huge Navagraha temple – touring population. Therefore, the scope of interventions includes the development of an amenity block, children feeding room, drinking water station, luggage/ cloakroom, wheelchair, a temple-ware retail shop for visitors' convenience. Maintenance of the existing garden along with seating area for tourist engagement. Besides, the upgradation of existing toilet blocks and provision of paved-shaded pathways, enhancing temple visibility with an arch gate and pavement of approach road is envisioned.

Existing Condition

Location

The Kailasanathar temple is located in the village of Thingalur, situated 18 km away from Thanjavur on the Kumbakonam - Thiruvaiyaru road. The temple is about 4 km from Thiruvaiyaru. The immediate surroundings of the temple have green paddy fields of Thingalur. Plenty of buses ply from Kumbakonam, Thanjavur, and Thiruvaiyaru. Other temples located in proximity are Thiyagaraja temple (~1.5 km), Thiruvaiyaru Shiva Temple (~2.2 km), Vaithyanathaswami Temple (~1.8 km), and Rajagopalaswamy Temple (~3.5 km).

Existing Layout

The temple has been built in the typical Tamilian style of architecture covering an area of 2.5 acres.

- It has a 5-tiered Raja gopuram and has two Prakarams running around it.
- A huge Nandi is seen in the front, facing the temple.
- In the sanctum sanctorum, Lord Shiva's idol known as Kailasanathar, bless the devotees facing east. The 16-sided Shiva lingam placed at the main shrine is made out of black granite which is usually clad with a white cloth.

- The image of Chandra is located in the second precinct in a separate shrine facing the southeast.
- An open courtyard and the pond Chandra theertham are against the eastern entrance of the temple.
- The sanctum of mother goddess Periyanyaki is located towards the south of the complex.

Existing Uses

The temple is majorly used for religious purposes. Devotees and locals flock to the temple premises to celebrate festivals Maha Shivratri, Karthigai deepam, Deepawali, and Pongal. The temple has the following infrastructure dedicated for other uses:

- Mandapam for events
- 4 Male/Female toilets
- Offices and Waiting Area.

Other Land

The temple complex covers an area of 2.5 acres including a temple tank, garden, toilets, and administrative office block. In addition to the temple complex, the temple also owns nearly 150-acres of agricultural land in Thanjavur, Thiruvaiyaru, Mannargudi, and Kumbakonam which is leased out under a long-term contract of 99 years.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction –** The temple is one of the significant attractions as it is considered one of the nine Navagraha Sthalas dedicated to planet Moon. It is famous for the first feeding of rice to infant children. A unique feature of the temple is during the Tamil month of Purattasi and Panguni when moonlight falls directly on the image of the presiding deity on the full moon days. The temple is also famous for its “horoscope correction” poojas. Each year thousands of devotees come to the temple to pray to Lord Shiva and to seek blessings of the Moon God for removal of obstacles in marriage proceedings, for childbirth and excelling in education. The temple is located amidst the paddy green fields of Thanjavur which provide a serene and calm atmosphere around. The other eight Navagraha temples are in proximity to Thingalur and can be visited along with this temple.
- 2. Accessibility –** The temple can be accessed from Kumbakonam - Thiruvaiyaru road via SH 22, however, the last ~400 m road is narrow and leads from the village area and green paddy fields. The bus stand is available at a distance of ~1 km and buses ply frequently from Kumbakonam and Thanjavur. Thingalur does not have a railway station of its own. The nearest train station is Thanjavur Railway Station at a distance of ~18 km. Cabs/Taxis are easily available from Kumbakonam and Thanjavur. The site can be reached through Tiruchirappalli International Airport which is ~80 km away from the site. The major modes of transport people use to commute to the site are public buses and private/rental vehicles.

3. Amenities – As a popular tourist destination, the temple has a par-developed ecosystem of infrastructure earmarked for public amenities. However, it lacks certain facilities such as:

- No tourist Information centre.
- Insufficient Toilets
- No drinking water facility.
- Inadequate dustbins in and around the site.
- No designated footwear stands.
- No luggage/cloakroom.
- No power backup facility
- No ramps and wheelchairs on the site.
- Unpaved and narrow access road.
- No rest/relaxing outside the temple premises.
- The poor condition of electrical wiring inside the temple.

Parking – The temple has a designated parking space within the temple premises. It is maintained and charged by the panchayat. The parking charges collected on an hourly basis from the visitors are INR 50 for Cars and INR 100 for Bus.

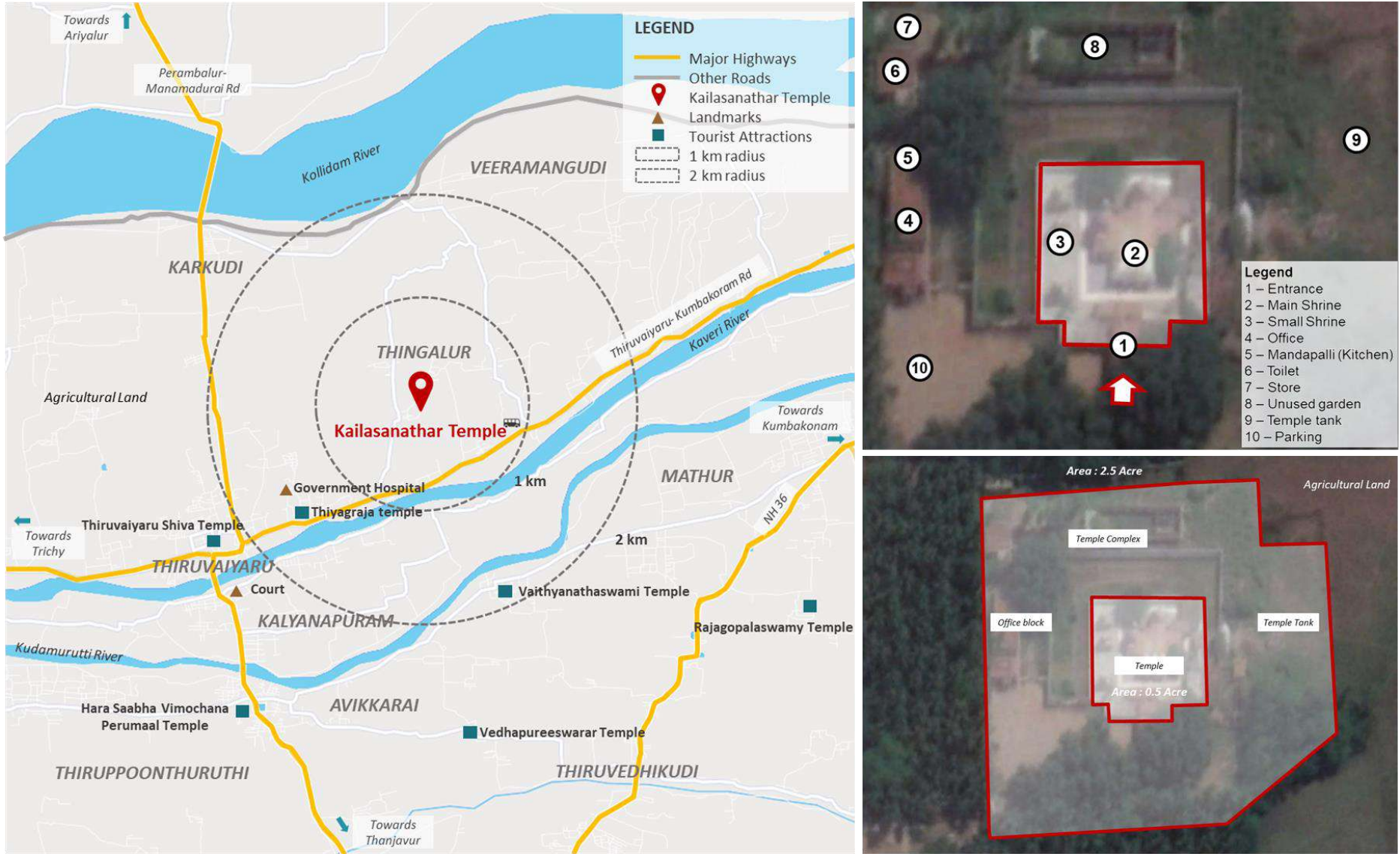
4. Awareness – Kailasanathar temple is a popular temple among pilgrims and tourists alike. It is majorly visited by people residing in Tamil Nadu, Karnataka, and Andhra Pradesh. It finds mention in renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc.

5. Activities – On normal days, the temple does not offer any activities. There are weekly rituals like Somavaram and Sukravaram, fortnightly rituals, and every month Amavasai (new moon day), Kiruthigai, Pournami (full moon day) celebrated in the temple. Every year, Chitra Pournami (full moon day in mid-May) and Shivaratri are celebrated with grandeur, as believed, moonlight falls directly on the image of the presiding deity. On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc.

6. Accommodation – There is no accommodation available in proximity for visitors. Since the time spent at the temple is not more than 0.5 hours on non-festive occasions and 1 hour on festive occasions, visitors tend to either return to Kumbakonam/Thanjavur or other cities after visiting the temple.

7. Association with Community – The temple is located in a remote area in a small town. The locals are well aware of the temple's history and significance. They readily participate in the everyday rituals and flock to the site in large numbers during festive seasons. Vendors, hawkers, and beggars flock outside the temple premises.

Figure 1-1: Location & Existing Layout



Site Pictures



Vision for the Site

The Kailasanathar temple is one of the significant temples in Thanjavur district as it is considered one of the nine Navagraha Sthalas located in the Kaveri Delta region dedicated to planet Moon. The temple provides a good infrastructure to its visitors. However, it lacks certain amenities. Being one of the famous tourists and pilgrim attractions, the temple has good scope to enhance its footfall.

The temple complex has huge potential to enhance its facilities considering the availability of the huge vacant land outside the main temple shrine. It has a good opportunity to provide the needed amenities to enhance the visitor's experience and ease on the site.

The vision for the site is to improve visitor's experience, convenience, and movement to and on the site. Therefore, the development of an amenity block having children feeding room, drinking water station, luggage/ cloakroom, wheelchair, a temple-ware retail shop on the site is proposed for visitors' convenience. To enhance activities around the site, maintenance of the existing garden is proposed along with the provision of canopy style seating area for visitors to relax and engage. Upgradation of existing toilet blocks and provision of paved-shaded pathways is also proposed to cater to the large number of people visiting the temple during festive seasons. To enhance the visibility of the temple and improve accessibility to the site, an entrance arch gate will be developed, and the approach road will be paved.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	2,047	5,308	9,816
High Value Tourists (HVT) (Both domestic and foreign)	7	18	34
Maximum Carrying Capacity	9,850		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious significance and its popularity among devotees, the concept of the masterplan includes:

- **Improving visitor's experience** at the temple – through additional amenities of feeding room, luggage room, drinking water station, wheelchair, and a shoe stand.
- **Improving engaging spaces on the site** with the maintenance of the existing garden and addition of shaded seating areas.
- **Improving temple visibility and aesthetics** by the construction of entrance arch gate and provision of dustbins on the site to keep it clean.
- **Improving accessibility to the site and ease of movement within the temple** by paving approach road and providing paved pathways connecting all building blocks within the temple premises respectively.

Hard Interventions

1. **Amenity Block** – As the temple lacks certain amenities, therefore a small amenity block with a luggage room, drinking water station, a wheelchair, a shoe stand, and a temple-ware retail shop will be developed for tourist convenience and ease at the site. Also, the site is famous for the first feeding of rice to infant children, therefore a feeding room for the privacy of mothers will also be

incorporated within the amenity block. The block can be placed adjacent to the existing office building and near the entrance for easy accessibility.

Infrastructure Created: ~ 100 sqm of building.

- 2. Shaded Pathways (Prakarms)** – The outer Prakarms/ pathway around the temple is painted white for heat resistance, yet tourists face inconvenience in hot weather during peak seasons. Therefore, a canopy-style structure is proposed to be installed to shade the pathways and thus enhance the tourist experience on the site. Apart from existing pathways, new designated pathways will be developed connecting all the buildings such as office block, toilet block, amenity block, and main temple building for ease of movement on the site. Pavement shall be done using locally sourced material.

Infrastructure Created – A 2 m wide and ~85 m long Prakarm to be shaded using canopy and construction of ~110 m long and ~2 m wide paved pathways.

- 3. Upgradation of existing toilet block** – The temple has insufficient toilets and thus during peak seasons it does not cater to increased number of tourists. Therefore, the upgradation of the existing toilet block is proposed by the addition of more male and female toilets.

Infrastructure Created – Addition of ~30 sqm in the existing toilet block.

- 4. Paved approach road** – The last stretch of approach road is unpaved and narrow, resulting in tourists' inconvenience. Therefore, pavement with paver blocks is proposed for ease of movement and accessibility to the site. Pavement shall be done using locally sourced material.

Infrastructure Created – Pavement of ~400 m long and ~3.5 m wide approach road.

- 5. Construction of entrance Arch Gate** – The temple complex has a small entrance gate. To enhance the visibility of the temple and improve its aesthetics, an entrance Arch gate is proposed. This will help to spot the temple from a distance. The arch will contain elements and material similar to the existing temple architecture.

Infrastructure Created – Construction of entrance Arch gate.



Amenity Block



Paved-Shaded Pathways



Upgradation of Toilet Block

Maintenance of existing garden with shaded seating area

Soft Interventions

- 1. Maintenance of electrical wiring** – The electrical wiring in the temple is in poor condition and open wiring results in the un-aesthetic appeal of the temple. Therefore, maintenance of wiring is suggested to prevent any mishappening and improve the overall visual experience of the visitors.
- 2. Maintenance of existing garden** – Temple has a huge garden situated on the northern side which is currently not used by visitors as it is not well-maintained.

Therefore, maintenance of the garden is suggested to restore its beauty and convert it into an engaging space for visitors to relax, sit and spend more time outside the temple premises. Moreover, the garden can be used by the local community as a recreational space for daily walks. Shaded-seating areas will be provided for visitor's convenience.

Infrastructure Created – Provision of 3 number of shaded canopy style seating.

- 3. Guided Tours** – A self-guided audio tour provision shall be present on the site to portray the rich history of the site. Licensed guides can be deployed on the site to guide the visitors about the history and significance of the temple.
- 4. Community Engagement** – The local community is involved in the everyday activities of the temple. Locals can also be engaged by training and deploying them as guards and tour guides on the site. Moreover, the garden and paved pathways outside the main temple can be used by locals as recreational spaces for relaxing and daily walks.

Amenities Plan

- 1. Dustbin** – As observed on the site, there is an inadequate number of dustbins inside the temple premises. Moreover, there is no provision of dustbins outside the temple premises. This results in the littering of the site and its surroundings. Therefore, an adequate number of dustbins will be provided within and outside the site to maintain cleanliness around it. The design and material of dustbins will be as per the design guidelines mentioned in the Glossary of Interventions.
Infrastructure Created: A total of 10 dustbins will be provided.
- 2. Technology Interventions** – For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 - The package shall exclude CCTV's as there is a sufficient number of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Amenity Block	100 sqm
2	Shaded Pathways <ul style="list-style-type: none"> • Canopy-style shading for 2 m wide pathways • Construction of pathways (2 m wide) 	85 m 110 m
3	Upgradation of an existing Toilet block	30 sqm
4	Paved approach road (~3.5 m wide)	400 m
5	Construction of entrance Arch Gate	1
6	Shaded-seating area (Canopy-style)	3
7	Dustbins	10
8	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the master plan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Design Guidelines.

#	Project Component	Cost (INR Lakhs)
1	Amenity block - Toilet	5
2	Amenity block - Drinking water station	3
3	Amenity block - storage	5
4	Paved approach road	120
5	Entrance gate	2
6	Shaded Seating	1
7	Paved Pathway - shade	3
8	Paved Pathway (2m wide)	2
9	Technology Package 1	1
Total		INR 1.40 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction/implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below-mentioned revenue modules.

- a) *Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted for here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- b) *Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- c) *All revenues are unescalated.*
- d) *Revenues are indicative and based on a preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making an investment decision or before implementing the proposed revenue.*

There are no additional revenue streams pegged to the interventions proposed at this temple since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in the note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks, etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below-mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the master plan.*

- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** for the amenity block.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc., and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc., and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste), and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets, and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in the note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, the total additional un-escalated OPEX from the site in Y5 is estimated as INR 9 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and the experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Sub-projects which can be taken up by the local governing body/ Town panchayat

The last mile connectivity to the temple is poor and has been raised as a repeated concern by the residents frequently visiting the temple and by the pilgrims alike. Since this is out of the temple's scope, it has to be taken up by the local governing body/ town panchayat to address the concerns of its constituents.

¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity block - Toilet	5	Y0 – Y2	HR & CE
2	Amenity block - Drinking water station	3	Y0 – Y2	HR & CE
3	Amenity block - storage	5	Y0 – Y2	HR & CE
4	Paved approach road	120	Y0 – Y2	Local governing body/ Town panchayat
5	Entrance gate	2	Y0 – Y2	HR & CE
6	Shaded Seating	1	Y0 – Y2	HR & CE
7	Paved Pathway - shade	3	Y0 – Y2	HR & CE
8	Paved Pathway (2m wide)	2	Y0 – Y2	HR & CE
9	Technology Package 1	1	Y0 – Y2	HR & CE
Total		INR 1.40 Cr.		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 6,100¹ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days per day²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 15,200 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and an increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of IN00R 990 Cr. at the site³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%

² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals, pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food, and entertainment.

Figure 1-2: Proposed Master Plan – Kailasanathar Temple, Thingalur



2. Thirunageswaram Temple, Thirunageswaram

Site Details

District:	Thanjavur
Name of Site:	Thirunageswaram Temple
Site No:	Site 112 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9634, 79.4290
Land Area:	11 acres + 172 acres
Peak footfalls:	15,000 per day (November – December) Shivratri
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 7.9 lakhs (2019) For. – 6,070 (2019)
Site Revenues:	INR 6.7 crores (FY20)
Site Orientation:	Pilgrim and Tourist
Site Potential:	Very Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	5.5 km (Kumbakonam)
b. Airport:	108 km (Tiruchirappalli)
c. Highway:	Abutting SH 147
Trails featured on:	Navagraha

One of the Navagraha temples, Thirunageswaram Temple, also known as Rahu Sthalam, is widely recognized among pilgrims of South Indian states for its “horoscope correction” poojas. It is also classified as a Paadal Petra Sthalam and dedicated to Lord Shiva. The temple has well-developed public amenities for visitors. It is a widely visited temple by domestic and Tamil origin tourists. The scope for interventions at the temple is limited to crowd control, development of facilitation centre, enhancement, and upgradation of open areas.

Existing Condition

Location

Thirunageswaram Naganathar Temple is located near Thirunageswaram, a village in the outskirts of the Kumbakonam city (~7 km away) in Thanjavur district, Tamil Nadu. The temple is located on the southern bank of the river Kaveri. It is well connected with autos/taxis and bus services from Kumbakonam. Another important temple located nearby is Uppiliappan Temple (~500 m away).

Existing Layout

The temple covers an area of 11 acres with concentric sub lanes and four major streets around the four sides. The Thirunageswaram Temple has vast prakaram, towering gopurams, several mandapas, and 12 sacred water heads enclosed within a compound wall on all four sides.

- The temple has a rectangular plan and is approached through four gateways (gopuram) along the four sides with raja gopuram on the eastern side.
- In the broad pathway on the third precinct, there is a flower garden on the northern side.
- The temple campus encompasses exclusive shrines for Naganatha Swamy (Shiva), Pirayani Amman (Parvathi), Giri-Gujambigai (Parvathi), and Rahu with his divine spouses.
- The temple tank is located on the southern side with four mandapas and surrounded by a 100 pillar mandapam in a temple-car style.

- The temple has a well-developed infrastructure dedicated to public services.
- Architecture splendour –
 - Dwarapalaga Sudhai work (made of chunam clay) on each side at the entrance of the Naganathar shrine
 - Soorya theertham is built in Chola style and is square with 'double-bat' roofing
 - The path leading to the main shrine (Rahu shrine) in the second precinct has a hall decorated with Nayak-style pillars with yalis.

Existing Uses

- The temple has reasonable popularity and is visited by people for worship and horoscope corrections.
- The temple tank is called Surya Theertham, a dip in which is believed to clear sins committed by human beings and cure diseases.
- The temple has a well-developed infrastructure dedicated to public services. There are mandapams, festive halls for conducting events, dance recitals, etc. There are toilet blocks and an ample amount of parking areas available within the temple premises.
- The important festivals celebrated at the temple are Navaratri, Kandasasti festival, Brahmotsavam, and Thai Poosa star float festival.

Other Land Available

In addition to the temple complex of 11 acres, the temple also owns 172-acres of agricultural land in and around Thanjavur which is under a lease. 5,69,000 sq. ft of leased land in Thanjavur is used for housing and shops.

Master Planning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
- 2. TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair,

- alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – Thirunageswaram, is one of the significant temples in Kumbakonam as it is associated with the nine planet elements and specifically Rahu. It is believed, people troubled by Sarpa-dosha or Malefic effects of Rahu-Kethu seek relief by offering prayers in this temple at noon. A unique feature of the temple is that the ablution of the image of Rahu during Rahu kalam with milk turning to blue colour in this temple is considered to be a miracle and attracts devotees from distant places.

Another important tourist attraction in the vicinity of this temple is the Uppiliappan temple dedicated to Lord Vishnu.

- 2. Accessibility & Mobility** – The Thirunageswaram temple can be accessed from Kumbakonam (~7 km away) via SH147 (Kumbakonam- Karaikkal road). The access road to the site is narrow and frequently congested by hawkers and vendors. There is the availability of a bus every 2 hours from Kumbakonam directly to the temple. Autos/cabs are readily available outside the temple and Kumbakonam city for easy access to the site. The major modes of transport people use to commute to the site include public buses, auto/taxis, and private transport.

3. **Amenities** – The temple scores high on cleanliness and has developed an ecosystem of infrastructure earmarked for public amenities. Though common toilet blocks, drinking water stations, sufficient streetlighting, and safety security and divyaang friendly measures are present inside the temple, it lacks the following facilities –

- No wayfinding signages are available for the site and the signages available are only in the Tamil language.
- Dustbins not installed in adequate number.
- No cloak room available
- CCTV installed at tourist-gathering spaces and entry/exit points, but not sufficient.
- No F&B and Retail shop present inside the temple site, though few eatery joints present outside the site.
- No amenities present for visitors to rest/sit outside the site.

Parking – The Site has ample parking space within the site of a capacity of 50 cars and 30 buses. This is located on the left side of the temple precinct. It is a paid parking with INR 20 for cars, INR 30 for vans and INR 50 for buses.

4. **Awareness** – Thirunageswaram Temple also known as Rahu Sthalam is a popular temple near Kumbakonam. It is majorly visited by people residing in Tamil Nadu, Karnataka, and Andhra Pradesh. Foreign tourists are negligible with only Tamilians residing abroad visiting the temple. It finds mention in renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. The temple also has a dedicated website, maintained by the HR&CE department. The temple is known for its “horoscope correction” poojas.

5. **Activities** – On normal days, the temple does not offer any activities. Every year, Shivaratri day is celebrated with grandeur and magnificence, as believed, Rahu got relieved of his pains praying to Naganathar during a Shivaratri day. On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc. Holy dip in the temple tank is allowed on special requests.

6. **Accommodation** – There are few low-budget accommodation facilities available nearby for visitors like dormitories and budget hotels with fixed tariffs for A/C rooms as INR 1500 and normal rooms ranging from INR 750 to INR 1000. A

wider range of options and 3- star hotels are available in Kumbakonam (~7km away)

7. **Association with Community** – There are no guides at the temple. The festivals of the temple enjoy immense participation among the locals. Some hawkers and vendors dot the site with carts and stalls – selling local goods, handicrafts, and food items increasing congestion.

Figure 2-1: Location and Existing Layout



Site Pictures





Crowd during Festival Season



Vision for the Site

- Thirunageswaram Temple is one of the Paadal Petal Sthalam, religiously known as Rahu Sthalam. The temple enjoys immense popularity among South Indians and Tamil foreigners for horoscope correction poojas. It has easy accessibility from Kumbakonam city with well-developed public amenities and parking space.
- Although the temple is well maintained and the temple authorities ensure the safety and security of the tourist, it has inadequate CCTV cameras. The temple gets overcrowded in peak hours and is often occupied by beggars and hawkers, affecting the overall character of the temple.
- Thirunageswaram Temple has the potential to be developed into a nodal religious tourist attraction for the town with the development of a tourist facilitation centre, reviving of the existing landscape, and implementing crowd control measures. This shall facilitate tourist comfort at the site and leverage ancillary recreation activities for local and tourist engagement.
- The vision for the site is to develop it as a domestic/pilgrim tourist destination by improving existing infrastructure & basic amenities and effectively utilizing the available vacant parcels of land within the site.

- Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	784	1,756	3,381
High Value Tourists (HVT) (Both domestic and foreign)	12	27	52
Maximum Carrying Capacity	43,328		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of Master planning at this Site include:

- Improving visitor experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing **temporary cultural/recreational spaces** at the site by providing spaces on available vacant land.
- Provision of rest areas and crowd control measures** – provision of temporary sheds, deployment of security guards, and implementation of the token system.
- Linking it with Uppiliappan Temple** – developing shaded pilgrim walkway connecting the two temples.
- Creating a **welcoming environment around the site** for the visitors.

Hard Interventions

- Tourist Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, ticket sales counter, galleries to display and showcase temple importance and architecture, shoe stand, and cloak room. It will be a standalone building placed at the entrance of the temple adjacent to the temple tank. This development will be as per the design guidelines.

Infrastructure Created: ~140 sqm of BUA

- Local Recreation Space with Landscaped Garden** – On the northern side of the site, there is an existing flower garden of the temple not properly maintained. Therefore, reviving the garden area with a nice seating arrangement is proposed.

The landscaping will be developed in such a manner that it houses temporary shaded areas in the form of canopy structures or gazebos, tensile sit-outs adorned with beautifully carved pathways. The landscaping will feature native and religious flowers and bushes, and should, as far as possible, be the least maintenance-oriented and be self-sustainable. This shall thus create a visual treat for the visitors.

Infrastructure Created:

- Flower Garden - 5400 sqm
- Footpath - 240 m length and 3 m wide
- Hardscape - 7600 sqm
- Temporary Seating – 8 units

3. **Temple tank Rejuvenation** – The temple has a beautiful temple tank with a holy belief in cleansing sins. Therefore, the temple tank will be rejuvenated, and water will be cleaned with sustainable techniques like rainwater harvesting. The ghat-like steps around the temple tank and the shaded pathway will be renovated and rectified in broken areas. Beautification and maintenance of the same would increase the aesthetic appeal of the temple.

Infrastructure Created:

- Cleaning of temple tank – 1525 sqm water area
- Step Renovation – 210 m length

4. **Shaded Pavilion/ Holding Area** – At the rear side of the temple, shaded pavilions with temporary canopy structures will be developed. This area will be utilized for conducting poojas and rituals of larger gatherings and also act as a holding area for visitors during peak season. They will have temporary seating facilities and shall be integrated with landscaping, thus improving the overall look and feel of the area.

Infrastructure Created: 4 units of 105 sqm each

5. **Vending Zone** – During peak season, vending outside the temple leads to congestion. Therefore, a temporary vending area will be designed along Sannadhi street with temporary kiosks and stalls. The area will be pedestrianized and regulated with only limited vendors allowed as per the area capacity. This will enhance community participation and provide visitors with facilities to engage on the site.

Infrastructure Created: Vending Area – 3 m wide and 60 m in length



Local Recreation Space with Flower Garden



Shaded Pavilion/ Holding Area

6. **Pilgrim Souvenir and F&B shops** – As the temple lack souvenir retail shops, therefore, along the vending zone outside the temple, an array of shops with food beverages, and souvenirs are proposed. This will enhance the tourist experience and improve the area with a vibrant interactive cultural value.

On the rear side also, a couple of prasadam stalls and packed food stalls can be placed. These can be handled by the temple or local authority or any religious co-operative society.

Infrastructure Created:

- Souvenir shops & F&B Shops – 10 units each (Near Vending Area)
- Souvenir shops & F&B Shops – 2 units each (Rear Side)

- Pilgrim Walkway** – As the temple is 500m north of Uppiliappan Temple, a pilgrim walkway can be developed between the two along the access road. This can be achieved by developing a shaded 3 m wide pedestrian pathway. This will improve the visibility and importance of the temples and hence increase tourist footfalls for the sites.

Infrastructure Created: 450 m shaded pedestrian walkway (3m wide)

- Paved Pathway** – The internal lanes connecting all the four entrances, parking, temple precinct will be developed as a paved pathway. This will improve and enmark a clear internal circulation and regularize the tourist movement.

Infrastructure Created:

- External (main road to gopuram) – 130 m length (3m wide)
- Internal – 400 m length (3m wide)

- Site Boundary** – Currently, the site boundary on all sides of the temple is broken or worn out. Hence, a well-finished boundary wall will be developed on the broken sides of the temple with face lifting of the remaining. This will protect the site and the proposed development from local interference and trespassers ensuring minimum issues of loitering and waste littering.

Infrastructure Created: 860m of boundary to rectify around the site.

Soft Interventions

- Events** – The open space and shaded pavilions proposed at the site could be used for organizing local craft fairs, cultural events, festivals, which will make the place more alive and vibrant throughout the year.
- Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.



Vending Zone



Pilgrim Walkway



Paved Pathway connecting Rear side of the site (Yatri Niwas)

- Crowd Management** – As the access road is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.

- Access timings can be made exclusive for high-value tourists.
4. **Curation of facilitated tours** – Incorporate the site into the Kumbakonam temple tour. These will be facilitated with licensed tour guides and hop on hop off services.
 5. **Community involvement** – Temple enjoys immense popularity among locals. On most days, large crowds visit the temple for worship. Some non-commercial events are also hosted at the temple, such as dance recitals, music concerts, etc. To enhance community engagement, locals can be involved in developing pilgrim souvenirs, F&B shops, vending areas. Also, locals will be trained and appointed as guides for the site.

Amenities Plan

1. **Technology** – The temple requires additional 15 CCTV cameras at various tourist gathering spots and exteriors.
2. **Signage (Package 2)** – Package 2 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
3. **Divyaang Toilet** – The temple complex is already well equipped with toilet facilities but lacks a divyaang or age-friendly toilet block. Therefore, one divyaang friendly toilet block is proposed next to the common toilet block in the parking area.
4. **Dustbins** – The landscaped spaces, parking inside the site must be provided with adequate dustbins and other street furniture. This is important to maintain the site and keep the surroundings clean. These dustbins will be placed at an effective distance of 50 m from any visitor. To be developed as per the design guidelines.
Infrastructure Created: 10 units around parking and landscaping area within the temple complex
5. **General Site Landscaping** – More strategic tree planting and site landscaping is required along the entrance road, near the temple tank and parking area to create more natural shaded areas and make the site attractive as a destination.

This green cover will ensure rainwater absorption into the ground, air purification, reduction of ambient noise and temperature.

Infrastructure Created:

- *Hardscaping* – 5000 sqm
- *Soft scaping* – 5600 sqm

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Tourist Facilitation Centre (Type 1)	140 Sqm BUA
2	Local Recreational Space with Landscape Garden <ul style="list-style-type: none"> • Flower Garden • Footpath • Hardscape • temporary Seating 	5400 sqm 240 m 7600 sqm 8
3	Temple tank rejuvenation <ul style="list-style-type: none"> • Cleaning of the temple tank • Step Renovation 	1525 sqm 210 m
4	Shaded Pavilion	420 sqm
5	Vending Zone <ul style="list-style-type: none"> • Vending Area • Souvenir shops • F&B Shops 	60 m 10 10
6	Pilgrim Souvenir and F&B shops (Rear side)	4
7	Pilgrim Walkway	450 m
8	Paved Walkway	530 m
9	Site Boundary	860 m
10	CCTV Cameras	15
11	Signage (Package 2)	1
12	Divyaang Toilet	1
13	Dustbins	10

#	Project Component	Scale
14	General Site Landscaping <ul style="list-style-type: none"> • Hardscaping • Soft scaping 	5000 sqm 5600 sqm

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the master plan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Design Guidelines.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre (Type 1)	15
2	Landscaping	21
3	Walkway (Footpath)	24
4	Local Recreational Space - Seats	1
5	Temple tank steps	2
6	Shaded Pavilion	21
7	Vending zone	2
8	Retail Kiosks	21
9	F&B Kiosks	15
10	Boundary	47
11	CCTV Cameras	1
12	Signage (Package 2)	3
13	Divyaang Toilet	4
14	Dustbins	1
Total		INR 180 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction/implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below-mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted for here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on a preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making an investment decision or before implementing the proposed revenue.

The following revenue sources are expected for the site:

- Hawker zone** – Captures renting out of 180 sqm of space at INR 960 per sqm per annum.
- Kiosks** – Captures 24 kiosks to be rented out at INR 1.5 Lakhs per annum.

As discussed in the note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks, etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 39 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below-mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the master plan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the facilitation centre.
 - b. **Security personnel** for the facilitation centre.
 - c. An **Administration staff** to overlook the operations of the retail space and the facilitation centre.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc., and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc., and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste), and responsible disposal as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets, and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in the note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, the total additional un-escalated OPEX from the site in Y5 is estimated as INR 35 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions exceed the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and the experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Tourist Facilitation Centre (Type 1)	15	Y0 – Y2	HR&CE
2	Landscaping	21	Y0 – Y2	HR&CE
3	Walkway (Footpath)	24	Y0 – Y2	HR&CE
4	Local Recreational Space - Seats	1	Y0 – Y2	HR&CE
5	Temple tank steps	2	Y0 – Y2	HR&CE
6	Shaded Pavilion	21	Y0 – Y2	HR&CE
7	Vending zone	2	Y0 – Y2	HR&CE
8	Retail Kiosks	21	Y0 – Y2	HR&CE
9	F&B Kiosks	15	Y0 – Y2	HR&CE
10	Boundary	47	Y0 – Y2	HR&CE
11	CCTV Cameras	1	Y0 – Y2	HR&CE
12	Signage (Package 2)	3	Y0 – Y2	HR&CE
13	Divyaang Toilet	4	Y0 – Y2	HR&CE
14	Dustbins	1	Y0 – Y2	HR&CE
Total		INR 180 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 7715⁴ man-days of construction labour (spread across 1-2 years of implementation)

⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days⁵
- Retail and F&B spaces = 56 man-days per day⁶

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 19,460 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 345 Cr. at the site⁷.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%

- Cumulative labour man-days = 30% * CAPEX / 700

⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁶ Assuming average 2.5 persons per kiosk / shop

⁷ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food, and entertainment.

- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in an impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works, etc.

Figure 2-2: Proposed Master Plan – Thirunageswaram Temple



3. Shri Suryanar Kovil, Thirumangalakudi

Site Details

District:	Thanjavur
Name of Site	Shri Suryanar Kovil
Site No:	Site 125 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.030899, 79.478722
Land Area:	~ 1.5 acres
Peak footfalls:	20,000 per day
Operator:	Thiruvadudurai Aadinathira Trust
Site Ownership:	Thiruvadudurai Aadinathira Trust
Tourist Footfall:	Dom. – 18 lakhs (2019 - 20) For. – Nil (2019 - 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~3km (Aduturai)
b. Airport:	~70km (Thanjavur)
c. Highway:	~2km from SH-22; 10km from NH-36
Trails featured on:	Navagraha

Suryanar Kovil is one of the 22 Navagraha temples of Tamil Nadu and is well known amongst the pilgrims from Tamil Nadu and the surrounding states. There are only two temples dedicated to the Sun God in India, one of them being the Suryanar kovil. This temple is also the only temple in southern India that has shrines for all planetary deities. Given the high religious significance, the temple has immense potential to be developed as a pilgrimage destination. The intent is to develop the temple & its surroundings, engaging more regional pilgrims and emphasizing the uniqueness of the temple.

Existing Condition

Location

Suryanar Kovil is a Hindu temple located in Suryanar Kovil, a small town near Kumbakonam (Thanjavur). The temple is easily accessible by Aduthurai-Kuthalam Road that connects it to all the nearby major cities & towns. The temple is also well connected by rail, with the nearest railway station being ~3km away in Aduturai. The nearest airport to the temple is the Thanjavur Airport, ~70km from the site. Other important attractions near the temple are Oppiliappan Temple (~10km), Agneeswaran Shukran Temple (~3km), and Kampahareswar Temple (~7km),

Existing Layout

The temple complex covers an area of 1.5 acres, enclosed by a boundary wall. The presiding deity is Suriyanar, the Sun, and his consorts Ushadevi and Pratyusha Devi.

- Constructed in the Dravidian style of architecture, the west-facing temple has a five-tiered Rajagopuram and a gateway tower.
- The temple has a rectangular plan with compound walls surrounding the site. The central shrine houses the idol of Surya (Sun God) and his consorts with an idol built on an elevated structure.
- The temple also has separate shrines for the other eight planetary deities.
- All the other eight shrines of the Navagraha are arranged to face the shrine of Suryanar.

- The hall leading to the central shrine has images of Viswanathar, Visalakshi, Nataraja, Sivakami, Vinayagar, and Murugan.

Existing Uses

- The temple has reasonable popularity and is visited by various local and regional pilgrims
- The temple is currently operated and maintained by 'Thiruvadudurai Aadinathira Trust'
- The temple houses few retail shops within its compound that sell ritual/pooja items and books
- The important festivals celebrated at the temple are Pongal (Thiruvizha) - a 10-day festival, Navaratri, and Shiv Ratri.

Other Land Available

Apart from the 1.5-acre temple complex, the temple does not own any land parcels in the vicinity of the temple.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city/town, therefore falls under the category of unplanned land.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

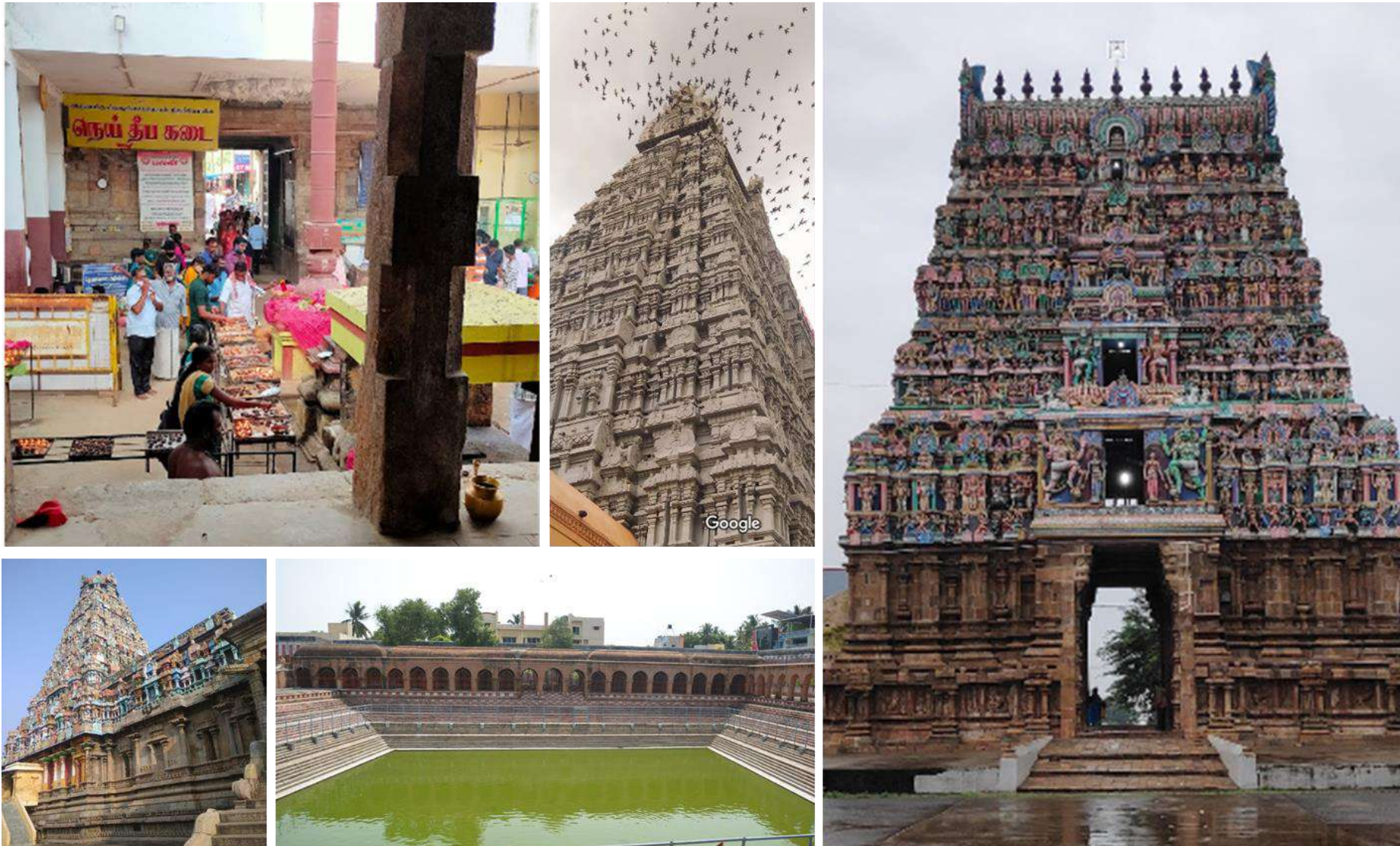
1. **Attraction** – Suryanar Kovil is mostly known for its religious significance of being one of the 22 Navagraha temples in Tamil Nadu. Additionally, it is also one of the only two temples in India that are dedicated to the Sun God. The temple is well known for performing Pariharam pooja, a ritual performed by an individual who has a Dosham in their life. It is also popular among pilgrims since this is the only temple in Tamil Nadu that houses individual shrines for all the planetary deities.
2. **Accessibility & Mobility** – Suryanar Kovil can be accessed from Kumbakonam (~15 km away) via Aduthurai-Kuthalam Road. Since the temple is situated in a rural setting surrounded by agricultural fields, the temple is approached by a single-lane narrow road. The nearest bus stop is ~50m away with frequent bus service from Kumbakonam, Thanjavur, and other nearby towns. Ola/Uber cabs are not available around the site; however, the site has an auto stand right outside its entrance. Major modes of transport people use to commute to the site include public bus, auto, and private transport.
3. **Amenities** – The condition of tourist amenities within and around the temple is sub-standard, considering the footfalls it receives. Though drinking water stations, dustbins, power backup facilities, safety & security, parking, and divyaang friendly measures are present inside the temple, it lacks the following facilities:
 - There is no provision of toilets within the temple complex.
 - Insufficient streetlighting in and around the temple
 - Lack of wayfinding signages available for the site
4. **Awareness** – Suryanar Temple is a popular temple situated near Kumbakonam, mostly visited by regional pilgrims. It is majorly visited by people residing in Tamil Nadu and the nearby states of Karnataka and Andhra Pradesh, with foreign visitors close to negligible. It finds mention in renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. The temple also has a dedicated website, maintained by the Thiruvadudurai Aadinathira Trust.
5. **Activities** – On normal days, the temple does not offer any special activities. However, devotees perform special poojas to get cured of their Doshas. The temple also has a provision of Annadhanam. Daily, the temple priest performs 4-6 rituals during the entire day. Starting from Vizha Pooja at around 6:00 am to Kala Sandhi pooja at around 9:00 pm, the worship is held amidst music and narration of religious instructions from the Vedas. There are other specific weekly and monthly rituals held at the temple. Celebration of monthly festivals includes amavasai (new moon day), kiruthigai, pournami (full moon day), and sathurthi.

6. **Accommodation** – There are no accommodation options available for tourists in the nearby vicinity of the temple. Pilgrims visiting this temple often prefer to stay at Kumbakonam due to the availability of a wider range of accommodation options and its proximity to other temples in the area.
7. **Association with Community** – The locals have set up small retail stalls/carts, leveraging on the footfalls received at the temple. Other than that, the locals participate in daily rituals and festivals held at the temple.

Figure 3-1: Location and Existing Layout



Site Pictures





Vision for the Site

Suryanar Kovil is one of the 22 Navagraha temples in Tamil Nadu. The temple enjoys immense popularity among regional pilgrims. It has easy accessibility from Kumbakonam and Mayiladuthurai. Suryanar Kovil is also well known for the Planetary deities it houses. It receives ~20,000 devotees on weekend days. However, the temple lacks the provision of some basic amenities. In comparison to other temples in Kumbakonam and Thanjavur, Suryanar Kovil doesn't provide any unique offering. Devotees visit the temple only for its religious significance and hence it only receives footfalls from locals and regional pilgrims. The temple has very limited reach.

Given the temple's religious significance, the temple has immense potential to tap a larger pilgrim segment. The vision for the site is to develop it as a popular pilgrimage destination by upgrading the existing infrastructure and increasing visitor convenience at the temple.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from other regions of Tamil Nadu and other south Indian states due to its rich religious significance. Foreigners visiting the temple are almost negligible. Going forward, the master planning will target moderate spending pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,800	4,669	5,908
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	5,908		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master planning approach

The objectives of Master planning at this Site include:

- **Improving Temple's access** – The current entry to the temple is through a shaded pathway that is covered by a temporary shed. It also consists of few temporary retail shops. The intent is to regularize the retail area while providing a properly shaded pathway to the temple.
- **Improving visitor's experience** at the temple – through shaded resting areas, additional information signages about temple's significance, basic amenities, paved pathways, etc.
- **Temple Tank Rejuvenation** – Temple tanks at Hindu temples play a vital role in the overall layout of the temple. Hence, rejuvenating the temple tank will not only add to the beautification of the temple but will also enhance visitor's experience.
- **Highlighting the temple's historic significance** – by putting up wall-mounted sculptures/information boards or wall paintings on the outer boundary wall of the temple, giving information about the temple's history & significance.

Hard Interventions

1. **Temple tank Rejuvenation** – The temple has a beautiful temple tank which at present is not being maintained. For the temple to attract and host a larger crowd of pilgrims, the temple surroundings have to be improved. This includes the restoration of the tank. The tank would be rejuvenated, and water would be cleaned with sustainable techniques like rainwater harvesting. The tank would have steps leading to the water level from all 4 sides. A paved pathway around

the temple tank could be created to ease public movement. Beautification and maintenance of the same would increase the aesthetic appeal of the temple.

Infrastructure Created:

- *Cleaning of temple tank – 190 sqm water area*
- *Paved walkways around the tank – 80 m length*

2. **Development of temple access and shaded vending zone** – The temple at present does not have a distinctive entrance and is covered by a temporary shed with a few retail shops. Thus, a welcoming entrance can be created in tandem with the temple's architecture. The access pathway would incorporate the following:

- **Low Height sloping roof structure** – Since the temple has a beautiful 5-tier gopuram, the structure of the entrance would ensure maximum visibility of the gopuram.
- **Vending Zone** – A regularized vending zone with 3-4 retail kiosks is proposed at the entrance
- **Restrict vehicular movement** – Bollards would be provided at the entry to restrict irregular parking and movement of vehicles near the entrance. The temple access will have paved walkways and will be pedestrianized with the restriction of any vehicular movement.

Infrastructure Created: Vending Area – 250 sqm

3. **Development of Paved Pathway around the temple** – To further engage pilgrims at the temple site, paved pathways could be provided outside the temple, along the compound wall. The pathway could include shaded seating areas, tree plantation along the side, and a connected entryway to the vending zone and the temple tank.

Infrastructure Created: Pedestrian walkway (3m wide) ~250m in length,

4. **Installation of wall-mounted information boards** – Being one of the 22 Navagraha temples and the only temple in Tamil Nadu to have individual shrines for all planetary deities, the temple could emphasize these unique features at the temple premise. The outer compound wall could be mounted with information boards that provide information on the presiding deities, the temple's history & architecture. This would engage visitors at the religious site for a longer duration.

Infrastructure Created: 9-10 information sign boards

Soft Interventions

1. **Marketing & Promotion** - Increasing temple visibility can be achieved with strategies like integration with TN Assist App. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.
2. **Site management** – The site must be managed by the respective management authorities in the aspects of placing restrictions on waste littering at the site. It can be done by deploying adequate full-time security and maintenance staff at the site.
3. **Community involvement** - The locals around the temple are very well aware of the temple's history and significance. These local communities could be incentivized to participate by involving them in various activities within and around the temple.

Amenities Plan

1. **Signage** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site's importance. All the signages at the site should be as per the design guidelines.
2. **Technology Intervention** – As the site is small in scale and does not attract a large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines.
3. **Lighting** – Adequate streetlighting is to be provided in and around the site premises.
4. **Landscaping** – More strategic tree/shrubs planting & site landscaping is required along the paved pathway around the temple compound, to create more natural shaded areas. This green cover will ensure rainwater absorption into the ground, air purification, reduction of ambient noise and temperature.

Infrastructure Created: ~500 sqm



Temple Tank Rejuvenation



Temple Access



Pedestrian Pathways



Temple Access Pathways



Regularized Parking Area



Wall mounted signages



Vending zones

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Temple tank rejuvenation <ul style="list-style-type: none"> Cleaning of the temple tank Paved walkway (around the tank) 	~190 Sqm ~80m (in length)
2	Vending Zone (Shaded) and Temple Access	~250 sqm
3	Paved pedestrian pathway	~250m (in length)
4	Signage (Package 1)	1
5	Technology Intervention (Package 1)	1
6	Benches/ Seats	10 Units
7	Landscaping	500 Sqm

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the master plan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Design Guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple tank - paved walkway	2
2	Vending/ Hawker Zone	3
3	Paved pedestrian pathway	5
4	Signage (Package 1)	1
5	Technology Intervention (Package 1)	1
6	Benches/ Seats	1
7	Landscaping	1
Total		INR 15 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction/implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below-mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted for here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on the preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making an investment decision or before implementing the proposed revenue.

The following revenue sources are expected for the site:

- Built-up area rent** – Captures renting out of 250 sqm built-up space at INR 172 per sqm per annum.

As discussed in the note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks, etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1 Lakh.

Operating Expenditures (OPEX)

The following considerations are applicable to the below-mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the master plan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc., and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc., and is pegged at 2 percentage of the total capital expenditure incurred.
- Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste), and responsible disposal as per the environment norms. It is calculated based on the footfall projections.

- Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets, and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

- Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in the note above, the following existing OPEX, if any, are not considered:

- Salaries and perks of existing employees
- O&M cost of existing site and facilities
- Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 1 Lakh.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial. The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple tank - paved walkway	2	Y0 – Y2	Temple Trust
2	Vending/ Hawker Zone	3	Y0 – Y2	Temple Trust
3	Paved pedestrian pathway	5	Y0 – Y2	Temple Trust

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
4	Signage (Package 1)	1	Y0 – Y2	Temple Trust
5	Technology Intervention	1	Y0 – Y2	Temple Trust
Total		INR 15 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 645⁸ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁹
- Retail and F&B spaces = 10 man-days per day¹⁰

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of

2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 1,640 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 590 Cr. at the site¹¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

• Cumulative labour man-days = 30% * CAPEX / 700

⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁰ Assuming average 2.5 persons per kiosk / shop

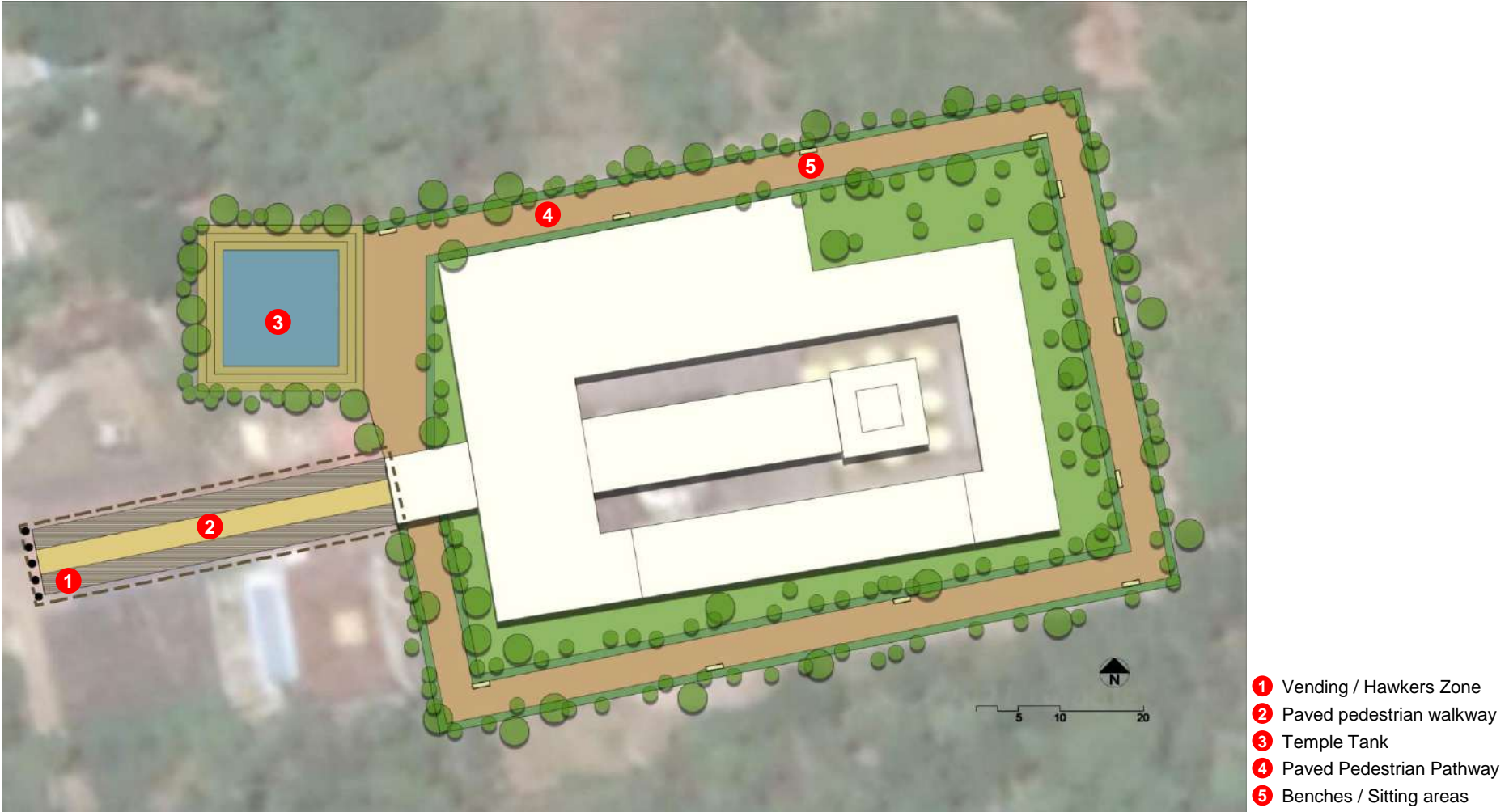
¹¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food, and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals, pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 3-2: Proposed Master Plan – Suryanar Kovil



4. Agneeswarar Shukran Temple, Kanjanur

Site Details

District	Thanjavur
Name of Site	Agneeswarar Shukran Temple
Site No:	Site 111 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.0463, 79.4942
Land Area:	6 acres + 15 acres
Peak footfalls:	1000 per day (April-June, weekends)
Operator:	Madurai Adheenam
Site Ownership:	Madurai Adheenam
Tourist Footfall:	Dom. – 5743 (2019 - 20) For. – 0 (2019 – 20)
Site Revenues:	NA
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~5 km from Aduthurai Railway Station
b. Airport:	~120 km from Tiruchirappalli International Airport
c. Highway:	~2.9 km from SH-22, ~16km from NH-36
Trails featured on:	Navagraha

The Agneeswarar Shukran Temple is a Hindu temple dedicated to god Shiva in the form of the Lord of Planet of Venus. The presiding deity is Sukra (Venus), however, the main idol in the temple is "Agneeswarar" or Shiva. The temple is one of the Navagraha temples in India and famous for performing Kalathira Dosha Pariharam for Lord Shukran. With its awareness limited to the regional devotees, it is majorly visited by the pilgrims from Karnataka, Gujarat, Andhra Pradesh, and Tamil Nadu. The temple site has the potential to be developed as a regional pilgrim destination with appropriate marketing and temple maintenance strategies.

Existing Condition

Location

Agneeswarar Shukran temple is located in the village of Kanjanur near Kumbakonam, in Thanjavur district. The temple is located approximately 15km east of Kumbakonam and nearly 20km west of Mayiladuthurai. Several prominent tourist landmarks near Agneeswarar Shukran Temple are - Thirukodeeswarar Temple, Masilamaneeswar Temple, Balavenayakar Temple and Suryanar Kovil.

Existing Layout and Uses

The Agneeswarar Shukran Temple covers an area of 6 acres. It has a small entry gate on the southern side, with a shaded roof structure. The temple is a closed precinct with two prakarams and a 5-tiered raja gopuram (gateway tower) inside the complex. The mandapam also referred to as Nataraja Sabha is located on the northern side of the temple complex, containing architectural gems of stone images of Natarajan and Sivakami. The temple houses separate shrines for Sukran (Venus), Maanakkanjaarar Nayanmaar and Kalikkaamar.

Located in a tiny village, the temple is surrounded by houses and agricultural fields. It is currently used for religious purposes mainly. The temple complex has two small shops for pooja items, religious books and prasadam. Some of the festivals conducted at the site are Maasi Magam and Brahmotsavam.

Other Land Available

In addition to the temple complex of 6 acres, the temple also owns 15 acres of land in ~2km vicinity from the temple. Presently, it is given on a lease and being used for agricultural purposes.

Masterplanning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** - The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the baseline stage are summarised below along the 7A Framework:

1. **Attraction** – A distinctive feature of the Agneeswarar temple is that river Kaveri flows from North to South. Hence having a bath in 'Vada Kaveri' is considered sacred. The raja gopuram is also facing south towards the Kaveri river.
One of the unique features of the temple is that the Vilva leaf (Bilwa Leaf) seen here is 5 in number. This temple is one of the Paadal Petra Sthalams glorified in the Tamil canonical work by the Nayanars. It is one of the famous Navagraha temples of Tamil Nadu specifically for Sukran (Venus) who is believed to be inside the stomach of the idol of Shiva.
This temple is famous for performing Kalathira Dosha Pariharam for Lord Shukran. Archana, abhishekam and homam are performed at the temple to ward off Sukra dosha. Devotees offer white lotus, white cloth, common bean(mochchai) and fig (aththi) and light 20 clay lamps to appease Shukran. Special poojas are done on Fridays which is considered auspicious for Shukran, the second most beneficial planet after Guru.
Located in the close vicinity of Kumbakonam, some of the villagers here practice the ancient art of making items from metals such as bronze and mix metals.

2. **Accessibility** – The Agneeswarar Shukran Temple can be accessed via district and village-level roads. The temple is easily accessible from the highway running from Kumbakonam to Mayiladuthurai. The most optimal way to reach the temple is through an auto or bus costing INR 100 from Kumbakonam. The nearest bus stop is located within 500m of the site and auto services are available near the temple at any point in time. Visitors are not allowed to enter the temple during the lunar and solar eclipse.

Parking – There is no designated parking space available, vehicles are parked along the road adjacent to the temple adding to the congestion on a single lane road.

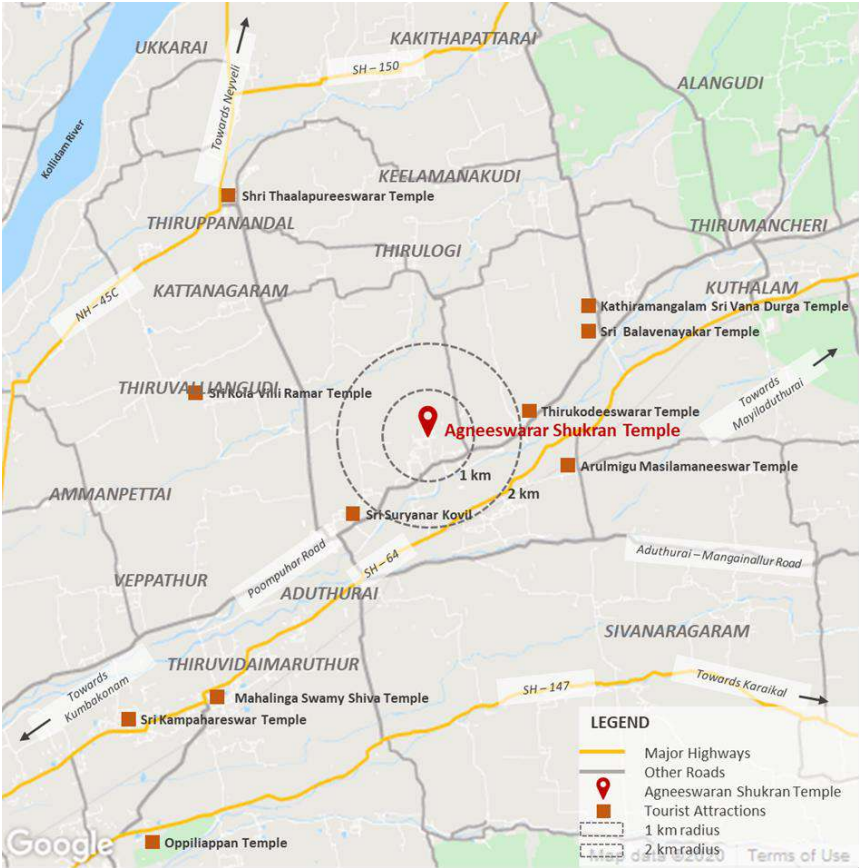
3. **Amenities** – The temple is equipped with a few moderate-level amenities within and around the temple, such as-
 - The site has a provision of toilet block with 3 units each for men and women, the toilets are observed to be clean and well-maintained.
 - Free drinking water RO plant is installed at the site.
 - 16 CCTV cameras are covering all the key areas, entry/exit points, along with 3 security guards (1 – Day and 2 – Night). However, there is no frisking / scanning of visitors being done at entry.
 - Fire safety equipment like fire hoses, fire extinguishers, emergency exits and emergency evacuation signages are provided. However, the Emergency exit routes are not marked.
 - There is an adequate number of dustbins provided in and around the temple site, the site premises are observed to be clean in general.
 - There are 2 retail shops present inside the temple complex for pooja items, prasadam and religious books.
 - There are various ticket options available based on the nature and purpose of the visit (Archana ticket INR 5, Abhishekam INR 50, Vasthram INR 5).
 - A backup power facility available at the temple complex.
 - The site is equipped with ramps and wheelchairs for elderly and physically challenged visitors.

Following are the issues related to existing facilities –

- The access road to the site is unpaved and the temple lacks a parking facility, resulting in congestion during peak season due to on-street parking.

- Certain areas around the temple remain dark due to inefficient coverage by the already present streetlights.
 - There are no other activities that take place at the temple or in the village to keep the area lively.
 - Temple's façade is also observed as losing its aesthetics. It has blackened out and cracks have been developed at many places ending up in the degradation of the temple facade.
4. **Awareness – The** temple is not as popular as other temples in Thanjavur. It is majorly visited by local people residing in Thanjavur and surrounding areas. There are only domestic pilgrims from the states of Tamil Nadu, Karnataka and Andhra Pradesh and Gujarat.
5. **Activities –** The temple does not offer any special services or activities that can attract visitors, except for Annadhanam. On a normal day, it is open for the visitors to worship and a special festival pooja is conducted for 10 days during the Brahmotsavam event.
6. **Accommodation –** There is 1 lodge available for accommodation in the vicinity of the temple (~500 m), which charges INR 600 for a day. Some of the decent stay options are available at Kumbakonam town at a minimum distance of 15Km from the temple. Also, the tourist visiting this temple prefer to stay at Kumbakonam due to its central reach to other tourist destinations.
7. **Association with Community –** There are no common or regular associations of the local communities with the temple.

Figure 4-1: Location & Existing Layout, Agneeswarar Shukran Temple



Site Pictures





Vision for the Site

Though located in a village, the temple has good connectivity owing to its location near Kumbakonam town. The ancient art of making bronze Idols in this region is famous all across the state and Southern India. The temple is one of the Navagraha temples famous for performing Kalathira Dosha Pariharam for Lord Shukran. This is a parihara sthalam for “Sukra dosham”.

While the site has religious significance, the temple façade is not well-maintained and losing its aesthetics. There are also many underutilized areas inside the temple, which is being neglected. Thus, the masterplan aims to tap on the potential of the site.

Further, the vision is to leverage on temple's proximity to various other temples in its vicinity, giving an opportunity of developing an entire tourism circuit based on the religious importance of the temple. Additionally, while currently only the temple is the attraction point of this village, with its increased footfall the aim is to promote the art of making hand-crafted metal items and attract more regional pilgrims.

- **Target Visitor** –The site is largely a pilgrim site, with low footfall mainly received from neighbouring areas, namely Andhra Pradesh, Karnataka, and Tamil Nadu, due to its religious significance. Going forward, the master planning will target facilitating better amenities and improving the visitor's experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** - The site is categorized as a very low pilgrim site with low HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	6	13	25
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	23,634		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High-Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The master planning approach at the site deals with the provision of basic amenities around the site and creation of engaging & employment generating activities.

The objectives of master planning at this site include:

- To create an additional **event space** in the temple complex for the visitors.
- To promote the **handcrafted items** of bronze, brass, steel, etc.
- To conserve and promote the **architectural treasure** of the temple such as the stone idol of Natarajar etc.

Hard Interventions

The temple is remotely located with no additional vacant land for construction. The temple complex already has sufficient infrastructure but in poor condition. It requires proper maintenance and conservation to improve the condition and facilities. Hence, no hard interventions are proposed here.

Soft Interventions

1. **Cleanliness drive** - Certain areas inside the temple campus and outside the temple are observed to be unclean where waste heaps are found. The temple façade has the issue of mould growth. To improve the overall condition and control the overgrowth of vegetation, one-time cleanliness and painting of the walls should be done.

2. **Development of skill centres-** The area in and around Kumbakonam town is famous for practicing handcrafted art for making items from bronze and other metals. However, the nearby towns and villages do not get the benefits of the tourists visiting Kumbakonam. Developing small skill centres in coordination with the local bodies in these towns and villages can help in promoting the ancient local art around the country and the world as well.
3. **Utilization of unused spaces inside the temple complex-** The temple complex has an ample amount of unused land and landscape. It has scope for developing event organizing areas and gardens for the temple. The event/community space will provide a suitable area for formal and informal events for the locals. It can be proposed on the north eastern side of the complex near the Mandapam. Temporary semi-open spaces can be incorporated with the event area, as per the requirement of various events such as weddings, poojas, etc.
4. **Temple maintenance plan-** The stone idol of Natarajar at the Agneeswarar temple is a rare piece of architecture. The temple complex and the structure are observed to be deteriorating. Leaving the situation untouched, affects the aesthetics of the temple and more importantly, might weaken the structure. A proper maintenance plan for the temple in consultation with the conservation architects and specialists can be developed to conserve the temple.
5. **Promotion** – The department should promote the Agneeswarar Shukran temple and events/activities held here, in the TN Assist app and on its various platforms, following the site changes. Being a part of one of the Navagraha temples, all the other temples in conjunction can be developed into the “**Navagraha Circuit**”.

Amenities Plan

1. **Parking area-** The road along the main entrance is wide enough to be used for parallel on-street parking (~30 ECS) with proper management, done by the panchayat.
2. **Solar streetlights** - The site is observed to be dull during the night. Considering the remote location of the temple, providing solar streetlights will be a sustainable measure. The streets and temple can be kept illuminated after dark. Solar streetlights can be funded jointly by the temple authorities and the panchayat.
Infrastructure Created: 10 units.

6. **Technology Interventions (Package 1)** – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Electronic Visitor Counter at the entry point.
 - TN Assist App integration at the site, with an internet connection and QR scanner.
 - There is no requirement for additional CCTV coverage as 16 CCTVs are installed in the office building and entry/exit points.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Cleanliness drive	1
2	Solar Streetlights	10
3	Technology Interventions (Package 1) (No CCTV)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Design Guidelines.

#	Project Component	Cost (INR Lakhs)
1	Cleanliness drive	0.5
2	Solar Streetlights	0.2
3	Technology Interventions (Package 1)	0.6
Total		INR 1 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- b) Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- c) All revenues are unescalated.*
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

There are no additional revenue streams pegged to the interventions proposed at the temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*

- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 1 Lakh.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are extremely limited to the basic amenities, directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Cleanliness drive	0.5	Y0 – Y2	Madurai Adheenam
2	Solar Streetlights	0.2	Y0 – Y2	Madurai Adheenam
3	Technology Interventions	0.6	Y0 – Y2	Madurai Adheenam
Total		INR 1 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 50¹² man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days¹³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 125 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 2.5 Cr. at the site¹⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%

¹² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food, and entertainment.

- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals, pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 4-2: Proposed Master Plan-Agneeswarar Shukran Temple



5. Vaitheeswaran Koil, Mayiladuthurai

Site Details

District:	Mayiladuthurai
Name of Site:	Vaitheeswaran Koil
Site No:	Site 81 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	11.2113, 79.6992
Land Area:	~15 acres + 1000 acres
Peak footfalls:	10,000 per day ¹⁵ (Panguni, Mahashivratri, Kiruthikai)
Operator:	Dharmapuram Adhinam Mutt
Site Ownership:	Dharmapuram Adhinam Mutt
Tourist Footfall:	Dom. – 7 lakhs (2019 - 20) For. – 2 lakhs (2019 - 20) ¹⁶
Site Revenues:	INR 34.69 Crores (2019 – 2020)
Site Orientation:	Pilgrim/Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway Station:	850 m (Vaitheeswaran Koil)
b. Airport:	150 km (Tiruchirappalli)
c. Highway:	500 m from SH 64
Trails featured on:	Navagraha

Vaitheeswaran Koil is one of the 9 Navagraha temples and is located in the Mayiladuthurai district. This temple is dedicated to the planet Angaraka (Mars). Despite the temple's good acknowledgement, the temple site lacks in terms of tourist engaging areas and amenities. Additionally, the site is not currently aesthetically appealing and inviting. Scope of interventions and master planning exercise at the site includes space development, creation of site attraction points, along with visitor facilitation.

Existing Condition

Location

The Vaitheeswaran Koil temple is located in Vaitheeswaran Koil, a panchayat town in the Mayiladuthurai district Tamil Nadu. It is situated ~15 km north-east to Mayiladuthurai Town and ~20 km south to Chidambaram Town.

Existing Layout

Vaitheeswaran Koil is a vast temple covering an area of 15 acres with several mandapams (halls). The five entrance gopurams (towers) are all in a line and beautifully decorated with gods and goddesses in brilliant hues.

- On the entrance from the western side, there is a bazaar that sells objects, icons and other items associated with religion.
- There is a vast temple pond with slippery steps. There are around 18 theerthams (holy tanks) in Vaitheeswaran Koil spread all across the site.
- The inner side of the temple comprises vast pillars, with numerous deities, distinct from each other.
- There are two Dwajasthambams or Kodimarams (Flag posts) before the presiding deity that are made of silver and gold.

¹⁵ Received from Site Manager

¹⁶ Received from Site Manager (The existing foreign tourist footfalls at the site comprise of the NRI and South Indian (especially people from Tamil Nadu) residing overseas.

- The temple apart from the main shrine dedicated to Lord Shiva, also has a shrine dedicated to Lord Dhanvantari or Dhanwantari, an avatar of Lord Vishnu and the Lord of Ayurveda, the Indian system of medicine.
- Near the eastern Gopuram (tower) are the deities Palaniandavar (Muruga of Palani) and Angarakan (Moolavar or stone figure of Mars).
- The sthala vruksham (temple tree) is the healing neem tree that can be seen in the outer praharam (circumambulatory path).

Existing Uses

The site is primarily accessed for religious visits. Due to the ongoing temple renovation works, the temple administration has restricted the entry of any visitor inside the temple. When the temple was completely functional it attracted visitors from all over the world including Asian countries like Malaysia, Singapore and many more.

Other Land Available

Apart from the 15 acres of the temple complex, the temple also owns about 1,000 acres of land. These lands are essentially on lease for farming or rented out as residential buildings. The precise land details were not disclosed but on surveys, it was understood that the land is spread across the surrounding villages Mathur, Nayinarthoppu, Kondathur and Karkoli.

Masterplanning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – One of the 9 Navagraha Temples, the site's attraction value can be stated as high in terms of the values and beliefs of pilgrims associated with it which includes Astrology and Ayurveda. A minimal number of tourists also visit the site to witness its monumental beauty of the light circulations, and Dravidian architectural style. Temple conservation activities are currently carried out at the site to make it more aesthetically appealing, through its façade development.

2. **Accessibility** – The temple site is situated in a small town, accessible via state highways as well as narrow town roads. The main entrance of the town, however, is through the narrow town road. Owing to two access point one on the west and one on the east, the temple is usually accessible from the eastern side, via SH – 64.

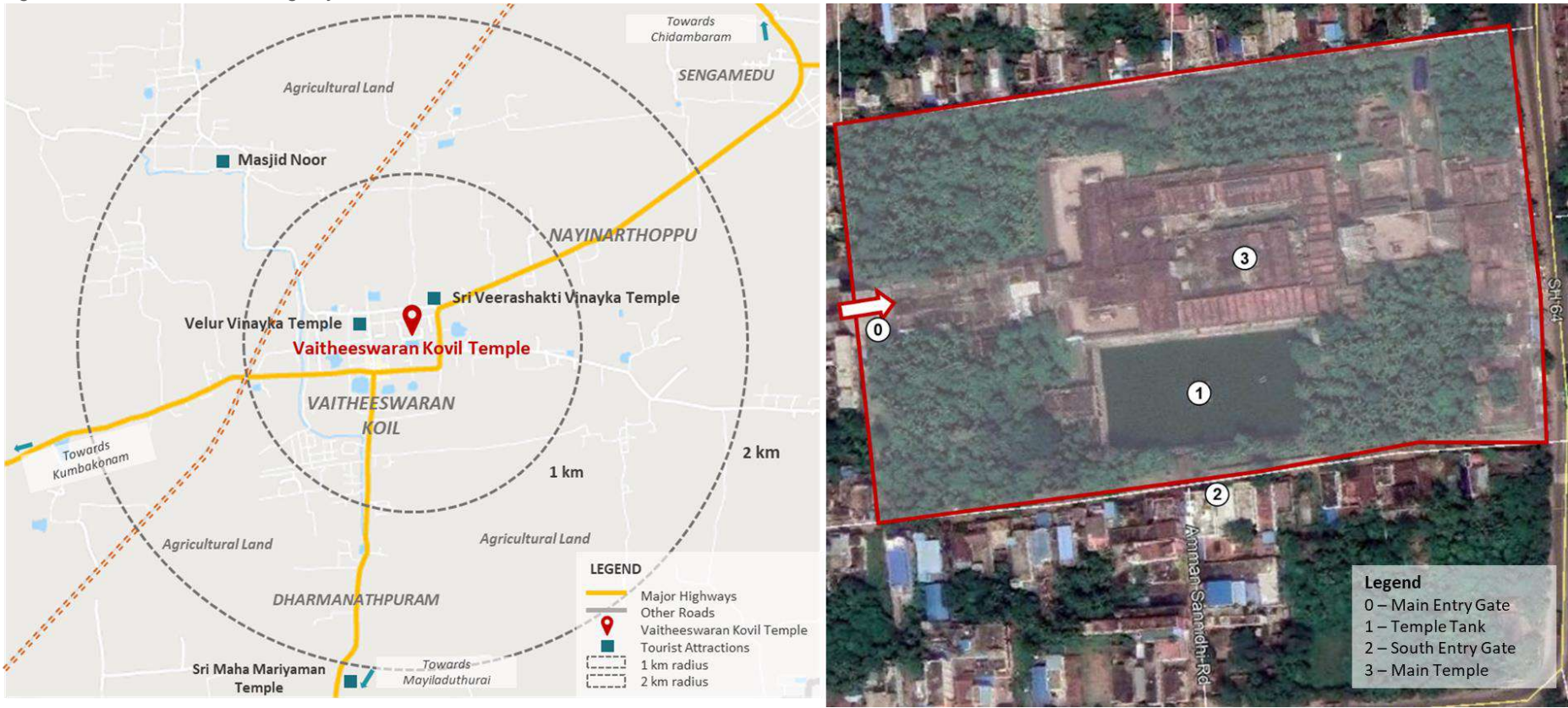
Parking – There are parking lots provided within 50 m. outside of the temple complex for the tourist, maintained by the panchayat. The parking lots inside the temple are under construction.

Internal Circulation – The temple site facilitate tourist circulation through pedestrian pathways. However, the western edge and the eastern edge of the temple are not connected by any pedestrian pathways.

3. **Amenities** – The environment of amenities around the temple is well established. The temple is well-maintained but there is a need for improved infrastructure in place to hold the large no of visitors it receives.
 - The existing number of toilet blocks, drinking water facilities, are limited and insufficient in comparison to the footfalls the temple receive.
 - The site is well equipped in terms of CCTV site monitoring and safeguarding its boundaries both physically and with the presence of fire safety measures. However, there is no frisking of visitors at the site which might be a risk.
 - The site constructed at multiple levels which is only accessed via steps. Ramps at the site are under construction as a part of ongoing activities at the temple.
 - The site surroundings are developed with the provision of public toilets, several accommodation options, the Presence of retail establishments, adequate lighting, and excellent quality roads,

4. **Awareness** – The temple is a very well-acknowledged site with a good online presence. It has gained popularity and belief amongst the devotees. It is a well-known destination for curing skin diseases, and for ceremonies pertaining to getting children. The temple is one of the nine Navagraha temples of Tamil Nadu and is a part of the popular Navagraha pilgrimage in the state.
5. **Activities** – On normal days, the temple does not offer any activities, apart from Annadhanam. The occasional activities conducted at the temple include:
- Festival Celebrations: Brahmotsavam, Panguni, Karthigai
 - Hosting Nattanjali Dance Fest – An Annual Cultural Dance Fest, last held in Feb 2020
 - Thirukalyanam - Meenakshi Thiru Kalayanam
- However, it lacks special activities relating to the temple's essence and significance, which can help increase the overall value and importance of the temple.
6. **Accommodation** – Around 20 budget accommodation facility like Oyo and several lodges are available within 500 m. from the site. On a normal day, the accommodation requirements are also fulfilled by the nearest towns including Malyiladuthurai (~20 km) and Chidambaram (~30 km). However, at the time of festivals, when tourists prefer to stay closer to the temple, the facilities available within town fail to provide enough number and variety of options to the pilgrims.
7. **Association with Communities** – The local community around the temple site have set up their small shops around the temple for astrology work (Naadi Josiyam) and Ayurveda (Dhanvantari). The tourist footfalls at the site make sure to visit these shops at least once while they visit the site.

Figure 5-1: Location and Existing Layout



Site Pictures





Vision for the Site

The Vaitheeswaran Koil Temple is a well-established and acknowledged Navagraha Temple in the Mayiladuthurai district. Considered the nerve centre of Naadi Josiyam (Astrology) and Dhanvantari (Ayurveda), this temple is dedicated to the planet Angaraka (Mars).

Ongoing efforts have been made to improve the overall temple aesthetics and parking facility at the site. However, apart from that, there are several temple amenities which deem insufficient in comparison to the number of tourists received at the site. Additionally, the temple site also hosts several festival celebrations, Thiru Kalyanam and other cultural dance events (Nityanjali).

Considering all the facts about the temple site, its specialities, and the availability of vacant spaces around the main temple site, the overall site can be developed with the intent of enhancing the pilgrim amenities at the site with enhancement of spaces, while utilising the temple's speciality to develop additional activity points.

- **Target Visitor** – The site currently draws a fair number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance and the connection to Naadi Josiyam, the site draws a sizeable number of tourists – both foreign and domestic.
- **Pilgrims** – Visiting the temples for their religious value. The idea of master planning will be to capture these tourists to also engage in other activities apart from a visit to the temple.
- **High-Value Tourists (Both Domestic and Foreign)** - The Localities who have shifted out or in the foreign countries (NRI) over a course of time, who visit the site, when in Tamil Nadu for the monumental, historical, and religious values attached to the temple.

Having said that, given the connection of the site to other Navagraha temples and its rich historical value, there is a significant potential to improve the activity points for tourists as well as increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and the elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site with Moderate HVT potential**. Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data.
- **HVT Growth rate** - The composition of the HVT share is projected to increase from the current rate of 25% to 62% in the short term(Y1-Y5) and the medium term(Y6-Y10) based on the HVT potential of the site.
- **Overall CAGR** - The annual growth rate is pegged at 22% in the short term(Y1-Y5) and organically capping off at 18% in the medium term(Y6-Y10).

Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	600	1,517	3,583
High Value Tourists (HVT) (Both Domestic and Foreign)	200	690	1,629
Maximum Carrying Capacity	59,084		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- Foreign – All non-Indians
- High-Value Tourists – A new definition proposed to capture estimated footfall of visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites. For purely pilgrim sites, HVT footfalls are taken as 10% of domestic footfalls.

Proposed Masterplan

Approach to Masterplanning

The master plan activity intends to utilize a share of vacant land available within the temple campus and develop facilities and additional activity points for increasing tourist engagement at the site.

The objectives for developing master planning interventions at this site are:

- Provide Adequate facilities for ease of pilgrim's visit to the site
- Develop the land parcel within the temple campus for cultural events as well as to enhance the temple speciality and historical significance.
- Create vibrant multi-functional (Cultural) spaces, which function as an additional attraction point to the site.
- Ease out visitor movement across the campuses

Hard Interventions

1. **Open Air Event Area** – The temple hosts cultural events during several festivals, including Thiru Kalyanam (an auspicious wedding of gods). Additionally, the temple also initiated the hosting of Nityanjali (a state-level dance fest) in 2020. Developing an open-air event will help facilitate the hosting of several such cultural events.
 - It can be developed in terms of an amphitheatre with circular seating arrangements facing the main temple, while the stage can utilise the main temple as a backdrop area.
 - Proper hard and soft landscaping of a large Events Plaza in front of the stage is an essential part of that.

Infrastructure Created: ~3000 sqm of open-air events area

2. **Learning Centre** – The temple's association with Naadi Josiyam (Astrology) and Dhanvantari (Ayurveda) can be utilized to attract the enthusiast to the site of its origin. Learning Centres can be developed to spread knowledge about the same. Interested pilgrims and tourists can take up sessions at the centre. The learning centre can be a ground floor hut alike structure, in the traditional architectural style of the courtyard building.

Infrastructure Created: ~ 750 sqm of built-up area



Outdoor Events Area



Ayurveda and Naadi Josiyam Learning Centre



3. **Paved Pathways** – The temple has 2 entrance points, the main entrance is on the western side accessible via a narrow road, while the one on the east is accessible from the SH. However, the connection between both entrances is weak. Additionally, the new facilities developed will also require access. A paved pedestrian pathway connecting the existing pathways and all other spaces will facilitate pedestrian movement across a ~300 m wide site.

Infrastructure Created: ~500 m. length of pedestrian pathways.

4. **Paved Parking Area** – There are no existing parking facilities available at the site. There is a parking area developed and managed by a local authority within 50 m. from the site. A new parking area can be developed at the site campus for ease of the tourists, especially the senior citizen, and physically handicapped pilgrims.

Infrastructure Created: ~1700 sqm of the paved parking area

5. **Amenity Block** – The existing facilities at the temple are insufficient as compared to the number of pilgrims received by the site. A new amenity block would ease out pilgrim facilitation during the visit to the temple. The block would comprise of ~5 toilet blocks for each male and, as well as ~7 drinking water stations female as identified in design guidelines.

Infrastructure Created: ~75 sqm of built-up area.

6. **General Site Landscaping** – The existing temple campus, comprises dull spaces, with irregular vegetation growth. Defined and formalised landscaping would not only improve the temple aesthetics and attraction value but also provide a pleasant atmosphere to the pilgrims.

Infrastructure Created: ~23,000 sqm of landscaping area

Soft Interventions

1. **Cleanliness Initiative** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:
 - a. **Community participation** programmes or devotee volunteers.
 - b. **Providing adequate dustbins** for disposal of segregated waste.
 - c. Through **Innovative interventions** like “Own your Street” where all the stakeholders around the site and residents are made in charge of the cleanliness of the assigned street for a specific period.
2. Develop a **façade maintenance guideline** for the temple
3. **Promoting Homestays as an alternative to Lodging Facilities Requirement**
The development of knowledge centres along with the option of homestays can provide a better accommodation facility to the visitors who wish to stay for a

longer period. Development of local homestay options would also avail the direct benefits of tourism development to the residents and help in uplifting the local economy. Such an indigenous option can boost up among foreign tourists as well as it can provide them with a chance to experience a rural lifestyle.

4. **Scheduled Ayurveda and Naadi Josiyam Learning Camps** - The temple based on the stories attached with it, is famous as “**Naadi Josyam and Ayurveda.**” This can be utilised for attracting additional pilgrims and enthusiasts through activity camps.
5. **Events** - The temple complex may remain closed after hours, but the site outside the complex should remain open in the evenings. The grounds could host cultural activities after hours, such as classical music or dance performances, theatre, etc. Against the backdrop of the lit-up gopuram, this could be a unique venue for such activities.
6. **Site management** – The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.
7. **Promotion** – The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes

Amenities Plan

1. **Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
2. **Signages** – Package 2 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.
3. **Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App

- b. Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1	Paved Parking Area	~1700 sqm
2	Amenity Block (5 Toilets blocks each for male and Female + 7 Drinking Water Station)	~75 sqm
3	Open Events Area (similar to OAT)	~3000 sqm
4	Learning Centre	~750 sqm
5	Pedestrian Pathways	~500 m
6	General Landscaping Area	~23,000 sqm
7	Signages	Package 2
8	Technology Interventions a. Electronic Visitor Counter b. Integration with TN Assist App, QR Scanner	Package 1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Design Guidelines.

#	Project Component	Cost (INR Lakhs)
1	Paved Parking area	27
2	Amenity Block - Toilets	20
3	Amenity Block - Drinking water station	3

#	Project Component	Cost (INR Lakhs)
4	Open Events area	54
5	Learning centre	120
6	Pedestrian pathways	10
7	General Landscaping	21
8	Signages	3
9	Technology Interventions	1
Total		INR 270 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Built-up area rent** – Captures renting out of 750 sqm built-up space at INR 172 per sqm per annum.
- Space on Hire** – Capturing 4 events per month at INR ~84,000 per event.
- Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.
- Parking** – Capturing 95 ECS at 20% occupancy per day at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 63 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the Amenity block.
 - b. A **security personnel** for the parking.
 - c. An **Administration staff** to overlook the operations of the Learning centre, event spaces and the parking.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of

broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 50 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the

interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the conservative governing policies of the temple body - Dharmapuram Adhinam Mutt, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by the Temple trust itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Paved Parking area	27	Y0 – Y2	Dharmapuram Adhinam Mutt
2	Amenity Block - Toilets	20	Y0 – Y2	Dharmapuram Adhinam Mutt
3	Amenity Block - Drinking water station	3	Y0 – Y2	Dharmapuram Adhinam Mutt
4	Open Events area	54	Y0 – Y2	Dharmapuram Adhinam Mutt
6	Learning centre ¹⁷	120	Y3 – Y5	Dharmapuram Adhinam Mutt
7	Pedestrian pathways	10	Y0 – Y2	Dharmapuram Adhinam Mutt
8	General Landscaping	21	Y0 – Y2	Dharmapuram Adhinam Mutt
9	Signages	3	Y0 – Y2	Dharmapuram Adhinam Mutt
10	Technology Interventions	1	Y0 – Y2	Dharmapuram Adhinam Mutt
Total		INR 270 L		

¹⁷ The development of the proposed part can be taken up at later phases based on the increase in future footfalls.

¹⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 11600¹⁸ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 0 man-days per day
- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days¹⁹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as **115782** man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 930 Cr. at the site²⁰.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals, pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

²⁰ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food, and entertainment.

Figure 5-2: Proposed Master Plan – Vaitheeswaran Koil, Mayiladuthurai



6. Swetharanyeswarar Temple, Thiruvengadu

Site Details

District:	Mayiladuthurai
Name of Site:	Swetharanyeswarar Temple, Thiruvengadu
Site No:	Site 85 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	11.1753, 79.8072
Land Area:	~11 acres + 809 acres + 567 acres
Peak footfalls:	2,000 per day ²¹ (Every Wednesdays & 15 days of Feb – Mar)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 3.8 lakhs (2019 - 20) For. – 20,000 (2019 - 20) ²²
Site Revenues:	INR 25 lakhs (2019 – 2020)
Site Orientation:	Pilgrim/Tourist
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	10 km (Vaitheeswaran Koil)
b. Airport:	160 km (Tiruchirappalli)
c. Highway:	7 km from Chennai – Nagapattinam Highway
Trails featured on:	Navagraha

The Swetharanyeswarar Temple is one among the 9 Navagraha temples (Buddh) and also one among the 51 Sakthi Peethas. The temple is mostly visited by devotees with astrological beliefs from the adjoining region and other Indian States. Despite the good connectivity and religious importance of the site, the site fails to acknowledge pilgrim facilitation requirement as well as the other demands of the local community.

Master planning interventions can be made in the form of improving the aesthetics & functionality of vacant and degrading spaces around the site, for improving the overall spatial environment of the place and making it more inviting for the pilgrims and local visitors.

Existing Condition

Location

The Swetharanyeswarar temple is located in Thiruvengadu village, Nagapattinam District, Tamil Nadu. It is situated ~20 km northeast of Mayiladuthurai Town and ~30 km south-east to Chidambaram Town. The temple is located in a predominantly religious neighbourhood surrounded by Buddhist Temples, few houses, small retail shops, etc.

Existing Layout

- The temple is spread across an area of ~11 acres. The temple is facing east with a 5 – tier Rajagopuram on east and west.
- Vinayagar, Dwajasthambam, Balipedam are after the Rajagopuram. After Mandapam, a 6 – tier Rajagopuram is at the entrance of the sanctum.
- The temple has three water bodies namely Surya, Chandra, and Agni.
- The shrine of Buddha is located in the third precinct opposite one of the temple tanks, in the central precinct of the entire campus.

²¹ Received from Site Manager

²² Received from Site Manager (The existing foreign tourist footfalls at the site comprise of the NRI and South Indian (especially people from Tamil Nadu) residing overseas.

- There are all-in-all 3 temple tanks inside the site, two of which are located in the south of the main temple, whereas one to the north of the main temple.
- Toilet blocks and few shops are located in the north-western end of the campus, and a garden is situated to the southwestern end of the main temple, inside the campus boundary.
- The sthala vruksham (temple tree) is the healing neem tree that can be seen in the outer praharam (circumambulatory path).

Existing Uses

On most days, large crowds visit the temple for religious visits and other dosha nivaran pooja. Some of the other continuous audio programs included at the temple, are Thiruppavai, Thiruvambhavai, Sorpozhu, etc. The other uses housed on the site include 4 retail shops that provide items for temple rituals like flowers, deepam, mala, etc., amenities, and vacant areas.

Other Land Available

Apart from the 11 acres of land used for the temple complex, other land parcels that the temple owns include:

- 809 acres of land leased out for farming.
- 567 acres of lands leased out for paddy and wet crop cultivation.

These land parcels, as per the site representatives, are distributed across the temple surrounding and the neighbouring villages.

Masterplanning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
- 2. TNHRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – Several areas along the site are not aesthetically appealing to the pilgrims and site visitors. Some of the elements that make the site unappealing are:
 - The abrupt and irregular fencing at the site
 - Irregular vegetation growth across many unused areas of the site
 - The presence of dead tree stems around the site
 - Worn out paints from certain areas of the other structures inside the site.
 - However, the site owing to the religious beliefs associated with it attracts, a decent number of pilgrim footfalls. The temple is also famously known as “Varanasi of the South” and for its Dosha Nirvana Pooja
- 2. Accessibility** – The temple site is situated in a small village, abutting a state highway, is accessible via state highways as well as narrow village roads. Owing to two access points one on the west and one on the east, the temple is usually accessible from the eastern side, via SH.

Parking – There are no parking lots provided by the temple administration, on-street paid parking is available for the tourists and is often maintained by the local body. The parking available is a paid parking and is insufficient. In comparison to the footfalls the site receives.

Internal Circulation – The temple site facilitate tourist circulation through pedestrian pathways. However, the western edge and the eastern edge of the temple are not connected by any pedestrian pathways.

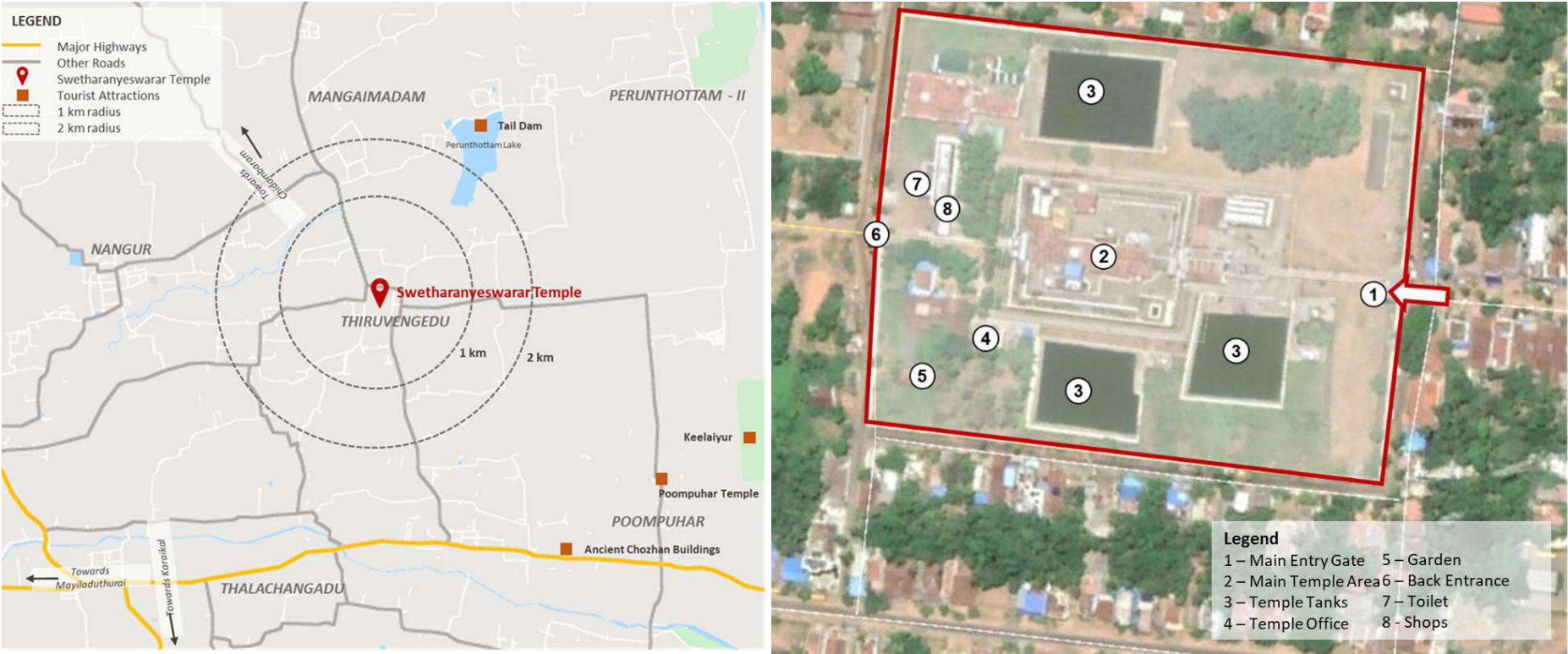
3. **Amenities** – The condition of tourist amenities in and around the site is quite poor.
 - The site is not equipped with any toilet facilities.
 - The drinking water stations, and a minimal number of dustbins present at the site are also grubby.
 - The site is well equipped in terms of CCTV site monitoring and safeguarding its boundaries both physically and with the presence of fire safety measures. However, there is no frisking of visitors at the site which might be a risk.
 - The site surroundings are developed with the provision of public toilets, several accommodation options, the Presence of retail establishments, adequate lighting.
 - However, some of the site access roads are poor, especially the ones that are part of a village, and the public toilets available are also filthy.
4. **Awareness** – The temple is a very well-acknowledged site with a good online presence. The temple is one of the nine Navagraha temples of Tamil Nadu and is a part of the popular Navagraha pilgrimage in the state. Various travel websites and blogs recommend visiting the place and experience the grandness and serenity of the place.
5. **Activities** – On normal days, the temple does not offer any activities, apart from Annadhanam. A few of the other activities organized at the temple campus are:

- Festival Celebrations: Brahmotsavam, Indhira Vizha, Theru, Panchamoorthi Purappadu, Themppam

However, it lacks special activities relating to the F&B Provision and other essential activities around the site.

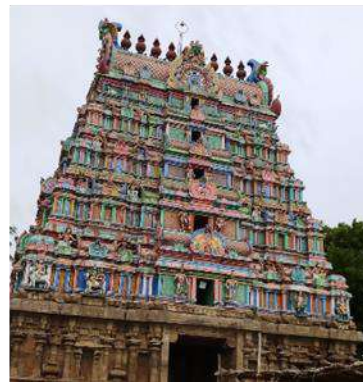
6. **Accommodation** – 5 lodges are available as accommodation facilities for the tourists within a 500 m radius of the temple. A wider range of options is available at Mayiladuthurai at an approx. a distance of 20 km, which caters to a larger pilgrim segment visiting the Navagraha and other temples in the region.
7. **Association with Communities** – Apart from being a site of religious importance for the locals. The temple is the central attraction both geographically and religiously few of the people from the local community around the temple site has set up their small shops around the temple, indicating a very minimal association with local communities from a tourism perspective but a comparatively higher association with the religious value of the space.

Figure 6-1: Location and Existing Layout



Site Pictures





Vision for the Site

The Swetharanyeswarar Temple in Thiruvengadu has two distinctions - being one of the 9 Navagraha temples and also being one of the 51 Sakthi Peethas. The temple dedicated to the planet Mercury,

- Has immense religious significance attached to it, especially with Dosha Nivaran Pooja?
- Is known as Varanasi of the South
- Is well connected with a network of good roads and public transportation

Despite the above-stated facts, the temple faces several weaknesses and fails to address the pilgrim to the fullest extent, in terms of:

- Unappealing site aesthetics
- Lack of parking spaces
- Failure to provide clean and hygienic amenities to the pilgrims and other tourists.
- The dull and non-attractive temple pond

Considering the existing situation of the temple and the amount of vacant land available outside the main temple area at the site, it is envisioned to develop the vacant spaces around the temple. The intent is to enhance the pilgrim amenities at the site, creation of landscaped spaces to improve the site aesthetics and addition of some temple activity facilitating areas. The temple is proposed to be developed as a regional tourist destination with the provision of adequate amenities for the visitors.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience. The target visitor group envisioned to be captured at the site are:
 - **Pilgrims** – Visiting the temples for their religious value. The idea of master planning will be to capture these tourists to also engage in other activities apart from a visit to the temple.
 - **High-Value Tourists (Both Domestic and Foreign)** - The Localities who have shifted out or in the foreign countries (NRI) over a course of time, who

visit the site, when in Tamil Nadu for the monumental, historical, and religious values attached to the temple.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**. Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data.

Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	360	850	1,710
High Value Tourists (HVT) (Both Domestic and Foreign)	40	94	190
Maximum Carrying Capacity	43,328		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- Foreign – All non-Indians
- High-Value Tourists – A new definition proposed to capture estimated footfall of visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites. For purely pilgrim sites, HVT footfalls are taken as 10% of domestic footfalls.

Proposed Masterplan

Approach to Masterplanning

Around 1/3 of the entire site land parcel is currently vacant and underutilized. The main aim of the master planning activity at the site is to utilize and further put to use these land parcels to create a pleasant and facilitated environment for the pilgrims.

The objectives for developing master planning interventions at this site are:

- **To overcome the existing issues faced** by pilgrims at the site.
- To **create a live and interactive space** around the temple
- **Provide Adequate facilities** for ease of pilgrim's visit to the site
- To **address the needs of local communities** who regularly access the site due to lack of any other places to go in and around the town.
- **Ease out visitor movement** across the campus
- **Provide new avenues for regular and occasional activities** at the temple.

Hard Interventions

1. **Open Air Exhibit Area** – Thiruvengadu is one of the six places considered to be equivalent to Kasi. The temple has a rich history and is connected to the mythological stories of Lord Shiva. Those connections and stories can be displayed through sculptures and deciphering stone inscriptions in an open exhibit area. A dedicated area where the pilgrim can witness the stories and values associated with the temple. It can be developed near the temple tank on the north to the main temple area.

Infrastructure Created: ~1700 sqm area of the open exhibit with stone sculptures and inscriptions

2. **Amenity Block** – The existing facilities at the temple are insufficient as compared to the number of pilgrims received by the site. A small amenity block including ~7 drinking water stations, ~5 toilets, ~5 changing rooms, ~1 cloakroom, and a bathroom can be developed along with the rear entry of the temple on the west side of the main temple. This will be developed as per the design guidelines.

Infrastructure Created: ~75 sqm of built-up area.

3. **Community Garden** – The village where the temple is situated, is a small village with limited recreational options for the locals. The temple is a focal point of

outing and gathering for several locals. Developing a small community garden at the site, would not only compel the pilgrims to spend some extra amount of time at the site but also provide a recreational option for the locals.

Infrastructure Created: ~3450 sqm of a community garden

4. **Stone Gazebo** – The temple being a Navagraha temple associated with Buddha (Planet Mercury), organizes numerous poojas. Both individually for the pilgrims as well as a part of temple ritual. The pooja that is a part of temple rituals are conducted inside the main temple, however, the pooja that is conducted specifically for a pilgrim group or individuals on a booking basis is conducted in the parikrama areas currently

Special stone gazebo areas for booked dosha nirvana pooja for individual pilgrim can make the temple interiors free of obstruction for pilgrim movement as well as a dedicated area for pooja in open will facilitate tourists.

Infrastructure Created: ~5 units of 100 sqm. Gazebo

5. **Paved Parking Area** – There are no existing parking facilities available at the site. The available on-street parking spaces developed by the local authority are insufficient. A new parking area with greater capacity can be developed at the site campus for ease of the tourists.

Infrastructure Created: ~1700 sqm of the paved parking area

6. **Pedestrian Friendly pathways and Landscaping areas** – The temple has 2 entrance points, the main entrance is on the western side accessible via a narrow road, while the one on the east is accessible from the SH. However, the connection between both entrances is weak. Additionally, the new facilities developed will also require access.

A comprehensive landscape and open space design with a logical pedestrian routing, comfortable places will tie together the variety of spaces at the site and create one cohesive destination.

Infrastructure Created: ~700 m. length of pedestrian pathways and ~16,100 sqm of General Landscaping Area.

7. **Temple Tank Area Modification** – There are 3 temple tanks on the site campus one on the north and two to the south of the main temple. These tanks are currently either dried up or are filled with algae and unwanted vegetation.

Redevelopment of the tank embankment with the creation of steps around it can make the temple tank accessible to the pilgrims, as well as make it easy to clean it up in the future.

Infrastructure Created: ~2400 sqm of steps around the temple tank

8. **Façade Beautification of buildings in the site** – To improve the overall experience of the visit to the historically significant Temple, the buildings inside the site campus should be well maintained and should reflect the architectural beauty of the Temple. Firstly, the disfiguring hoardings and other architecturally inappropriate structures added to the buildings over the years should be removed. Secondly, the building exteriors must be repainted with re-construction work if required.

Soft Interventions

1. **Cleanliness Initiative** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:
 - a. **Community participation** programs or devotee volunteers.
 - b. **Providing adequate dustbins** for disposal of segregated waste.
 - c. Through **Innovative interventions** like “Own your Street” where all the stakeholders around the site and residents are made in charge of the cleanliness of the assigned street for a specific period.
2. Develop a **façade maintenance guideline** for the temple
3. **Guidelines for Temple Tank Maintenance** - The Pond adjacent to the temple, as observed at the site comprises a dump of ritual constituents and other waste resulting in unhygienic conditions around it. Rejuvenation of the tank can be done using the following measures:
 - a. Restrictions on disposal of organic matter, alternative arrangements can be made for the disposal of organic matter which can then be collected and transported to feed the animals.
 - b. Awareness amongst the general public for disposal of waste at designated locations.



Landscaping and Pavements around Temple



Exhibition and Display area at Temple and around the tank



Areas around the tank



Gazebo at the temple

4. **Site management** – The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.
5. **Promotion** – The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes

Amenities Plan

1. **Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
2. **Street furniture** – Adequate street furniture like benches, dustbins, etc. is proposed to be provided, along with the design guidelines for street furniture.
3. **Signages** – Package 2 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.
4. **Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1	Open Exhibit Area with Stone Sculptures	~1700 sqm
2	Amenity Block (5 Toilets blocks each for male and Female + 7 Drinking Water Station)	~400 sqm

#	Project Component	Scale
3	Paved Parking Area	~2800 sqm
4	Community Garden	~3450 sqm
5	Pedestrian Pathway	~700 m
6	Stone Gazebo Area (~100 sqm)	~ 5 units
7	General Landscaping Area	~16,100 sqm
8	Steps Around Temple Tank	~2400 sqm
9	Signages	Package 1
10	Technology Interventions a. Electronic Visitor Counter b. Integration with TN Assist App, QR Scanner	Package 1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Design Guidelines.

#	Project Component	Cost (INR Lakhs)
1	Open Exhibit area	37
2	Amenity Block - Toilets	20
3	Amenity Block - Drinking water station	3
4	Paved parking area	45
5	Community garden	24
6	Pedestrian pathways	14
7	Wooden Gazebo Areas	10
8	General Landscaping	14
9	Signages	1
10	Technology Interventions	1
Total		INR 170 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are un-escalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.
2. **Parking** – Capturing 150 at 10% occupancy per day at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 12 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the Amenity block.
 - b. A **security personnel** for the parking.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and

responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 23 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the estimated additional revenue from the proposed interventions falls short of the operational expenses incurred, the interventions proposed at the temple are largely catered to improve the experience of the visiting pilgrims, thereby adding intangible value to its social/ religious outlook.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”.

²³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Open Exhibit area	37	Y0 – Y2	HR&CE
2	Amenity Block - Toilets	20	Y0 – Y2	HR&CE
3	Amenity Block - Drinking water station	3	Y0 – Y2	HR&CE
4	Paved parking area	45	Y0 – Y2	HR&CE
6	Community garden	24	Y0 – Y2	HR&CE
7	Pedestrian pathways	14	Y0 – Y2	HR&CE
8	Wooden Gazebo Areas	10	Y0 – Y2	HR&CE
9	General Landscaping	14	Y0 – Y2	HR&CE
10	Signages	1	Y0 – Y2	HR&CE
Total		INR 170 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 7290²³ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days²⁴

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labour assumed for computation = *INR 700* per day
- Cumulative labour man-days = 30% * CAPEX / 700

²⁴ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 18,240 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 190 Cr. at the site²⁵.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals, pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

²⁵ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food, and entertainment.

Figure 6-2: Proposed Master Plan – Swetharanyeswarar Temple, Thiruvengadu



7. Nagnathaswamy Temple, Keezhaperumpallam, Ketu Sthalam

Site Details

District:	Mayiladuthurai
Name of Site:	Nagnathaswamy Temple
Site No:	Site 86 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	11.1350, 79.8349
Land Area:	~7.5 acres + 54 acres
Peak footfalls:	20,000 per day ²⁶ (Ravagalam & Emakandam, Rasdhu Payirchi)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 5 lakhs (2019 – 20) For. – 50,000 (2019 - 20) ²⁷
Site Revenues:	INR 60 lakhs (2019 – 2020)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	10 km (Vaitheeswaran Koil)
b. Airport:	160 km (Tiruchirappalli)
c. Highway:	2 km from SH 22
Trails featured on:	Navagraha

The Nagannathaswamy Temple is located in the remote village of Keezhaperumpallam, ~2 km away from Poompuhar town. It is one of the popular Navagraha temples in Tamil Nadu. Devotees visit the temple as part of the Navagraha temple pilgrimage. The temple is usually visited by people from the bordering states of Andhra Pradesh and Karnataka. Despite being an acknowledged site among Navagraha pilgrims and receiving a decent number of footfalls in comparison to other Navagraha temples, the site lacks in terms of provision of good quality pilgrim services and eye-appealing site aesthetics.

The scope of interventions at the site includes the development of new and refurbishing the old tourist amenities present at the site, as well as adding elements to enhance site beauty and organization of different site areas in conjunction with each other.

Existing Condition

Location

The Nagannathaswamy temple is located in the village of Kezhaperumpallam ~2 km south of Dharmakulam, Tamil Nadu, India, ~25 km east of Mayiladuthurai, ~3 km southwest to Poompuhar beach. The temple site is located in a rural setup, surrounded by agricultural fields and minimal small-scale developments.

Existing Layout

Nagannathaswamy Temple was constructed by Chola Kings. The temple site occupies an area of ~7.5 acres, it has a 2-tier Raja gopuram surrounded by two parikrama (closed precincts of a temple). In this Kethu temple, Lord Kethu faces

²⁶ Received from Site Manager

²⁷ Received from Site Manager (The existing foreign tourist footfalls at the site comprise of the NRI and South Indian (especially people from Tamil Nadu) residing overseas.

west in the north praharam. Lord Ketu appears with the body in divine form, his head as a five-headed snake and the folded hands worshipping Lord Shiva.

- Upon entering the site from the south direction, one finds the temple archagar house to their west at ~ 45m.
- Followed by the temple archagar house, on the west side of the entrance road, there are the temple mandapam, the rest house, and a gazebo.
- On the eastern side of the temple road, opposite to the mandapam and temple Arcagar house, one can notice toilet blocks for the tourist and few shops for the temple and pilgrim requirements,
- Along with the road's endpoint, to the west is the main temple area.
- To the east of the main temple, one can notice a dried-out temple tank with algae and uncontrolled vegetation
- To the west of the main temple is a ~2.5 acres of coconut farming land developed by the temple administration.
- ~2.5 acres of the land area to the southeast of the main temple, within the temple site area, is vacant with scanty small-scale development.

Existing Uses

The site is primarily accessed for religious visits. The Nagannathaswamy Temple holds immense importance amongst those suffering from gastric troubles, neurological setbacks, lacking courage, and those aspiring progress in trade and undertakings, seeking unity and prosperity in family and longevity and welfare. They perform milk abhishekam with nivedhana and offer vastras in a different color. The Nagannathaswamy Temple is currently operated and maintained by HR&CE. Few of the other uses housed on the site are small retail stalls selling pooja items and food stalls.

Other Land Available

Apart from the 7.5-acre land used for the temple complex, the temple also owns lands that are used across 3 different purposes, these include:

- About 54 acres of the land around the temple, the majority of this land is leased out for farming.
- 3.75 acres of land is currently being rented out for residential purposes.
- 2.66 acres of land is used for wet crop cultivation.

Masterplanning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
- 2. TNHRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR& CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** –The aesthetic beauty of the site is the least attractive factor for the pilgrims and other tourists. The temple tank is dried out, with the site surroundings having irregular vegetation growth and the presence of non-attractive temple facility buildings and the rest house. The site cleanliness and maintenance are also poor, affecting the aesthetic beauty of the site. The uniqueness of the temple that attracts locals and tourists to this place is their belief in Lord Ketu.

2. **Accessibility** – The temple site is situated in a small village, accessible via a major district road. The main entrance of the temple site is connected to the major district road ~15 m. wide. The temple is further connected via an internal road of ~12 m. width.

Parking – There are parking lots provided within 50 m. outside of the temple complex for the tourist, maintained by the panchayat. The parking lots provided are paid parking lots.

Internal Circulation – The temple site facilitate tourist circulation through a 100 m long paved internal road. A larger section of the site is unbuilt and does not have any means of circulation.

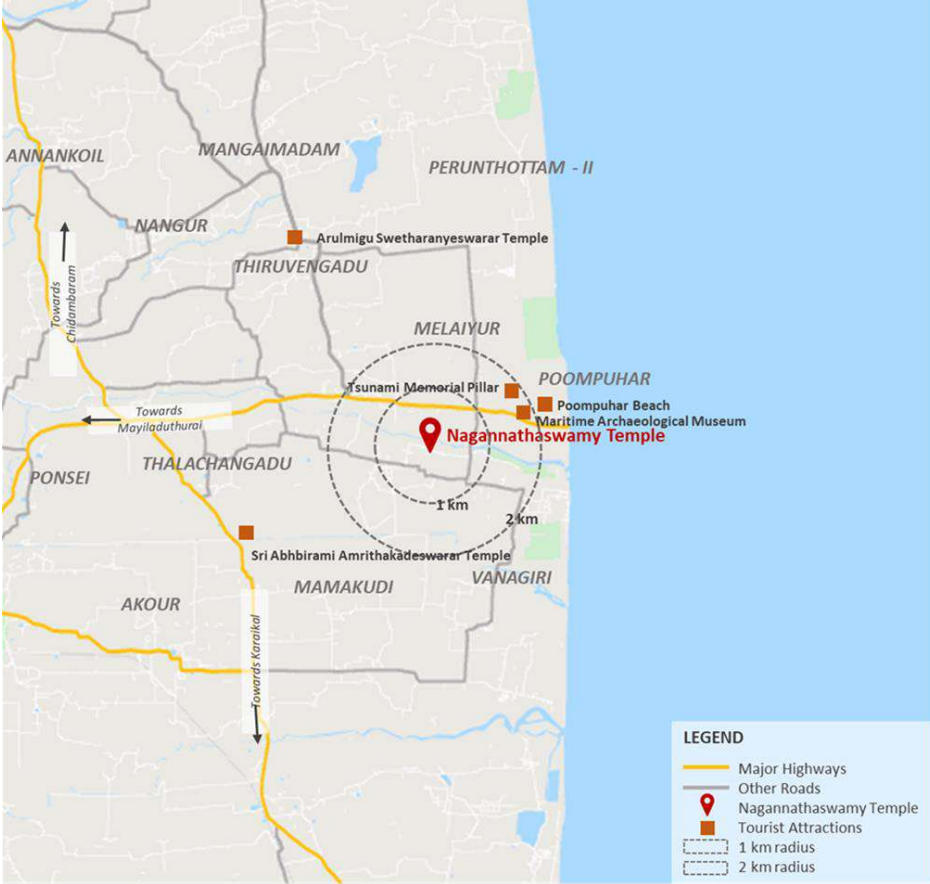
3. **Amenities** – The environment of amenities around the temple is well established. The temple is well-maintained but there is a need for improved infrastructure in place to hold the large no of visitors it receives.
- The existing number of toilet blocks, drinking water facilities, are limited and insufficient, and unhygienic in comparison to the footfalls the temple receives.
 - The site is well equipped in terms of CCTV site monitoring and safeguarding its boundaries both physically and with the presence of fire safety measures. However, there is no frisking of visitors at the site which might be a risk.
 - The site is constructed at multiple levels which is only accessed via steps. Ramps at the site are under construction as a part of ongoing activities at the temple.
 - The site surroundings are developed with the provision of public toilets, several accommodation options, the Presence of retail establishments, adequate lighting, and excellent quality roads,
4. **Awareness** – The temple is a very well-acknowledged site with a good online presence. It is a well-known destination for believers of Lord Ketu. There is a dedicated website that talks about the historical connection of the temple deities to the event of “Samudra Manthan”, the services offered, and how to book a special pooja and different festivals that are celebrated at the temple.

5. **Activities** – On normal days, the temple does not offer any activities. Two Special occasions pooja are done once every 1.5 years and every year, respectively. However, it lacks special activities relating to the temple's essence and significance as well as basic tourist requirements like F&B areas, which can help increase the overall value and importance of the temple.

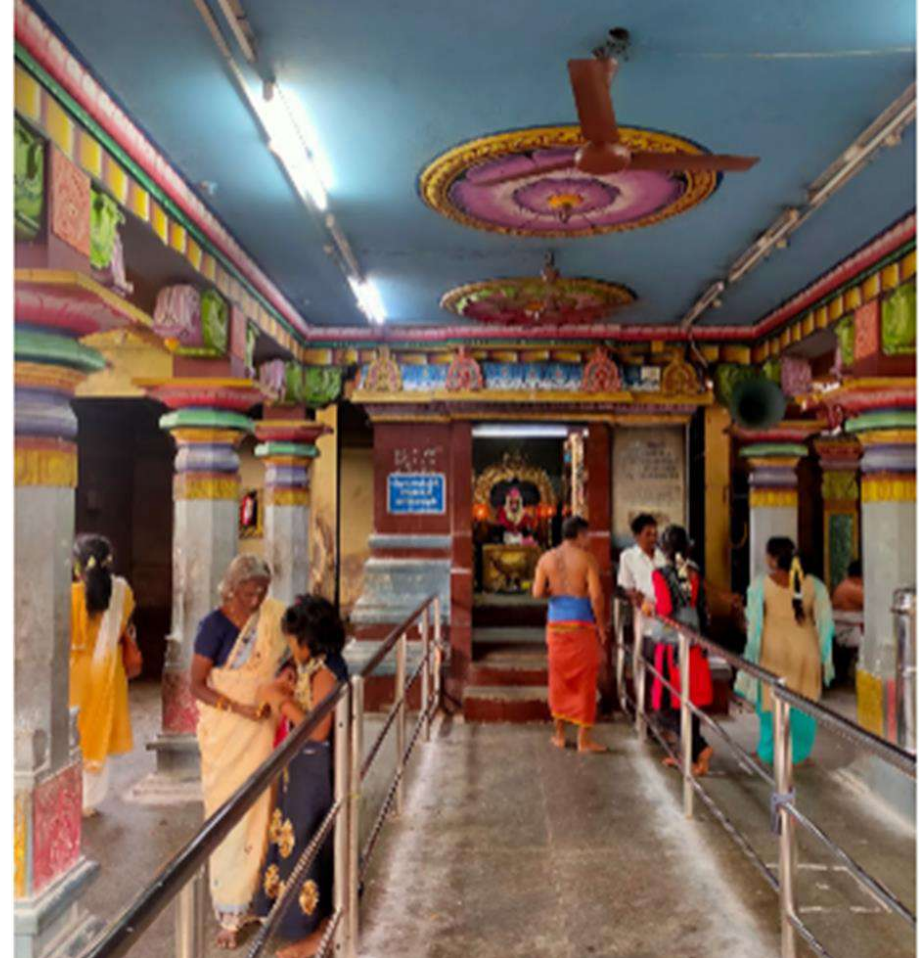
6. **Accommodation** – There are no accommodation options available for tourists in the nearby vicinity of 2 km. the radius of the temple. However, the temple provides one hall as a lodging facility free of cost which is often used by the tourist to rest. A wider range of options is available at Thirukkadaiyur at an approx. a distance of 8 Km. However, at the time of festivals, when tourists prefer to stay closer to the temple, the facilities available within the temple site fail to provide enough options to the pilgrims.

7. **Association with Communities** – The local community around the site has no association with the temple which can enhance the tourist atmosphere and experience at the site.

Figure 7-1: Location and Existing Layout



Site Pictures



Vision for the Site

The Nagannathaswamy Temple is located in the remote village of Keezhaperumpallam, is one of the popular Navagraha temples in Tamil Nadu.

Considering the existing site situation, such as:

- Its rich and divine connect, which keeps the belief in its devotees alive and attracts more tourists towards it.
- It's a connection to the events of "Samudra Manthan" that connects to the rich mythological beliefs, it can be focussed upon while marketing the temple.
- Its popularity among locals and pilgrims.
- Good road connectivity
- Availability of a large amount of land for development

As well as the weaknesses and limitations associated with the site, such as:

- Poor hygiene maintenance of the spaces around the site
- Degrading the aesthetic quality of the space around the site
- Lack of stay options, owing to its location in a village
- Lack of Proper Sanitation Facilities
- Lack of clean drinking water
- Dried out and dull temple tank area

The temple can be envisioned to be developed on the principles of improving site the overall appearance and vibrancy around the site, along with development of pilgrim facilitating service areas at the site while solving the existing issues faced by site visitors.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other South Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience. The target visitor group envisioned to be captured at the site are:
 - **Pilgrims** – Visiting the temples for their religious value. The idea of master planning will be to capture these tourists to also engage in other activities apart from a visit to the temple.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**. Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data.

Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	495	1,169	2,351
High Value Tourists (HVT) (Both Domestic and Foreign)	10	24	47
Maximum Carrying Capacity	13,786		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- Foreign – All non-Indians
- High-Value Tourists – A new definition proposed to capture estimated footfall of visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites. For purely pilgrim sites, HVT footfalls are taken as 10% of domestic footfalls.

Proposed Masterplan

Approach to Masterplanning

The master plan activity intends to utilize a share of vacant land available within the temple campus and develop facilities and refurbish existing facilities with increased capacity to cater to the pilgrim's need at the site.

The objectives for developing master planning interventions at this site are:

- Improve the quality and quantity of services for pilgrims currently available at the site
- Provide additional areas that serve pilgrim accommodation facilitation.

- Develop the land parcel within the temple campus for improving the site aesthetics and vibrancy
- Rejuvenating temple tank and steps – This will improve tourist engagement at the site.

Hard Interventions

1. **Yatri Nivas** – A Yatri Nivas for pilgrim accommodation must be developed at the vacant land on the western side of the site entrance. It will hold a capacity of 25 keys which will include:

- 4 dormitories with common toilets,
- 5 non-reserved AC rooms and
- 5 VIP/VVIP AC rooms with attached washrooms - These rooms will be spacious with better in-house amenities and facilities.
- 12 non-AC rooms with attached toilets.
- It must also have a parking capacity of ~30 ECS.

Infrastructure Created: ~1430 sqm built-up area and ~400 sqm of the paved parking area

2. **Amenity Block** – The existing facilities at the temple are insufficient as compared to the number of pilgrims received by the site. An upgraded amenity block with increased capacity at the same place, where it is currently, would ease out pilgrim facilitation during the visit to the temple. The block would comprise of ~5 toilet blocks for each male and, as well as ~5 drinking water stations female as identified in designed guidelines, Temple Administrative office, and ~4 retail shops.

Infrastructure Created: ~120 sqm of built-up area.

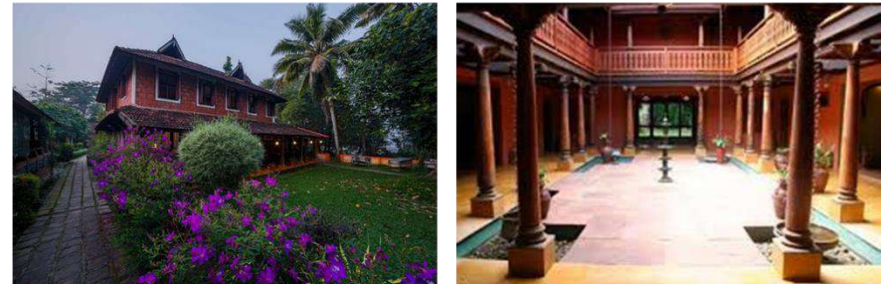
3. **F&B Area** – The temple site is located in a village area, there are limited F&B options available in the vicinity. A Food and Beverage area for the temple visitors at the site can be helpful, without the pilgrims having to search for other options. It can be located near the amenity block along the temple's access road and can have an open seating area at the vacant land behind the F&B block.

Infrastructure Created: ~120 sqm built-up area

4. **Refurbishment of the Rest House** – The existing rest house is a small hall present near the temple, with dull spaces around it. It can be refurbished with the creation of 2 rooms, and a luggage room. It must be developed into a short time

resting facility for the pilgrims who have travelled a larger distance, but who do not wish to stay overnight at the temple site.

Infrastructure Created: Refurbishment of ~500 sqm built area



Yatri Nivas



Spaces around Temple Tank

5. **Temple Tank Development** – The temple tank, in its present condition is dried out to a larger extent and completely occupied with algae. An embank around the temple tank along with steps can help in retaining water in the tank for a longer period as well as make it accessible for the pilgrims. The tank would help in harvesting rainwater and utilize it to refill the tank when required.

Infrastructure Created: ~215 m of embankment with ~3500 sqm area for the steps at the tank

6. **Stone Gazebo Pooja Area** – The temple being a Navagraha temple associated organizes numerous poojas. Both individually for the pilgrims as well as a part of temple ritual. The pooja that is a part of temple rituals are conducted inside the main temple, however, the pooja that is conducted specifically for a pilgrim group or individuals on a booking basis is conducted in the parikrama areas currently. Special stone gazebo areas for booked pooja for individual pilgrim can make the temple interiors free of obstruction for pilgrim movement as well as a dedicated area for pooja in open will facilitate tourists.

Infrastructure Created: ~5 units of 100 sqm. Gazebo



Pooja Areas at the temple

7. **Designated Parking Area** – There are parking lots provided within 50 m. outside of the temple complex for the tourist, maintained by the panchayat. The parking lots provided are paid parking lots. For the pilgrims to reach the temple site easily, instead of parking at the allotted parking area, they usually park their vehicles outside the temple. Therefore, a paved portion of the vacant area to the south of the main temple near the rest house can be designated as a parking area through the installation of signages, and area differences.

Infrastructure Created: ~770 sqm of the designated parking area

8. **Pedestrian Friendly Pathways and Landscaping** – The land area around the temple and the temple tank seem dead. Those areas can be developed with pedestrian-friendly landscaping and pathways to encourage the movement of tourists to those areas of the site as well as to add aesthetic beauty to the site. Additionally, the newly developed and refurbished facilities will also require access, which can be developed similarly.

A comprehensive landscape and open space design with a logical pedestrian routing, comfortable places will tie together the variety of spaces at the site and create one cohesive destination.

Infrastructure Created: ~435 m. length of pedestrian pathways and ~3280 sqm of General Landscaping Area.

9. **Temple Entrance and Boundary** – The temple entrance in the existing situation is non-welcoming and non-indicative. There is no arch or direction board at the site entrance. Moreover, certain areas of the site are also open, which can easily be trespassed by the nuisance creating humans during night. To avoid nuisance activities at the site and to develop a guarded site entry an arch along with the boundary wall must be developed.

Infrastructure Created: ~460 m of temple site boundary wall and ~1 unit of entry arch gate with stone signage

Soft Interventions

1. **Temple site cleanliness maintenance** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:
 - a. **Community participation** programs or devotee volunteers.
 - b. **Providing adequate dustbins** for disposal of segregated waste.
 - c. Regulations for **no waste disposal into the temple tank**
2. Develop a **façade maintenance guideline** for the temple – The façade of buildings around the temple within the site area must follow the traditional architectural style of the temple and other buildings in the village, to provide the look and feel of a pilgrim destination. The facades of the buildings within the site must also be repainted every 10 years to maintain the spatial character of the place.

- 3. Guidelines for Temple Tank Maintenance** - The Pond adjacent to the temple, as observed at the site comprises a dump of ritual constituents and other waste resulting in unhygienic conditions around it. Rejuvenation of the tank can be done using the following measures:
- Restrictions on disposal of organic matter, alternative arrangements can be made for the disposal of organic matter which can then be collected and transported to feed the animals.
 - Awareness amongst the general public for disposal of waste at designated locations.
- 4. Site management** – The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.
- 5. Promotion** – The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes

Amenities Plan

- 1. Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
- 2. Signages** – Package 2 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.
- 3. Technology Interventions** – Package 2 set of technology interventions are required to be deployed at the site. These include:
- Electronic Visitor Counter at entry points
 - TN Assist App integration at the site,
 - WiFi bollards and/or enclosures at key locations

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1	Yatri Nivas (Built Area)	~1430 sqm (28 keys)
2	Yatri Nivas (Paved Parking)	~400 sqm
3	Designated Parking Area	~770 sqm.
4	Amenity Block	~120 sqm
5	Refurbishment of Rest Area	~500 sqm
6	F&B Area	~120 sqm
7	General Landscaping Area	~3280 m
8	Pedestrian Pathway	~435 sqm
9	Temple Tank Development <ol style="list-style-type: none"> Embankment Steps 	~3715 sqm a. ~215 sqm b. ~3500 sqm
10	Entry Gate Arch	~1 Unit
11	Site Boundary	~460 m
12	Pooja Areas (~100 sqm)	~5 units
13	Signages	Package 2
14	Technology Interventions <ol style="list-style-type: none"> Electronic Visitor Counter at entry points TN Assist App integration at the site, WiFi bollards and/or enclosures at key locations 	Package 2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Design Guidelines.

#	Project Component	Cost (INR Lakhs)
1	Yatri Nivas (Built Area)	420
2	Yatri Nivas (Paved Parking)	6
3	Designated Parking Area (Out of Scope)	0
4	Amenity Block - Toilet block	20
5	Amenity Block -Drinking water station	3
6	Amenity Block - Temple Office	5
7	Refurbishment of Rest Area	2
8	F&B Area	2
9	Pedestrian Pathway	3
10	Temple tank steps	37
12	Entry Gate Arch	1
13	Site Boundary	25
14	Pooja Areas (~100 sqm)	9
15	General Landscaping	3
16	Signages	3
17	Technology Interventions	7
Total		INR 550 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Built-up area rent** – Captures renting out of 120 sqm built-up space at INR 900 per sqm per annum.
- Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.
- Parking** – Capturing 22 ECS at 30% occupancy per day at INR 15 per ECS.
- Yatri Niwas** – Capturing 28 keys with average yearly occupancy of 60% at INR 1700 per room and additional revenues of 20% over room revenues.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1.18 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.

- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the amenity block and the retail zone.
 - b. A **security personnel** for the Yatri Niwas and the parking.
 - c. An **Administration staff** to overlook the operations of the Yatri Niwas and the vending area.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 72 Lakhs

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the Yatri Niwas at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Yatri Nivas ²⁸	420	Y5 – Y7	HR&CE
2	Yatri Nivas (Paved Parking)	6	Y5 – Y7	HR&CE
3	Designated Parking Area (Out of Scope)	0	Y0 – Y2	HR&CE
4	Amenity Block - Toilet block	20	Y0 – Y2	HR&CE
5	Amenity Block - Drinking water station	3	Y0 – Y2	HR&CE
6	Amenity Block - Temple Office	5	Y0 – Y2	HR&CE
7	Refurbishment of Rest Area	2	Y0 – Y2	HR&CE
8	F&B Area	2	Y0 – Y2	HR&CE
9	Pedestrian Pathway	3	Y0 – Y2	HR&CE
10	Temple tank steps	37	Y0 – Y2	HR&CE
12	Entry Gate Arch	1	Y0 – Y2	HR&CE
13	Site Boundary	25	Y0 – Y2	HR&CE
14	Pooja Areas (~100 sqm)	9	Y0 – Y2	HR&CE
15	General Landscaping	3	Y0 – Y2	HR&CE
16	Signages	3	Y0 – Y2	HR&CE
17	Technology Interventions	7	Y0 – Y2	HR&CE
Total		INR 550 L		

²⁸ The development of the proposed component can be taken up at later phases based on the increase in future footfalls.

²⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 23570 ²⁹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 20.16 man – days per day³⁰
- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days³¹
- Retail and F&B spaces = 12 man-days per day³²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment because of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 59,000 man-days.

◦ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

³⁰ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5-star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

³¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

³² Assuming average 2.5 persons per kiosk / shop

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 240 Cr. at the site³³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals, pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

³³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food, and entertainment.

Figure 7-2: Proposed Master Plan – Nagnathaswamy Temple, Keezhaperumpallam, Kethu Sthalam



8. Abathsahaswarar Temple (Guru), Alangudi

Site Details

District	Thiruvavur
Name of Site	Abathsahaswarar Temple
Site No:	Site 89 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.8297, 79.4103
Land Area:	10 acres + 137 acres
Peak footfalls:	50,000 per day (April - May Brahmotsavam, Shivaratri, Masi Masam, Guru Varam, 1008 Saingu Abishikam)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 9 lakhs (2019 - 2020) For. – 2.5 lakhs (2019 - 2020)
Site Revenues:	INR 3 Crores (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	5 km (Nidamangalam)
b. Airport:	99 km (Tiruchirappalli)
c. Highway:	0.9 m from SH-66
Trails featured on:	Navagraha

The Abathsahaswarar Temple (Guru) is located in the village of Alangudi. The temple is known for devotees making amends to the problems that arise as a consequence of their astrological signs not aligning with the planet Jupiter. The temple is popular among devotees from all across India and abroad alike from an astrological belief perspective. The devotees from all over the world visiting the temple, reside and perform rituals in the temple. The temple is of significant religious importance and the site holds potential to be developed as a community congregation space.

Existing Condition

Location

Abathsahaswarar Temple is located in a village of Alangudi, at a distance of 12 km south from the town of Kumbakonam, in Tamil Nadu India. Located in the small divine village, the temple is surrounded by village houses, few small shops, and agricultural fields. Several prominent tourist landmarks nearby Abathsahaswarar temple are:

- Arulmigu Soundranayagi Udhanurai Vennikarumbeeswarar Temple – ~12 kms.
- Kudavasal Koneswaran Shiva Temple – ~5 km.
- Needamangalam Vennar Dam – ~5 km
- Sri Swarnapureeshwarar Temple – ~2 km

Existing Layout

The temple complex covers 10 acres, and it houses five-tier gateway towers known as gopurams, one facing the Abathsahaswarar shrine and other towards North surrounded by two Prakarams. The temple is circumscribed by pond on all four sides. The temple houses Kalyan mandapam, temple office and garden apart from the main shrines.

Existing Uses

The temple is currently used as a place of worship by the local, regional, and foreign pilgrims. The Kalyan mandapam is used to house marriage celebrations for the locals. The festival of Brahmotsavam is celebrated with pomp and glory. Light and Sound Shows, cultural folk performances are arranged for school students during Thiruppavai, Thiruvandpavi. Music and Speech Competitions are also arranged during Brahmotsavam

Other Land Available

Apart from the 10 acres temple complex, the temple owns 137 acres of land towards its surrounding villages of Rajendra Nallur and Poonaeerrupu.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple, dedicated to lord Shiva, is of significant religious value and attracts pilgrims from around the world. Alangudi and its temple are famous for being the Holy Sthala surrounded by the three holy rivers Kaveri, Kollidam and Vennaru. The place and the temple are intimately connected with each other and have some historical, mythological, and local folklores tied to its past origin and present legend.
2. **Accessibility** – The temple is situated in the town of Mannagudi near Kullumangudi Town and is accessible via urban roads. The best way to reach the temple is through an auto or bus.
3. **Amenities** – The tourist amenities provided in and around the temple site is adequate but requires maintenance.
 - The wayfinding signages and informative signage boards are available for the site but in Tamil language.
 - No luggage, cloak room, toilets or free drinking water facilities are available for pilgrims.
 - No retail or F&B kiosks are present inside the temple site, except the prasadam stall.
 - Upkeep of surrounding streets is average. Garbage is dumped near the river and some areas outside the temple have littering.

Parking- One parking lot provided by the panchayat, which is located within 100 m. of the temple is used for parking. Apart from the dedicated parking plot, the access street is also used for parking by the visitors.

4. **Awareness** – The temple has gained its popularity and belief amongst the local devotees as well as foreign tourists. It is a well-known destination for believers of planet Jupiter or amongst the believers of Navagraha. The temple owing to its location near Kumbakonam (The town famous for its handcrafted metal items) also attracts tourists from East Asian Region of Malaysia and Singapore. There are several travel bloggers and architecture enthusiasts who have written about the great architectural and other details of the temple. It is recommended by

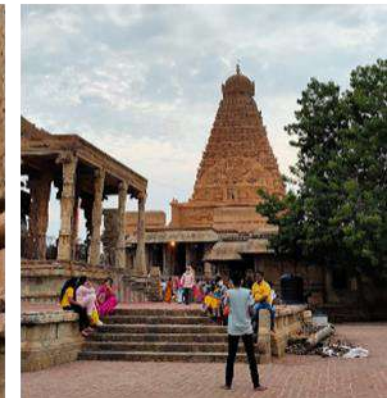
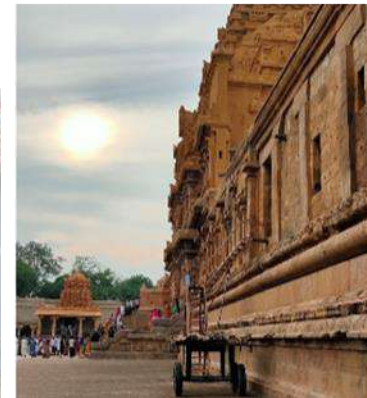
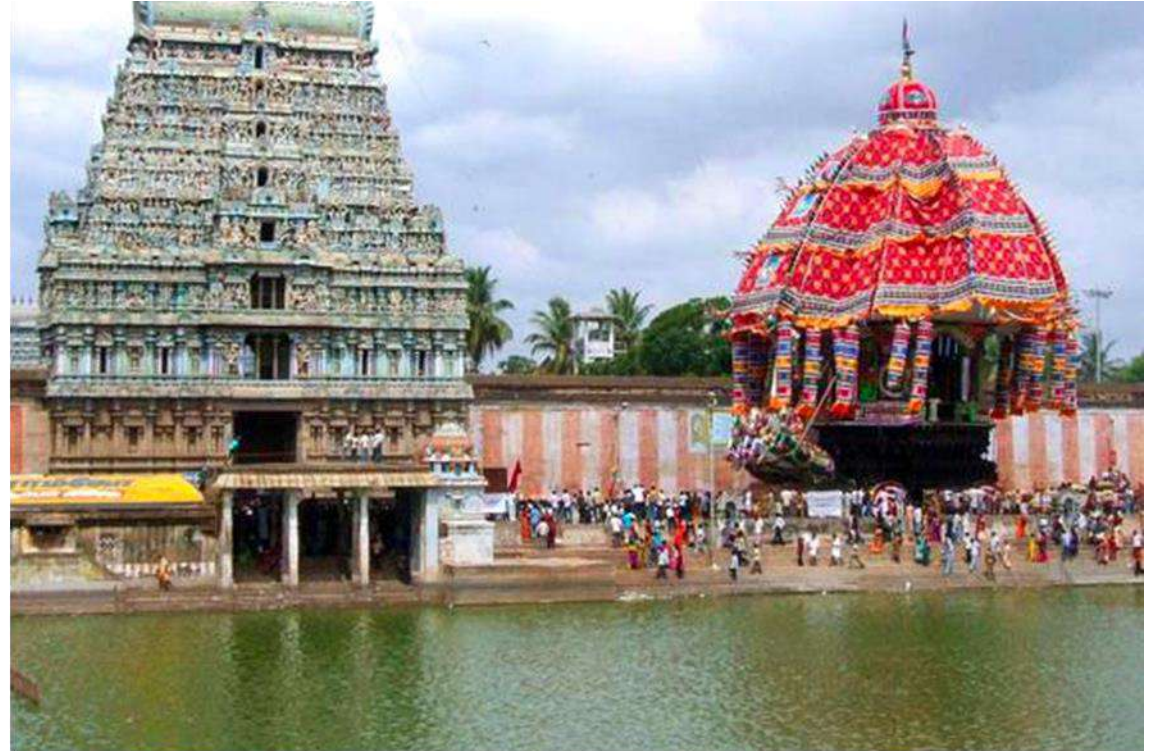
renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc.

5. **Activities** – On normal days, the temple does not offer any activities. However, the festival of Brahmotsavam is celebrated with pomp and glory. Light and Sound Shows, cultural folk performances are arranged for school students during Thiruppavai, Thiruvandpavi. Music and Speech Competitions are also arranged during Brahmotsavam.
6. **Accommodation** – There are only few accommodation options available for tourists in the nearby vicinity of 500 m. radius of the temple. Some of the decent stay options are available at Kumbakonam at a minimum distance of 15 Km. from the temple. The price of accommodation option available at Kumbakonam ranges from INR 500 to INR 2000. The temple is also constructing a dormitory with a capacity of 50 people, 100 m from the temple site.
7. **Association with Community** – The locals are involved during festival celebrations and events in the temple.

Figure 8-1: Location and Existing Layout



Site Pictures



Vision for the Site

The temple holds a religious value as it is one of the Navagraha temples and is of significant religious importance to the locals and regional pilgrims.

The temple is located remotely in a small panchayat town and strategically placed surrounded by the pond. The temple is visited by a significant number of foreign pilgrims apart from local and regional pilgrims.

Considering the existing situation, the temple is envisioned to be developed as a community congregation space for locals and visitors.

- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from Tamil Nadu and other southern states, due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Low Tourism Site with Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	850	2,921	7,576
High Value Tourists (HVT) (Both domestic and foreign)	100	344	891
Maximum Carrying Capacity	39,369		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through improved circulation, conveniences, and amenities.
- Developing **cultural/recreational spaces** at the site by improving existing green spaces.
- Creating a **welcoming environment around the site** for the visitors

Hard Interventions

1. **Pond Rejuvenation** – The temple is situated in a small panchayat town with limited recreational options for the locals. The temple is a focal point of outing and gathering for several locals and is surrounded by a pond on all four sides. The rejuvenation of pond and creation of a community garden around it would provide a recreational space to the pilgrims as well as locals. The garden to be developed with a paved walkway and steps towards the rear side of temple. The garden to be developed additionally with amenities such as seating, dustbins, and lighting.

Infrastructure Created: ~180 m of stairs, 400m of paved walkway, 21,950 sqm of tank cleaning

2. **Retail Shops:** The temple complex consists of a prasadam stall. Addition of 2 retail shops to be used for souvenirs and retail within the temple complex. The revenue generated from the shops would act as an additional source of income for the temple.

Infrastructure Created: 2 shops of 3 sqm each

Soft Interventions

1. **Site Promotion** – Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness about Navagraha Temples.
2. **General Landscaping - Strategic** tree plantation along the proposed paved pathway to create more shaded areas and make the site attractive. Resting areas in form of benches to be placed at desired location.

3. **Regulated Parking** – The access road to the temple site is currently used for parking. The presence of commercial activity and unregulated parking creates congestion. This creates an uninviting entrance to the temple. The local body regulates the parking on the street and promotes parking in the designated parking lot. The pathway from the parking to the temple entrance, to be developed with footpaths.
4. **Cleanliness Drive** – The surrounding streets of the temple are filled with garbage and overflowing dustbins. Therefore, adequate size and number of dustbins are proposed to be installed at the appropriate position and away from the entrance gates. It is suggested to the local body to maintain the hygiene of the place by regularly collecting the waste from the dustbins.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
2. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
3. **Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
4. **Benches** – Five Benches to be placed in the proposed pathway between the twin temples and the museum. The benches would be used in a common facility, as a resting space between the twin temples. The benches to be detailed as per the design guidelines.
5. **Lighting** – Street lights to be installed in the eastern entrance to the temple complex. The module to be placed as per design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

6. **Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:

- Electronic Visitor Counter at the entry point
- TN Assist App integration at the site, with internet connection and QR scanner
- CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Pond Rejuvenation <ul style="list-style-type: none"> • Steps • Paved Walkway • Cleaning 	180m 400m 21,950 sqm
2	Retail Shops	6 sqm
3	Paved Parking	500 sqm
4	Benches	5
5	Streetlights	44 m
6	Signage Package 1	1
7	Drinking Water Station	1
8	Dustbins	2
9	Technology (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the master plan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Design Guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple pond - steps	5
2	Temple pond - paved walkway	8
3	Retail Shops	3
4	Paved Parking	8
5	Benches	1
6	Streetlights	1
7	Signage Package 1	1
8	Drinking Water Station	3
9	Dustbins	1
10	Technology (Package 1)	1
Total		INR 30 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

- Parking** – Capturing 30 ECS at 20% occupancy per day with 2 rotations at INR 15 per ECS.
- Kiosks** – Captures 2 kiosks, each to be rented out at INR 1.5 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 4 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **Helpdesk staff** at the facilitation centre.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Temple pond Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple pond such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 6 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Divya Desam trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by the HR & CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple pond - steps	5	Y0 – Y2	HR & CE
2	Temple pond - paved walkway	8	Y0 – Y2	HR & CE
3	Retail Shops	3	Y0 – Y2	HR & CE
4	Paved Parking	8	Y0 – Y2	HR & CE
5	Benches	1	Y0 – Y2	HR & CE
6	Streetlights	1	Y0 – Y2	HR & CE
7	Signage Package 1	1	Y0 – Y2	HR & CE
8	Drinking Water Station	3	Y0 – Y2	HR & CE
9	Dustbins	1	Y0 – Y2	HR & CE
10	Technology (Package 1)	1	Y0 – Y2	HR & CE
Total		INR 30 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,290³⁴ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days³⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 3,230 man-days.

Increased tourism footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 850 Cr. at the site³⁶. As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%

- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals, pulses, and flowers.

Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

³⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

◦ Assumed cost of labour assumed for computation = INR 700 per day

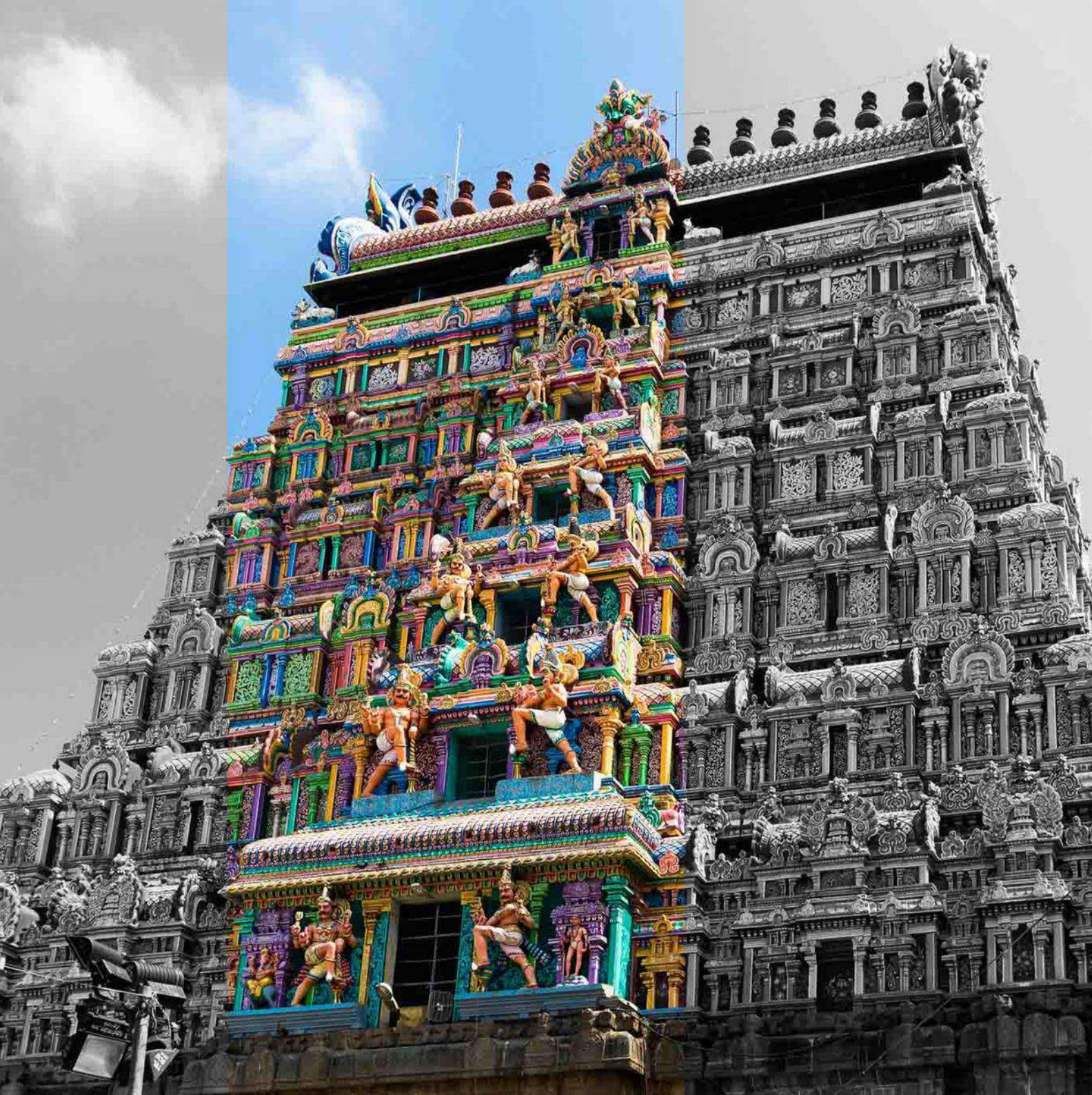
- Cumulative labour man-days = 30% * CAPEX / 700

³⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

³⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food, and entertainment.

Figure 8-2: Proposed Master Plan – Abathsahaswarar Temple (Guru), Alangudi





THE PANCH BHOOTHA TRAIL

PANCHA BHOOTHA STHALAMS

Lord Shiva is worshipped for many reasons all over India. However, in South India, Shiva is worshipped as the presiding deity of the five elements of nature and is called Bhootapati or Bhootnath.

Na | Ma | Shi | Va | Ya – these five syllables indicate the five elements (known as Bhootha in Sanskrit) – Earth, Water, Fire, Air, and Sky (Ether). The five elements are believed to be the building blocks of everything in creation, including the human body, and Lord Shiva is the upholder of the five elements.

Honouring this aspect of Lord Shiva (as the upholder of the five elements) are the Pancha Bhoota Sthalams – the five Shiva temples, each of which represent one of the five elements of Nature. All of these temples are located in the Southern part of India, four in Tamil Nadu and one in Andhra Pradesh, and each temple has a distinct spiritual essence.

Target Tourist Segments

The trail could be promoted to pilgrims, across all Indian states and outside (including expats), who worship Lord Shiva.

Linkages



Ekambareswarar Temple – Earth or Prithvi

In the Ekambareswarar temple, Lord Shiva is said to have manifested himself in the form of Prithvi Lingam. Here, Lord Shiva is fondly worshipped as Ekambaranathar or Ekambareswar with his consort Parvati depicted as Elavarkuzhali.

Arunachaleswarar Temple – Fire or Agni

The temple, situated at the foot of Arunachala hill, depicts the Fire element bestowed by Shiva and is represented by the Agni Lingam. Here, Shiva is worshipped as Arunachalesvara or Annamalaiyar with his consort Parvati depicted as Unnamalai Amman.

Thillai Natarajar Temple – Sky or Aagaya (Akasha)

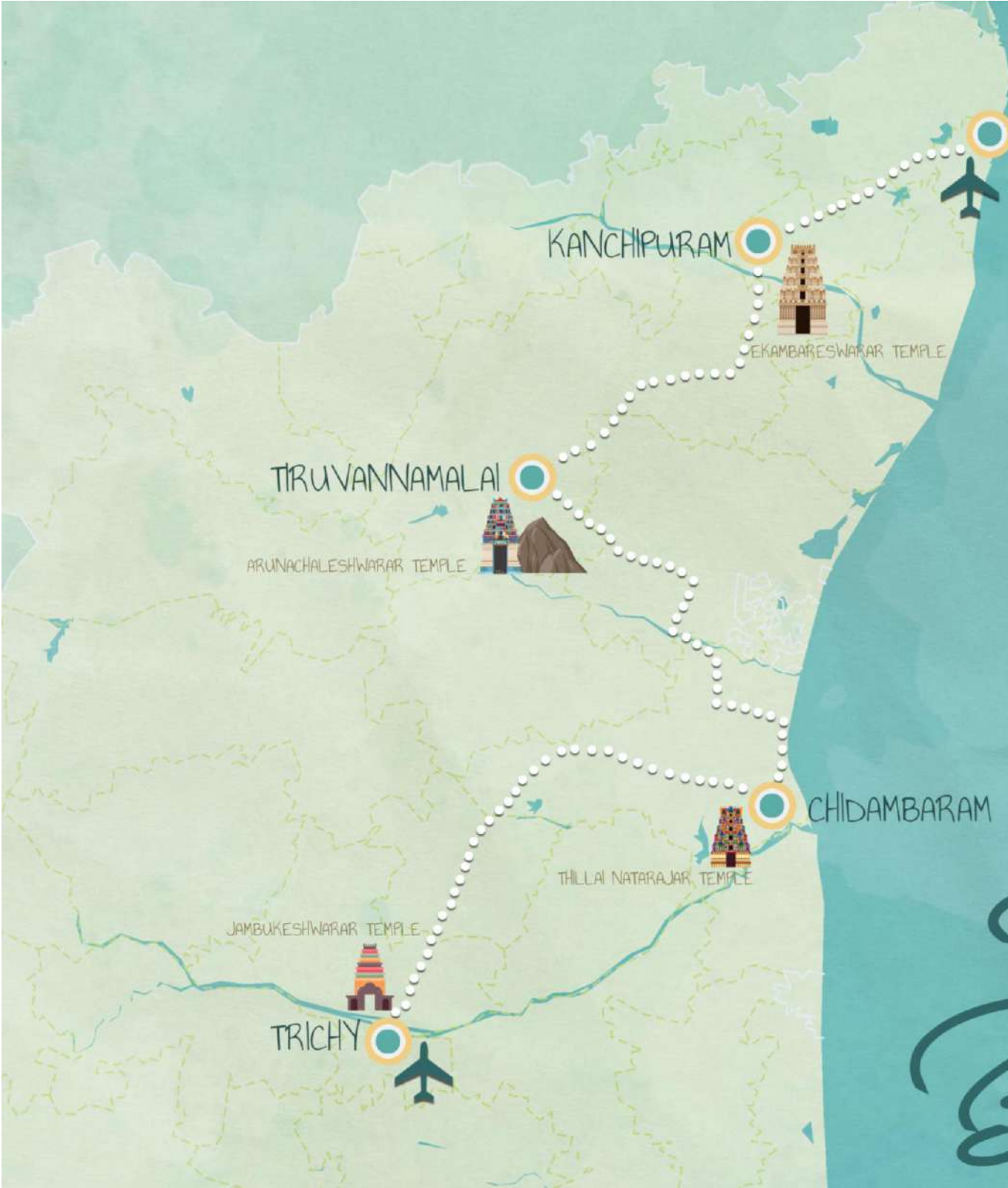
The Thillai Natarajar Temple represents the Ether (Sky) element, the subtlest of the five elements. In this temple, Lord Shiva is worshipped in his formless form, rather than the Lingam, as Nataraja – the lord of dance.

Jambukeshwarar Temple – Water or Jal (Appu)

The Jambukeshwarar Temple in Trichy depicts the water element. Here, Lord Shiva is worshipped in the form of Appu Lingam (a water Lingam). In the shrine of the temple, a stream of water flows under the Lingam and engulfs it with water, embodying the water element.

Srikalahasteeswara Temple - Air or Vayu

Located in the state of Andhra Pradesh, the temple depicts the air element. Lord Shiva is worshipped at this temple in the form of Vayu Lingam, representing the wind. The temple is also revered as the Kailash of the South.



The Pancha Bhootha Trail

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum
D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
1	22	Kanchipuram	Ekambareswarar Temple	Temple	12,565	255	24,815	970	35,550	1,465	39,420	Very high tourism site	High HVT Potential
2	95	Tiruchirappalli	Jambukeswarar Temple, Thiruvanaikoil	Temple	595	8	2,210	30	6,105	82	74,500	Low tourism site	Low HVT Potential
3	49A	Tiruvannamalai	Arunachaleswarar Temple (Arulmigu Annamalaiyar Temple)	Temple	3,705	48	8,360	210	13,920	365	94,535	High tourism site	High HVT Potential
4	67A	Cuddalore	Natarajar Temple, Chidambaram	Temple	8,330	20	8,735	40	8,940	60	157,500	Very high tourism site	High HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
1	Ekambareswarar Temple	1.6	HR&CE Dept.	EV hub – Annual lease, Kiosk Units – lease / rent
2	Jambukeswarar Temple, Thiruvanaikoil	0.3	HR&CE Dept.	Event Space – O&M on PPP
3	Arunachaleswarar Temple (Arulmigu Annamalaiyar Temple)	20	HR&CE Dept.	Bus/ EV Stop – Annual Lease
4	Natarajar Temple, Chidambaram	2.7	Thillai Muvayiravar (Dikshitar)	EV hub – Annual lease

Impact

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment Opportunities

The proposed interventions are planned to:

- Increase visitor comfort and convenience to the tourist sites
 - Increase tourist footfalls at the sites
- Promote higher footfall of high-value tourists – thereby increasing overall spending at the sites.

This tourist spending will directly flow to the local economy and communities.



~110k man-days Construction Jobs



~40 (incremental) man-days per day during operations jobs
(Accommodation, Site maintenance & housekeeping, Activity Operators, Retail and F&B operators, hawkers, vendors etc.)



~275k man-days Indirect & Induced Jobs
created due to multiplier impact of construction and operations jobs

Benefitted Stakeholders



Local Weavers, Craftsmen and Artisans



Security & Maintenance Staff



Temple-ware & Souvenir Vendors



Tour Guides & Operators



Transporters (Taxi/Auto)



Hospitality Staff



Temple Workers

1. Ekambaranathar Temple, Kanchipuram

Site Details

District	Kanchipuram
Name of Site	Ekambaranathar Temple
Site No:	Site 22 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.8460, 79.7004
Land Area:	10 acres + 13.5 acres
Peak footfalls:	1 lakh per day (December – January)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 126.93 lakhs (2019) For. – 1.27 lakhs (2019)
Site Revenues:	INR 1.5 crores (2019)
Site Orientation	Pilgrim & Tourist
Site Potential:	Very High Tourism Site
HVT Potential:	High HVT Potential
Connectivity:	
a. Railway station:	~900 m (Kanchipuram)
b. Airport:	~60 km (Chennai)
c. Highway:	~200 m from SH-58
d. Other:	Nil
Trails featured on:	Gopuram, Panchabhoota

Ekambaranathar Temple is one of the five major Shiva temples or Pancha Bootha Sthalams, representing the element – Earth. The temple is located in central Kanchipuram and is one of the most visited sites in the city and in the state. While it is highly popular among tourists, it lacks adequate temple amenities to cater to the large crowds gathering at this site. Thus, the scope of interventions includes the provision of amenities and enhancement of visitor experience at the site.

Further, owing to its central location in Kanchipuram and the availability of ample vacant land within the site boundary, the temple has immense potential to be developed as a holistic site. It can be developed with a large interpretation centre, which shall act as a nodal centre for all religious sites in Kanchipuram.

Existing Condition

Location

Located in central Kanchipuram, the temple is situated in a busy mixed-use neighbourhood surrounded by high-density development on all sides. Several prominent tourist landmarks in proximity are Kamakshi Amman temple, Kailasanathar temple, and Ulangalandha Perumal temple.

Existing Layout

The Site consists of a ~23.5-acre land parcel out of which 10 acres is under temple complex, under HR&CE Department. All 4 sides of the site are bound by busy roads. Access to the site is via Ekambaranathar Sannadhi Street on the south. This is a ~200 m long road connecting the temple gopuram to the arterial road, Kamarajar Street. ~100 m of Ekambaranathar Sannadhi Street (~24 m wide) is dedicated to temple use, marked by a landmark on the south and housing temple's parking on the island between the lanes.

Other Land Available

The temple owns the land of the temple and its surroundings, amounting to a total of 23.5 acres. The additional ~13.5 acres are spread across the north, east, and west of the temple complex and is vacant, except for some plantation. The empty land has a total of ~1 km street frontage on North & West Mada streets and Car street.

Existing Uses

The site premises are walled off and the site entrance is on the southern side, via the South Gopuram. The following are the major elements of the Site:

- Temple complex –The complex comprises 2 main shrines and 1 large temple tank. There is a second tank near shrine 2 which is currently dry. This area is used for worship by pilgrims and devotees.
- Other uses – Office building, stage, cowshed (“goshala”), and miscellaneous sheds
- Open grounds – More than half of the site is vacant land, with many trees. The vacant land is walled off from the surroundings and the temple complex.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Kanchipuram Master Plan, the site lies in a Mixed-use Residential and Heritage Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

2. **Height Restrictions** - Heritage Zone height restrictions of ~13 m. (roughly up to 4 storeys) is applicable for the developments around the site.
3. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair,

alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, the management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Ekambaranathar Temple is of great religious and historic significance. The temple is known for its 1000 pillar hall, 1008 Shivalinga's, and 3,500year-old sacred mango tree. Also, it features prominently in many tourist itineraries and is a must-visit attraction of Tamil Nadu.
2. **Accessibility** – The site enjoys easy access from all major locations in Kanchipuram. Kanchipuram is ~70 km away from Chennai and enjoys good road connectivity. The town also has 2 railway stations and a major bus stand. The Chennai International Airport is a 60 km / ~1.5-hour drive away from Kanchipuram.

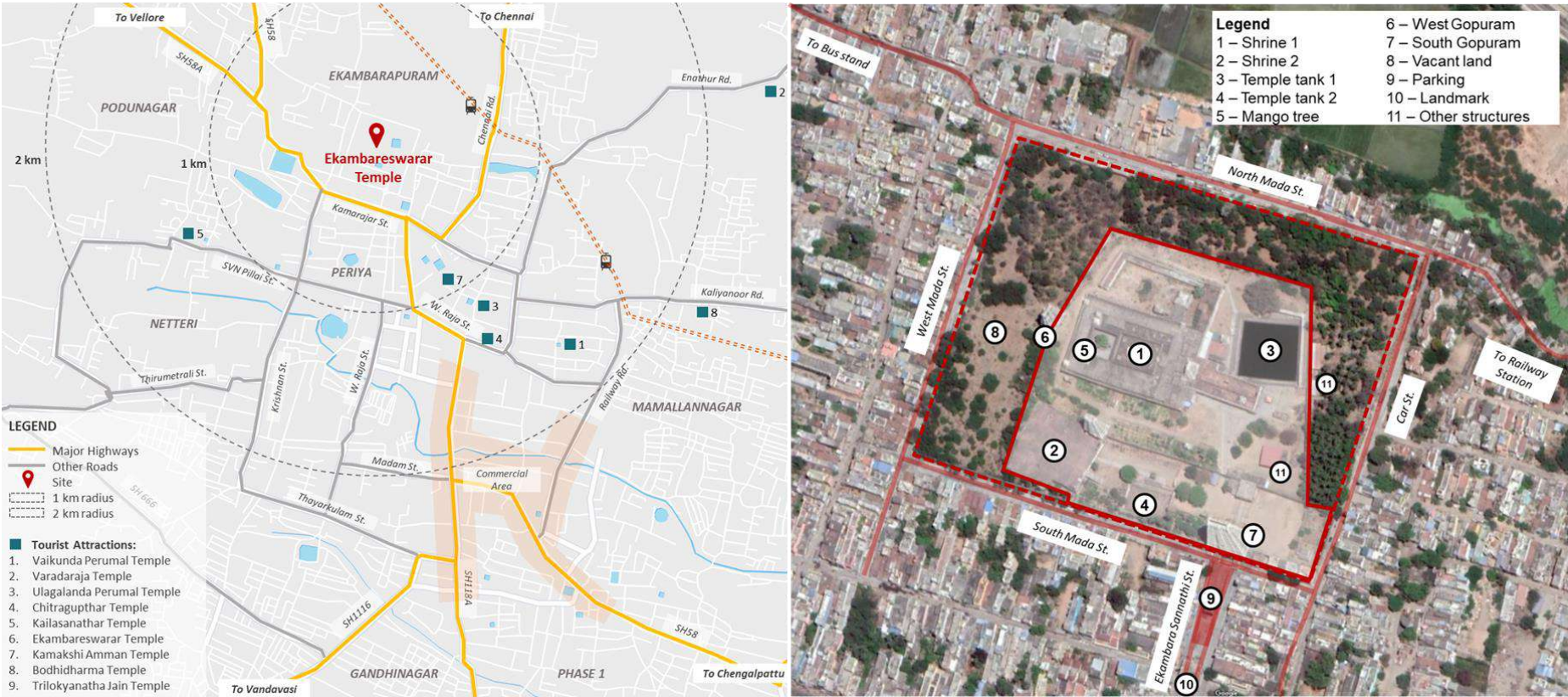
While the town is well connected to nearby towns and cities, the internal road infrastructure is characterized by narrow and congested streets which often face traffic congestion, especially during peak seasons.
3. **Amenities** – The site is equipped with a moderate level of amenities. Of the amenities provided, street & area lighting and toilets are adequate & properly maintained.
 - Drinking water (RO) is installed but poorly maintained.

- Facilities like stores, seating, signage, etc. need to be modernized and upgraded.
- Limited shading is available.
- Lastly, no designated footpaths or divyaang friendly facilities are available at the site.

Parking – The site has a designated parking area where the cars and tour buses park on the street near the main entry. The existing parking becomes saturated and leads to frequent crowding during evenings and peak hours.

4. **Awareness** – While the temple is among the 4 most popular sites in Kanchipuram, it is mostly frequented by pilgrims and domestic visitors. It is featured on most tourism referrals and receives fair amounts of high value tourists. The many non-religious, cultural attractions of the temple still lack promotion and are needed to be highlighted.
5. **Activities** – On normal days, the temple does not offer any activities other than temple rituals. Intermittently, there are some activities such as temple festivals, feasts, recitals, etc.
6. **Accommodation** – The hotels in Kanchipuram are majorly of the budget category, operated by standalone/regional players. Sriperumbudur (located ~35 km away) has a well-developed hotel ecosystem, with many reputed brands, such as Citrus, Mercure, Fairfield by Marriott, etc.
7. **Association with Community** – The residents use the footfalls received at the site for sales at their small retail and stalls located near the temple. Other than that, people engage in the daily rituals and festivities held at the temple.

Figure 1-1: Location and Existing Layout

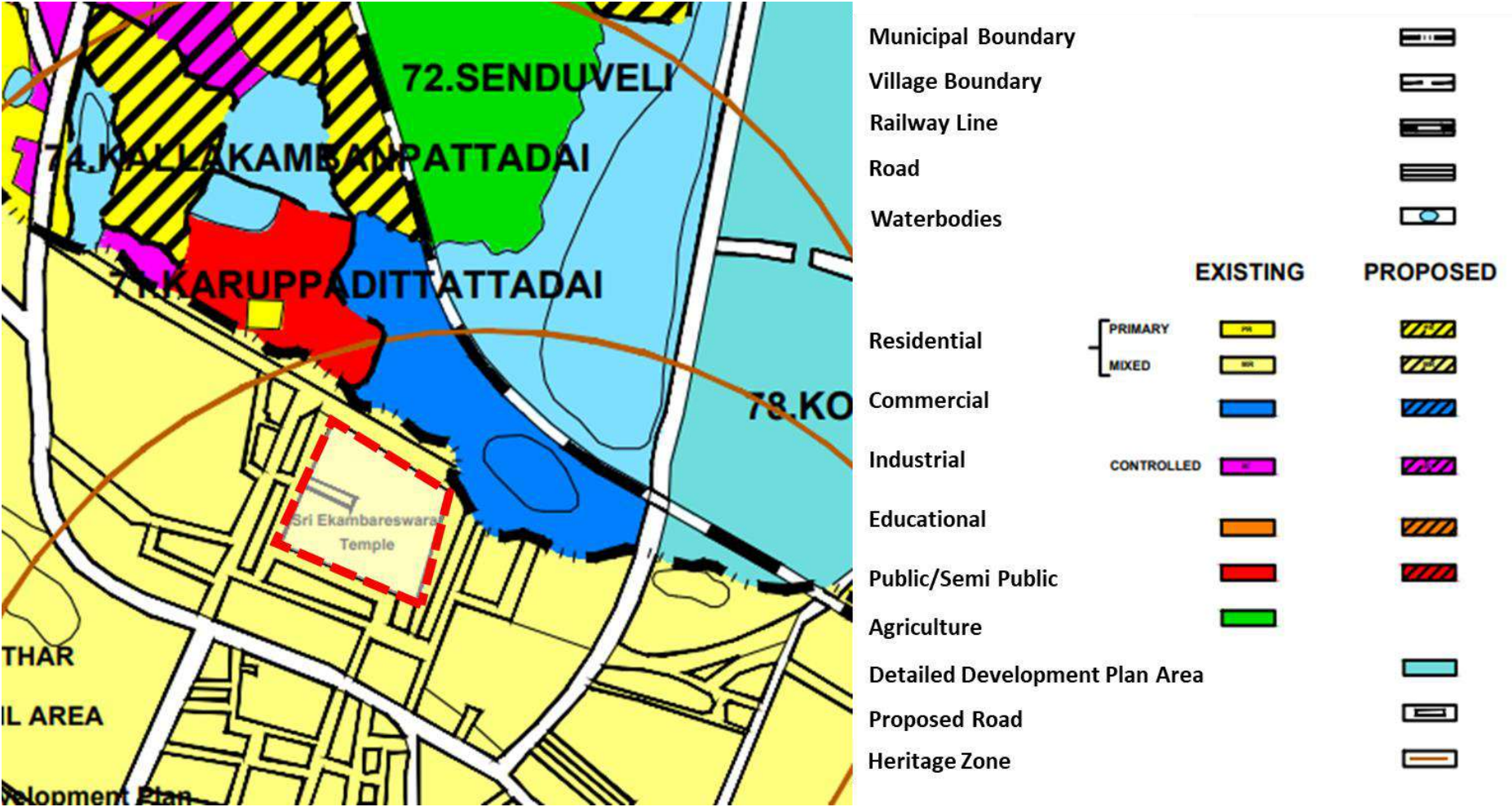


Site Pictures





Figure 1-2: Land Uses Regulation Zone at the Site



Vision for the Site

Ekambareswarar Temple is one of the Kanchipuram's oldest temples. As the prime attraction of Kanchipuram, it draws massive hordes of tourists – domestic and foreign. Its uniqueness stems from its architecture and intricate stone carvings, depicting various deities. As a tourist magnet, the temple faces issues related to crowd management, inadequate parking, and lack of engaging activities.

Tourist-friendliness and convenience at the site can be improved by better traffic management and the development of an Interpretation Centre. Owing to the site's central location and availability of ample vacant land, this Interpretation Centre can act as an anchor to all the religious sites of Kanchipuram and initiation and/or culmination point for the temple trail in the city.

- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value and rich architectural importance, the site draws a good number of tourists – both foreign and domestic.
Given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.
- **Pilgrims and Domestic Tourists** – To develop as an anchor tourist site in the temple trail of Kanchipuram, where visitors can enjoy and acknowledge the religious value of all the sites and increase their popularity and footfall.
- **High Value Tourists (both domestic and foreign)** - Who want to see the monumental value of the temple architecture in the city.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang, and the elderly).

- **Tourist Projections** – The site is categorized as a **very high tourism site** with **high HVT potential**.
Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	12,566	24,815	35,552
High Value Tourists (HVT) (Both domestic and foreign)	254	970	1,467
Maximum Carrying Capacity	39,420 <i>p.a.</i>		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Master Planning Concept

- The main approach road, Ekambaranathar Sannadhi Street, should become a much more appealing, safe experience for both tourists and pilgrims walking up to the temple. A combination of traffic management, traffic calming, and pedestrianization allows the creation of an important pedestrian-friendly public space just outside the Temple. This will be very beneficial to the tourists and pilgrim's overall experience of a visit to the Temple. Instead of having tourists and pilgrims' cars and buses randomly parked at the Ekambaranathar Sannadhi Street, one corner in the large open space available within the Temple's complex is recommended to be used exclusively for parking.
- One of the major aspects of the tourist's experience that needs to be improved is the lack of proper amenities, tourist information, and engaging background information at the temple. To address all of the above, a large Site Interpretation / Tourist Facilitation Centre is proposed within the Temple's site boundary. This will also act as initiation and/or culmination point to the temple trail proposed in the city, connecting all the important religious sites of Kanchipuram.

Hard Interventions

1. **Traffic Calming, Pedestrianisation, and Traffic Routing Improvements around the Temple** –The large gopuram at the main entrance is one of the main attractions and its impressive size can only be admired from a distance. Instead of being dropped off right in front of the gate, traffic calming and pedestrianization create the required pedestrian space for pilgrims and tourists to walk comfortably along Ekambaranathar Sannadhi Street and admire the temple's architecture from a distance.

The street can have frequent tourist shops and small eateries along the way, making it much more attractive for tourists. This will also benefit the local business community. All visitors can comfortably disembark their vehicle at the first part of the Ekambaranathar Sannadhi Street where more pedestrian space is created, and cars are only allowed to drive in one direction. The second part of Ekambaranathar Sannadhi Street, closest to the temple will be completely pedestrianized.

Infrastructure Created: ~300 sqm of hard landscaped pedestrian space with new trees and street furniture and ~1000 sqm of soft landscaped areas.



Pedestrianisation and Façade Beautification Ekambaranathar Sannidhi Street

2. **Facade Beautification of Ekambaranathar Sannadhi Street** – To improve the overall experience of the visit to the historically significant Temple, the buildings along Ekambaranathar Sannadhi Street should reflect the architectural beauty of the Temple. Firstly, the disfiguring hoardings and other architecturally inappropriate structures added to the buildings over the years should be removed. Secondly, the owners of historic buildings along the street should be financially incentivized to renovate their building facades to let the original architecture shine. Thirdly, building facades nearest to the gopuram that distracts from the historic beauty of the temple should be beautified in a manner that is historically and architecturally appropriate.

3. **Dedicated Tourist Car/Bus Parking** – Instead of having tourists and pilgrims' cars and buses randomly parked at the Ekambaranathar Sannadhi Street, one corner in the large open space available within the Temple's complex is recommended to be used exclusively for parking. While visitors will be disembarking their vehicle at the far end of the Ekambaranathar Sannadhi Street, they don't need to walk the same route twice and can board their vehicles at the parking lot on the other side of the Temple.

Infrastructure Created: ~4000 sqm of hard landscaped area

4. **Interpretation and Tourist Facilitation Centre** – One of the major aspects of the **Tourist's** experience that needs to be improved is the lack of proper amenities, tourist information and engaging background information at the site. To address all the above, a Site Interpretation / Tourist Facilitation Centre is proposed. Considering the large unused open space available within the Temple's boundary, it is recommended that one corner will be used for such a facility. The centre will be planned strategically near the boundary of the Temple complex while being directly accessible from the street.

The Interpretation Centre is aimed at Tourist segments who lack knowledge about the religious and historical significance of religious sites in the city. Inside the centre, the story of the Kanchipuram's history and the tourist sites will be told in an engaging way viadisplays, galleries, and interactive exhibits. Further, considering the lack of facilities like bathroom, retail, F&B, resting area, etc. The centre will house:

- Basic amenities
- A small café with some al fresco seating for Tourists to take a quick drink/lunch break

- A quiet spot for Tourists to relax a bit before continuing their visit.

Infrastructure Created: Type 2: ~800 sqm of built up area



Ekambaranathar Temple Interpretation and Tourist Facilitation Centre

Soft Interventions

1. **Events** – The local Corporation or the Tourism Department could organize various events and pilgrim offerings & food servings in and around the temple and interpretation centre during important festivals. This would help to popularise the site to other segments of visitors.

2. **Marketing & Promotion** – The site to be integrated with TN Tourism Assist App, along with photo and video documentation. This can be advertised at all key public locations and online platforms.
3. **Crowd Management** – As the temple receives large footfalls which peaks during festivals, additional measures will be undertaken for crowd management during peak seasons:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace and in line.
 - Tents outside the temple complex could act as temporary holding areas for devotees, during festivals, to prevent overcrowding inside.
4. **Curation of facilitated tours** – Develop tours with QR codes, Self-Guided Audio Tours, etc. linking all major temples of Kanchipuram. This can be accompanied by community integration that can be enhanced by appointing locals as Guides-trained and accredited. The temple's facilitation centre can act at the nodal initiation or culmination point for the tour.

Amenities Plan

1. **Signage (Package 3)** – Package 3 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used.
2. **Technology Interventions (Package 3)** – Being an anchor tourism site, Ekambareswarar temple should offer all technological conveniences and employ technological tools for optimal management. These include:
 - Free Wi-Fi
 - Compatibility with TN Assist App
 - AR Experiences
 - CCTV coverage
 - Security beacons/panic buttons at remote parts of Site
 - Electronic visitor counters
3. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site.

4. **EV & EC Stop** – The temple is a part of the holistic temple trail proposed in Kanchipuram city, connecting all-important religious destinations. Therefore, an EV & EC stop is proposed at the site near the parking area. This shall facilitate and ease movement across all sites and avoid traffic jams near temples.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to the Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Traffic Calming, Pedestrianisation and Traffic Routing Improvements around the Temple <ul style="list-style-type: none"> • Hard Landscape • Soft Landscape 	300 sqm 1000 sqm
2	Dedicated Tourist Car/Bus Parking	4000 sqm
3	Interpretation and Tourist Facilitation Centre (Type 2)	800 sqm
4	Signage (Package 3)	1
5	Technology Interventions (Package 3)	1
6	Drinking-Water Station	3
7	EV Stop	1
8	EC Stop	1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- The feasibility of the cashflows projected here is accounted only for the additional components master planned.

- The current operating & maintenance cost of the temple has not been considered.

Capital Expenditures

The cost of the different project components proposed in the master plan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Traffic Calming, Pedestrianisation and Traffic Routing Improvements around the Temple <ul style="list-style-type: none"> • Hard Landscape • Soft Landscape 	6
2	Dedicated Tourist Car/Bus Parking	64
3	Interpretation and Tourist Facilitation Centre (Type 2)	45
4	Signage (Package 3)	6
5	Technology Interventions (Package 3)	12
6	Drinking-Water Station	3
7	EV Stop	20
8	EC Stop	1
Total		INR ~160 L

(Note: Cost of all the project components including the Total CAPEX is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below-mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Kiosks** – 2 leasable kiosk units at the proposed Facilitation centre with a rental earning of **INR 18 Lakhs**.

2. **Shuttle Services (Operator)** – A licensed shuttle service operator to manage the EV services catering to the visitors. The operator is estimated to pay an annual license fee of **INR 10 Lakhs** to the temple management.
3. **Parking** – About 200 parking spaces assuming a daily occupancy of 20%, would earn the temple an estimated revenue of **INR 3 Lakhs**.

The total revenues to the temple from the proposed capital projects are projected at an estimated **INR 19 Lakhs at Y5**.

Operating Expenditures

(Note: The following considerations are applicable to the below-mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the master plan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Manpower costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. A **Help-desk staff** at the facilitation centre.
 - b. **Security personnel** at the proposed parking.
 - c. An **Administration staff** to overlook the parking and the facilitation centre.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for the upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas, and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the community block.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc., and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc., and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste), and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets, and drinking water stations.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 1.42 Cr. at Y5*.

Though the revenues from the capital projects fall short of the estimated operational expenses, the temple being one of the prime attractions in the Kanchipuram temple trail, the interventions proposed here are necessary to sustain the footfalls received and are envisioned to benefit the entire Kanchipuram cluster.

¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Phasing and Funding Agencies

The development of the projects is to be taken up by the HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) and the **cleanliness drive** as part of the Civic Upgradation in and around the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shops to display and sell temple-related religious arts/ craft/ pooja items.
3. The **Parking facility** is to be undertaken by the temple body through the addition of security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).
4. The **EV-hub** is to be developed and operated by private vendors by paying an annual lease to the temple management, while the provisioning of the space for operations is to be facilitated by the temple.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 6,860 ¹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 Persons²
- Retail and F&B spaces = 5 man-days per day³

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

³ Assuming average 2.5 persons per kiosk / shop

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in the value chain.

As per market norms, the multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 17,170 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid in the improvement/increase in footfalls to the site.

Both increase in overall number of visitors and an increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 5,850 Cr. at the site⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in an impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works, etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 1-3: Proposed Master Plan – Ekambaranathar Temple, Kanchipuram



- ➔ Main road
- ➔ Routing - Tourist/ Pilgrims cars and buses
- ① Traffic Calming + Landscaping
- ② Pedestrianization + Landscaping
- ③ Drop-off area - tourists + pilgrims
- ④ Possible location - Tourist Interpretation / Facilitation Centre
- ⑤ Car and Bus Parking - Tourists

2. Jambukeswarar Temple, Thiruvanaikoil

Site Details

District	Tiruchirappalli
Name of Site	Jambukeswarar Temple
Site No:	Site 95 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.8531, 78.7057
Land Area:	19 acres + 80 acres other lands
Peak footfalls:	10,000 per day (January - April, September - December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 6 lakhs (2019 - 20) For. – 3,981 (2019 – 20)
Site Revenues:	INR 1.5 crores (2019-20)
Site Orientation	Pilgrim
Site Potential:	Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a) Railway station:	~1 km from Srirangam railway station
b) Airport:	~16 km from Tiruchirappalli International Airport
c) Highway:	~4 km from SH-22, ~350m from NH-81
Trails featured on:	Gopuram, Chola Nadu, Pancha bhootha

Jambukeswarar Temple is one of the five Pancha Bhoota Sthalam dedicated to the element of water. The temple is also a part of Gopuram and Chola Nadu trails. Its architectural beauty is said to surpass that of Sri Ranganathaswamy Temple. While it has an ecosystem of public amenities, there is scope for development in terms of its maintenance and effective marketing of its architectural aspects to a wider audience. Scope for intervention for this site is focused on increasing the footfall with the provision of tourist amenities.

Existing Condition

Location

Jambukeswarar Temple is located in the Thiruvanaikaval area of Srirangam, an island between the Kollidam and Kaveri rivers. The site is located close to the famous Sri Ranganathaswamy Temple (1.8km away). The immediate surroundings of the temple include residential development on the southern and north-eastern sides. Several prominent tourist landmarks located nearby are Uthamar Koil, Our Lady of Lourdes Church, and Arulmigu Ucchi Pillayar Temple.

Existing Layout and Uses

The Jambukeswarar temple covers a vast area of 19 acres endowed with 5 prakarams (corridor). There are four entry/exit points to the site with the East and West being the main entry points with the Rajagopuram.

- The massive outer wall covering the fifth precinct, known as the Vibudi Prakara, stretches over a mile and is 2 feet thick and over 25 feet high. The legend mentions that the wall was built by Shiva working with the laborers, therefore it is known as 'Thiruneettan thirumathil'.
- The fourth precinct contains a hall with 796 pillars. It also has a small tank fed by perpetual springs.
- The third enclosure is surrounded by a wall 30 feet high. This area has two gopurams- 73 and 100 feet tall, a coconut thoppu, and a small water tank.
- The second enclosure has a gopuram 65 feet high and several small shrines.

- The innermost enclosure measuring 126 feet by 123 feet has the main sanctum.

The sanctum sanctorum is laid out in the following way-

- It is a square structure, found independently situated at the centre of the innermost enclosure.
- There is a vimana on the roof of the sanctum.
- It is open on three sides, with a shallow moat separating it from the circumambulatory path of the innermost enclosure.
- The sthala-vriksham or holy tree here is the white Jambuka found growing along the south-eastern wall of the sanctum sanctorum.
- The western side of the sanctum from where the deity is viewed is continuous with a large, closed hall, the Mukha Mantapa is containing four pillars and a bronze idol of Nandi.
- The height of the linga is about 3 feet from the floor of the sanctum. The Garbha Griha and the Ardha Mantapa are unadorned from the inside, the only source of illumination within the sanctum are ghee lamps.

The site is currently used for religious purposes mainly. Some of the major festivals conducted at the temple are Vasantha Urchavam, Aadipuram, Navratri, Thai poosam, Brahmotsavam, and Panchaprakara festival.

Other Land Available

The temple owns the land surrounding the temple complex of ~80 acres. Most of this land has been used for residential and commercial developments, under a long-term lease by the temple. Land towards the north and south-east lies vacant.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel falls under the Tiruchirappalli planning area. However, its land-use could not be identified as per the latest available map (Tiruchirappalli Master Plan, Proposed Land use-2011).

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction – Jambukeswarar** temple is one of the five major Shiva temples of Tamil Nadu (Pancha Bhoota Stalam) representing the Mahābhūta or five great elements; this temple represents the element of water. The sanctum of Jambukeswarar has an underground water stream and despite pumping water out, it is always filled with water.
It is one of the 275 Paadal Petra Sthalams, where all the four most revered Nayanars have sung glories of the deity in this temple. The temple has been built around the same time as the Sri Ranganathaswamy temple is architecturally reminiscent of the Chola dynasty.
2. **Accessibility-** The temple is located Thiruvanaikaval area of the Srirangam, easily accessible from Tiruchirappalli via wide urban roads. The major modes of transport people use to commute to the site include tour buses, autos, and taxis / private cars. Srirangam Bus stop located is located at ~800m distance. There is an auto stand available at the site and cab services (Ola/Uber) are also available.

Parking – There is no parking within the temple complex. However, on-street parking is done outside the site, with a capacity of ~20 buses with charges for bikes (INR 5), cars (INR 20), buses (INR 30).

There are also dense residential developments on the land owned by the temple authority.

3. **Amenities** – Being a major temple of Tiruchirappalli, it has a developed ecosystem of infrastructure earmarked for public amenities like TIC, signages, adequate signages, toilets, and drinking water kiosks. The temple premise is adequately clean. However, dustbins are not installed in adequate numbers and the adjoining complex is not well maintained.
 - Luggage/ Cloakroom is available but not in working condition. Ticketed footwear stands are also available.
4. **Awareness** – The temple is popular amongst pilgrims but does not attract crowds as much as Sri Ranganatha Swamy, Mariamman temples. It finds mention in international travel journals such as Lonely Planet. The temple also has a dedicated website, maintained by the HR&CE department. The temple majorly attracts visitors from Tamil Nadu, Karnataka, and Andhra Pradesh. The proportion of foreigner visitors is average and lower than Sri Ranganatha Swamy Temple.
5. **Activities** – Dedicated to the element of water, the temple complex has multiple theerthams. These theerthams are used during Thai poosam and Thai Theppam (Float) festivals. Also, since the legend of the temple involves an elephant, the temple has an elephant, and visitors can seek its blessings.
6. **Accommodation** – The temple is located in Srirangam, which hosts a multitude of budget hotel accommodations. Most notably, the site is close to Yatri Nivas, a quality accommodation operated by Sri Ranganathaswamy Temple. It has various categories of keys such as dormitories, rooms, and cottages. The tariff is fixed below market rates ranging from INR 750 per night for double bed AC and INR 1750 per night for the cottage. Apart from Yatri Nivas, there are multiple lodges and budget hotels in Srirangam. Premium hotels are available in abundance in Tiruchirappalli city.
7. **Association with Community** – The temple is a part of the day-to-day life of locals who visit the temple for daily worship. The various ways in which the community is associated include jobs at the temple, auto, and taxi drivers, etc.

Figure 2-1: Location & Existing Layout, Jambukeswarar Temple



Site Pictures

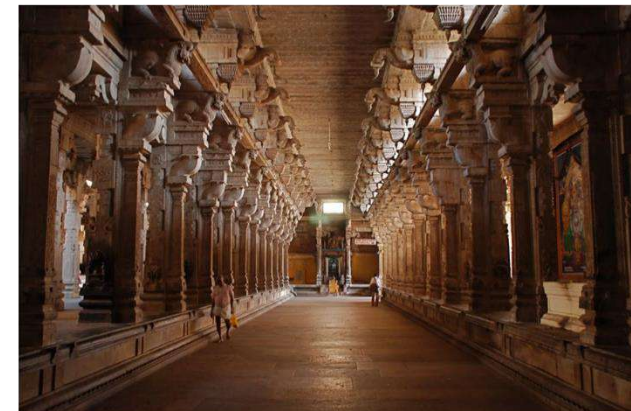
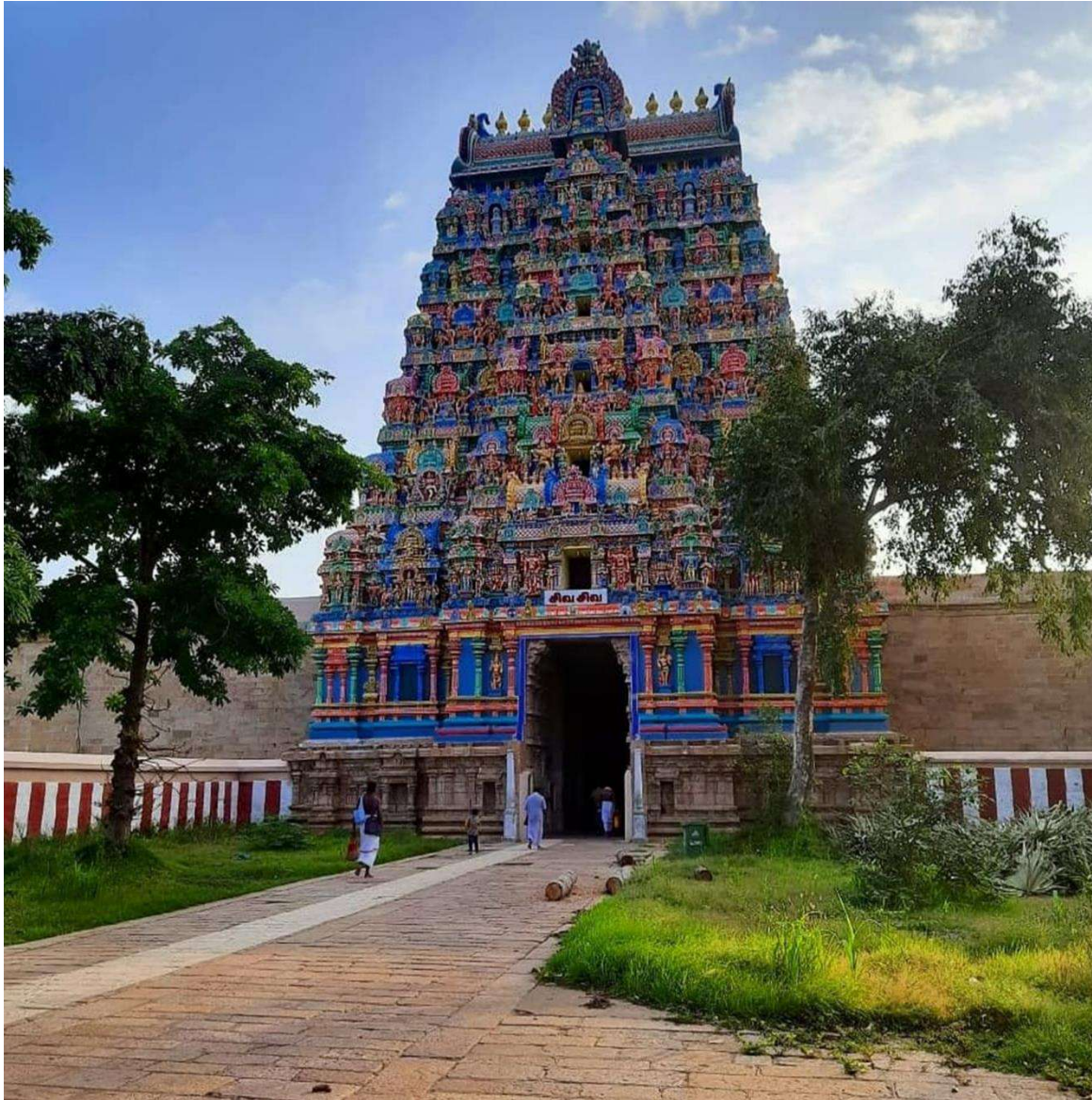
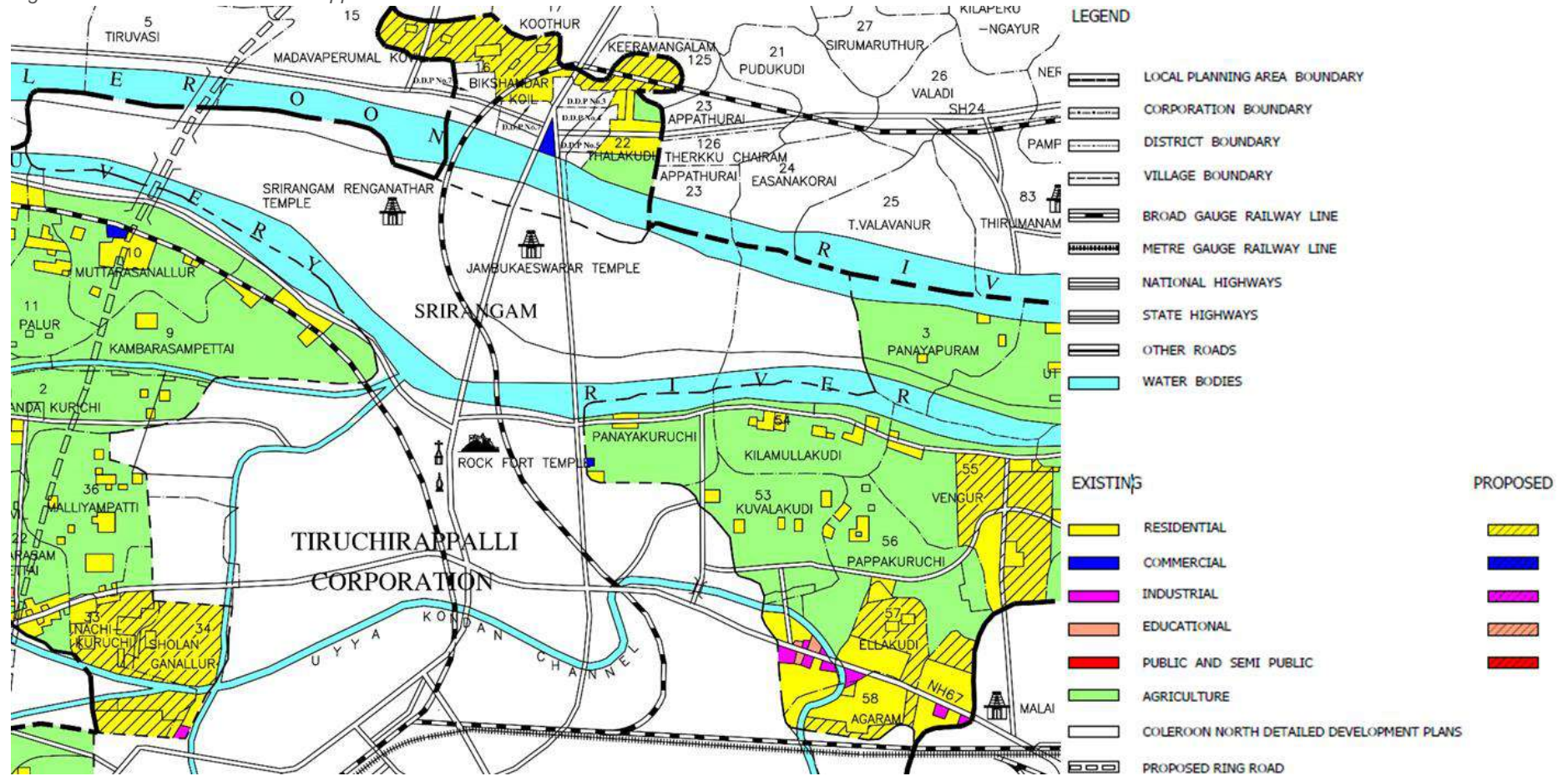






Figure 2-2: Site Land Use- Tiruchirappalli Master Plan



Vision for the Site

Jambukeswarar Temple is a part of 3 major trails including Panchbhoota, Gopuram, and Chola Nadu temples. The temple's architecture is ancient and is said to surpass that of Sri Ranganathaswamy Temple. It has historically significant inscriptions from the Chola period.

The temple has a well-developed ecosystem of public amenities such as ATMs, banks, health centres, restaurants, lodges, etc. The temple complex has ample open spaces and well-maintained lawns, providing a spiritual atmosphere. Although the temple is well maintained with a clean environment, it lacks designated parking spaces with adjoining areas occupied by beggars and hawkers, affecting the character of the temple surroundings.

Jambukeswarar Temple has the potential to be developed into a popular religious tourist attraction with improved footfall due to its proximity with Sri Ranganathaswamy Temple. The vision for the site is to develop it as a pilgrim tourist destination by improving basic amenities and effectively utilizing the available vacant parcels of land.

- **Target Visitor** – The site currently draws a significant number of pilgrims due to its religious value. Further, due to its monumental value, rich architecture, and historical importance, the site draws a good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang, and the elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	596	2,213	6,104
High Value Tourists (HVT) (Both domestic and foreign)	8	30	82
Maximum Carrying Capacity	74,500		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given that the site is popular and religiously significant, interventions will be planned with the perspective of improving the visitor's experience. The objectives of Master planning at this site include:

- Developing **recreational spaces** at the site by providing spaces on available vacant land.
- **Upgradation and maintenance** of existing infrastructure present in and around the temple complex.
- **Improving pilgrims' experience** at the temple through the provision of the rest area and seating spaces.
- **Improving pilgrim footfall** through appropriate marketing and promotion of the site.

Hard Interventions

1. **Development of Parking Space** – Currently, parking is done on the streets outside the temple complex. This causes congestion during peak hours and festivals, affecting the locals. Moreover, a visitor has to take the inconvenience of driving around the temple to search for an empty parking spot. Hence, a dedicated paved parking space must be developed on the available vacant land on the southwest corner outside the temple complex.

Infrastructure Created: 5000 sqm paved parking area.

2. **Resting Space with Landscaped Garden-** A parcel of vacant land is available on the southwestern side of the site near the administrative office area. This area can be developed as a resting space with the provision of nice seating arrangements and beautifully carved pathways with naturally shaded areas from the trees, where visitors can rest and enjoy the temple's environment. The landscaping will feature native and religious flowers and bushes, and should, as far as possible, be the least maintenance-oriented and be self-sustainable.

Infrastructure Created:

- Softscape – 2000 sqm
- Footpath – 150 m
- Benches – 8

3. **Open Air Theatre (OAT)-** An OAT can be constructed on the available land on the north-western corner of the site near the existing toilet area. This outdoor space can be used for conducting light and sound shows, outdoor exhibitions, dance recitals, and various community/social events

Infrastructure Created:

- OAT Steps- ~ 1000 sqm
- Softscape- 5000 sqm turf on the remaining vacant parcel.

4. **Paved Walkway (Part Pedestrianization)-** The access road to the eastern Rajagopuram can be converted into a part pedestrianized street. In the peak season, the street will be used by pedestrians only and on regular days it can act like a normal access road.

Infrastructure Created: Paved Walkway ~140m X 6m (Length X Width)

5. **Community Park-** A community park near the proposed parking space can be provided. The park could be used by the locals as well as pilgrims, for rejuvenation and recreation purposes. Vegetation, paved walkways, children's play area, benches, and streetlights can be provided in the park.

Infrastructure Created: ~3000 sqm. BUA consisting of

- Footpath ~200 m. length
- Softscape ~2500 sqm
- Hardscape ~ 200 sqm
- Benches ~7 units



Reference images for Resting Space with Landscaped Garden



Reference images for Open Air Theatre



Reference images for Paved Walkway (Part Pedestrianization)



Reference images for Community Park

Soft Interventions

- 1. EV Shuttle to/from Sri Ranganathaswamy Temple-** Sri Ranganathaswamy Temple is located at a 1.8km distance. The temple can be connected via EV shuttles. It would be a comfortable solution for tourists and also help in increasing the footfall for the Jambukeswarar Temple. A dedicated area can be marked in the proposed parking area for parking of these shuttles and provision of an E-cycle stand can also be given.
- 2. Site Promotion –** Sri Ranganathaswamy Temple and Rock Fort Temple have facilitation centre facilities; both the temple should promote the Jambukeswarar Temple to its visitors. It will not only Increase the temple's visibility but also enhance the footfall. Strategies like integration with TN Assist App, etc. can also be adopted. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness.
- 3. Light and Sound shows-** The temple structure is already a visual landmark of the region. The Light and Sound shows will describe the glorious history and architecture of the temple and its rich culture. The lighting at night will make the temple premises more attractive and it would also engage the younger population with temple activities.
- 4. Cleanliness Initiative –** The temple surroundings can be kept clean through awareness drives, and various innovative initiatives like “own your street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.

Amenities Plan

- 1. Dustbins-** Although the temple premises are very clean, there is no provision of dustbins in the temple complex. Dustbins must be provided in sufficient quantity to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines mentioned in the Glossary of Interventions.
Infrastructure Created: 15 Units (Across all the areas including a community park, rest area, etc.)
- 2. Luggage/ Cloakroom-** The temple has a dedicated luggage/ cloakroom facility, which is not working currently. It should be open up for the convenience of the visitors and maintained properly.

- 3. Streetlights –**The temple complex is well lit with the presence of adequate lighting. However, the proposed areas will require additional lighting facilities. Streetlights would be installed in these proposed areas, as mentioned in Glossary of Interventions.
Infrastructure Created: 5 Units.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to the Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Parking Space	5000 sqm
2	Resting Space with Landscaped Garden- <ul style="list-style-type: none"> • Softscape • Footpath 	2000 sqm 150 m
3	Open Air Theatre (OAT)- <ul style="list-style-type: none"> • OAT Steps • Softscape 	1000 sqm 5000 sqm
4	Paved Walkway (Part Pedestrianization)	140m X 6m
5	Community Park- <ul style="list-style-type: none"> • Footpath • Softscape • Hardscape 	200 m 2500 sqm 200 sqm
6	Benches	15
7	Dustbins	15
8	Streetlights	5

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the master plan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Parking	1
2	Softscape	2
3	Foothpath	3
4	OAT steps	4
5	OAT softscape	5
6	Paved walkway	6
7	Foothpath	7
8	landscaping	8
9	Benches	9
10	Dustbins	10
11	Streetlights	11
Total		INR 30 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction/implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below-mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- All revenues are unescalated.*
- Revenues are indicative and based on a preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making an investment decision or before implementing the proposed revenue.*

The following revenue sources are expected for the site:

- Parking** – Capturing 250 ECS at 10% occupancy per day with 2 rotations at INR 15 per ECS.
- Space on Hire** – Capturing 4 events per month at INR ~ 1.5 Lakhs per event.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 76 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below-mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the master plan.*
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- The costs are un-escalated.*

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - Assuming **1 Help-desk staff** at the event space.
 - Assuming **1 security personnel** for the parking.
 - Assuming **1 Administration staff** to overlook the operations of the event space.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc., and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc., and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste), and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets, and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in the note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, the total additional un-escalated OPEX from the site in Y5 is estimated as *INR 56 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions exceed the operational expenses incurred, it can be concluded that the interventions

proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple and the entire Gopuram trail.

The interventions proposed at the site are largely for improving amenities and the experience of visitors and hence have an associated “social cause”. Given the 3-year lease cap implemented by the HR & CE dept., PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by the HR & CE dept. itself.

However, it is recommended to give out operations and management of the event space at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Parking	1	Y0 – Y2	HR & CE
2	Softscape	2	Y0 – Y2	HR & CE
3	Foothpath	3	Y0 – Y2	HR & CE
4	OAT steps	4	Y0 – Y2	HR & CE
5	OAT softscape	5	Y0 – Y2	HR & CE
6	Paved walkway	6	Y0 – Y2	HR & CE
7	Foothpath	7	Y0 – Y2	HR & CE
8	landscaping	8	Y0 – Y2	HR & CE
9	Benches	9	Y0 – Y2	HR & CE
10	Dustbins	10	Y0 – Y2	HR & CE
11	Streetlights	11	Y0 – Y2	HR & CE
Total		INR 30 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 290 man-days of construction labour (*spread across 1 – 2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in the value chain.

As per market norms, the multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 735 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid in the improvement/increase in footfalls to the site.

Both increase in overall number of visitors and an increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 620 Cr. at the site⁶.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in an impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works, etc.

⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 2-3: Proposed Master Plan – Jambukeswarar Temple



3. Arunachaleswarar Temple, Thiruvannamalai

Site Details

District	Thiruvannamalai
Name of Site	Arunachaleswarar Temple
Site No:	Site 49A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.2313,79.0661
Land Area:	24 acres
Peak footfalls:	5 lakhs per day (November - January Karthigai Deepam, Chirithra Pournami, Brahmotsavam, Pradhosham)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 37.3 lakhs (2019 - 2020) For. – 24,000 (2019 - 2020)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim + Tourist
Site Potential:	High Tourism Site
HVT Potential:	High HVT potential
Connectivity:	
a. Railway Station:	1 km (Thiruvannamalai)
b. Airport:	105 km (Pondicherry)
c. Highway:	0.4 km from NH-66
Trails featured on:	Gopuram, Pancha bhootha

The Arunachaleswarar Temple is located on the base of the Arunachala hill, Thiruvannamalai, and is one of the Pancha Bhootha Stalas, specific to the element Agni (Fire). The temple is a visually majestic landmark in Thiruvannamalai and is one of the largest temples in India. The temple is immensely popular among the local people and devotees from other states – Andhra Pradesh, West Bengal, and Assam visit the temple, especially during the Girivalam and Karthigai deepam festival. The temple is also quite popular among international tourists from European countries, China, and Australia. The temple has great potential to invite more footfalls if marketed with its religious and architectural significance.

Existing Condition

Location

Arunachaleswarar Temple is located in central Thiruvannamalai at the base of Arunachala Hill and is close to several other prominent tourist landmarks. The immediate surroundings of the temple consist of congested mixed-use development. Prominent tourist landmarks include:

- Indra Lingam - < 500km away
- Seshadri Ashram - < 1 km away
- Sri Ramanasramam – 1.5 km away
- Arunagiri Children's Park - < 2 km away
- Skandasramam - 1 km away
- Virupaksha Cave - <1 km away
- Hotel Tamil Nadu, Thiruvannamalai - < 2 km away

Existing Layout

Arunachaleswarar Temple is located amidst a dense residential settlement, covers an area of 24 acres. The temple can be approached from all four sides. The temple houses numerous shrines apart from the main shrine. The temple complex houses many halls; the most notable is the thousand-pillared hall built during the Vijayanagar Period.

Existing Uses

Arunachaleswarar Temple enjoys immense popularity among locals and tourists. On most days, large crowds visit the temple for worship. The Site is famous for the Shiva Temple, Girivalam, and Annamalaiannal which are considered the most sacred names of the manifestation of Lord Shiva. The other uses housed on Site include:

- Administration Office.
- Food outlets – 1 shop.
- Auditorium.
- The stage is used for temple functions.
- Temple Gallery.

Other Land Available

The temple does not own any vacant land parcels within the 1 km vicinity from the temple complex.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel falls under the Tiruvannamalai composite local planning area. However, its land-use could not be identified as per the latest available map (Tiruvannamalai Master Plan, Proposed Land use).
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.

- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/ social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Arunachaleswara Temple is a Hindu temple dedicated to the deity of Shiva. It is significant to the Hindu Sect of Saivism as one of the temples associated with the five elements and in particular the element of fire, or Agni. The Site is famous for the Shiva Temple, Girivalam, and Annamalaiannal which are considered the most sacred names of the manifestation of Lord Shiva. The present temple structure built during the Chola Dynasty is of significant architectural importance and attracts many tourists.
2. **Accessibility** – The Arunachaleswarar Temple is situated within central Tiruvannamalai and accessible via numerous paved urban roads including Tiruvannamalai Road (west), Vada Othavaadai Street (north), Big bazaar Road (east) and Then Othavaadai Street (south). Visitors can only enter the Site through the east, north, and south sides. The western entrance is blocked due to safety concerns.
3. **Amenities** – The visitor amenities within and around the temple are well maintained but need some additions.
 - No tourist information centre is available.
 - No wayfinding signages or informative signage boards are available for the site. The signages available are in the Tamil language.
 - No luggage or cloakroom is available for pilgrims.
 - No retail or F&B kiosks are present near the temple site, except.
 - Inadequate condition of dustbins in the temple complex.

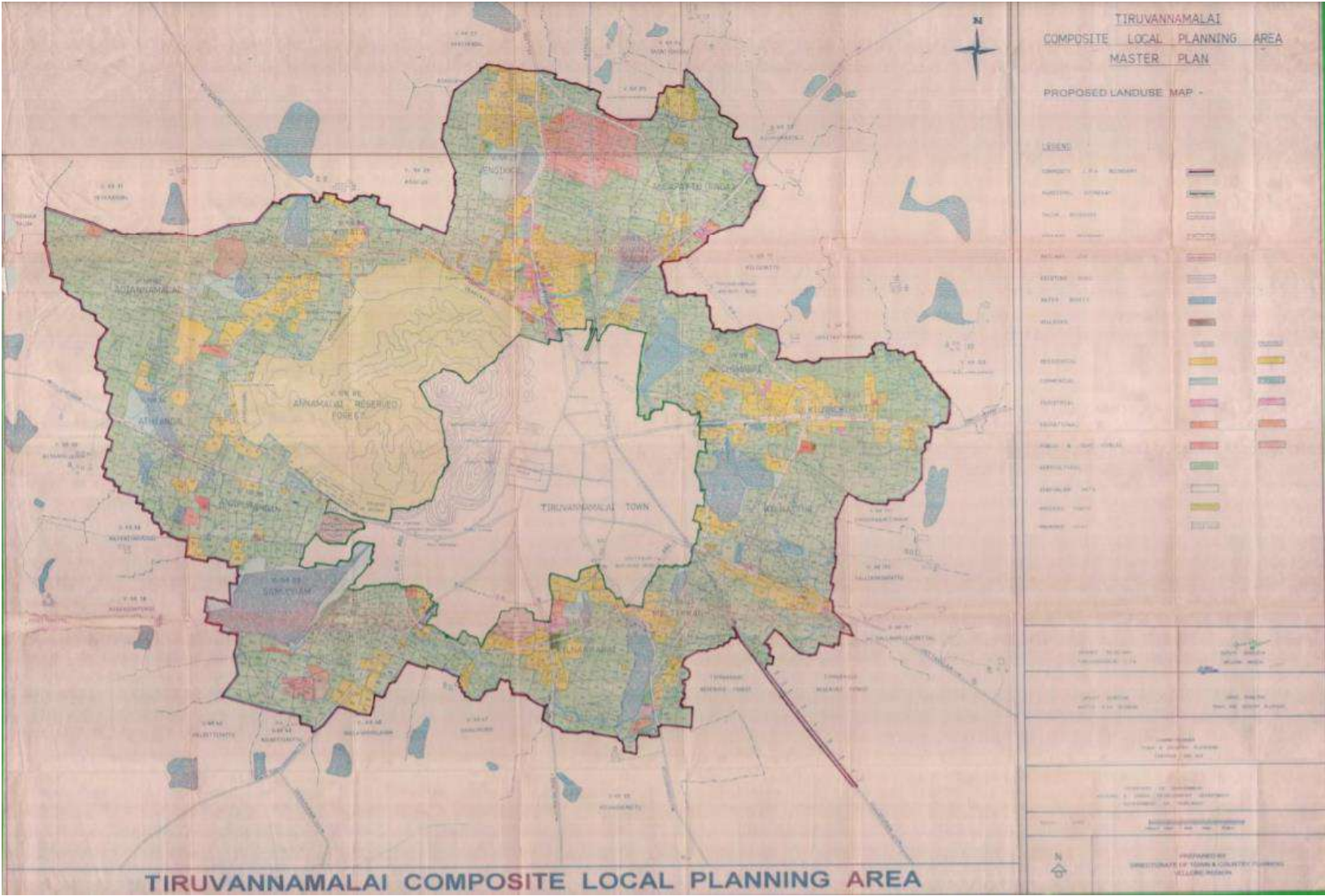
Parking- One major parking lot located directly outside the Site at the eastern entrance. Parking is available near the TTDC Hotel during festivals.

4. **Awareness** – The temple enjoys immense popularity among pilgrims. It is also well-known as a tourist destination in Thiruvannamalai and is visited by a large number of foreign tourists. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. The HR&CE department maintains a temple website with relevant information.
5. **Activities** – On normal days, the temple holds six daily rituals. Intermittently, there are some activities such as feasts, cultural/folk performances, and spiritual speeches, etc. These are also present on all days during festival times.
6. **Accommodation** – Being centrally located within Thiruvannamalai, there are around 15-20 accommodation facilities located within 500m of the Site. These include budget hotels, several luxury hotels, and a dormitory that is yet to open. Average room charges in the area are around INR1200-3000 for a budget hotel room with A/C and INR900 without A/C.
7. **Association with Community** – The temple is visited daily by locals and pilgrims. Occasionally, community events, marriages, festivals, etc. are also hosted at the temple. Along with the religious ties with the temple, various families and individuals are also dependent on the temple & its visitors for their livelihood.

Figure 3-1: Location and Existing Layout



Figure 3-2: Proposed Land Use Map



Site Pictures







Vision for the Site

Arunachaleswarar Temple is one of South India's most popular temples. As a prime attraction of Tiruvannamalai, it draws large groups of pilgrims and tourists – domestic and foreign. As a tourist magnet, the temple faces issues about crowd control, inadequate parking, and cluttered streets with an abundance of informal vending areas and hawkers' stalls taking over the public spaces. The visitor experience at the site can be improved by better traffic management, improved parking spaces, traffic calming and pedestrianization of some of its busiest streets and shifting some of the hawkers encroachments.

There is also a fascinating theory that the Siva Lingam at Arunachaleswarar Temple is an ancient energy device similar to the more contemporary **Tesla Coil**. The mysterious phenomenon that is happening in the temple is that there is a lingam in the main chamber, and it emits an enormous amount of heat. Even the entire stone walls have turned completely black because of constant radiation. There is a water vessel (i.e. thara parthiram) placed over the Lingam at Shiva Temples during Kathiri Veyil, which is the period when the Sun (i.e. Surya) passes through the star Kritika to keep the lingam cool.

Locals and priests explain that this radiation is happening because it is a special type of lingam called the Agni Lingam. It does not look like a traditional lingam, it has many turns, many coils on the cylinder, as though it is wound with wires. It also matches 100% with a modern-day Tesla coil. It is a Wireless Power Transfer device, it does not need wires, but can radiate enormous amount of energy, simply through the air. Nikola Tesla, an extraordinary inventor created this in 1891 in an attempt to deliver free energy to the world.

- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value, rich architecture, and historical importance, the site draws a good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang, and the elderly).

- **Tourist Projections** – The site is categorized as a **High Tourism Site** with **High HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	3,706	8,361	13,923
High Value Tourists (HVT) (Both domestic and foreign)	48	208	365
Maximum Carrying Capacity	94,535		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

[Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.]

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

The streets around the Temple which get the most footfall (Big Bazaar Road, the eastern half of Vada Othavadai Street, and Then Othavadai Street) leading to the East Gate, North Gate, and the South Gate gopurams, should become more appealing when walking up to the Temple, with Pedestrianisation and strict Urban Design Guidelines with a maximum allowed building height and improved standards for the buildings' façade treatment. Over the years some buildings have gotten (unsightly) additional floors, which is detrimental to the visitor's experience when they obscure the view of the gopurams.

Instead of having streets clogged by visitor's cars and buses randomly parked along the streets, better Traffic Management (i.e., Pedestrianisation, Traffic Calming, Pick Up/Drop Off areas, and strict Parking regulations) in the wider area around the Temple, will further improve the visitors' experience and will entice pilgrims, tourists, and locals alike to spend more time in the area, which is beneficial for local business.

The East Gate to the Temple is the most popular with a large plaza in front containing the historically and religiously important Mandapam and Chariots. However, because of all (illegal) hawkers that have come up in and around the Mandapam the visitor is not able to admire the architectural beauty of these impressive spaces and structures. The number of hawkers needs to be reduced significantly in and around Entrance Mandapam. At a separate location at the same Square, a new stand-alone pavilion is planned for hawkers, which respects the historic and religious built context.

Hard Interventions

1. Traffic Calming - Pedestrianisation Improvements –

Infrastructure created: ~2 km long by 10 m wide streets of Traffic Calmed and Pedestrianisation Streets combined and ~2500 sq. m. of redesigned Entrance Plaza of hard landscaped pedestrian space with new trees and street furniture



Pedestrianisation Streets around the Temple

- 2. Façade Beautification of Pedestrianised Streets –** To improve the overall visitor experience of the temple the buildings along the major streets, receiving the major tourist footfall, should reflect the architectural beauty of the Temple. Firstly, the disfiguring hoardings and other architecturally inappropriate structures added to the buildings over the years should be removed. Secondly, the owners of historic buildings along the street should be financially incentivized to renovate their building facades to let the original architecture shine. Thirdly, building facades nearest to the gopurams that are a real eyesore and distract from the historic beauty of the temple should be beautified in a manner that is historically more appropriate. Fourthly, buildings nearest to the gopurams that have added floors over the years that are now obstructing views of the gopuram and distract from the historic beauty of the temple should remove these top floors.



Façade Beautification facades main streets around the Temple

3. **Pavilions for Hawkers** – Most of the (illegal) hawker kiosks are removed from the square in and around Entrance Mandapam since they are encroaching on the public space and historic buildings and structures. Instead, a new pavilion is planned for hawkers which is in keeping with the historic and religious built context.

Infrastructure Created: ~250 sqm built-up area.

4. **Dedicated Tourist Car/Bus Parking area** – Parking on the Western Side of the Temple to be formalized to avoid cars and busses parked on access streets around the temple. Parking to be banned in the Pedestrianized and Traffic Calmed areas around the temple. Tourists are encouraged to be dropped off at the start of the Pedestrianised streets at special drop-off zones. Another option is the use an Electric Shuttle Vehicle that operates between the pick-up/drop of zones near the temples and the remote Parking Areas.

Infrastructure Created: ~3500 sq. m. of the hard landscaped area next to the Temple (remote Parking Plots not part of the Master plan)



New separate Hawkers Pavilion



Pedestrianisation Streets around the Temple

Soft Interventions

1. **EV Shuttle to/from Parking** The distance to the remote Car and Bus Parking areas may be too far to walk and in case pick-up by the bus or car cannot be

arranged at a specific time, an EV Shuttle service to and from the remote Parking Area would be the most comfortable solution, avoiding any large traffic jams on the roads near the Temple.

Amenities Plan

- 1. Lighting** –The streets around the Temple will need a Street Lighting Plan, with an emphasis on different types of lighting and levels of brightness befitting the variety in areas (Temple, Pedestrianised, and traffic-calmed streets).
- 2. Street furniture** – An international standard to the design and quality of street furniture should be the benchmark. Street furniture needs to become an integral part of Landscape Design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, way finding, etc.
- 3. Planting & landscaping** – Strategic tree planting is required along the pedestrianized and traffic-calmed streets to create more shade to make these sites more attractive as a pedestrian-friendly destination, where walking is encouraged also during the day.
- 4. Signage** - Direction boards can be erected along the main roads in the area indicating the presence of this Site

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to the Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Traffic Calming & Pedestrianisation Improvements <ul style="list-style-type: none"> Street Entrance Plaza 	2 km (10m wide) 2500 sqm
2	Pavilions for Hawkers	250 sqm

#	Project Component	Scale
3	Parking	3500 Sqm
4	Lighting	2 km
5	Signage (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the master plan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Street Pedestrianisation	2,000
2	Entrance plaza landscaping	5
3	Bus / EV stop	20
4	Parking	56
5	Signage	6
6	Hawker zone	4
Total		INR ~ 20 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction/implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below-mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- All revenues are unescalated.*
- Revenues are indicative and based on a preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested*

before making an investment decision or before implementing the proposed revenue.

The following revenue sources are expected for the site:

1. **Revenue share from shuttle operators** – Capturing 2 operators at INR 8 Lakh per operator per year.
2. **Hawker zone** – Captures renting out of 250 sqm of built-up space at INR 1200 per sqm per annum.
3. **Parking** – Capturing 175 ECS at 30% occupancy per day with 2 rotations at INR 15 per ECS.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 26 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below-mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the master plan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. Assuming **1 security personnel** for the parking.
 - b. Assuming **1 Administration staff** to overlook the operations of the hawker zone and the parking.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a

variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc., and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc., and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste), and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets, and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in the note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, the total additional un-escalated OPEX from the site in Y5 is estimated as INR 85 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are to mitigate the strain on the carrying capacity and are directed to cater to the needs of the pilgrims.

The interventions proposed at the site are largely for crowd management and enhance the experience of visitors. Hence it has an associated “social cause” and is pertinent.

Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Therefore, it is recommended that the interventions be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Street Pedestrianisation	2,000	Y0 – Y2	HR & CE
2	Entrance plaza	5	Y0 – Y2	HR & CE
3	Bus / EV stop	20	Y0 – Y2	Operators – Annual Lease
4	Parking	56	Y0 – Y2	HR & CE
5	Signage	6	Y0 – Y2	HR & CE
6	Hawker zone	4	Y0 – Y2	HR & CE
Total		INR ~20 Cr.		

⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 89,570⁷ man-days of construction labour (*spread across 1 – 2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in the value chain.

As per market norms, the multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 2.25 L man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to the improvement/increase in footfalls to the site. Both an increase in overall number of visitors and an increase in high value tourists is expected to push the

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 2215 Cr. at the site⁹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in an impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, woodworks etc.

⁹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 3-3: Proposed Master Plan – Arunachaleswarar Temple, Thiruvannamalai



4. Tillai Kali Amman Temple & Natrajar Temple, Chidambaram

Site Details

District	Cuddalore
Name of Site	Tillai Kali Amman Temple & Natrajar Temple
Site No:	Site 67 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.4064, 79.6947
Land Area:	3.6 acres + 40 acres + 2 acres
Peak footfalls:	1,500 per day (July - August Brahmotsavam, Navaratri, Aadi)
Operator:	HR & CE Dept. Thillai Muvayiravar (Dikshitar)
Site Ownership:	HR & CE Dept. Thillai Muvayiravar (Dikshitar)
Tourist Footfall:	Dom. – 9 lakhs 83.4 (2019 - 2020) For. – nil 9441 (2019 - 2020)
Site Revenues:	INR 40 lakhs (2019) NA
Site Orientation:	Pilgrim + Tourist
Site Potential:	Very High Tourism Site
HVT Potential:	High HVT potential
Connectivity:	
a. Railway Station:	2 km (Chidambaram)
b. Airport:	195 km (Tiruchirappalli)
c. Highway:	0.4 km from SH-49
The trail featured on:	Gopuram, Chola Nadu, Pancha bhootha

The temple is famous for one of the rear Idol of Tillai Kali Amman and its linkages to Natrajar Temple. While it is very well known amongst the devotees and has good connectivity, it is let down in terms of site maintenance and appropriate use of spaces. It is majorly visited by the devotees from Karnataka, Kerala, AP, and few other parts of Tamil Nadu. The temple site alone has the potential only to be developed as a regional religious tourist destination with appropriate marketing and development of amenities and linkage with the Natarajar Temple.

Existing Condition

Location

Thillai Kali Amman Temple as well as Natrajar Temple is located in the outskirts of Chidambaram town, in Tamil Nadu. Both the temples are situated at a distance of about ~1.5 km from each other amidst residential areas and vacant parcels of land. The town is about 5 km north of the Kollidam River, and 15 km. west of Bay of Bengal. Shri Pashupatheswarar Temple, Thirunelvayil Shiva Temple are among the several prominent tourist landmarks located nearby.

Existing Layout

Thillai Kali Amman Temple occupies an area of 3.6 acres. The temple houses a Mandapam, Temple office, Temple Tank, and Annadhanam Building. The temple tank is located outside the temple complex across the street and has available vacant land in proximity.

The **Nataraja temple** occupies an area of over 40 acres, within layers of concentric courtyards. The temple is located in a dense residential setup and is approached from all four directions. The temple complex houses a temple pond, 1000 pillared hall, and sabha halls apart from the main shrines.

Existing Uses

The Thillai Kali Amman temple is currently used as a place of worship by devotees. The temple is also used for the daily activity of Annadham for the devotees and less fortunate ones. The temple is currently maintained and owned by HR & CE Department. Many Architectural enthusiasts visit the place to understand its rich architectural style of both the temples especially Natarajar Temple.

Other Land Available

Apart from the 3.6-acre temple complex, the temple owns a 2 - acre of land on the opposite of the temple, which is usually vacant throughout the year but is used for parking purposes during peak season.

Master Planning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019 – As per the Master Plan, the temple complex lies in a Public/ Semi-Public Zone. The permissible uses included are:

Public/ Semi-Public Zone - Art Galleries | Museums | Public Libraries Auditoriums & Theatres | Exhibitions | Fairs & Festive grounds | Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi-public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multilevel parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs. Etc

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/ social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction –

a. Thillai Kali Amman Temple

The unique feature of this temple is that it comprises 2 Amman Sannathi at the same place, this attracts both domestic and foreign tourists and pilgrims. It is also believed that one has to visit this temple before visiting the Nataraja temple. The temple's historic connection to the Nataraja Temple also attracts many foreign and domestic visitors.

b. Nataraja Temple

The unique feature of this temple that attracts many visitors is the temple's grand architecture. The temple is of significant religious value and attracts local, regional, and foreign tourists.

2. Accessibility – The temples are situated on the outskirts of Chidambaram Town and are accessible via single lane narrow road. The most optimal way to reach the temple is through an auto, bus, or cab.

3. Amenities –

a. Thillai Kali Amman Temple

The visitor amenities within and around the temple are well maintained but need some additions.

- No tourist information centre is available.
- No wayfinding signages or informative signage boards are available for the site. The signages available are in the Tamil language.

- No luggage or cloakroom is available for pilgrims.
- No retail or F&B kiosks are present near the temple site, except.
- No divyaang friendly infrastructure is present within the temple complex.
- Inadequate condition of dustbins in the temple complex.

Parking- There are no other temple-designated parking spots identified in the 500 m. The access street is currently used as paid parking for the visitors, outside the temple.

b. Nataraja Temple

There is no data available for the amenities present inside the temple complex.

4. **Awareness** – Both the Thillai Amman Kali Temple and Nataraja Temple have gained immense popularity and belief amongst the local devotees as well as foreign tourists. The Nataraja Temple has obtained this popularity due to its rich architecture. Both the temples also have obtained their popularity amongst domestic tourists from Karnataka, Andhra Pradesh, Kerala, etc, and foreign tourists from the USA, Canada, Malaysia, etc. There are several travel bloggers and architecture enthusiasts who have written about the great architecture and other details of the temple. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc.

5. **Activities** – The temples are interlinked in terms of religious significance and popularity, the kind of activities that place at these temples are quite different.

a. Thillai Kali Amman Temple

On a normal, it is open for the visitors to worship and a special festival pooja is conducted on a 10 – day Brahmotsavam event and Navarathitiri festival. The temple does not offer any special activities, except for Annadhanam.

b. Nataraja Temple

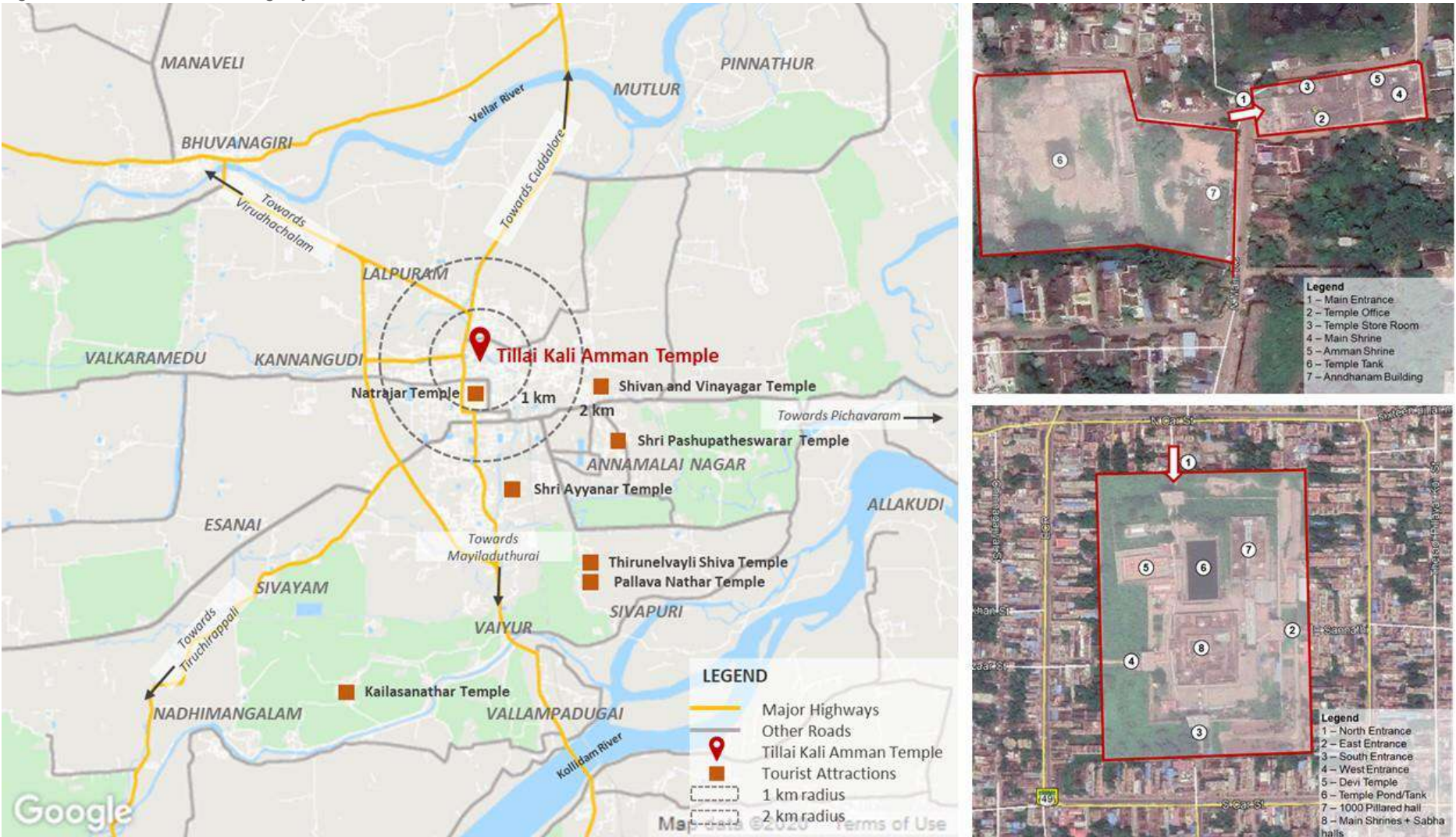
There is not much data on the day to activities that take place at Nataraja Temple. However, through secondary resources, it can be stated that it is also a site for performance arts, including the annual Natyanjali dance festival (celebrating India's spirituality) on Maha Shivratri. The festival now is a major tourist attraction in Tamil Nadu and has the support of the Ministry of Tourism

of the Government of India and also the Department of Tourism of the Tamil Nadu government along with the Natyanjali trust which oversees and manages all of the festivities. During the festivities, dancers from all around the world come to offer their dances to Lord Shiva with many varied forms of dance such as Kuchipudi, Mohiniyattam, Kathak, Bharatanatyam, Manipuri, Odissi, and Pung Cholam being performed here.

6. **Accommodation** – The temples are located in the outskirts of Chidambaram Town. There are 5 accommodation options available for tourists in the 500 m. vicinity of the temple. Dormitories and Budget hotel options like Oyo available near to the temple range from INR 1400 to INR 2500.

7. **Association with Community** – There are no guides at the temple. The festivals of the temple enjoy immense participation among the locals. Some many hawkers and vendors dot the site with carts and stalls – selling local goods, handicrafts, and food items increasing congestion.

Figure 4-1: Location and Existing Layout



Site Pictures









Vision for the Site

Tillai Kali Amman Temple and the Natrajar Temple are connected religiously and are of significant religious importance. The temples are located approx. 1500m apart. Nataraja Temple is maintained and operated by a private trust. Therefore, the scope of development is limited to interventions in Tillai Kali Amman Temple. The two temples are envisioned to work collectively, thus the interventions provided are intended to serve both the temples.

- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value, rich architecture, and historical importance, the site draws a good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang, and the elderly).

- **Tourist Projections** – The site is categorized as a **Very High Tourism Site** with **High HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	8,330	8,736	8,937
High Value Tourists (HVT) (Both domestic and foreign)	20	40	60
Maximum Carrying Capacity	157,500		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists

- **High Value Tourists** – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through improvement in site surroundings and aesthetics. Addition of basic amenities to improve the overall visitor experience.
- Improving the footfall of Tillai Kalii Amman Temple by linking amenities with the Natrajar temple.

Hard Interventions

1. **Amenities Block** – The existing facilities at the temple are insufficient as compared to the number of pilgrims received during peak season by the two temples. A small amenity block including a drinking water station, ~5 toilets, ~1 cloakroom, and a shoe stand can be developed along with the proposed Tourist Interpretation Centre near the temple tank. This will be developed as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Infrastructure Created: ~100 sqm of built-up area.

2. **Temple Tank Rejuvenation** – The temple tank, in its present condition is dried out to a larger extent and completely occupied with algae. Cleaning the temple tank would create an additional inviting space next to the temple. The tank would help in harvesting rainwater and utilize it to refill the tank when required.

Infrastructure Created: ~5600 m of tank cleaning

- 3. Redevelopment of approach road** – The approach road to the temples and around the temple tank linking the two temples is not maintained and thus causes inconvenience to visitors. Therefore, the entire stretch of road is proposed to be paved with pavers and footpaths for ease of movement around the site.

Infrastructure Created: ~600m long of paved road.

- 4. Parking** – The vacant area near the Tillai Kali Amman Temple could be utilized to create a designated parking spot for both temples. Currently, the access streets to the temple are used for parking, creating a chaotic entrance to the temples. The parking provision near Tillai Kali Amman Temple would also increase the temple footfall.

Infrastructure Created: 270 sqm of paved parking

- 5. EV Hub** – An Electric Vehicle hub with a charging point to be placed near the proposed parking lot next to the Tillai Kali Amman Temple. The stand to be used by EV vehicles proposed to be running between the two temples. The module to be detailed as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Infrastructure Created: 130 sqm of paved parking

- 6. Tourist Information Centre** - A small facilitation centre with an inquiry desk, luggage room, changing room, and rest/waiting area, toilets, drinking water station and a temple-souvenir shop can be developed for tourist convenience and ease at the site. It can be placed near the entrance of the temple on the south side of the temple complex. This development will be as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Infrastructure Created: ~50 sqm of building

Soft Interventions

- 1. Site Promotion** – As seventh in importance in the Nava Tirupati, the temple needs to be promoted to a wider audience. Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness about the two temples and their historical linkages.

- 2. Crowd Management** – As the access road is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:

- Limit the number of people within the temple complex at any time.
- Deploy ushers to ensure people move through the temple at a minimum pace.
- Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
- Access timings can be made exclusive for high-value tourists.

- 3. Guided Tours** - Self-guided audio tour provision shall be present on the site to portray the history of the site. As the temple has many shrines within and outside the temple premises, therefore, the self-guided tour shall aware the tourists of the historical significance of these shrines. Licensed guides can also be deployed to guide the visitors on the site.

- 4. EV Rickshaw between temples** – The two temples Tillai Kali Amman Temple and the Natrajar Temple are located ~500m apart and are connected with historical and religious beliefs. EV rickshaws can be made operational along the connecting route to make the commute easy for the visitors. The EV rickshaw to be started from the EV hub near the proposed parking at Tillai Kali Amman Temple and connect to the temple entrance of the Natrajar Temple. The visitors can park their cars in the proposed parking lot and visit the Natrajar temple via EV vehicles. This would decongest the entrance and manage the crowd at the Natrajar Temple.

- 5. Cleanliness Drive** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:

- **Community participation** programs or devotee volunteers.
- **Providing adequate dustbins** for disposal of segregated waste.
- Through **Innovative interventions** like “**Own your Street**” where all the stakeholders around the site and residents are made in charge of the cleanliness of the assigned street for a specific period.

Amenities Plan

- 1. Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
- 2. Dustbins** – Dustbins to be installed at various locations within and outside the temple site. A modular unit to be installed as per guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
- 3. Benches** - The entrance plaza to the temple complex also serves as the waiting area for pilgrims. Benches to be placed near the entrance for the ease of the visitors. The benches to be detailed as per the design guidelines mentioned in Glossary of Interventions regarding amenities and urban design.
- 4. Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:
 - Electronic Visitor Counter at the entry point
 - TN Assist App integration at the site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to the Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Amenities Block	1000 Sqm
2	Temple Tank Rejuvenation	5600 Sqm
3	Redevelopment of Approach Road	600 m
4	Parking	270 Sqm
5	EV Hub	130 sqm

#	Project Component	Scale
6	Tourist Information Centre	50 Sqm
7	Signage (Package 1)	1
8	Dustbins	2
9	Benches	4
10	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the master plan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Amenity block - Toilet	20
2	Amenity block - Drinking water station	3
3	Amenity block - Store room	5
4	Temple tank cleaning	0 (Included in OPEX)
5	Redevelopment of Approach Road	180
6	Parking	6
7	EV Hub	10
8	Tourist Information Centre	43
9	Signage (Package 1)	1
10	Dustbins	1
11	Benches	1
12	Technology Interventions (Package 1)	1

Total **INR 270 L**

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction/implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below-mentioned revenue modules.

- a) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- b) All revenues are unescalated.
- c) Revenues are indicative and based on a preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making an investment decision or before implementing the proposed revenue.

The following revenue sources are expected for the site:

1. **Parking** – Capturing 20 ECS at 60% occupancy per day with 2 rotations at INR 15 per ECS.
2. **Revenue share from shuttle operators** – Capturing 2 operators at INR 8 Lakh per operator per year.
3. **Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 83 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below-mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the master plan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. Assuming **2 Help-desk staff** at the amenity block and the TIC.

- b. Assuming **1 security personnel** for the parking.
- c. Assuming **1 Administration staff** to overlook the operations of the TIC and the EV operations.

2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc., and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc., and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste), and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets, and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in the note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, the total additional un-escalated OPEX from the site in Y5 is estimated as INR 34 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions exceed the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple and the entire Gopuram trail.

The interventions proposed at the site are largely for improving amenities and the experience of visitors and hence have an associated “social cause”. Also, given the strict governing protocols of Thillai Muvayiravar (Dikshitaras) – Temple trust, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by Temple Trust itself.

However, it is recommended to give out operations and management of the EV hub at the site to private operators for better efficiency and long-term sustainability.

Sub-projects which can be taken up by the local governing body/ Town panchayat

The approach road to the temple is in poor condition and has been raised as a repeated concern by the residents frequently visiting the temple and by the pilgrims alike. Since this is out of the temple's scope, it has to be taken up by the local governing body/ town panchayat to address the concerns of its constituents.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity block - Toilet	20	Y0 – Y2	Temple Trust
2	Amenity block - Drinking water station	3	Y0 – Y2	Temple Trust
3	Amenity block - Store room	5	Y0 – Y2	Temple Trust
4	Temple tank cleaning	0	Y0 – Y2	Temple Trust
5	Redevelopment of Approach Road	180	Y0 – Y2	Local governing body/ Town panchayat
6	Parking	6	Y0 – Y2	Temple Trust
7	EV Hub	10	Y0 – Y2	Operators – Annual License
8	Tourist Information Centre	43	Y0 – Y2	Temple Trust
9	Signage (Package 1)	1	Y0 – Y2	Temple Trust
10	Dustbins	1	Y0 – Y2	Temple Trust
11	Benches	1	Y0 – Y2	Temple Trust
12	Technology Interventions	1	Y0 – Y2	Temple Trust
Total		INR 270 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 11,570¹⁰ man-days of construction labour (*spread across 1 – 2 years of implementation*)

¹⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour

- Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days¹¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in the value chain.

As per market norms, the multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 29,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid in the improvement/increase in footfalls to the site.

Both increases in overall number of visitors and an increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,360 Cr. at the site¹².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%

- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in an impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses, and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, woodworks, etc.

○ As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
○ Assumed cost of labour assumed for computation = INR 700 per day

• Cumulative labour man-days = 30% * CAPEX / 700

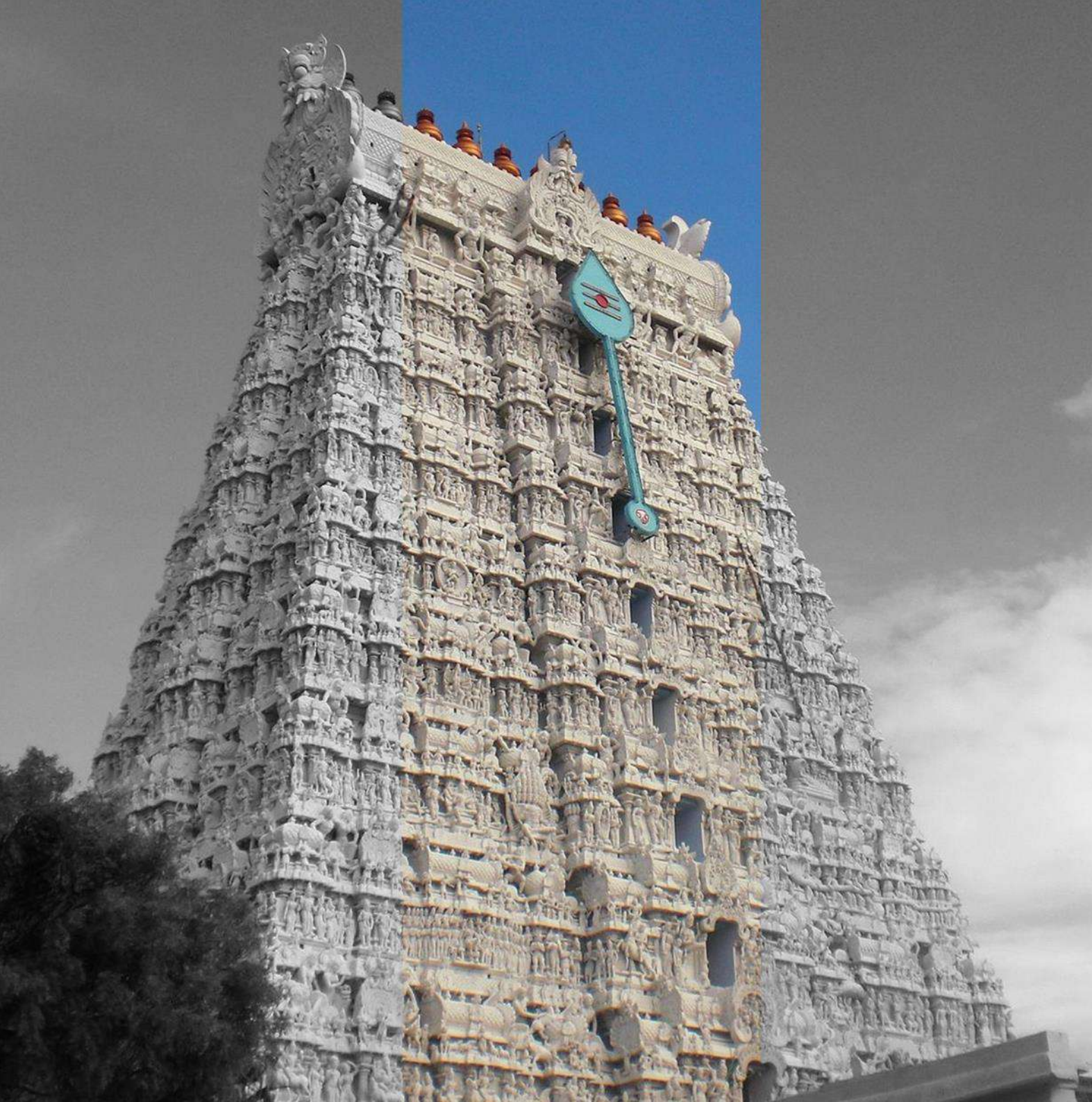
¹¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 4-2: Proposed Master Plan – Tillai Kali Amman Temple & B – Natrajar Temple, Chidambaram



THE ARUPADAI VEEDU TRAIL



ARUPADAI VEEDU – SIX ABODES OF MURUGAN

Lord Murugan, the Hindu God of War is known by multiple names like Kartikeya, Skanda, Kumara and Subrahmanya. Arupadai veedu translates to 'six war houses' of the Lord. In Tamil Nadu, these six abodes or temples of Lord Murugan are considered as important pilgrim destinations and attract thousand of followers from across the world.

These six temples of Lord Murugan are located in Thiruparankundram, Tiruchendur, Palani, Swamimalai, Thiruthani and Pazhamudircholai. While Tiruparankundram is considered the first of the six abodes, Palani is considered the most prominent abodes of Lord Muruga. The legend of these temples are also mentioned in Tamil sangam literature, "Thirumugatrupadai", written by Nakkeerar and in "Thiruppugazh", written by Arunagirinathar.

Target Tourist Segments

The trail could be promoted to pilgrims, across all Indian states and outside (including expats), who worship Lord Murugan.

Linkages



Arulmigu Subramaniya Swamy Temple, Tiruttani - is a hill temple located in Tiruttani. The temple is 5th amongst the six abodes of Lord Murugan. Muruga is believed to have taken rest atop the hill in order to calm himself down after killing the demon king Surapadman at Thiruchendur. To reach the shrine of the temple, the devotees have to climb 365 steps that represent number of days in a year.

Arulmigu Swaminatha Swamy Temple, Swamimalai is located ~5km from Kumbakonam. The temple is 4th amongst the six Arupadai veedu. As per Hindu legends, Muruga, the son of Shiva, extolled the meaning of the Pranava Mantra (AUM) to his father at this place and hence attained the name Swaminathaswamy. The shrine of Lord Murugan is located atop a 60ft hillock while the shrine of Lord Shiva and Parvathi are located downhill.

Sikkal Singaravelan Temple, Nagapattinam is a temple dedicated to Lord Murugan and a contender for the unofficial seventh Padaiveedu of Muruga, along with the popular Arupadaiveedu. The temple houses both Shiva and Vishnu deities in the same complex

Arulmigu Dhandayuthapani Swamy Temple, Palani is the 3rd among the six abodes of Lord Murugan. As per Hindu legend, Lord Shiva held a competition between his two sons, Lord Ganesha and Lord Murugan to present the winner with the fruit of knowledge. It is believed that after losing the competition to his brother, Lord Murugan left Mount Kailash in fury and came to Palani to calm his anger.

Arulmigu Solaimalai Murugan Temple, Pazhamudircholai is located ~25km north of Madurai. It is considered as the 6th among the six abodes of Lord Murugan. Unlike the other Arupadai Veedu temples, the weapon of Lord Murugan (the Vel) is worshipped here. Lord Murugan here is known as Kurinji Nilam Kizhavan and stands along with his consorts Valli and Devayani, which makes it the only temple amongst the six abodes where he blesses his devotees along with his consorts.

Thiruparankundram Murugan temple is the 1st among the six Arupadai veedu temples. According to Hindu legend, this is the place where Lord Murugan slayed the demon Surapadman and married Deivayanai, the divine daughter of Lord Indra.

Arulmigu Subramaniya Swamy Temple, Tiruchendur is the 2nd among the six Arupadai veedu temples. The temple complex is located on the shores of Bay of Bengal, the only temple out of the six that is not situated on a hilltop. The shrine at Tiruchendur was built to mark the victory of Murugan over the demon king Surapadman.



The Arupadai Veedu Trail

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum
D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
1	33	Tiruvallur	Arulmigu, Subramaniya Swamy Temple, Thiruthani	Temple	2,060	5	4,855	15	8,275	25	86,870	High tourism site	Moderate HVT Potential
2	114	Thanjavur	Swamimalai Swaminathaswamy Temple	Temple	580	20	1,490	65	3,340	145	5,910	Medium tourism site	Moderate HVT Potential
3	152	Nagapattinam	Sikkal Singaravel Temple	Temple	810	0	1,645	0	2,820	0	3,940	Low tourism site	Low HVT Potential
4	187	Dindigul	Arulmigu Shri Dhandayuthapani Temple, Palani	Temple	12,670	67	18,800	190	20,270	215	20,485	Very high tourism site	High HVT Potential
5	132	Madurai	Pazhamudircholai Murugan Temple	Temple	2,770	24	6,415	70	10,820	120	15,755	High tourism site	Moderate HVT Potential
6	223B	Madurai	Thirupparankundram Murugan Temple	Temple	3,665	127	8,435	370	9,435	410	9,850	High tourism site	Moderate HVT Potential
7	259B	Thoothukudi	Thiruchendur Murugan Temple	Temple	5,275	4	10,445	10	14,880	14	267,850	Very high tourism site	Moderate HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
1	Arulmigu, Subramaniya Swamy Temple, Thiruthani	10 - 12	HR&CE Dept.	Yatri Niwas – O&M on PPP
2	Swamimalai Swaminathaswamy Temple	2.3	HR&CE Dept.	Yatri Niwas – O&M on PPP
3	Sikkal Singaravel Temple	0.5 – 0.6	HR&CE Dept.	-
4	Arulmigu Shri Dhandayuthapani Temple, Palani	43.3 – 43.5	HR&CE Dept.	-
5	Pazhamudircholai Murugan Temple	0.10	HR&CE Dept.	-
6	Thirupparankundram Murugan Temple	0.05	HR&CE Dept.	-
7	Thiruchendur Murugan Temple	31.6 – 31.7	HR&CE Dept.	Temple Guest House, Staff Quarters – O&M on PPP

Impact

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment Opportunities

The proposed interventions are planned to:

- Increase visitor comfort and convenience to the tourist sites
 - Increase tourist footfalls at the sites
- Promote higher footfall of high-value tourists – thereby increasing overall spending at the sites.

This tourist spending will directly flow to the local economy and communities.



~390k man-days Construction Jobs



~150 (incremental) man-days per day during operations jobs
(Accommodation, Site maintenance & housekeeping, Activity Operators, Retail and F&B operators, hawkers, vendors etc.)



~980k man-days Indirect & Induced Jobs
created due to multiplier impact of construction and operations jobs

Benefitted Stakeholders



Local Weavers, Craftsmen and Artisans



Security & Maintenance Staff



Temple-ware & Souvenir Vendors



Tour Guides & Operators



Transporters (Taxi/Auto)



Hospitality Staff



Temple Workers

1. Subramaniya Swamy Temple, Thiruthani

Site Details

District	Tiruvallur
Name of Site	Arulmigu Subramaniya Swamy Temple, Thiruthani
Site No:	Site 33 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	13.1719, 79.6026
Land Area:	~22 acres (Main Temple Land)
Peak footfalls:	100,000 per day
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 20.60 lakhs (2019 - 20) For. – 2475 (2019 - 20)
Site Revenues:	INR 34.69 Crores (2019 – 2020)
Site Orientation:	Pilgrim/Tourists
Site Potential:	High Tourism Site
HVT Potential:	Moderate HVT potential
Connectivity:	
a. Railway Station:	~15 km (Arakkonam)
b. Airport:	~85 km (Chennai)
c. Highway:	~2 km from SH58 and ~4 km from SH106
The trail featured on:	Arupadaiveedu

The Arulmigu Subramaniya Swamy Temple located on the hill of Thiruthani is a visual landmark. The Aaru Padai Veedu temple enjoys immense popularity among the Murugan devotees and domestic tourists alike especially from the bordering states of Tamil Nadu – Andhra Pradesh and Karnataka. The temple has a good potential for a day-long pilgrim tour given its religious and historical significance. The location adds to the aesthetic appeal of the temple.

The scope of interventions at the site includes developing a pilgrimage environment for the tourists, crowd management, and creating several tourist engaging activities.

Existing Condition

Location

The temple is located on a hill, in the town of Thiruthani. Situated along with Kanchipuram to Tirupati route, Thiruthani is nestled ~95 km east Chennai and ~40 km east of Tiruvallur. The hill temple is accessible by a motorable road as well as through a flight of 365 steps. The immediate surroundings of the temple include residential, small-scale commercial, and religious developments on the habitable parts of the hill. The rest of the area, especially on the north of the temple, is inhabited. The site is easily accessible from Thiruthani railway station (~1.2 km) and Chennai International Airport (~85km).

Existing Layout

The temple covers an area of ~22 acres, upon the hill in the town of Thiruthani. Some of the features of the temple layout are:

- The temple is located on a hill, at a height of ~158 m above sea level. 365 steps, representing the days of a year (on the east of the main temple), and a motorable road led to the Hill Temple (towards the south-east of the main temple).
- Administrative office and accommodation facilities are located at the base of the hill to its west.

- There is also an arrangement of temple buses, to take the pilgrims up and down the hill temple. While parking is located at the hill temple as well as the base, the latter is used during festivities.
- The hill temple accommodates the main temple complex as well as various other facilities and amenities. It includes Valli Mandapam, Pilgrims Rest Shed (Palace Mandapam), Annathana Mandapam, Retail Shops, Footwear Stand, Siddha Medical Clinic, Toilet Blocks, and Prasadam Stall.
- The main temple complex has Rajagopuram on the east, along with Bali Pedom and Dhvajasthamba at the entrance. The main deity is Lord Muruga with separate shrines for Valli and Deivanai, on either side of Lord Murugan.
- Currently, the construction of another road between the highway and the hill temple is in progress. This will help in segregating the movement of incoming and outgoing vehicles, for safety and to cater to the heavy traffic received during festivals.

Existing Uses

The site is primarily assessed for religious visits. The main temple area is currently developed to a certain extent for tourist and pilgrim facilitation. The other ancillary uses housed at the site include retailing areas, parking areas, shaded movement spaces, festival areas, etc.

Other Land Available

Apart from ~22 acres of hill temple land (which includes the temple tank and access ways), the temple administrators own ~33 acres of land, located downhill. This includes land under various small shrines, stay facilities, mandapams, temple offices, staff quarters, and vacant land.

Out of the ~33 acres of the land, two land parcels are large and available for infrastructure development. Both land parcels are accessible from the main highway road. While one covers an area of ~19.5 acres, the other one is spread over an area of ~2.5 acres.

Master Planning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for no more than 3 years.

2. Tamil Nadu Combined Development and Building Rules 2019 - As per Tiruttani Local Area Plan, the site lies in a **Public/Semi-Public and Agricultural Zone**. The permissible uses include:

Govt and Quasi Govt. Offices | Institutions | Professional and business offices | Art galleries, Archives, Museums, Public Libraries, Social and Cultural, Institutions and Religious buildings | Hospitals, Sanatoria, and other medical and public health institutions | Parks, Playfields, Swimming pools and other public and Semi-public open spaces | Social and Cultural Institutions including Sabhas, Residential and commercial spaces | Transport terminals, bus, parking lots including multilevel parking lots | Kalyana mandapams | Community halls, Assembly halls, Auditoriums and Theatres, Recreation Complexes, Exhibition, Fares | All public and semi-public recreational uses and open spaces, parks and playgrounds | Waterfront developments, museums and memorials | Theme parks and amusement parks, Open Air Theatre, Exhibitions | Circuses, Fairs and Festival grounds, public utilities.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction – The temple is the 5th padai veedu shrine of Lord Muruga and is associated with his life period after destroying the demon Surapadman. The temple is also famously known for the place where the lord married Valli. Located on a hilltop, the temple site is associated with peace and has been mentioned in various religious texts & legends.

Owing to the great religious importance and the unique attractions, the temple is popular amongst regional tourists and believers of Lord Murugan. The is a visual beauty and a landmark site that one witness while traveling from Chennai to Tirupati. However, the site surroundings are kept unclean by the locals residing in the locality as well as several tourists.

2. Accessibility – The temple site is situated within Thiruthani and is easily accessible via decent quality State Highway roads. The main temple is located on a hill which can be reached by a motorable road as well as by climbing a flight. The last mile site accessibility is still an issue for many tourists at the site, especially during festivals and peak season.

Parking – The main temple site at the hilltop is provided with a large parking space sufficient for everyday tourists. A parcel of land on the foothills, owned by the temple authority is also used as parking, only during the festivals.

Internal Circulation – Partially shaded walkways and tourist rest areas are developed along the pradakshina path of the main temple. However, the partial shading of the pathways is generally an issue during peak summer seasons.

3. Amenities – The environment of amenities around the temple is well established. The temple is well-maintained but there is a need for improved infrastructure in place to hold the large no of visitors it receives.

- The existing number of toilet blocks, drinking water facilities, are limited and insufficient in comparison to the footfalls the temple receives.
- The site is well equipped in terms of CCTV site monitoring and safeguarding its boundaries both physically and with the presence of fire safety measures. However, there is no frisking of visitors at the site which might be a risk.

- The site is constructed at multiple levels which is only accessed via steps. There are no ramps or wheelchairs available at the site for the aid of the physically disabled and elderly visitors.
- The site surroundings are developed with the provision of public toilets, several accommodation options, adequate lighting, and excellent quality roads,

4. Awareness – The temple is a well-known pilgrim destination and enjoys immense popularity among pilgrims. The temple attracts a large number of tourists and locals alike, especially during festivals. In 2019, the temple received 20.72 lakh visitors, originating from all over the country.

5. Activities – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as:

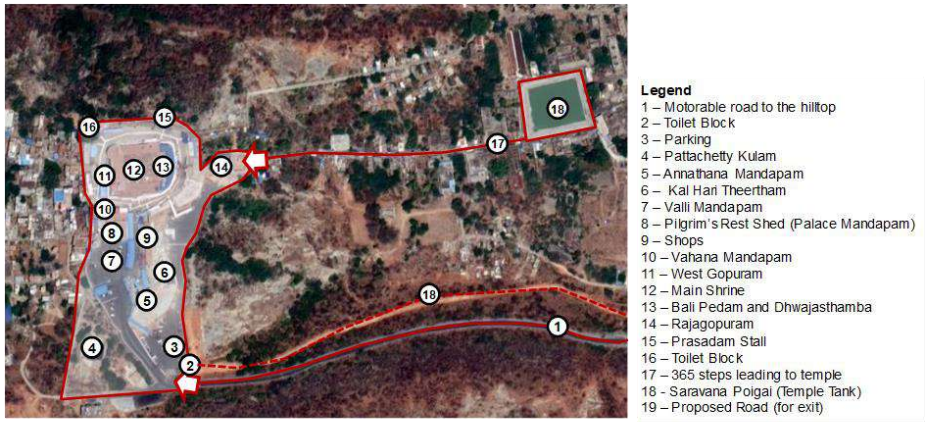
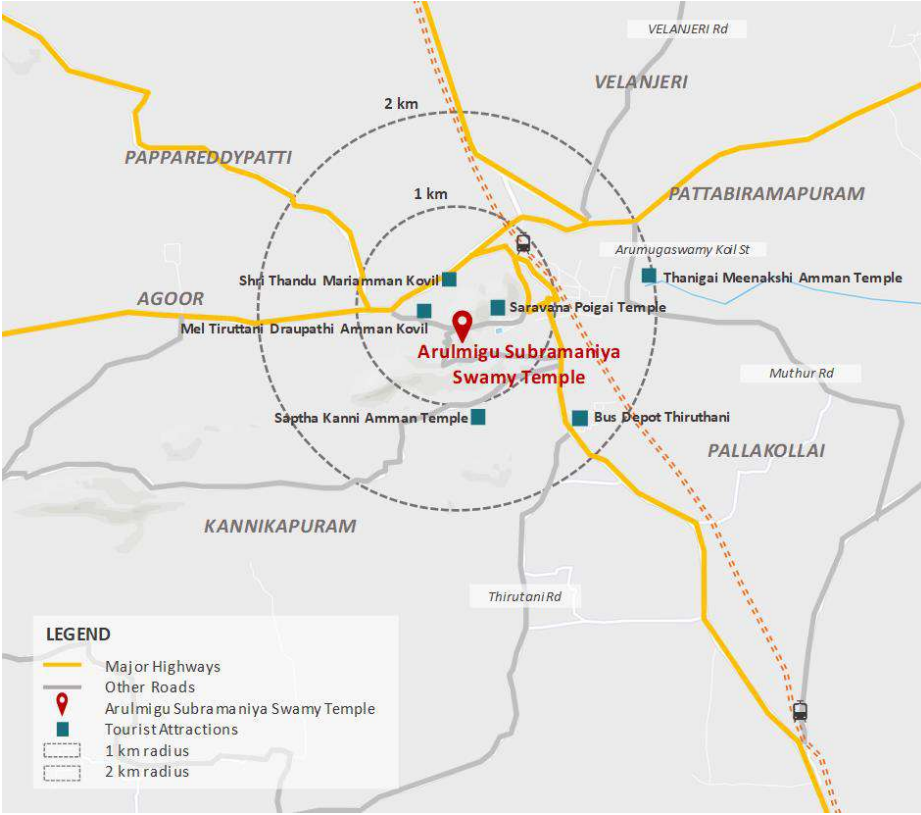
- Feasts,
- Dance recitals,
- music concerts, etc Organised on festival days.
- Marriages and cultural events are also hosted in temple mandapams.
- However, it lacks in everyday tourist engaging activities other than Poojas and temple rituals.

6. Accommodation – The temple provides accommodation options for devotees, ranging from an AC cottage with 4 beds costing INR 1500 to a simple room costing INR 400. The condition of these accommodation options is dated, and it deems insufficient during the festivals and peak tourist season.

Apart from this, various lodges, guest houses, and budget hotels are in the vicinity of the temple. 3-star hotels, like Regency Thirutani by GRT Hotels, are also located within a ~7km radius of the temple.

7. Association with Communities – The temple has a minimal association with communities. The retail shops and residences located along with the temple step benefit in their businesses from the purchase made by the tourist at these shops.

Figure 1-1: Location and Existing Layout



Site Pictures



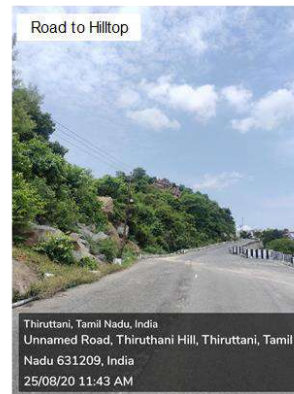
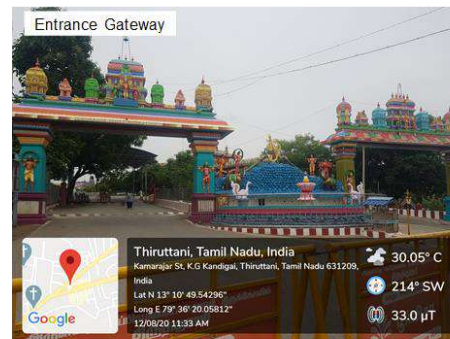
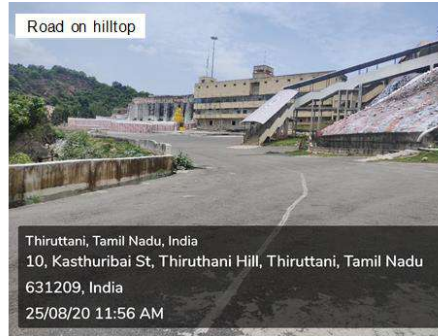
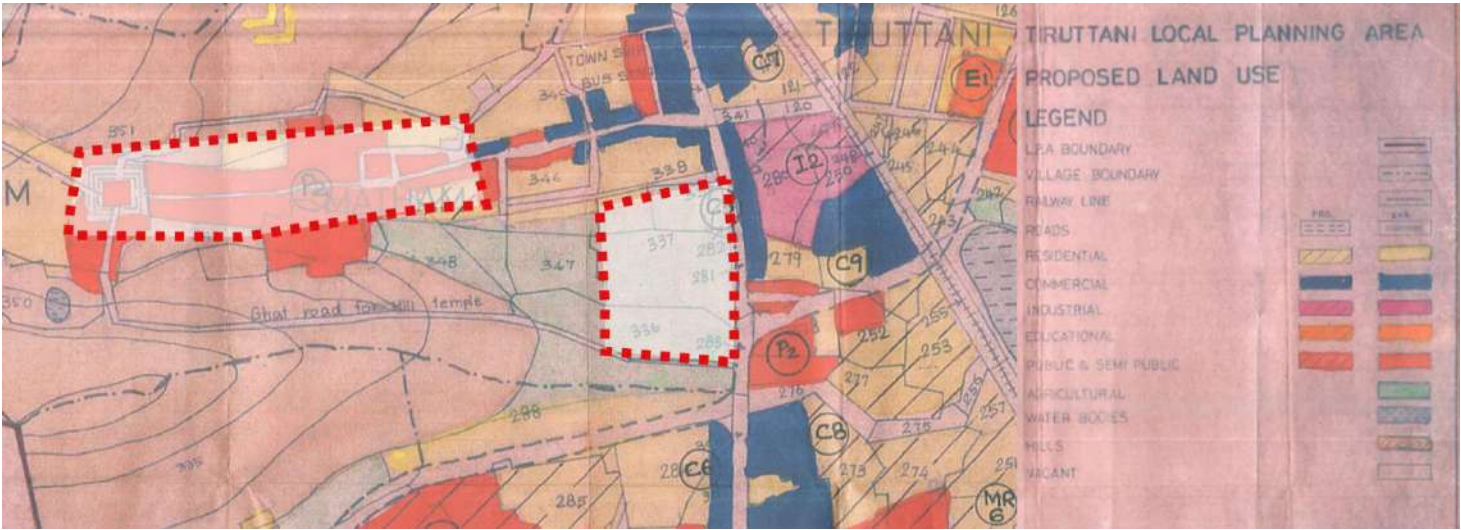


Figure 1-2: Location of Other Lands Available Near the temple



Figure 1-3: Site Land Use – Tiruttani Local Planning Area Plan



Vision for the Site

The Arulmigu Subramaniya Swamy Temple located on the hill of Thiruthani is an eye-pleasing landmark of popularity amongst domestic and local pilgrim tourists. Even though the site is the historical importance of site with easy accessibility and its acknowledgment by the pilgrims, some of the drawbacks of the site are lack of proper tourist information for the tourists who are new to the site, the issues in the last mile connectivity to the main temple, meagre tourist engagement, etc.

In addition to the main temple area, the temple management authorities have also tried to develop pilgrim accommodation places in the foothill area, (~2 km from the main temple). These accommodation facilities, however, do not fulfil the requirement of a large number of tourists that visit the site during festivals and peak season (~4 out of 12 months).

Considering all the points, despite the temple's weaknesses, it has a good potential for a day-long pilgrim tour given its religious and historical significance and the large crowd it attracts from 1/3 time of the year.

The temple site and its other land holdings at the foothills can be utilised for further development. It can be developed on the lines of benchmark religious tourist destinations such as **Konark Sun Temple (M.P.), Somnath Temple (Gujarat), Tirupati Balaji (Andhra Pradesh)**. All these sites are at a regional level, tourism sites for domestic pilgrims and owing to the ecstatic developments along with them like interpretation centres, better pilgrim facilitation, and redeveloping the spaces around the temple managed to attract tourists from across the country with a small share of foreign tourists too.

Owing to the temple' reputation as one of the most sites when visiting Chennai – Vellore, the temple can be developed on the idea of space redevelopment, pilgrim amenity provision, and site area development.

- **Target Visitor** – The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

The target visitors to be captured here are:

- **Pilgrim Tourists** – to develop a religious site integrated into the circuit of Chennai - Vellore temple sites for pilgrims from nearby regions.
- **Domestic Tourists** – To develop a site where visitors can visit temple attractions and witness the local culture.
- **Tourist Projections** – The site is categorized as a **high tourism site with moderate HVT potential**.
- Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	~2,058	4,856	8,274
High Value Tourist (HVT) (Both domestic and foreign)	5	15	25
Maximum Carrying Capacity (p.a.)	86,870		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/

interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

At the foothills of the site at ~2 km from the main temple, ~33 acres of the land parcels are owned by the temple managing bodies. ~11 acres of land are already built with several retail developments, pilgrim accommodation facilities, and occupied by several small shrines.

The master plan activity intends to utilize a share of the entire ~22 acres of land available (~4 acres) and redevelops one of the 2 tourist accommodation facilities covering an area of ~3 acres. The idea is to develop all the necessary facilities, pilgrim requirements, and additional attraction points, which widens the tourist market segment for the temple and enhances the overall experience at the site.

The objectives for developing master planning interventions at this site are:

- Develop the land parcels on the foothills, incoherence to the temple's architectural style and historical significance.
- Create vibrant multi-functional (Cultural and Recreational) spaces, which function as an additional attraction point to the site.
- Develop a seamless flow of movement of the visitors, with the downhill campus as a pre-stage of the visit.
- Ease out visitor movement across both the campuses (on the hill as well as on the ground)

Hard Interventions

1. Interpretation Centre –

- ~2 acres of the land behind the “Thanigai Illam Rooms and Cottages” can be developed into a theme interpretation centre.
- The design of the interpretation centre can be a resemblance to the temple architectural style, the resemblance to the temple tanks with a modern touch, and an entirely stepped campus (which can act as a small amphitheatre when the cultural events are conducted at the temple) equipped with ramps to access limited areas.

- The campus of the site for interpretation centre can have two areas where the site's information, its connection with the other 5 abodes of Lord Murugan and other unique information of the site can be portrayed.
 - A temple style stepped building
 - Courtyard semi-open gallery
- These two components can be supplemented with a vast landscaped area, small water reservoirs surrounded by wide steps, and narrow risers easing the visitors to sit around and spend some time at the site.

Infrastructure Created:

- A temple style stepped built area (Gallery): ~2,500 sqft
- A Courtyard style Semi-open Gallery: ~2,000 sqft
- Landscaping area - ~0.42 acres
- Water Covered area: ~2,500 sqm
- Entrance Gate
- Areas for steps - ~0.89 acres

2. Tourist Facilitation Centre –

- The area opposite the temple interpretation site can be used for the development of a tourist facilitation centre.
- The components which can be covered at the facilitation area Ticket sales counter + audio guides + guides' station | Helpdesk | Site galleries with large format displays & VR experiences | Souvenir retail | Temple wares retail (pooja items, prasadam) | Shoe storage & protective foot cover distribution | Cloakroom |
- The facilitation centre can be accompanied by a stepped shared area opening towards its access roads where tourists can spend some time if required.
- They are on the left of the facilitation centre and can be used for parking mini-E – cars which can be used to improve the temple's last-mile connectivity.

Infrastructure Created: ~1500 sqft built-up area and ~300 sqm of a shed for storing mini-E – cars.



Tourist Interpretation Centre



Tourist Interpretation Centre



Stepped public Space outside the Facilitation Centre on Ground



3. Refurbishing one of the pilgrim accommodation facility –

- The existing accommodation facilities provided at the site are quite dated and is sufficient in comparison to the tourist footfalls at the site.
- Redevelopment of existing facilities with modern standards, increased built-up area, can help increase the number of keys available.

- The current capacity of one of the accommodation cottages proposed to be redeveloped is ~100 units which are accommodated into the following:
 - 1 dormitory building - ~60 keys
 - 20 Cottages (G+1) - ~40 Keys
- The redevelopment thus identified shall convert cottages into a G+2 structure with increased floor area which can help in increasing the total number of keys to ~200 keys.

Infrastructure Created:

- ~27,500 sqft of built-up area
- ~620 sqm of the parking area

4. **Parking Relocation and Change in the usual circulation route of vehicles with the introduction of Mini-E-Cars** – The main temple can be accessed by a motorizable route as well as by climbing 365 tanks as shown in the layout map. The parking currently is done along with the temple site on the top of a hill, a small area of which can be retained for the vehicular parking whereas the rest of the parking can be shifted to the land opposite the interpretation site. Pilgrims can then take a mini-E-car available near the facilitation centre and get to the main temple site via vehicular route. The Mini E-cars can drop off and pick up the pilgrims at a designated area near the site parking area as identified. The intent here is to reduce the extents of vehicular parking at the top and create more eye-soothing landscape areas and areas for tourist circulation during peak season.

Infrastructure Created: ~50 mini – cars to be deployed at the site in the initial phase, ~6,800 sq. m. paved parking area



Pilgrim Tourist Accommodations



E – Vehicle option for mobility across the sites

5. **Space Redistribution at the main temple area** – Currently the spaces surrounding the main temple includes more of a built and solid environment. At times, such an environment is less appealing and eye-catching. Creating pedestrian-friendly landscaping areas, with more greens can be an added attraction to the site aesthetics. The temple also has a hustle environment around it due to the presence of retail stores, parking, etc. some space redistribution and shifting certain facilities to the tourist facilitation at the foothill can be helpful. The intended proposal that must be conducted at the main temple site is:

- Converting existing shops into Food court area
- Converting a part of existing paved parking space into pedestrian-friendly landscaped spaces
- Creation of viewpoint areas to enjoy the view from the top
- Shaded circulation routes till the reach of the main temple
- Designated pickup and drop off location for the pilgrims.
- A small tourist facilitation centre near the pickup and drop off area

Infrastructure Created:

- ~800 sqft of tourist facilitation area
- ~2000 sqft food court area
- ~2 acres of pedestrianised landscaped area
- ~650 sqm area of pick up and drop spots

6. **Landscaping around temple tank** – The currently dull and faded temple tank can be revived by proper landscaping and pavement development where visitors can spend some time, without interfering in the temple tank area. The Temple tank must be cleaned regularly. Water retaining plants can be chosen to retain water for a longer period at the tank

Infrastructure Created: ~0.07 acre of landscaping area

7. **Temple Entry Arch** – A new temple entry arch can be developed near the parking site on the ground, for better visibility and identification of the location of additional temple facilities like parking, interpretation centre, etc.

Infrastructure Created: Temple Arch Gate

Soft Interventions

1. **Cleanliness Initiative** – Civic initiatives, along with participation from local communities and pilgrim volunteers can be taken up to keep the temple surroundings clean.



Landscaping around the temple site and Tank area

2. **Ticket Pricing** – INR 20 per person of temple entry can be charged, and the funds thus collected can be utilised for daily maintenance of the temple areas.

3. Develop a **façade maintenance guideline** along with the steps from the temple tank to the main temple.

4. **Monument lighting** – The hill temple enjoys high visibility and is a visual landmark in the region. This can be further accentuated with monument lighting.

5. **Token system for devotees** –

- The tokens can be distributed during peak seasons to regulate and control overcrowding.
- The tokens should be distributed both through online and offline means

6. **Ease of movement around the temple** – To ease out the movement of pilgrims within the temple, the following measures can be taken up:
- Removal of temporary railings,
 - Identification of pilgrim movement area with temporary portable fence,
 - Create a level difference through wood installations,
 - Separate lines for males, females, elderly, and person with a disability.

Amenities Plan

1. **Toilets** - The site must be equipped with ~10 modules/units of the toilet block as identified in Vol A. The location of the toilets shown in the master plan is an indicative representation. It must be tentatively integrated with parking areas and pick up drop off area and facilitation centre
2. **Street Furniture** – The street spaces and the spaces around the temple and tank thus developed for public access must be provided with adequate benches, dustbins, and other street furniture. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, wayfinding, etc.
3. **Drinking water station** – The site must be equipped with ~6-8 units of drinking water stations which can be placed at strategic locations within the temple premises such as at regular intervals of ~500 m. along the circulation path, and at the facilitation centre.
4. **Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
5. **Signages** – Package 2 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.
6. **Technology Interventions** – Package 2 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. CCTV coverage at key locations
 - c. Electronic visitor counters
 - d. Wi-Fi Bollards/enclosure at key locations

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1	Interpretation Centre	~2 acres
2	Tourist Facilitation Centre	~2300 sqft
3	Redevelopment of Accommodation Facilities	~27,500 sqft
4	Paved Parking Area (both for Accommodation centre and Temple Site)	~9,300 sqm
5	Shed Area (for Mini E cars)	~300 sqm
6	Food Court Area	~200 sqft
7	Pick up drop off area	~650 sqm
8	General Landscaping Area	2.45 acres
9	Temple Arch Gate	~1 unit
10	Pay and Use Toilets	~10 units
11	Drinking-Water Station	~8 units
12	Signages	Package 2
13	Technology Interventions	Package 2

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Interpretation centre - Built area	125
2	Interpretation centre - Semi open gallery	37
3	Interpretation centre - Landscaping	2
4	Interpretation centre - Entrance arch	2
5	Tourist Facilitation Centre	42
6	Redevelopment of Accommodation Facilities	550
7	Paved Parking Area (both for Accommodation centre and Temple Site)	118
8	Shed Area (for Mini E cars)	30
9	Food Court Area	84
10	Pick up drop off area	10
11	General Landscaping Area	9
12	Temple Arch Gate	1
13	Pay and Use Toilets	40
14	Drinking-Water Station	6
15	Signages	3
16	Technology Interventions	7
Total		INR 10 – 12 Cr.

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
- The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

- Kiosks** – 2 leasable kiosk units at the proposed Facilitation centre with a rental earning of *INR 6 Lakhs*.
- Parking** – About 290 parking spaces assuming a daily occupancy of 40%, would earn the temple an estimated revenue of *INR 8 Lakhs*.
- BUA Rent (Canteen/ food court)** – The demarcated food court area would earn the temple *INR 12 Lakhs*.
- Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 73 Lakhs*.
- Shuttle Services (Operator)** – A licensed shuttle service operator to manage the EV services catering to the visitors. The operator is estimated to pay an annual license fee of *INR 20 Lakhs* to the temple management.
- Yatri Niwas** – Since only the refurbishment of the Accommodation facilities is proposed and the revenue of which has already been taken into account of the existing temple revenues, it has not been accounted into the revenue estimations considered here.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 1.17 CR at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
 - The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
 - The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
- Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.

- a. **2 Help-desk staff** at the facilitation centre and 1 at the toilet block.
 - b. **2 security personnel** at the proposed parking.
 - c. An **Administration staff** to overlook the operations of the restaurant and the interpretation centre.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
- a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the Yatri Niwas premise, interpretation centre and the community block.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections of the temple.
The projected costs incurred is estimated at *INR 5 Lakhs*.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.
The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 1.15 CR at Y5*.

Given that the estimated revenues (*INR 1.17 Cr.*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 1.15 Cr.*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. **Community hall** at the Yatri Niwas to be rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.
3. While the development of the **Yatri Niwas** be taken up the HR & CE dept. the operation and maintenance of the facility can be tendered out to private hotels operators on a 3-year retainer contract basis. This would help in maintaining a benchmark in the quality of the services rendered.
4. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).
5. The **EV-hub** is to be developed and operated by private vendors by paying an annual lease to the temple management, while the provisioning of the space for operations is to be facilitated by the temple.
6. The demarcated **Retail/restaurant zone** can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items and to F&B service providers to cater to the visitors.

Development phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Interpretation Centre	HR & CE Dept.	Y2 – Y5
2	Tourist Facilitation Centre (both)	HR & CE Dept.	Y0 – Y2
3	Redevelopment of Accommodation Facilities	HR & CE Dept.	Y2 – Y5
4	Paved Parking Area (both for Accommodation centre and Temple Site)	HR & CE Dept.	Y0 – Y2
5	Shed Area (for Mini E cars)	HR & CE Dept.	Y0 – Y2
6	Food Court Area	HR & CE Dept.	Y2 – Y5
7	Pick up drop off area	HR & CE Dept.	Y0 – Y2
8	General Landscaping Area	HR & CE Dept.	Y0 – Y2
9	Temple Arch Gate	HR & CE Dept.	Y0 – Y2
10	Pay and Use Toilets	HR & CE Dept.	Y0 – Y2
11	Drinking-Water Station	HR & CE Dept.	Y0 – Y2
12	Signages	HR & CE Dept.	Y0 – Y2
13	Technology Interventions	HR & CE Dept.	Y0 – Y2

Impact on Communities**Employment opportunities**

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 45,650¹ man-days of construction labour (*spread across 2-3 years of implementation*)

During Operations: Jobs created during operations will entail:

¹ Estimated basis following assumptions:

- Market norm for cost of labor = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labor
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labor assumed for computation = INR 700 per day

- Accommodation Facility = 5 man – days per day²
- Additional personnel deployed at site (Housekeeping, management, security) = 12 Persons³
- Retail and F&B spaces = 5 man-days per day⁴

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 1.15L man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 835 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%

- Cumulative labor man-days = 30% * CAPEX / 700

² As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5-star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁴ Assuming average 2.5 persons per kiosk / shop

- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 1-4: Proposed Master Plan – Arulmigu Subramaniya Swamy Temple, Thirutani (Hill Top Temple)



Figure 1-5: Proposed Master Plan – Arulmigu Subramaniya Swamy Temple, Thiruthani (Temple Land on the Foothills)



2. Swamimalai Swaminatha Swamy Temple,

Site Details

District	Thanjavur
Name of Site	Swamimalai Swaminatha Swamy Temple
Site No:	Site 114 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9567, 79.3259
Land Area:	1.55 acres + 4.5 acres additional land
Peak footfalls:	1 lakh per day (Summer Season)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 5.9 lakhs (2019 - 20) For. – 0.13 lakhs (2019 – 20)
Site Revenues:	INR 4.84 crores (2019-20)
Site Orientation	Pilgrim
Site Potential:	Medium tourism site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~2 km (Swamimalai)
b. Airport:	~96 km (Tiruchirappalli)
c. Highway:	~150 m from SH-22, ~1.5km from NH-36
Trails featured on:	Arupadaiveedu, Siddhar

Swamimalai Swaminatha Swamy Temple is a Hindu temple dedicated to the god Murugan. The temple is one of the six holy shrines of Murugan called Arupadaiveedu, which mark the different phases of his life. The temple is uniquely constructed on a manmade hill. While it is well known amongst the regional and NRI devotees, it is also famous for local metal crafts. The site currently faces major issues of traffic congestion and crowd management. The scope of intervention includes appropriate crowd management strategies at the site and creation of amenities for visitor facilitation. Further, the temple has vacant land available in its vicinity, which is proposed to be effectively utilised to create the site into a nodal religious destination for the town.

Existing Condition

Location

Swamimalai Swaminatha Swamy temple is located in the town of Swamimalai on the banks of a tributary of river Kaveri, in Thanjavur district. Located on the outskirts of Kumbakonam town, the temple is surrounded by retail shops and residential buildings. Several prominent tourist landmarks nearby are Sri Airavatesvara Temple, Arulmigu Chakrapani Swami Temple, Mottai Gopura Vasal Athi Kumbhakeshvarar Temple and Nageswaran Temple.

Existing Layout

The temple covers an area of 1.55 acres. It is built on an artificial hillock of about sixty feet in height, with sixty beautifully laid stone steps representing the Hindu cycle of sixty years, leading to the temple. On the ground floor, there are temples dedicated to Lord Sundareswarer and Goddess Meenakshi. The temple has three gopurams and three praharams. Out of the three praharam, one is at the foothill, the second at midway to the top of the hillock and the third around the sanctum of the Swaminatha Swamy shrine.

In the first praharam the shrines of Dakshinamurthy, Durga, Chandikeswarar and the utsavar of Swaminatha Swamy are located. The second praharam is large and has a marriage hall and the chariot of the temple.

The sixty steps lead to the main sanctum of the temple. The Iravatham (Indra's white elephant) in front of Lord Murugan is present here. It is a unique feature, as all other Murugan temples have a peacock in front of the Lord.

Existing Uses

The temple is mainly used as a worshiping place by the locals and a religious tourist destination by the tourists. The marriage halls of the temple are the most used space on the premises. Some of the other activities conducted in the temple complex are cultural and folk shows. The important festivals celebrated at the temple are Karthigai Dheebam, Kandha Shashti and Kithigai.

Other Land Available

In addition to the temple complex of 1.55 acres, the temple also owns 4.5 acres of vacant land with a pond. Currently, the land is used as parking space during the festivals and peak season.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. **Tamil Nadu Combined Development and Building Rules 2019** - The site lies in the **Proposed Residential Zone** as per the Kumbakolam Local Planning Area Plan. The permissible uses include-

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the baseline stage are summarised below along the 7A Framework:

1. **Attraction** – The Swamimalai Swaminatha Swamy temple is one of the significant temples in Kumbakonam, as it is the fourth among the six padai veedu or sacred shrines dedicated to Lord Murugan. The temple is constructed on a man-made hill (60 feet height), comprising of three arenas: the basement level, the ground level and the top of the hill.
The connection of the region to the ancient art of making bronze Idols is famous all across the state and Southern India. There are dedicated art schools that teach the ancient craft of making handcrafted bronze icons.
2. **Accessibility & Mobility** – The Swamimalai Swaminatha Swamy temple can be accessed from Thanjavur-Kumbakonam road (SH-22). It is accessible from Swamimalai railway station within a distance of 2 km. The most optimal way to reach the temple is through an auto/taxi or public bus. The nearest bus stop is located within 100m of the site and autos are available at any point in time near the temple site. The access road to the temple is narrow and often ends in congestion during peak season.

Parking- There is paid parking facility with a capacity to park 50 cars is provided outside of the temple complex for the tourists.

- Bus – INR 50
 - Car – INR 20
3. **Amenities** – The condition of amenities present at the site is fairly good.
- The temple campus has 3 marriage halls that can be rented and used for marriages.
 - The site has 8 clean and well-maintained toilet blocks.
 - Free drinking water tap is installed at the site.
 - There are 54 CCTV cameras, covering all the key areas, entry/exit points, along with 3 security guards during both the shift. However, there is no frisking / scanning of visitors being done at entry.
 - Site boundaries are walled and there is enough street lighting around the site.
 - Fire safety equipment, emergency exits and emergency evacuation signages are provided. However, the Emergency exit routes are not marked.
 - There are 10 dustbins provided in and around the temple site which seems to be adequate in number for the temple complex, there were no issues observed with the waste collection and management at the site.
 - The temple has facilities for paid luggage rooms, paid footwear storing area and free of charge waiting area.
 - There are various ticket options available based on the nature and purpose of the visit (Archana ticket INR 5, Special darshanam INR 50). It also offers concessions for senior citizens.
 - A backup power facility is available at the temple complex.
 - The ease of movement around the site is good with a chance of improvement.
 - The site is equipped with ramps and wheelchairs for elderly and physically challenged visitors.
 - There are retail shops available outside the temple for prashadam, packaged food, grocery, footwear and other items.

The temple has only a couple of amenity related issues-

- No F&B and Retail shop present inside the temple site, only 1 prasadam stall was observed outside the temple.
- The access road to the temple is observed to be clean, however, it is narrow and often ends in congestion during peak season.
- There are issues of cleanliness outside the temple premises and noise observed due to the presence of hawkers, beggars and heavy road traffic.

4. **Awareness** - The temple has gained popularity and belief amongst the local devotees as well as foreign tourists. It is a well-known destination for believers of Lord Murugan. There is an entirely dedicated website that provides all the information about the temple. The temple owing to its location in Kumbakonam (The town famous for its handcrafted metal items) also attracts tourists from the East-Asian Region of Malaysia and Japan. There are several travel bloggers and architecture enthusiasts, who have written about the great architecture and other details of the temple. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor etc.
5. **Activities** – On normal days, the temple arranges a free-of-cost cultural and folk performance show in the Tamil language, which can serve as a means of entertainment for the visitors in the waiting area. The temple also celebrates the festival of Karthigai Dheebam, Kandha Shashti, Kithigai with pomp and glory. The temple campus consists of 3 marriage halls with a seating capacity of 150 persons.
6. **Accommodation** – There are around 5 accommodation options available for tourists nearby the temple. It includes 3 Oyo rooms, 1 dormitory and two 4/5-star hotels. These accommodation options range from INR 1500 – INR 3000. Some of the decent stay options are available at Kumbakonam town at a minimum distance of 5 Km from the temple.
7. **Association with Community** – There are no guides at the temple. The festivals of the temple enjoy immense participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts and food items increasing congestion.

Figure 2-1: Location & Existing Layout, Swamimalai Swaminatha Swamy Temple

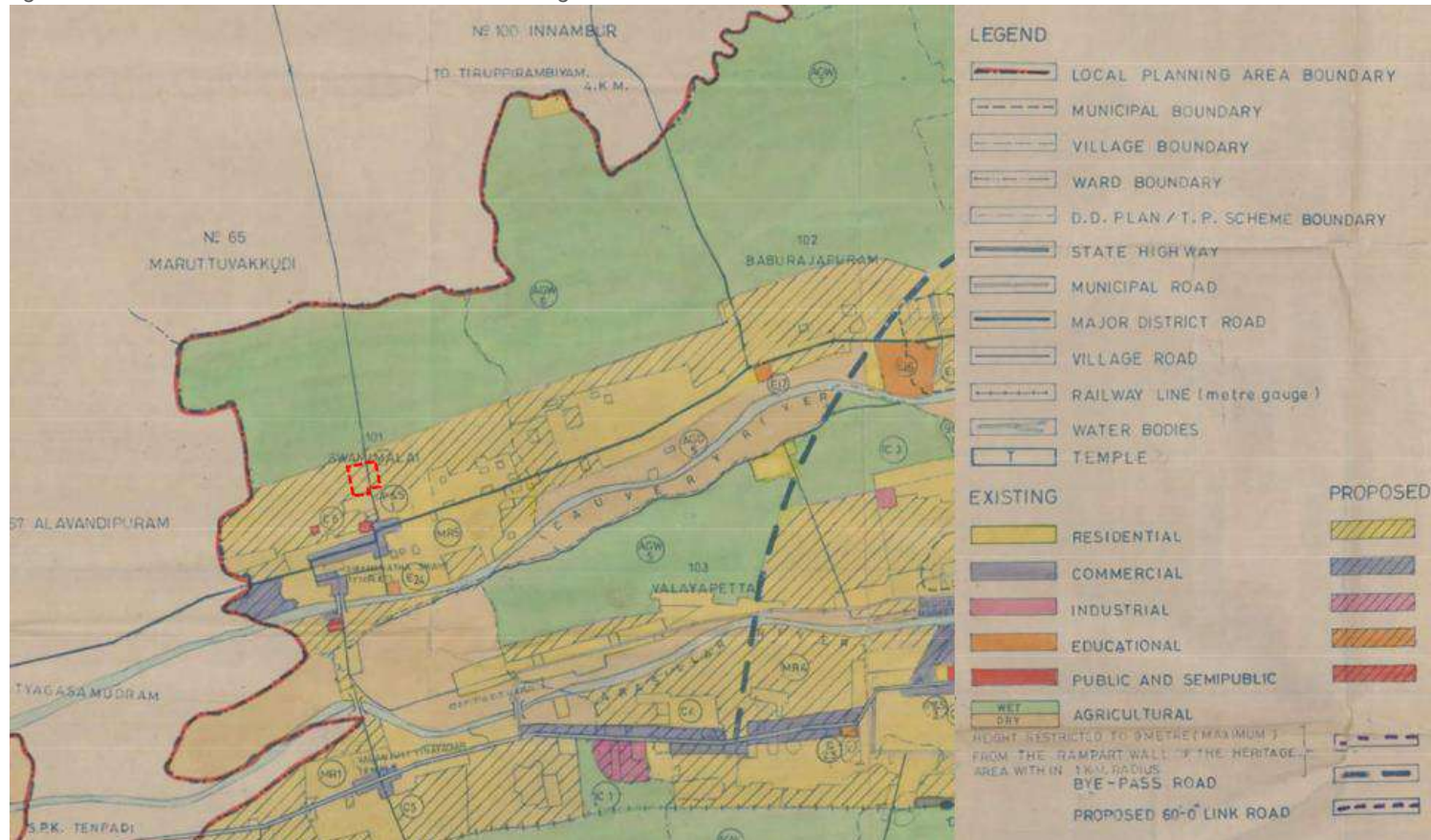


Site Pictures





Figure 2-2: Site Land Use- Kumbakolam Local Planning Area



Vision for the Site

Swamimalai Swaminatha Swamy Temple is one of six padai veedu or sacred shrines dedicated to Lord Murugan. The temple enjoys immense popularity among South Indians and Tamil foreigners. It has easy accessibility from Kumbakonam city with well-developed public amenities and parking space.

The temple is well-maintained and the temple authorities ensure the safety and security of the tourist. The temple gets overcrowded in peak hours and is often occupied by beggars and hawkers, affecting the urban character of the temple.

Swamimalai Swaminatha Swamy Temple has the potential to be developed into a nodal religious tourist attraction for the town with the development of a pilgrim rest house. This shall facilitate higher time spent and leverage ancillary recreation activities for visitor engagement.

Thus, the vision for the site is to develop it as a pilgrim tourist destination by improving existing infrastructure and basic amenities and effectively utilizing the available vacant parcels of land outside the temple complex.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance.

Given the location of the site and its rich historical value, there is significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and the elderly).

- **Tourist Projections** – The site is categorized as a medium tourism site with moderate HVT potential.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	580	1,491	3,341
High Value Tourists (HVT) (Both domestic and foreign)	20	65	145
Maximum Carrying Capacity	5.908		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

The objectives of Master planning at this site includes:

- Developing a **Pilgrim Rest house (Yatri Niwas)** at the available vacant land on the northern side for pilgrims.
- Developing **pilgrim recreational spaces** on available vacant land.
- **Provision of paved parking and crowd control measures** – Provision of the paid parking system and implementation of crowd control measures to reduce the congestion.

Hard Interventions

1. **Yatri Niwas (Pilgrim Accommodation Facility)** – A yatri niwas for pilgrim's accommodation will be developed on vacant land situated on the north side of the temple. As there are many trees present on this vacant land, 10 cottages are proposed as a pilot project on the available land without cutting any tree, if required, more cottages can be developed in the future. Each cottage will have

a room with an attached toilet and semi-open seating space. It also has 3 small F&B kiosks.

Infrastructure Created:

- BUA- 500 sqm
- Hardscape- 1750 sqm
- Softscape- 150 sqm
- Dustbins- 2

2. **Beautification of Pond-** The site has a beautiful pond on the southern side of available vacant land. Beautification of this pond will provide an additional recreation space for the tourists. A pedestrian entrance gate will be provided to enter the pond area. A paved walkway could be proposed around the pond with seating spaces and street lights to make it more aesthetically appealing.

Infrastructure Created:

- Paved Walkway- 260m and 3 m wide
- Temporary Seating- 4
- Street Lights- 4
- Dustbins- 2

3. **Pilgrim Recreation Space with Garden** –There is an extensive green area present in the central part of the vacant land near the pond area.

To create relaxing spaces for the pilgrims, this area can be developed into a landscaped garden. The landscaping shall be done using native flora, and should, as far as possible, be the least maintenance-oriented and be self-sustainable. Adequate garden furniture like benches, dustbins, etc. are proposed to be provided in the garden, adhering to the design guidelines for street furniture.

Infrastructure Created:

- Paved Walkway - 950 m length and 3 m wide
- Softscape – 10,800 sqm
- Temporary Seating – 6 units
- Street Lights- 4

4. **Parking-** Paid parking facility is proposed on the north side of the vacant area with a separate entry near the proposed Yatri Niwas. The parking has enough space for 80 cars and 30 buses.

Infrastructure Created:

- Parking- ~100 ECS
- Softscape- 480 sqm
- Street lights- 4

5. **Construction of a Boundary Wall-** Construction of a boundary wall is proposed around the vacant land.

Infrastructure Created: 680 m.



Reference images for Yatri Niwas



Reference images for Pond Beautification



Reference images for Pilgrim Recreation Space with Garden

Soft Interventions

- 1. Plantation** – The temple complex could be provided with potted plants around the temple, to reduce the noise coming from the surrounding areas.
- 2. Events-** The open space and shaded pavilions proposed at the site could be used for organizing local craft fairs, cultural events, festivals, which will make the place more alive and vibrant throughout the year.
- 3. Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.
- 4. Crowd Management** – As the access road is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
 - Access timings can be made exclusive for high-value tourists.
- 5. Curation of facilitated tours** – Incorporate the site in Kumbakonam temple tour. These will be facilitated with licensed tour guides and hop on hop off services.

Amenities Plan

- 1. Signage (Package 2)** – Package 2 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in design guidelines.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Yatri Niwas (Pilgrim Accommodation Facility)- <ul style="list-style-type: none"> • BUA • Hardscape 	500 sqm 1750 sqm
2	Paved walkway	1210 sqm
3	Softscape	11,400 sqm
4	Parking	100 ECS
5	Street Lights	12
6	Temporary Seatings	10
7	Dustbins	4
8	Construction of a boundary wall	680m
9	Signage (Package 2)	1
10	Entrance gate	2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discuss in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Yatri Nivas (Built Area)	135
2	Yatri Nivas - Landscaping	1
3	Paved walkway	8
4	Softscape	10
5	Parking	29
6	Street Lights	2
7	Temporary Seating's	1
8	Dustbins	1

#	Project Component	Cost (INR Lakhs)
9	Construction of a boundary wall	37
10	Signage Package 2	3
11	Entrance gate	3
Total		INR 230 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- All revenues are unescalated.*
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

The following revenue sources are expected for the site:

- Parking** – Capturing 38 ECS at 30% occupancy per day at INR 20 per ECS.
- Yatri Niwas** – Capturing 10 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships

- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 40 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- The costs are un-escalated.*

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **security personnel** for the parking and the Yatri niwas.
 - An **Administration staff** each to overlook the operations of the vending area and the Yatri niwas.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Pond Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the pond such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 36 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

⁵ The development of the proposed component can be taken up at later phases based on the increase in future footfalls.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the Yatri Niwas at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Yatri Nivas ⁵	135	Y3 – Y5	HR&CE
2	Yatri Nivas - Landscaping	1	Y0 – Y2	HR&CE
3	Paved walkway	8	Y0 – Y2	HR&CE
4	Softscape	10	Y0 – Y2	HR&CE
5	Parking	29	Y0 – Y2	HR&CE
6	Street Lights	2	Y0 – Y2	HR&CE
7	Temporary Seating's	1	Y0 – Y2	HR&CE
8	Dustbins	1	Y0 – Y2	HR&CE
9	Construction of a boundary wall	37	Y0 – Y2	HR&CE
10	Signage Package 2	3	Y0 – Y2	HR&CE
11	Entrance gate	3	Y0 – Y2	HR&CE
Total		INR 230 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 9,900⁶ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 7.2 man – days per day⁷
- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁸
- Retail and F&B spaces = 7.5 man-days per day⁹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 24,700 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

⁶ Estimated basis following assumptions:

- Market norm for cost of labor = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labor
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labor assumed for computation = INR 700 per day
- Cumulative labor man-days = 30% * CAPEX / 700

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 385 Cr. at the site¹⁰.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.

⁷ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5-star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁹ Assuming average 2.5 persons per kiosk / shop

¹⁰ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area. These mainly include the Kumbakonam metal workers.

Figure 2-3: Proposed Master Plan – Swamimalai Swaminatha Swamy Temple



3. Sikkal Singaravelar Temple, Nagapattinam

Site Details

District:	Nagapattinam
Name of Site:	Sikkal Singaravelar Temple
Site No:	Site 152 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.7567, 75.7987
Land Area:	~0.8 acres (Temple) ~1,110 acres (Additional Land)
Peak footfalls:	~1,000 per day (May – June)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 8.1 lakhs (2019 – 20) For – nil (2019 – 20)
Site Revenues:	INR 95 lakhs (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~1 km (Sikkal)
b. Airport:	~300 km (Chennai International Airport)
c. Highway:	~200 m from NH83
Trails featured on:	Arupadaiveedu

The temple is one of the most popular Murugan Temples and the contender for the seventh Padaiveedu (abode) of Murugan. The temple is one also of the rare traditional Hindu temples housing both Shiva and Vishnu deities in the same complex. Largely a regional pilgrim site, the temple provides sufficient facilities, however, it lacks in providing a good experience to its visitors. Therefore, the scope of interventions includes visitor facilitation and provision of landscaped areas to enhance the aesthetic appeal of the temple. Furthermore, the development of temple tank area to create an engaging space and improvement of access to the site is envisioned.

Existing Condition

Location

The Singaravelar temple is located in the Sikkal village, near Nagapattinam district. It is ~5 km to the west of Nagapattinam city and ~18 kilometres to the east of Thorofare on the way to Nagapattinam. Located on the Nagapattinam-Tiruvarur Road, the site enjoys excellent road connectivity. The nearest railway station is Sikkal which ~1 km away, while the nearest airport is Chennai International Airport at a distance of ~300 km. The site is surrounded by mixed-residential development. The other tourist attractions near the temple are Sri Kayaroghanaswamy temple, Sri Neelayadatchiamman temple, Sri Soundiraraja Perumal temple, and Sri Dhamodaranarayana Perumal temple.

Existing Layout

The ~0.8 acres of the temple are constructed in Dravidian-style architecture. It has the following prominent characteristics:

- There is 80 feet high, seven-tiered Rajagopuram at the entrance.
- There are two temples in the complex namely Navaneetheswarar (shiva) Temple and a Vishnu Temple.
- The Navaneetheswarar Shiva Temple is the main temple and houses the Singaravelan temple in its complex.

- There are Sannadhis of various deities in the temple complex.
- The complex houses several sculptures, a golden vehicle, and a Kalyana chariot.
- There is a separate sanctum for Aanjaneyar in the north-western corner.
- There are numerous mandapams in the complex namely Kartikai Mandapam and Kalyana Mandapam.
- The temple has three holy tanks – Ksheera (i.e., milk), Gaya, and Lakshmi Tank.
- There are numerous inscriptions from the Chola and Vijayanagar period spread in and around the temple complex over an area of ~2 acres.

Existing Uses

The site serves as a temple attracting tourists from all over the country. Cultural events like Bharatanatyam, Paichu Potti, Patti Mandharam are organized in the temple complex. Many festivals and marriage ceremonies are organized in the temple complex. Soora Samharam is the primary event organized in the temple. Other than religious uses, visitors also use the following amenities provided by the temple.

- Administration office
- Toilet blocks
- Ticket Centre
- Luggage/Cloak Rooms
- Free Footwear Stands
- Prasadam stall and retail outlet

Other Land

In addition to the ~0.8 acres of the temple complex, the temple also owns 1,110 acres of land which is used for agriculture and residential purposes.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

- 1. TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair,

alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction –** The Singaravelar temple is one of the 275 Paadal Petra Sthalams and is one of the most famous Murugan temples. It is the contender for the unofficial seventh Padaiveedu (abode) of Murugan, along with the popular Arupadaiveedu (six abodes of Murugan). It is one of the rare traditional Hindu temples housing both Shiva and Vishnu deities in the same complex. One unique aspect of the temple is the sweating observed on the idol of Murugan at the Soora Samharam event during Skanda Sashti. Other than its religious attractions, the site does not offer any other attraction to the tourists.
- 2. Accessibility –** The temple is located on the Nagapattinam-Tiruvarur Road and thus is easily accessible via a wide urban road. Regular buses ply between the Sikkal and Nagapattinam city. The average fare to reach the site from Nagapattinam is INR 10 by bus, INR 120 by cab, and INR 100 by auto. The site has a bus stand, cab stand, and auto stand at a distance of ~300 m. The site has good rail connectivity as the nearest railway station is ~1 km away from the temple. The major modes of transport people use to commute to the site include tourist/public bus, and private/hired transport.

3. Amenities – The temple provides decent tourist amenities within and around the temple premises. The site has facilities of washrooms, drinking water, Divyaang friendly measures, safety & security measures, and an adequate number of dustbins to keep the site clean. However, the temple lacks to provide the following:

- No Tourist Information Center.
- No layout and wayfinding signages.
- No audio-visual tours/guides are available on site.
- Unpaved approach road.
- No lodging facility in neighbourhood.
- Insufficient Street lights

Parking – There is no designated space for parking, therefore, street parking is practiced on the site which is chargeable. The fee charged on an hourly basis is INR 20 for a car, INR 5 for a bike, and INR 30 for a van.

4. Awareness – The temple is popular among tourists and receives a footfall of ~400 – 500 on Fridays, and Tuesdays, ~200 on other days, and ~500 during summers. It is frequently visited by families and large groups who are mostly from Kerala, Karnataka, and Andhra Pradesh. It sometimes receives foreign tourists from Malaysia, Sri Lanka, and Singapore as well. The temple finds mention in popular travel journals like Trip Advisor. The temple also has an online website managed by HR & CE that provides details about the temple.

5. Activities – The major festival celebrated at the temple is Skanda Sashti which attracts as many as 30,000 visitors. Other festivals like Brahmotsava, Chithrai Thiruviza, Thaipoosam, Diwali, Kithigai attract 1000 visitors per day. Numerous marriage ceremonies are organized in the temple complex. Cultural events like Bharatanatyam, Paichu Potti, Patti Mandharam are organized in the temple complex.

6. Accommodation – The site does not offer any lodging facilities in the neighbourhood. There are very limited options of budget hotels that can be found at a distance of ~10 km away from the temple. To find decent accommodation visitors have to travel ~40 km away towards Vailankanni, Kumbakonam, etc.

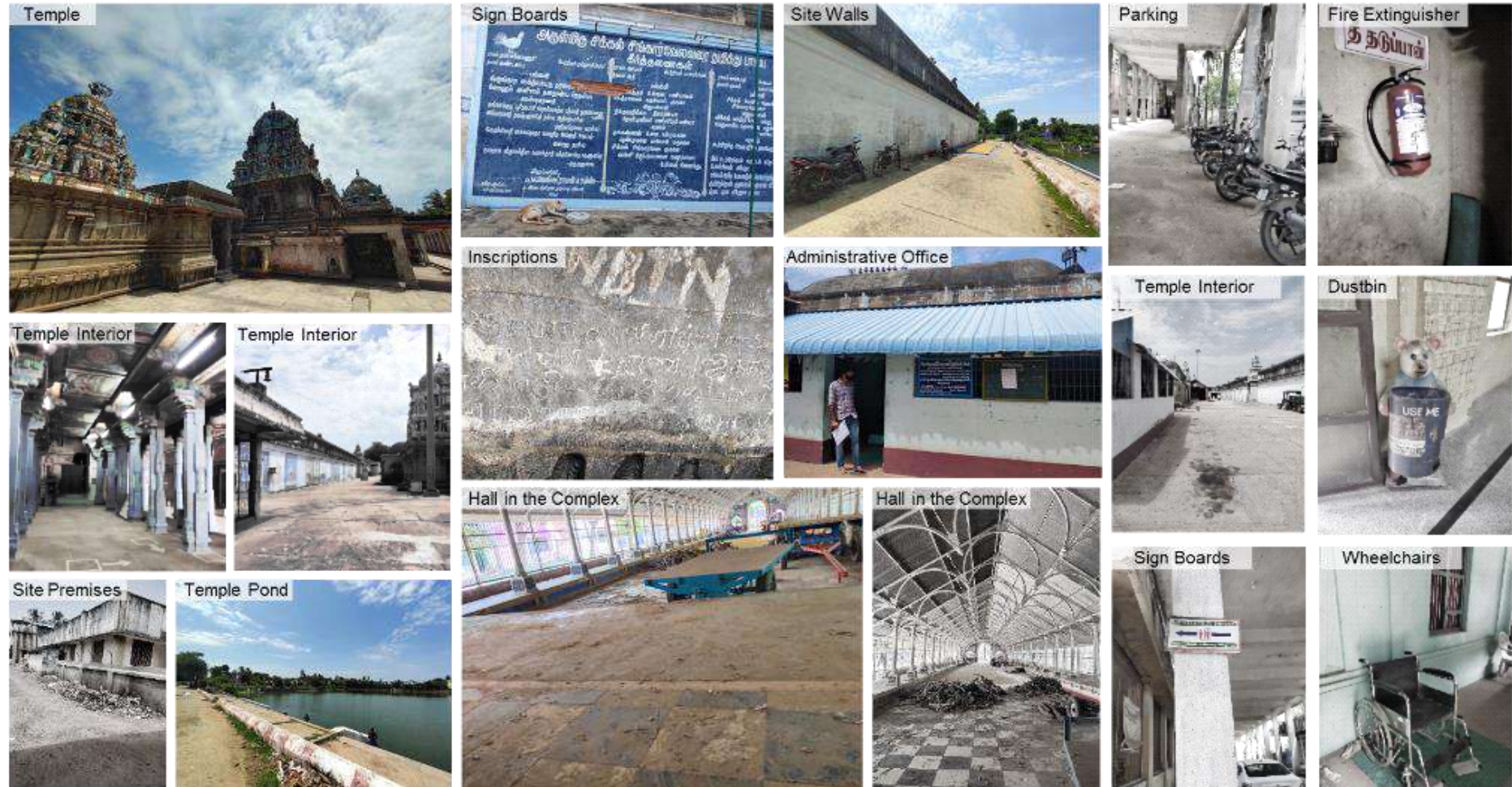
7. Association with Community – Currently the locals are involved in the basic transportation and commercial activities around the site. They also contribute to the regular operation and maintenance of the site. There is, however, an immense potential to involve the local community and develop an ecosystem to generate additional employment opportunities by involving them in retail operations, appointing them as guides for temple tours, and providing a platform to showcase the local art forms and shows depicting the temple history.

Figure 3-1: Location & Existing Layout.



Site Pictures





Vision for the Site

The Singaravelar temple having the Shiva temple, which is one of the 276 Devara Paadal Petra Shiva Sthalam is popular among locals and pilgrims. The site is secluded but is easily accessible and provides many amenities within temple premises. However, the temple lacks to provide some basic facilities for pilgrims and local visitors. Moreover, the temple lacks in providing an engaging environment.

The temple has a huge opportunity to enhance its aesthetic appeal and provide facilities to its visitors as it has a huge open space within the temple. It has a beautiful temple tank that can be developed to engage visitors.

The vision for the site is to enhance visitors' experience and utilize the available vacant space around the main shrine to propose landscaped gardens. Besides, the temple tank area will be developed to create an engaging space within the temple premises. Furthermore, to facilitate visitor access to the site, the approach road is proposed to be paved and provided with a designated parking.

- **Target Visitor** – The site is largely a pilgrim site, with less footfall majorly constituting of locals and pilgrims due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	810	1,643	2,820
High Value Tourists (HVT) (Both domestic and foreign)	-	-	-
Maximum Carrying Capacity	3,939		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious and architectural significance and its low popularity among pilgrims and domestic tourists, the concept of the masterplan is to:

- **Improving pilgrims' and locals' experience** at the temple – by enhancing soft landscaping and addition of tourist facilitation center having washroom, drinking water station, temple-souvenir shop, waiting area, luggage room, etc.
- **Utilisation of temple tank** by developing steps along the tank to enhance interaction between temple tank and pilgrims.
- **Ease of convenience** of pilgrims and locals by providing them designated parking space, and paved approach road.
- **Improving temple visibility** through signages, and appropriate marketing and promotion.

Hard Interventions

1. **Tourist Information/Facilitation Center** – A small facilitation center with an inquiry desk, luggage room, changing room, and rest/waiting area, toilets, drinking water station and a temple-souvenir shop can be developed for tourist convenience and ease at the site. It can be placed near the entrance of the temple on the south side of the temple complex. This development will be as per the design guidelines.

Infrastructure Created: ~150 sqm of building.

- 2. Landscaping and designated Paved Pathways**– The temple has a lot of hard surfaces, especially around the main temple shrine. This land can be utilised more judiciously by adding more greens, designated pathways, and naturally shaded seating areas. This will enhance the aesthetic appeal of the temple. Therefore, landscaping along with designated paved pathways linking entrance, proposed tourist facilitation center, main temple shrine, and other small shrines within the temple complex is proposed. The landscaping will be done using native flora and locally sourced pavers. The entire pathway will be shaded using natural shading devices to make walking convenient for devotees visiting the temple in the hot climate.

Infrastructure Created: ~2100 sqm of landscaping and ~100 m long, paved-shaded pathways.

- 3. Development of temple tank steps** – The temple has a huge beautiful temple tank located on the west side of the main shrine. The steps running along the east side of the tank will be constructed to enhance the interaction space between the water tank and visitors. This area will be utilized to engage tourists to do activities, with a focus on outdoor relaxation, natural experience, and wellness of the visitors.

Infrastructure Created: ~1200 sqm of steps construction.

- 4. Redevelopment of approach road** – The approach road to the temple and around the temple tank linking it to the main Nagapattinam-Tiruvarur Road is unpaved and thus causes inconvenience to visitors. Therefore, the entire stretch of road is proposed to be paved with pavers for ease of movement around the site.

Infrastructure Created: ~2000 sqm of paved road.

- 5. Temporary Holding Space** – As there is no vacant land within and outside the temple premises, therefore the temple is popular and draws visitors for religious and other purposes such as marriages. During peak-seasons overcrowding is witnessed. Therefore, to solve this issue, a temporary holding space having open waiting area/tents outside the temple premises is proposed for peak seasons only. It will be located on the east side of the Vishnu Temple. The land on which holding space is proposed does not come under temple-ownership. Thus, it is recommended to the temple authority to obtain this land in case of private ownership.

Infrastructure Created: ~300 sqm of paved holding space.



Landscaped Garden



Paved-Shaded Pathways



Temporary Holding Space

Soft Interventions

- 1. Marketing and Promotion** – As it was observed that the temple has moderate awareness among pilgrims, therefore to enhance the visibility of the temple, it has to be marketed well. Its location on the Nagapattinam-Tiruvarur Road shall be taken into an advantage by installing signages at the road to attract and aware travelling tourists. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract high-value tourists.
- 2. Guided Tours**– Self-guided audio tour provision shall be present on the site to portray the history of the site. As the temple has many shrines within and outside the temple premises, therefore, the self-guided tour shall aware the tourists of the historical significance of these shrines. Licensed guides can also be deployed to guide the visitors on the site.
- 3. Community Engagement** – The locals around the temple are well aware of the temple's history and significance. Therefore, the local community can be encouraged to participate in various activities within and around the temple. Locals can be trained and appointed as guides in the temple and they can be given ownership of souvenir shops in the facilitation centre on a rotational basis.

Amenities Plan

- 1. Signage** – Signages can be installed on the Nagapattinam-Tiruvarur Road for the outreach of the temple. Layout and wayfinding signages shall be erected at appropriate places for the ease of movement of visitors. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines .
- 2. Parking** – Currently the temple does not have any designated parking space resulting in on-street parking outside the temple premises. Therefore, the designated parking is proposed on the approach road. It will be located on the southern side of the Vishnu Temple. Proposing designated parking on the immediate outside of the temple premises will solve the issue of on-street parking and will enhance visitors' convenience. *Infrastructure created – ~325 sqm of paved parking area having 26 ECS.*

- 3. Technology Interventions** – For tourist's awareness on the site, self-audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:

- Free WiFi
- Compatibility with TN Assist App
- The package shall exclude CCTV's as there are sufficient numbers of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Facilitation Center (Type 1)	150 sqm
2	Soft Landscaping	2100 sqm
3	Hard Landscaping (2 m wide)	100 m
4	Construction of temple tank steps	1200 sqm
5	Redevelopment of Approach road (paving of road)	2000 sqm
6	Temporary Holding space (Paved area)	300 sqm
7	Signage Package 1	1
8	Parking (325 sqm of paved parking yard)	26 ECS
9	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discuss in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Facilitation Centre (Type 1)	15
2	Soft Landscaping	2
3	Hard Landscaping - Pathway	2
4	Construction of temple tank steps	12
5	Redevelopment of Approach road (paving of road)	13
6	Temporary Holding space (Paved area)	2
7	Signage Package 1	1
8	Parking (325 sqm of paved parking yard)	7
9	Technology Package 1 (Exclude CCTV's)	1
Total		INR 55 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosk** – Captures 1 kiosk to be rented out at INR 1.5 Lakhs per annum.
- Parking** – Capturing 25 ECS at 30% occupancy per day at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 3 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **security personnel** for the facilitation centre.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Temple Pond Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple pond such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 8 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Facilitation Center (Type 1)	15	Y0 – Y2	HR&CE
2	Soft Landscaping	2	Y0 – Y2	HR&CE
3	Hard Landscaping - Pathway	2	Y0 – Y2	HR&CE
4	Construction of temple tank steps	12	Y0 – Y2	HR&CE
5	Redevelopment of Approach road (paving of road)	13	Y0 – Y2	HR&CE
6	Temporary Holding space (Paved area)	2	Y0 – Y2	HR&CE
7	Signage Package 1	1	Y0 – Y2	HR&CE
8	Parking (325 sqm of paved parking yard)	7	Y0 – Y2	HR&CE
9	Technology Package 1 (Exclude CCTV's)	1	Y0 – Y2	HR&CE
Total		INR 55 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,400¹¹ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 6,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 285 Cr. at the site¹³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹¹ Estimated basis following assumptions:

- Market norm for cost of labor = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labor
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labor assumed for computation = INR 700 per day

- Cumulative labor man-days = 30% * CAPEX / 700

¹² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 3-2: Proposed Master Plan - Sikkal Singaravelar Temple



4. Shri Dhandayuthapani Temple, Palani

Site Details

District	Dindigul
Name of Site	Arulmigu Shri Dhandayuthapani Temple
Site No:	Site 187 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.4388, 77.5202
Land Area:	~5.2 acres + ~150 acre Other lands
Peak footfalls:	~3 lakhs per day (April – May, July – August)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 1.27 crore (2019 - 20) For. – 33,500 (2019 – 20)
Site Revenues:	INR 167 crores (2019 – 20)
Site Orientation	Pilgrim
Site Potential:	Very High Tourism Site
HVT Potential:	High HVT Potential & High HVT footfall
Connectivity:	
a. Railway station:	~2 km from Palani Railway Station
b. Airport:	~115 km from Coimbatore Airport
c. Highway:	2km from SH-83, ~1.5 km from NH-83
Trails featured on:	Gopuram, Arupadaiveedu

The Arulmigu Shri Dhandayuthapani temple is one of the most popular Hindu temples in India. It is widely known and visited by crores of devotees each year. The temple has a well-structured administration to govern its day-to-day activities. Given the magnitude of visitors, the scope of interventions at this site is planned to enhance the visitor experience with traffic calming and pedestrianization techniques.

Existing Condition

Location

The temple is situated on the hills of Palani, known as the Sivagiri at a height of 160 meters above ground level. The hill has a circumference of 2.84 km. Traditionally, access to the temple was by the main staircase, which is made up of 689 steps cut into the hillside or by the Yanai-Padhai or elephant's path, used by the ceremonial elephants. It is located about 150 km from Coimbatore city and 36 km from the Dharapauram junction. The temple is surrounded by mixed-use development on its foothills. Some of the well-known tourist places around the temple include Idumban Temple (200 m), Thiru Avinan Kudi Temple (1 km), Varathamani dam (9 km), and Palar dam (9 km).

Existing Layout

The temple covers an area of ~5.2 acres. The sanctum of the temple is of early Chera architecture while the covered ambulatory that runs around it bears unmistakable traces of Pandya influence, especially in the form of the two fishes, the Pandyan royal insignia. Other prominent features of the temple include:

- The walls of the sanctum bear extensive inscriptions in the old Tamil script.
- There is a five-tiered Rajagopuram that stands tall on the Palani hill.
- Surmounting the sanctum, is a gopuram of gold, with numerous sculptures of the presiding deity, Kartikeya, and gods and goddess's attendant upon him.
- In the first inner Praharam or ambulatory, around the heart of the temple, are two minor shrines, one each dedicated to Shiva and Parvati.
- There is a shrine for the sage Bhogar besides the Shiva and the Parvathi shrine.

- In the second precinct, is a celebrated shrine of Ganapati, besides the carriage-house of the Muruga's Golden Chariot.
- The four sides around the temple are paved to accommodate the movement of the temple car during festivals.

Existing Uses

The temple is currently used for religious purposes. Apart from that, the temple is flocked by devotees to celebrate festivals of Thai-Poosam (The most important festival of the temple), Pankuni-Uththiram, Vaikhashi-Vishakham, and Soora-Samharam. The temple has the following infrastructure dedicated for other uses such as:

- An Administration office
- A registration office
- A police outpost
- A first-aid centre
- 3 retail store selling prasada and Panjamartham
- A Canteen
- A Mandapam and a Charity hall (Annadhana Kudam)
- A waiting hall
- A winch train station
- A rope car station
- Toilet blocks

Other Land

Apart from 5.2 acres of temple complex atop the Palani hill, the entire hill which amounts to about 98 acres belongs to the temple. In addition to the hill, the surrounding lands about 150 acres including the hill belong to the temple. The temple has several facilities such as accommodations, office, parking, etc. built on these lands and the vacant lands within the vicinity can be leveraged for any planned developments. The temple also owns about 600 acres of land across the neighbouring districts.

Masterplanning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – As per the Master Plan, the temple complex lies in an Institutional Zone. The permissible uses include:

For Institutional Zone

Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multilevel parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

- 2. TN HRCE Rules, 1959**

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction – The major attraction factor of the Palani temple is the religious aspects tied to it. It is the most prominent temple dedicated to the Hindu deity – Murugan. This temple also has several mentions in important epics and other scriptures in Hindu mythology. The Panchamirtham that is served and sold in Palani has been certified with the prestigious G.I. tag. The main shrine that holds the presiding deity has a breath-taking dome made of gold. The temple chariot is made of using 4.73 kg of gold, 63 kg of silver and is embedded with diamonds. The religious factor, their faith, and serene surrounding of the temple attract visitors from all over the country.

2. Accessibility – The temple has good road access and can be reached via NH 83. There are frequent state buses and private buses from the Palani bus stand at the foothill of the temple to major districts in Tamil Nadu and Kerala. The temple has a dedicated Palani railway station, which is 2 km from the temple. The nearest airport is the Coimbatore Airport, which is about 115 km from the temple. There are frequent buses, autos and taxis available from the airport and railway station to Palani temple. The major modes of transport people use to commute to the site include public buses, tour buses, and private transport. Apart from these devotees walk to the temple from various parts of the state.

Accessibility from the foothill to the temple atop is also good as there is a winch, which operates from 6 a.m. on ordinary days and 4 a.m. during festive occasions and a rope car which operates from 7 a.m. to 12:30 p.m. and 1:30 p.m. to 5 p.m. Both winch and the rope car are closed after the Irakkala Pooja (night Pooja) at 8 p.m. Apart from this, there is a pilgrim walkway which consists of 689 stairs from the foothill to the temple atop. There is also a separate walkway for the elephants used in temple rituals.

3. Amenities – Tourist amenities within and around the temple are excellent. The temple provides all tourist needed facilities of drinking water, toilets, safety & security, divyang friendly measures, relaxing and accommodation.

Parking – The temple has multiple parking facilities available at the foothills of Palani hill which allows visitors to park vehicles without any charges. The total parking area constitutes ~5 acres with a capacity of ~4000 cars.

4. Awareness – The temple is immensely popular across the country and receives high tourist footfall. It is the most prominent Murugan temple in the country. It has

been mentioned in all popular online travel and tourism platforms. The temple maintains its website. The HR&CE also has a dedicated website for the Palani temple. Apart from this, the Dindigul tourism department has a separate web page dedicated to the temple.

5. Activities – The temple hosts many religious as well as cultural activities. One of the main traditions of the temple is the tonsuring of devotees, who vow to discard their hair in imitation of the Lord of Palani. Another is the anointing of the head of the presiding deity's idol with sandalwood paste, at night, before the temple being closed for the day. The paste, upon being allowed to stay overnight, is said to acquire medicinal properties and is much sought after and distributed to devotees, as Rakkala Chandaṇam. Devotees carrying Kavadi, an ornamental mount decked with flowers, glazed paper, and tinsel work and wearing ochre clothes themselves on foot from long distances is a commonly followed worship practice.

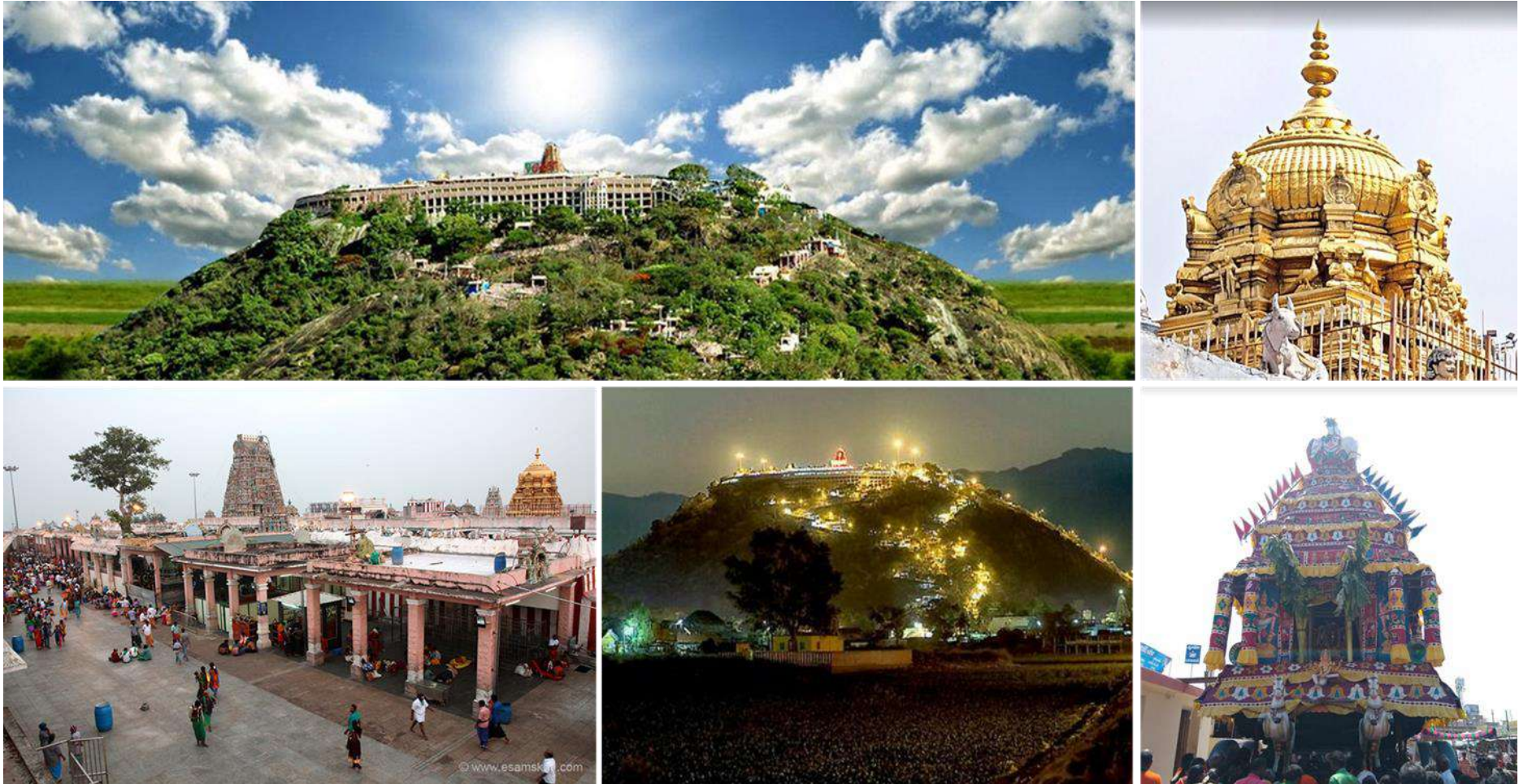
6. Accommodation – The temple owns about 25 dormitories each with a capacity of more than 200 people. Other categories of accommodation provided by the temple include air-conditioned rooms (60) and standard rooms (202) at nominal prices ranging from INR 300 (basic rooms) to INR 2500 (Best in class - Raja Alangaram Illam-AC). Apart from this, there are several hotels and guest houses around the Palani town owned by private players. These privately operated hotels majorly are of budget and 2-star categories. The average tariff for a standard double room varies from INR 500 to INR 2500.

7. Association with Community – More than half of the population in the Palani town is located at the foothills of the Palani temple and is either directly or indirectly associated with the different operations of the temple. This ranges from the multitude of retail stores set up for the visiting devotees, to other operational aspects of the temple like accommodation, parking, administration, etc. During interaction with the site manager, Mr. Natarajan, He had expressed his concern about the hawkers going around the transport hubs like bus depot and the railway station to exploit the devotees by charging higher prices for the services the temple trust does for free or for a very nominal sum.

Figure 4-1: Location & Existing Layout



Site Pictures



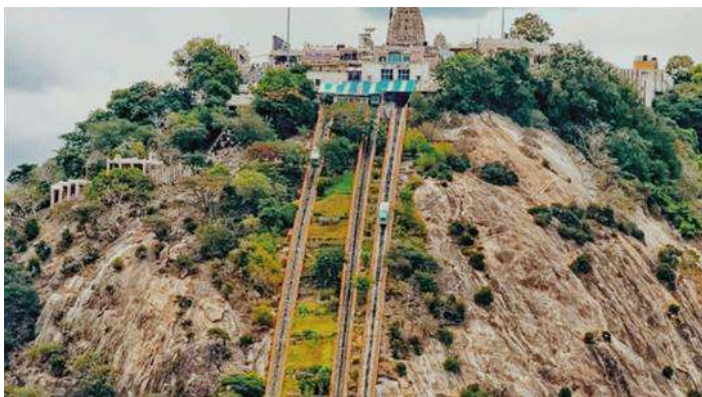
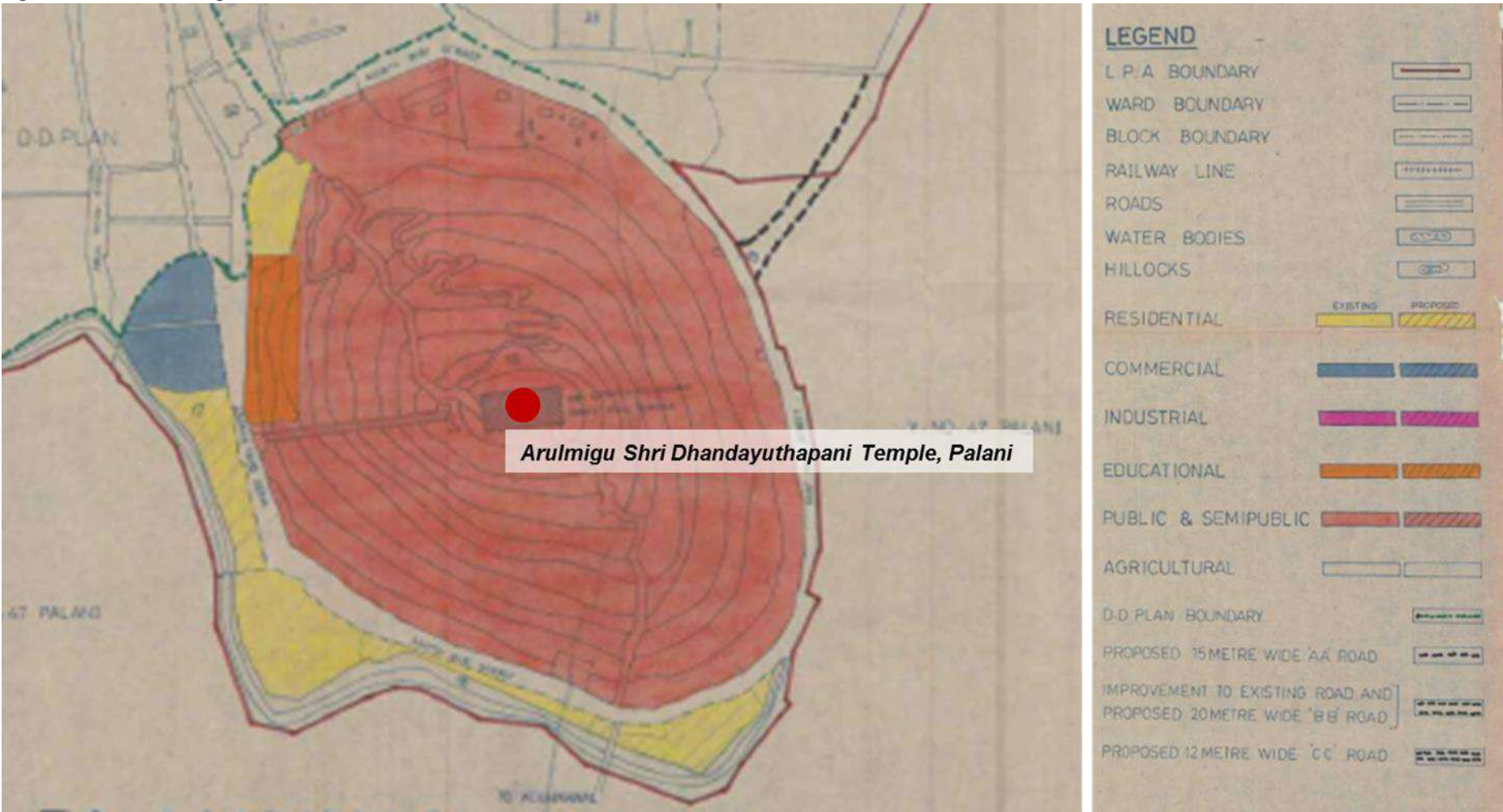




Figure 4-2: Land Use Regulation Zone at the Site



Vision for the Site

The Arulmigu Shri Dhandayuthapani temple is one of the most popular Hindu temples in India. It is widely known and visited by crores of devotees each year. Given the magnitude of visitors the temple receives, investments in different people's movers up and down the hilltop have been made in the past. The focus of the interventions now lies in creating a more pedestrian-friendly open space at the foot of the hill before and after the visit to the temple. This extra space for pedestrians will increase the carrying capacity, by removing all randomly parked vehicles. This entices visitors to spend more time in the nearby village streets and frequently visit the shops.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Very high Tourism Site** with **High HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	12,667	18,802	20,267
High Value Tourists (HVT) (Both domestic and foreign)	67	190	216
Maximum Carrying Capacity	20,483		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists

- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

- A combination of Traffic Management and Pedestrianisation allows the creation of attractive pedestrian-friendly plazas and streets, which will be very beneficial to the tourist's and pilgrim's overall experience of a visit to the temple. By creating special car drop-off areas at the edge of the pedestrianized streets, more visitors are enticed to walk the streets of the village and spend more time and money at the local shops.
- At the bus parking area, surface parking is proposed to be replanned to maximise the number of ECS spots available and provide space for pilgrims to have lunch and toilets and shower rooms. The Car Parking is concentrated in an MSCP to make more space for pedestrians around the historic Temple Tank. A Temple Interpretation Centre in combination with a rejuvenated Tank and Pedestrian Plaza could become one of the most attractive public spaces for pilgrims and tourists alike before or after a visit to the Temple.

Hard Interventions

1. **The Arulmigu Shri Dhandayuthapani Temple Interpretation and Tourist Facilitation Centre-** Planned on the ground floor of the MSCP, facing the Tank Plaza.

Infrastructure Created: ~800 sq. m. of built-up area

2. **Traffic Calming and Pedestrianisation** - Pedestrianisation Improvement measures for the convenience of the visitors should be undertaken.

Infrastructure Created: ~3.5 km long by 10 m wide streets of hard landscaped pedestrian spaces with new trees and street furniture

3. **Façade Beautification of main Pedestrianized streets.** To improve the overall experience of the visit to the historically significant temple, the buildings along the pedestrianized streets that get almost all the pilgrim and tourist footfall should reflect the architectural beauty of the Temple. Firstly, the disfiguring hoardings and other architecturally inappropriate structures added to the buildings over the years should be removed. Secondly, the owners of historic buildings along the street should be financially incentivized to renovate their building facades to let the original architecture shine.



Multi Storey Car Park with Interpretation Centre at Ground floor and Pedestrianized Streets



Pedestrian Friendly Landscaping Village Streets and Plazas

Soft Interventions

1. Crowd Management – As the temple is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:

- Limit the number of people within the temple complex at any time.
- Deploy ushers to ensure people move through the temple at a minimum pace.
- Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
- Access timings can be made exclusive for high-value tourists.

Amenities Plan

1. Toilets – In addition to the current public bathrooms, a more adequate number of toilets/changing rooms are proposed at the MSCP and Bus Parking. Both public-access and paid-access toilets could be provided.

2. Lighting – Improved streetlighting focusing on pedestrians is proposed to be provided along the pedestrianized streets, all public plazas, parking areas, temple steps, etc. Streetlamps design is proposed to follow the same design guidelines as for street furniture.

3. Street furniture – The existing street furniture needs improvement and is thought of more comprehensively and sustainably. Currently, the street furniture is not sufficient nor comfortable. An international standard to the design and quality of the street furniture should be the benchmark. The street furniture needs to become an integral part of the Public Space Landscape Design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for any future addition or change to the street furniture from seating benches, shading devices, canopies, cycle racks, dustbins, bollards, paving materials, wayfinding, etc.

4. Planting & landscaping – Along the Pedestrianised and Traffic Calmed streets more tree planting is required to create more shaded areas to make space attractive also during the daytime. More greenery in the shape of shrubs will also help to demarcate different zones better and sculptural and flowering trees are required to beautify certain important spaces and emphasize certain vistas and viewpoints.

5. Signage (Package 3) - Direction boards can be erected along the main roads in the area indicating the presence of this site. Package 3 signage is proposed to feature in Arulmigu Shri Dhandayuthapani Temple. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.

6. Parking – At the Bus Parking area surface parking is proposed to be replanned to maximise the number of ECS spots available and provide space for pilgrims to have lunch and toilets and shower rooms. To make more space for pedestrians around the Temple Tank area, parking is to be removed and instead a (underground and/or above ground) MSCP of four floors is planned.

Infrastructure Created:

- ~4000 sqm built up area MSCP
- ~10,000 sqm hard landscaped area bus parking
- Tree plantation and 10 picnic tables

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Temple Interpretation and Tourist Facilitation Centre	800 sqm
2	Traffic Calming and Pedestrianisation	3.5 kmX10 m
3	Parking- <ul style="list-style-type: none"> • MSCP built up area • Hard landscaped area bus parking • Picnic tables 	4,000 sqm 10,000 sqm 10
4	Signage Package 3	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Street Pedestrianisation	3,500
2	Tourist facilitation centre	42
3	Parking - Bus	160
4	Parking - Toilet block	20
5	Parking - changing area	6
6	Parking - dining area	2
7	Signage	6
8	MLCP	600
Total		INR 40 - 45 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 2 kiosks at the facilitation centre, each to be rented out at INR 1.5 Lakhs per annum.

- Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.
- Parking** – Capturing 375 ECS at 30% occupancy per day with 2 rotations at INR 15 per ECS.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1.6 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - Assuming **4 Help-desk staff** for the facilitation centre, amenity block, and the parking.
 - Assuming **3 security personnel** for the facilitation centre, and the parking.
 - Assuming **2 Administration staff** to overlook the operations of the facilitation centre and the parking.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 2.35 Cr.*

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are to mitigate the strain on the carrying capacity and are directed to cater to the needs of the pilgrims.

The interventions proposed at the site are largely for crowd management and enhance the experience of visitors. Hence it has an associated “social cause” and is pertinent.

Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Therefore, it is recommended that the interventions be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the MLCP at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Street Pedestrianisation	3,500	Y0 – Y2	HR & CE
2	Tourist facilitation centre	42	Y0 – Y2	HR & CE
3	Parking - Bus	160	Y0 – Y2	HR & CE
4	Parking - Toilet block	20	Y0 – Y2	HR & CE
5	Parking - changing area	6	Y0 – Y2	HR & CE
6	Parking - dining area	2	Y0 – Y2	HR & CE
7	Signage	6	Y0 – Y2	HR & CE
8	MLCP	600	Y0 – Y2	HR & CE
Total		INR 40 - 45 Cr.		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1.95L¹⁴ man-days of construction labour (*spread across 2 – 3 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days¹⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 4.85L man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 3,120 Cr. at the site¹⁶.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%

- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

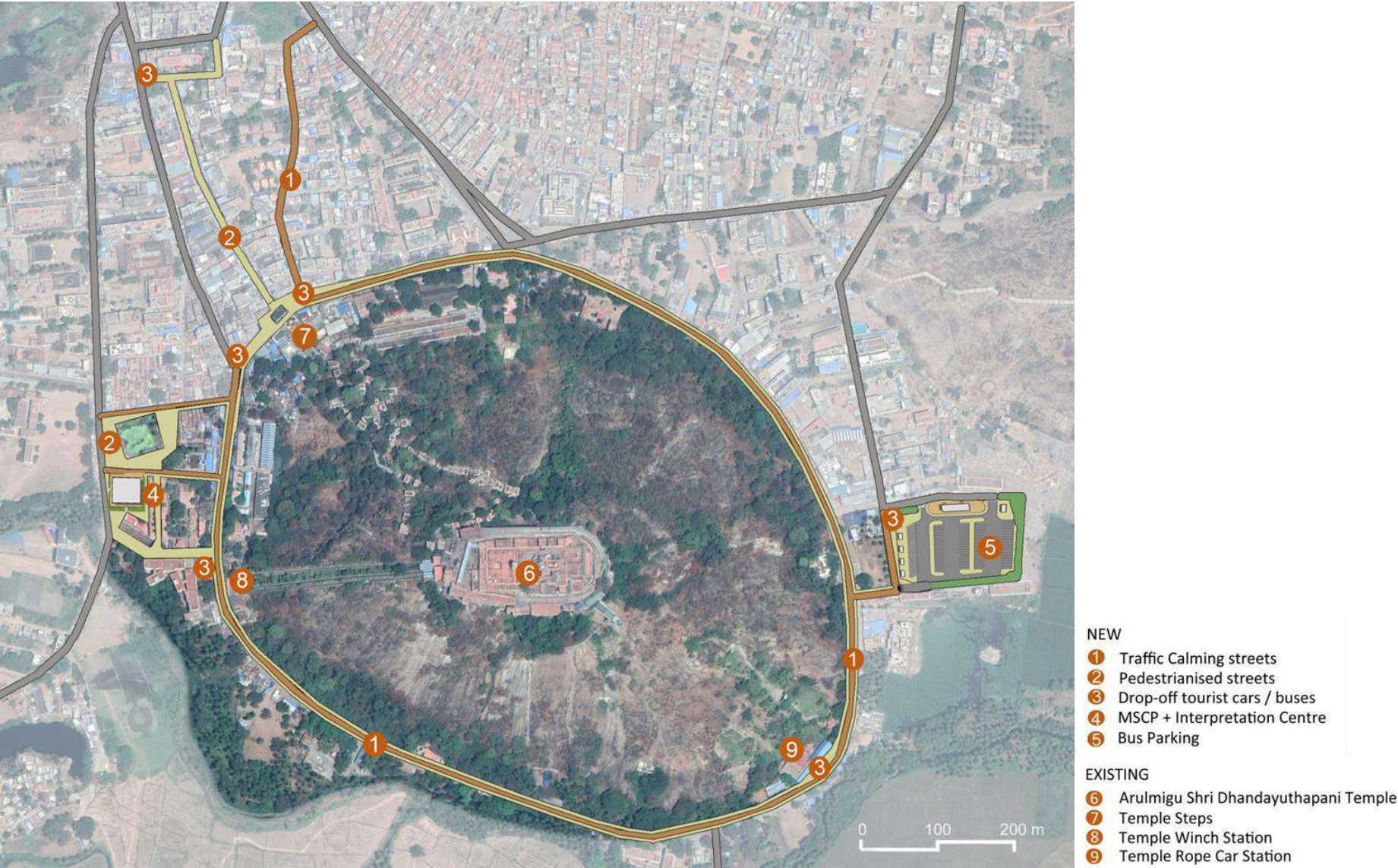
○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 4-3: Proposed Master Plan – Arulmigu Shri Dhandayuthapani Temple, Palani



5. Pazhamudircholai Murugan Temple, Alagar Koil

Site Details

District	Madurai
Name of Site	Pazhamudircholai Murugan Temple, Alagar Koil
Site No:	Site 132 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.0940, 78.2234
Land Area:	4 acres
Peak footfalls:	15,000 per day (March-August, October- November)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 27.80 lakhs (2019 - 20) For. – 11,984 (2019 – 20)
Site Revenues:	INR 5 crores (2019 – 20)
Site Orientation	Pilgrim
Site Potential:	High tourism site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~25 km from Madurai Junction
b. Airport:	~35 km from Madurai Airport
c. Highway:	~3.8 km from SH-72A, ~19 km from NH-38
Trails featured on:	Arupadaiveedu, Siddhar

The Pazhamudircholai Murugan Temple, a Hindu temple dedicated to Lord Vishnu, is one of the 6 Arupadaiveedu and the smallest of them all. Although located on a hill, connectivity is good and the temple is popular amongst domestic and foreign tourists. Scope for intervention for this site is limited to the provision of ancillary facilities and maintenance of existing amenities.

Existing Condition

Location

Pazhamudircholai Murugan Temple is located in the village of Alagar Koil, ~24 km northwest of Madurai, on the top of a hill, called Alagar Malai. The temple is well connected via road to Madurai city via frequent buses. Tourists can also hire taxis from the city to the hills. The other tourist destinations in the area include Garuda Theertham, Raakkayee Amman Temple, Azhagar Malai Jain Caves and Kallazhagar Temple.

Existing Layout and Uses

The temple is spread over an area of 4 acres. The intricate vimanam and gopuram are the key architectural attractions. One of the key highlights of the temple is its giant steps. The presiding deity is Lord Murugan who along with his consorts Devayani and Valli are placed within the main shrine.

Pazhamudircholai Murugan Temple has a main entrance on the southeastern side of the temple. The administrative office is located on the left side of the main entrance followed by one prasadam stall and one retail store. A paved parking area is available at the bottom of the hill. The temple also has one Annadanam block to provide free lunch to people.

The site is currently used for religious purposes mainly. The temple complex privately serves as a temple palace attracting tourists from all over the country. Some

of the festivals conducted at the site are Panguni Uthiram, Skanda Sashti, Vaikas Visakam and Aadi Krithigai.

Other Land Available

In addition to the temple complex of 4 acres, the temple does not own any other land. However, 2.75 acres of empty land is available inside the temple complex on the northern side. Presently, a small part of the land is being used for Annadhanam and toilet complex.

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959. The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. Tamil Nadu Combined Development and Building Rules, 2019 – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

3. Height Regulations – AAI height restrictions allow the construction of buildings up to ~240m above mean sea level in the Pazhamudircholai Murugan Temple and surrounding areas.

Key Sensitivities

Pazhamudircholai Murugan Temple is located on a hilltop under the reserve forest area, therefore no development can be done without the permission of the forest department.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction – The temple is considered as one of the six Arupadaiveedu and is also the smallest of them all. It is hence considered to be very holy and pilgrims flock to the temple to seek the deity's blessings. It is frequented by devotees seeking wedding, children, and academic excellence. Additionally, the temple is the only Arupadaiveedu where the presiding deity is present along with both his consorts.

The intricate vimanam and gopuram are the key architectural attractions of the temple. Atop the hill, the site provides ample locations which serve as excellent photography points providing a beautiful backdrop. The area around the temple is rich in Naaval trees which bear the fruits in October-November (during Shashi festival).

2. Accessibility – The Pazhamudircholai Murugan Temple can be accessed via SH-72A from Madurai. The major modes of transport people use to commute to the site include regular bus and private transport. Three regular buses are available every 20 mins from Alagar Kovil to the temple which costs INR 10.

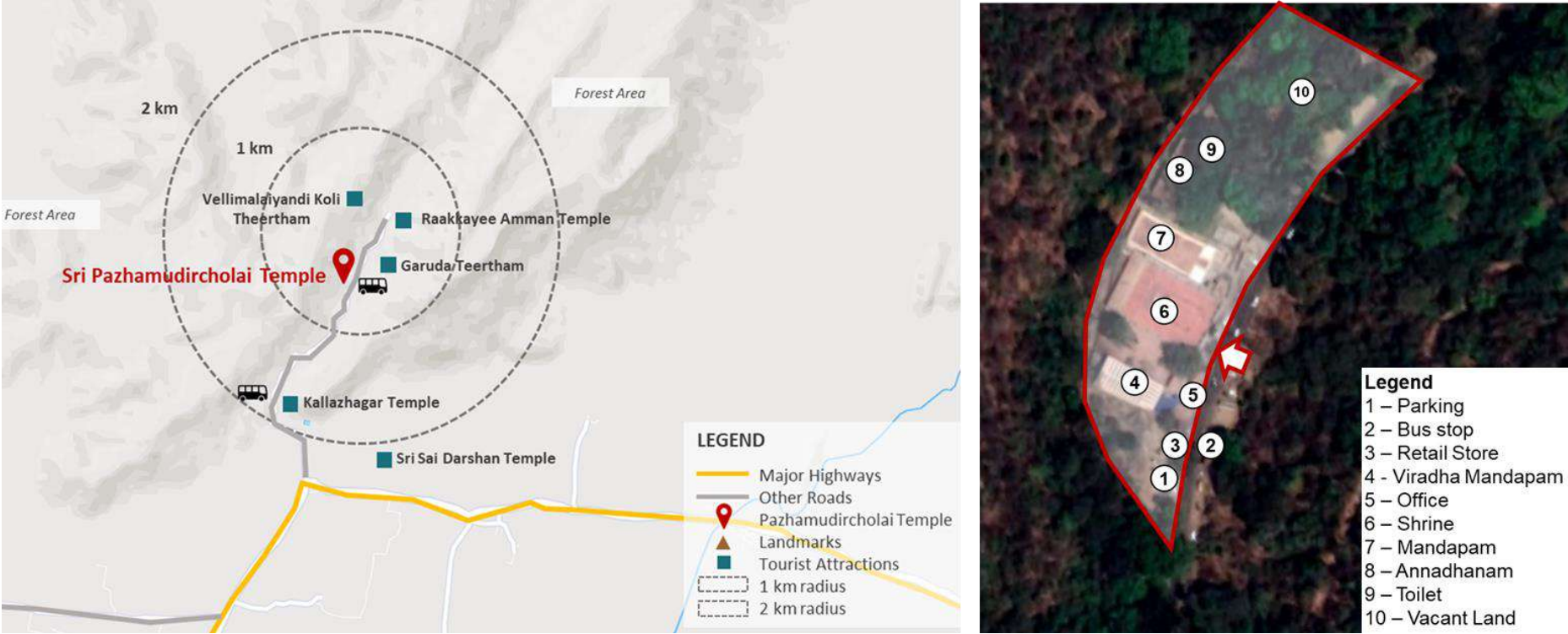
Parking – A common parking facility is available for both Azhagar Kovil and Pazhamudircholai Murugan Temple at Alagar Kovil with a capacity for ~200 bikes in the shaded area down, ~100 cars and ~20 minibusses around the corner of the road. The parking charges vary for two-wheelers (INR 5) cars (INR 50) and buses (INR 100).

3. Amenities – The temple is equipped with basic-level amenities within and around the temple.

- There is no tourist information centre available within the temple complex.
- Direction signage boards (mostly in Tamil and English) are available at the entrance and forks along the tourist path. Informative signboard only quotes about Arupadai Veedu in the Tamil language.
- There is 1 toilet block with 10 units inside the complex (5 seats/urinals for men and 5 seats for women). However, the toilets are dirty and not maintained.
- 1 free RO drinking water facility is available inside the temple complex.

- The temple premises is neat and cleaned daily and well maintained.
 - Dustbins are installed in adequate numbers and regularly cleared.
 - 16 CCTVs are installed at entry/exit and all key attractions. 4 security guards are employed on a shift basis- morning and evening
 - The site boundaries are walled and fire safety equipment like fire hoses and fire extinguishers are provided.
 - Streetlighting is provided but it is not sufficient for the temple complex.
 - 1 wheelchair facility is available but it requires maintenance.
 - There are 1 Prasadam stall and 1 retail outlet selling photo frames
 - Luggage / Cloakrooms are available at the bottom of the mountain for both Pazhamudircholai Murugan and Azhagar temple
 - No footwear stand is provided. Footwears are mostly dropped in tourist vehicle or left outside the temple
 - A Backup power facility available (25 KW Generator).
4. **Awareness – As** an Arupadaiveedu temple, ample literature is available on popular travel websites such as TripAdvisor and Lonely Planet. It attracts significant domestic and foreign tourists. Domestic pilgrims majorly hail from the southern states. Despite this popularity, the temple does not have a dedicated website.
5. **Activities –** The pilgrims mostly visit the temple for darshan and to take a dip in the holy Noopur Ganga Theertham. Under the Annadanam scheme, free lunch is provided to 100 people. The major festivals are celebrated here are Panguni Uthiram and Aadi Klrthigai.
6. **Accommodation –** The only accommodation option available nearby is located down the hill. Azhagar Hills manages a guesthouse and 12 cottages for visitors to both Pazhamudircholai and Azhagar Kovil. The tariff is in the range of INR 750 – 2500 per night. Visitors tend to either return to Madurai after visiting the temple.
7. **Association with Community –** There are no common or regular associations of the local communities with the temple.

Figure 5-1: Location & Existing Layout, Pazhamudircholai Murugan Temple



Site Pictures



Vision for the Site

The Pazhamudircholai Murugan Temple is located on a hill top amidst a reserve forest area providing a serene environment and picturesque view from all the sites. Although located on a hill, connectivity is good as a shuttle service runs between the temple and foothills. The temple is lacking with few amenities such as footwear stand, poor divyaang friendly measures and Insufficient streetlights around the temple.

The Pazhamudircholai Murugan Temple has the potential to use the available vacant land and utilize the location advantage to enhance the experience of the visitors. The vision for the site is to develop it as a pilgrim tourist destination by improving existing infrastructure and effectively utilizing the available vacant parcels of land within the site.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as **a high tourism site with moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	2,768	6,416	10,818
High Value Tourists (HVT) (Both domestic and foreign)	24	70	118
Maximum Carrying Capacity	15,756		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

Given that the site is popular and religiously significant, interventions will be planned with the perspective of improving the visitor's experience. The objectives of Master planning at this site include:

- **Upgradation and maintenance** of existing infrastructure present in and around the temple complex.
- **Improving pilgrims' experience** at the temple through the provision of the rest area and seating spaces.
- **Improving pilgrim footfall** through appropriate marketing and promotion of the unique features of the site.

Hard Interventions

1. **Resting Space with Landscaped Garden-** A parcel of vacant land with extensive greenery is available on the northern side of the site. A part of this area can be developed as a resting space with the provision of nice seating arrangements and beautifully carved pathways, where visitors can enjoy the peaceful environment amidst the forest area. The existing landscaping will be incorporated with the proposal and the development should, as far as possible, be the least maintenance-oriented and be self-sustainable.

Infrastructure Created:

- *Softscape – 4700 sqm*
- *Footpath – 300 m*
- *Benches – 10*

2. **Footwear Stand Kiosk-** Currently, the site does not have any provision of footwear stands. Footwears are mostly dropped in tourist vehicles or left outside the temple. A designated area with a small kiosk can be provided for the same near the main entrance area.

Infrastructure Created: 3mX3m module (1 unit)



Reference images for Resting Space with Landscaped Garden

Soft Interventions

1. **Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Madurai.
2. **Provision of Safety during Uphill Travel-** The road uphill to the temple is long, steep and winding. While the tarred road is of good quality, there are a few risky stretches. Since the major mode of travel uphill is by bus, the risk is manifold. It is suggested to construct the retainer walls of the adequate height along these risky stretches. Roads should also be widened to 50 ft. in few areas.

Amenities Plan

1. **Streetlights** - The site has Insufficient streetlights around the complex. Since the temple is located on a hilltop, it requires more safety hence additional lighting should be provided to ensure security around the temple complex.

Infrastructure Created: Streetlights 10 Units

2. **Signage (Package 1)** – Few Signages and direction boards can be installed at the site. Signage Package 1 is proposed to feature for this site. Both directional

signage and informational signage should be used, as per the design guidelines mentioned in the Glossary of Interventions.

3. **Technology Interventions (Package 1)** – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:

- Electronic Visitor Counter at the entry point.
- TN Assist App integration at the site, with an internet connection and QR scanner.
- No additional CCTV coverage is required for this site as it already has 16 CCTV present at the temple complex.

4. **Upgradation and Maintenance of Toilets-** The temple has sufficient provision of toilet facilities. However, it is poorly maintained and the tiles are broken and the water tank at the top of the toilet is leaking causing the unhygienic condition. Therefore, the toilet block requires up gradation and proper maintenance of the existing facilities.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Resting Space with Landscaped Garden- <ul style="list-style-type: none"> • Softscape • Footpath • Benches 	2400 sqm 200 m 10
2	Footwear Stand Kiosk	3m X 3m
3	Streetlights	10
4	Signage (Package 1)	1
5	Technology Interventions (Package 1) (No CCTV)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Garden - Landscaping	1
2	Garden - Footpath	4
3	Garden - Benches	1
4	Footwear stand	3
5	Signage (Package 1)	1
6	Streetlights	1
7	Technology Interventions (Package 1)	1
Total		INR 10 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- All revenues are unescalated.*
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).*
- The costs are un-escalated.*

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 9 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Arupadaiveedu trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since the amenities are limited it is recommended that the interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Garden - Landscaping	1	Y0 – Y2	HR&CE
2	Garden - Footpath	4	Y0 – Y2	HR&CE
3	Garden - Benches	1	Y0 – Y2	HR&CE
4	Footwear stand	3	Y0 – Y2	HR&CE
5	Signage (Package 1)	1	Y0 – Y2	HR&CE
6	Streetlights	1	Y0 – Y2	HR&CE
7	Technology Interventions (Package 1)	1	Y0 – Y2	HR&CE
Total		INR 10 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 430¹⁷ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

¹⁷ Estimated basis following assumptions:

- Market norm for cost of labor = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labor
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labor assumed for computation = *INR 700* per day
- Cumulative labor man-days = 30% * CAPEX / 700

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 1,100 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,120 Cr. at the site¹⁹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%

¹⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹⁹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 5-2: Proposed Master Plan – Pazhamudircholai Murugan Temple



6. Thirupparankundram Murugan Temple, Madurai

Site Details

District	Madurai
Name of Site	Thirupparankundram Murugan Temple
Site Use:	Temple
Site No:	Site 223B of 295
Category:	A (Temple)
Location:	9.8798, 78.0711
Land Area:	~2.6 acres+ ~124 acres other lands
Peak footfalls:	15,000 per day (October- January, March)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 37.27 lakhs (2019 - 20) For. – 63,492 (2019 – 20)
Site Revenues:	INR 14 crores (2019 – 20)
Site Orientation	Pilgrim
Site Potential:	High tourism site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~1 km from Thirupparankundram Railway Station
b. Airport:	~10 km from Madurai Airport
c. Highway:	~5 km from SH-32, ~5.5 km from NH-44
Trails featured on:	Arupadaiveedu, Siddhar

The temple is first of the 6 Murugan adobes (Arupadaiveedu) present in Madurai region. While the temple is immensely popular amongst the pilgrims and has established rituals for celebrating festivals with pomp and glory. It lacks in terms of provision of adequate tourist amenities during the peak seasons. The temple holds the potential of regional importance only with the adoption of adequate crowd management measures, and provision of adequate amenities.

Existing Condition

Location

The temple is located on a foothill in the town of Thirupparankundram, ~9.2 km from the city of Madurai. Located on the Tenkasi – Madurai Road, the temple enjoys excellent connectivity. The nearest railway station is temple is Thirupparankundram Railway Station that connects the town to Madurai, Mysore, and Coimbatore. The major important tourist sites around the temple are Thiruparankundram Dargah, Thiruparankundram Eco Park, Saravana Poigai Pond and Temple and Kasi Viswanathar Temple.

Existing Layout and Uses

Spread across an area of 2.6 acres, the temple is constructed in rock-cut architecture and known for its life-size sculptures. It has the following prominent characteristics:

- There is a 150 ft high, 7-tiered Rajagopuram at the entrance on the northern side of the temple.
- A mandapa with exquisitely 48 carved pillars.
- The Aasthaana Mandapam is situated at the entrance and houses many artistically carved sculptures.
- Three halls are leading to the main sanctum- the Kambathadi Mandapam, Ardha Mandapam, and Mahamandapam which are at varying elevations.

- The main shrine is a rock-cut temple having cells with the statues of various deities carved into the parankundram rock.
- Along with the presiding deity, many other deities are also housed in the main shrine.
- The temple complex houses a dwajastambha, a golden car, several other shrines and sannidhis, and several rock carvings.
- There is a 1050 ft high granite hill at the back of the temple which houses the Kasi Viswanathar Temple at the top.
- The temple tank is located outside the temple where, according to tradition, the fishes are served with salt and rice flakes by the devotees.
- A Vedic school and an Islamic Dargah are located adjacent to the banks of the temple pond.
- The temple has five divine water bodies associated with it – Saravana Poigai, Lakshmi Theertham, Saniyasi Kinaru (well), Kasi Sunai, and Sathiya Koopam.

The site primarily serves as a temple attracting tourists from all over the country. Numerous marriage ceremonies are also organized in the temple complex. The temple's infrastructure is well developed with various mandapams and marriage halls. Some of the festivals held at the temple include Skanda Sashti, Brahmotsavam, Karthigai Deepam, Vaikasi Visakam, Float Festival and Vaikuntha Ekadasi.

Other Land Available

In addition to the temple complex of ~2.6 acres, the temple administration owns the hill area (~108 acres). The other land parcels owned by the temple administration are:

- Sarvana Poigai – ~6 acres
- Eco Park – ~10 acres

Masterplanning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair,

alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. **Tamil Nadu Combined Development and Building Rules 2019** - The site lies in the **Existing Residential Zone** as per the Madurai Local Planning Area map. The permissible uses include-

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

3. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~180m above mean sea level in the Thirupparankundram and surrounding areas.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The Subramanya Swamy Temple is the first of the six abodes of Murugan. A unique aspect of the temple is the presence of Vishnu and Shiva facing each other which is a rare occurrence in ancient Hindu temples. Additionally, the Abhishek at the temple is performed to the “Vel” weapon of Murugan and not the deity himself. The temple is visited not only by Hindu

devotees but by people of other religions as well. Located atop a hill, the temple is known for its architectural beauty and lifesize sculptures. The temple complex houses a golden chariot temple car and It is regarded as an auspicious venue to conduct Hindu marriage ceremonies.

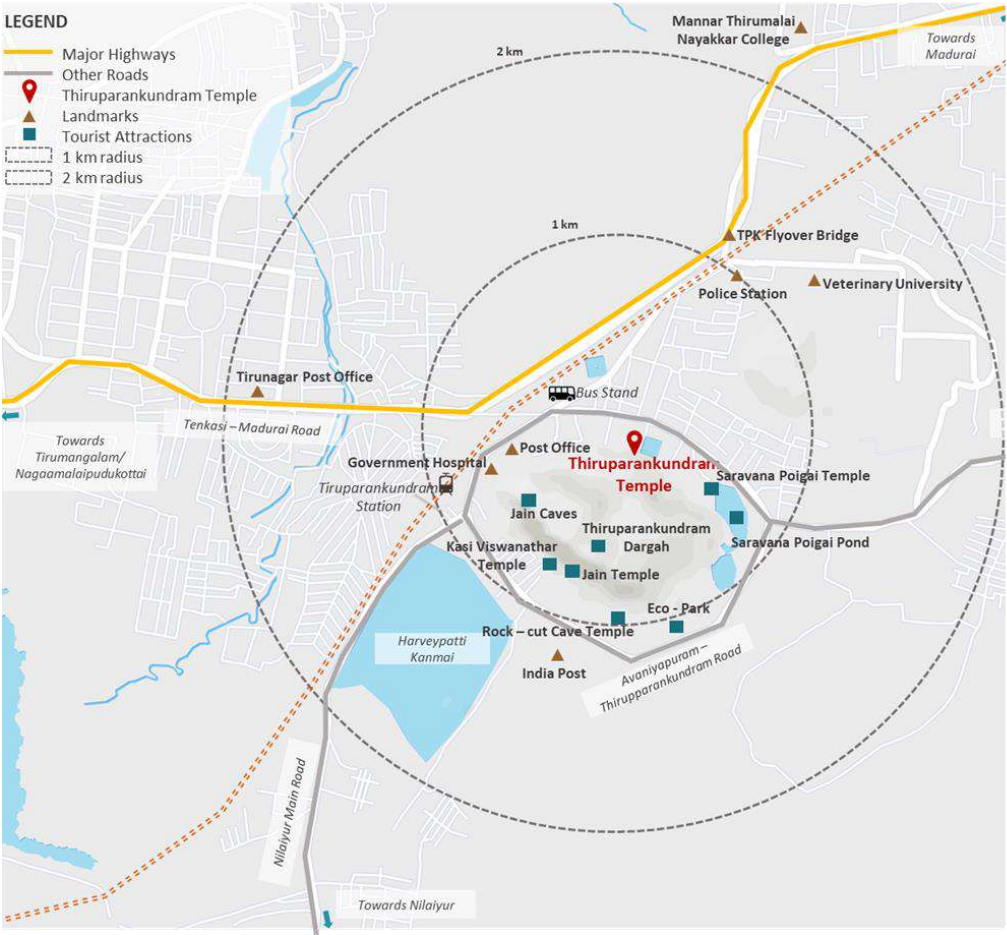
2. **Accessibility** – The Thirupparankundram Murugan Temple is located atop a hillock on the outskirts of the city of Madurai on the Madurai – Tenkasi road and can thus be accessed via wide urban roads. The major modes of transport people use to commute to the site include tourist/public bus, auto-rickshaw, taxi, and private/hired transport, Ola/Uber. All the buses moving from Periyar bus stand to Thirumangalam pass through Thirupparankundram Bus Stand (~950 m). The nearest bus stop and auto stand is located within 500 m from the temple complex.

Parking – Parking is done on the street and street corners with charges for buses (INR 50) and cars (INR 30).

3. **Amenities** – The temple is equipped with most of the amenities within and around the temple.
 - There is no tourist information centre available.
 - Direction signage boards are available at all key areas, entrance/exit, forks along the tourist path, at key attractions and dining area in both Tamil and English. Informative signage boards in Tamil and layout signage boards are also available.
 - Divyang friendly measures like wheelchairs and ramps are provided. A disabled person can visit Sannadhi without standing in the queue.
 - Wayfinding signages to the site are available.
 - There is 1 toilet block with 8 units (4M and 4F) in working condition and regularly cleaned and maintained but damaged.
 - A free Drinking water facility is available with 2 RO Plants provided.
 - The temple premise is adequately and regularly clean but no dustbins are installed.
 - Frisking of Visitors done at entry and 40 CCTVs are installed at entry/exit points and all key tourists gathering points.
 - 30 security guards are employed and 3 policemen are also present at the entrance.
 - The site boundaries are walled.

- The site is lacking with the provision of a sufficient lighting facility.
 - Fire safety equipment like fire extinguishers and emergency exits are provided.
 - There are 2 Prasadam Stall and 30 retail outlets of the photo frame shop, toy shop, bangles, books, etc.
 - The temple has free entry, however, INR 10 is charged for Special Darshan
 - There is an issue of overcrowding during peak season, queues are deployed to manage the crowd.
 - 1 footwear stand along with luggage/cloakroom is available.
4. **Awareness** - The temple is popular with tourists and draws huge crowds during the peak season. It is frequented by solo travellers, families, and large groups. foreign tourists mostly hail from Malaysia, Singapore, and Sri Lanka. Most of the domestic travellers are mostly from Maharashtra, Kerala, and Andhra Pradesh. The temple finds mention in popular travel journals like Trip Advisor. The temple also has an online website managed by HR & CE and provided details about the temple.
 5. **Activities**- The tourists mostly visit the temple for regular Darshan. Many festivals are celebrated in the temple and numerous marriage ceremonies are also organized in the temple complex.
 6. **Accommodation**- Sufficient accommodation facility is available around the site with 2 temple-owned lodges and ~10 budget private hotels (OYO etc). The tariffs at the temple-owned lodges vary from INR 300/night to INR 500/night.
 7. **Association with Community** - The temple has limited association with the local community. The usual small shops and business owners located on the foothills get benefited from the extensive tourist activity at the festival period. Other activities like employing guides for temple tours, shows to display local art forms and plays depicting the history and myth behind the temple would generate additional employment opportunities for the surrounding communities.

Figure 6-1: Location & Existing Layout, Thirupparankundram Murugan Temple



Site Pictures



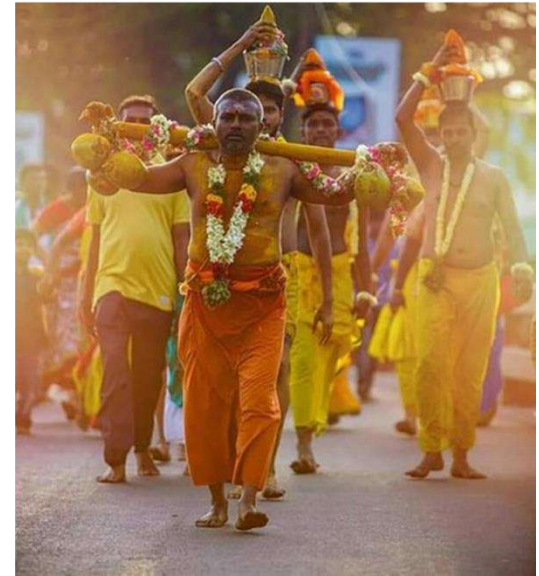
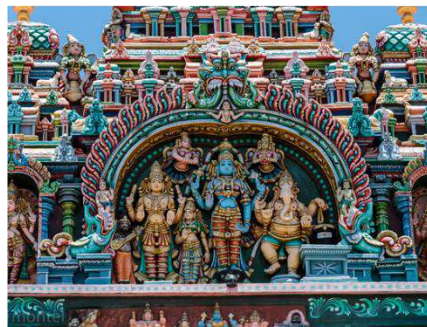
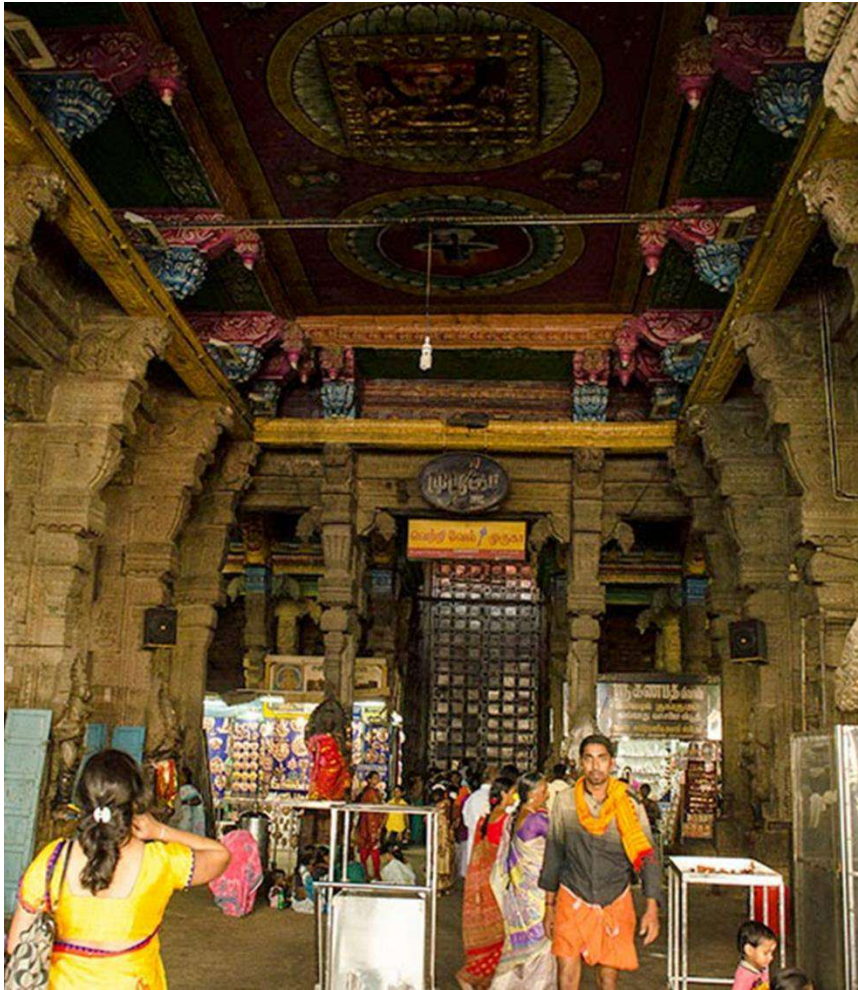
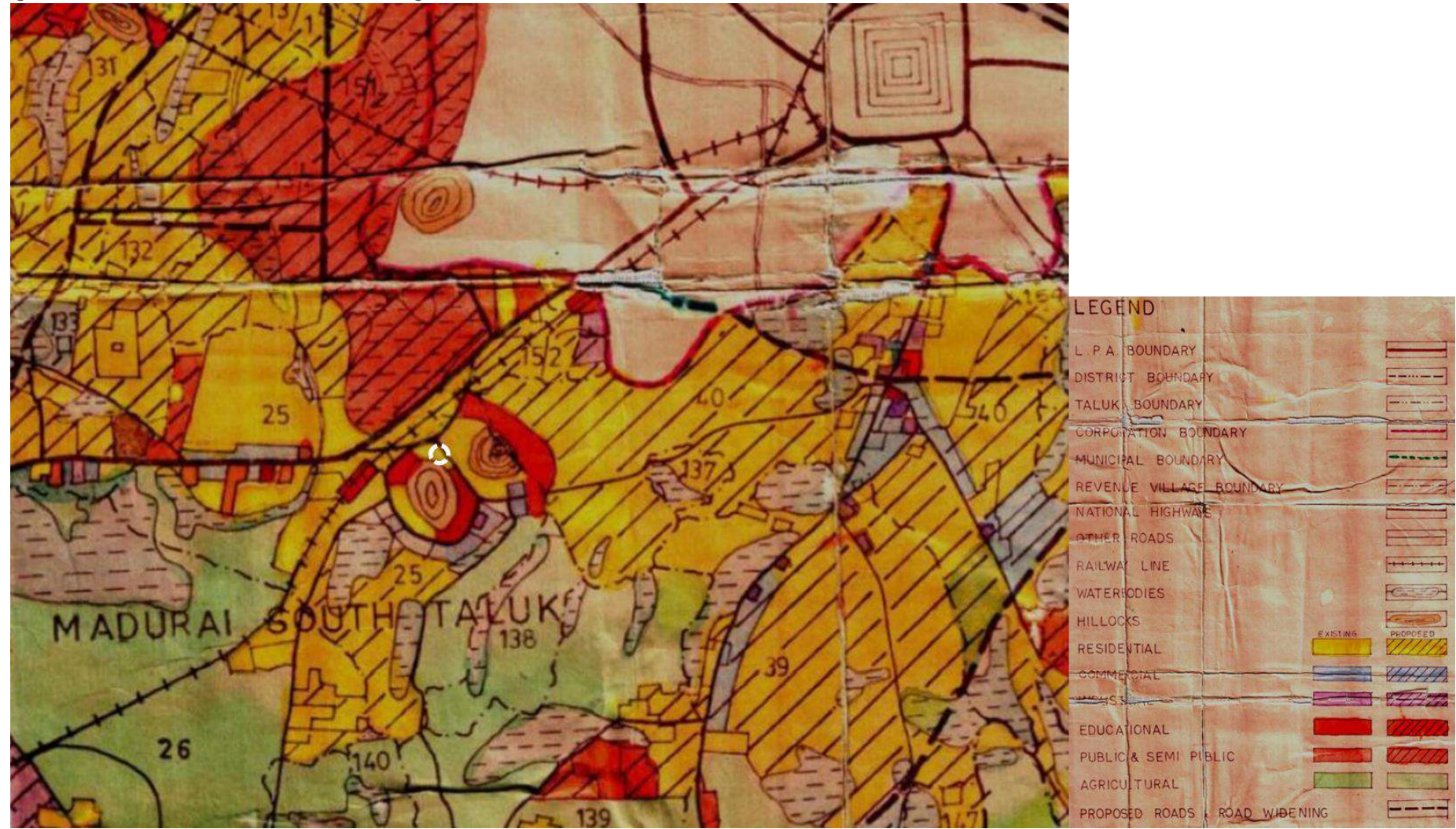


Figure 6-2: Site Land Use- Madurai Local Planning Area



Vision for the Site

The Thiruparankundram Murugan Temple is the first of the Arupadaiveedu temples. The temple enjoys immense popularity not only amongst Hindus but people of other faiths as well. Built in rock-cut architecture, the temple is located at the foot of a hillock and very well connected by all modes of transportation.

Although the temple is well maintained and the temple authorities ensure the safety and security of the tourist, it has inadequate lighting facilities. The temple also gets overcrowded in peak season.

The temple is already very popular, it has the potential to leverage its location, architecture and aesthetics of the temple. The famous festivals at the temple offer immense opportunities for branding and the series of retail shops provide employment opportunities for local people. The vision for the site is to develop it as a pilgrim tourist destination by improving existing infrastructure and basic amenities.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **high tourism site with moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	3,664	8,436	9,435
High Value Tourists (HVT) (Both domestic and foreign)	127	369	412
Maximum Carrying Capacity	9,847		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

The master planning approach at the site mainly deals with the improvement of existing amenities at the site.

The objectives of master planning at this site include:

- **Improving pilgrims' experience** at the temple through improved circulation, conveniences, and amenities.
- **Cleaning of the temple tank** to enhance its attractiveness.
- Improving the **aesthetic environment** of the temple.
- Provision of **crowd management measures**.

Hard Interventions

1. **Temple Tank Rejuvenation** – Both the temple pond Saravana Poigai and Lakshmi Theertham has good infrastructure with boundary walls and steps. However, as observed on the site, the temple pond (Lakshmi Theertham) has a thick cover of algae on it and Saravana Poigai has floating substances on the surface. To restore the beauty of these temple tanks, cleaning of the surface water is proposed. Aquatic plants that purify water can be planted in the temple tank to keep it clean and healthy.

Infrastructure Created: Cleaning of 25,000 sqm of water surface (4000 sqm Lakshmi Theertham and 21000 sqm Saravana Poigai pond).

Soft Interventions

1. **Audio-Visual Tour** – Audio-Visual tours on site can be initiated to aware visitors of the significance and importance of the temple's history. These audios will describe the inscriptions by translating them into the visitor's preferred language. The tours can be self-guided tours with a QR code.
2. **Crowd Management Measures-** The Thiruparankundram Murugan Temple is highly popular and draws a large number of pilgrims. It witnesses overcrowding during peak seasons. Therefore, the following measures may be implemented-
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Advance booking through the temple website should be enabled and separate queues for such tourists can be developed. Batch-wise entry into the temple can be encouraged.
 - Token system for devotees:
 - a. The tokens can be distributed during peak seasons to regulate and control overcrowding.
 - b. The tokens should be distributed both through online and offline means.
 - c. VIP tokens can also be made available for tourists.
 - Waiting halls/tents outside the temple as temporary holding areas for devotees, to prevent overcrowding inside.
3. **Cleanliness Initiative** – The streets and the area surrounding the temple are average in terms of cleanliness. It can be kept clean through awareness drives, and various innovative initiatives like "Own your Street" where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
4. **Conservation of Temple's Architecture and Aesthetics-** Thiruparankundram Murugan Temple is a cave temple with rich architectural features, which is not demonstrated anywhere at the temple. Development of informative signages talking about the temple's history, its architectural features, etc. can be beneficial in spreading knowledge about the temple.
The sculptures inside the temple complex have metal barriers and also various barricades are installed inside the temple for crowd management, which is a real eyesore and distracts from the historic beauty of the temple. Establishing a

theme-related design based on the temple's architecture style for these infrastructures will be historically appropriate and add to the aesthetics of the temple architecture.

Amenities Plan

1. **Streetlights** – The area around the temple is not well lit due to the absence of adequate lighting. To ensure the temple site and surrounding areas are safe and secure, streetlights would be installed in and around the temple area, as mentioned in Glossary of Interventions.
Infrastructure Created: 10 Units.
2. **Dustbins-** Although the temple premises are adequately clean, there is no provision of dustbins in the temple complex. Dustbins must be provided in sufficient quantity to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines mentioned in the Glossary of Interventions.
Infrastructure Created: 10 Units.
3. **Parking-** The vehicles are parked on the street outside the temple complex adding to the issues of congestion. An effective parking management strategy would manage the street congestion during peak tourist season. Owing to its location in a dense neighbourhood few of the parking strategies can be adopted for better management.
 - Shared parking options for locals and visitors can be explored in consultation with the local bodies.
 - Preferential parking for high occupancy vehicles.
4. **Signage (Package 1)** – The temple has many signboards in different styles and Tamil language only. Hence, a unified Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
5. **Technology Interventions (Package 1)** – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Electronic Visitor Counter at the entry point.

- TN Assist App integration at the site, with an internet connection and QR scanner.
- No additional CCTV coverage is required for this site as it already has 40 CCTV cameras present at the temple complex.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Temple Tank Rejuvenation (Only Cleaning)	25,000 sqm
2	Streetlights	10
3	Dustbins	10
4	Signage (Package 1)	1
5	Technology Interventions (Package 1) (No CCTV)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Temple Tank - cleaning	0 (Included in OPEX)
2	Technology interventions	1
3	Dustbin	1
4	Streetlights	1
5	Signage (Package 1)	1
Total		INR 5 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.

- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
- Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
- Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

- Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

- Salaries and perks of existing employees
- O&M cost of existing site and facilities
- Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 1 Lakh*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

Also, since the amenities are limited it is recommended that the interventions be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple Tank - cleaning	0	Y0 – Y2	HR&CE
2	Technology interventions	1	Y0 – Y2	HR&CE
3	Dustbin	1	Y0 – Y2	HR&CE
4	Streetlights	1	Y0 – Y2	HR&CE
5	Signage (Package 1)	1	Y0 – Y2	HR&CE
Total		INR 5 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 215²⁰ man-days of construction labour (*spread across 1-1.5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days²¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 540 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,100 Cr. at the site²².

²⁰ Estimated basis following assumptions:

- Market norm for cost of labor = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labor
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

○ Assumed cost of labor assumed for computation = INR 700 per day

- Cumulative labor man-days = 30% * CAPEX / 700

²¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

²² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 6-3: Proposed Master Plan – Thirupparankundram Murugan Temple



7. Thiruchendur Murugan Temple, Thoothukudi

Site Details

District:	Thoothukudi
Name of Site	Thiruchendur Murugan Temple
Site No:	Site 259B of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.6370, 77.9240
Land Area:	~68 acres
Peak footfalls:	~10 lakhs per day
Operator:	TVS Trust
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 41 lakhs (2019) For. – 1298 (2019)
Site Revenues:	INR 132.5 crores (2019)
Site Orientation	Pilgrim
Site Potential:	Very High Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~2 km (Thiruchendur)
b. Airport:	~173 km (Madurai)
c. Highway:	~1.4 km from SH-176
Trails featured on:	Gopuram, Arupadaiveedu

Thiruchendur Murugan Temple is popularly known as the second Arupadai Veedu of Lord Muruga with immense historic and religious significance. It has a vast complex spread across 68 acres with numerous public facilities. Being one of the 6 Murugan temples in Tamil Nadu, Thiruchendur Murugan Temple holds significant importance to pilgrims from southern India. The shrine of the temple was built to mark the victory of Murugan over the demon king Surapadman. Built in the beautiful Dravidian style of architecture, the temple is the fourth Hindu temple in Tamil Nadu to get an ISO certification.

Being a high tourist footfall site, the temple is well equipped with infrastructure facilities and maintenance is adequately undertaken. Hence, the aim is to further develop the site to enhance tourist experience by undertaking interventions with regards to improved road accessibility, traffic and crowd management and development of additional tourist facilities etc.

Existing Condition

Location

Thiruchendur Murugan Temple is located in the eastern end of the town Thiruchendur in the district of Thoothukudi. It is 60 km south-east of Tirunelveli, 40 km from Thoothukudi and 75 km north-east of Kanyakumari. The temple complex is situated on the shores of Bay of Bengal and is easily accessible via SH 176. Other tourist attractions located near the temple include Amali Annai Church (1.1km), Thiruchendur Beach (~1.5km) and St. Thomas Church (2.2km).

Existing Layout

The temple precinct covers an area of 2.7 acres and measures 91 m (299 ft) north to south, 65 m (213 ft) east to west enclosed in a compound wall.

- It has a nine-tier gopuram which is 157 feet (47 meter) high. This elaborate structure is called Mela Gopuram and is only used during festivals.

- The main entrance is through the southern gate called Shanmukha Vilasa. It opens into the first of two prakarams,
- The first temple praharam is known as Sivili Mandapam. It is a series of four long corridors running round the inner second prahara flanked on either side by familiar rows of columns of yalis.
- The main sanctum sanctorum of the temple is the home to the deity of Lord Murugan as Subramaniam
- The inner sanctum of the temple is in a cave and the main deity, or moolavar, is Murugan as a saintly child, portrayed in a granite carving
- Before the main sanctum, in the first corridor, there are shrines, caves and temples dedicated towards other various gods & goddesses
- Naazhi Kinaru, a sacred well fed by a freshwater spring, is located 100 m (330 ft) south of the temple. Devotees undergo a ritual cleansing by bathing in water from the well after bathing in the ocean
- The Vasanta Mandapam is a recent noble edifice standing on 120 columns and with a central porch.
- The Ananda Vilas Mandapam stands on a raised sandy promontory majestically overlooking the sea. It is a mandapam of 16 pillars worked in black granite.

Existing Uses

The temple is currently used for poojas conducted by devotees. It has 6 daily rituals and few events during festive days. The temple has well developed infrastructure dedicated for public services -

- Retail – 100+ shops selling worship accessories and religious books etc.
- Events mandapams
- 7 Toilet blocks
- Offices of the administrators
- Thiruchendur beach
- Accommodations

Other Land Available

The temple owns a total 68 acres of land along the shoreline. Temple precinct accounts for 2.7 acres while the rest is used for ancillary activities associated with the temple. These activities include parking area, temple bus stand, temple

accommodation spread across the entire belt, Thiruchendur beach, 7 toilet blocks etc. Vacant land available within accounts for an approximate 20 acres. The largest patch of vacant land is of 18 acres on the southern side of the complex.

Master Planning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
- 2. CRZ²³ Regulations** – As per CZMP Map, the site lies in CRZ-IA and CRZ-II
 - CRZ-IA region - Inter-tidal areas - No activity shall be permitted except Ecotourism activities (such as mangrove walks, nature trails etc), Laying of pipelines, transmission lines etc. for public utilities and construction of roads on stilts, by way of reclamation, shall be permitted in exceptional cases for defence, strategic purposes, public utilities etc.
 - CRZ II – It includes the areas developed up to the shoreline which fall within the Municipal limits. The site lies on the landward side. Permissible Uses: Defence and Security purposes | Construction of buildings on landward side of existing road / building | reconstruction of authorized buildings without change in land-use | Temporary tourism facilities
- 3. TN HRCE Rules, 1959**
 - The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.

²³ Coastal Regulation Zone

- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Thiruchendur Murugan Temple, situated near the sea shore, is one of the largest temple complexes (by area) of India. It is the second among six abodes of Lord Murugan (Arupadaiveedugal). Also, it is one of the few temples in India which has various forms and avatars of both Lord Vishnu and Lord Shiva together. This temple has an aperture from where one can hear the mystical OM vibration. The temple has various activities & attractions that entice tourists to the site including the annual car festival that is celebrated every year with huge footfalls.
2. **Accessibility & Mobility** – Thiruchendur Murugan Temple can be accessed can be accessed from Tirunelveli via SH 60 and Thoothukudi and Kanyakumari via SH 136. The major modes of transport people use to commute to the site include tour bus, autos and taxis / private cars. The nearest bus stop is ~500m from the temple. The nearest railway station is Thiruchendur railway station, ~2 km from the site. The nearest domestic airport is Tuticorin airport ~40km from the site while the nearest international airport is Madurai International Airport (~173km).
3. **Amenities** – Being a popular tourist destination, the temple has a developed ecosystem of infrastructure earmarked for public amenities. The temple precinct has a Tourist Information Desk, 22 RO drinking water facility, adequate dustbins, 2 footwear stands, luggage/cloak room, 30 CCTV camera & 76 security guards and divyaang friendly toilets. However, other than a few Prasadam stalls, the temple precinct doesn't have any retail shops.

The temple complex has 2 designated parking areas (capacity of 500 cars), 7 toilet blocks, 50-60 retail shops, 100+ eating stalls, 20 RO drinking water facilities, 2 ATM's and ~100 dustbins.

4. **Awareness** –Thiruchendur Murugan Temple is one of the most esteemed religious places of south India. Located right on the beach of Thoothukudi District, it attracts 5 million of devotees over the year. The temple is thronged by lakhs of visitors every year from South Indian states (Tamil Nadu, Andhra Pradesh, Karnataka and Kerala). The proportion of foreigners is high mainly from Srilanka and Malaysia. It finds mention in renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc. The temple also has a dedicated website, maintained by the HR&CE department.
5. **Activities** – On normal days, the temple does not offer any activities. On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc. The most famous is the Skanda Sasti Festival held during October-November for 7 days. This festival marks the defeat of the demon king Surapadma in the hands of Murugan. There are +300 tour guides for the temple. They provide temple information in Tamil, Hindi and English language.
6. **Accommodation** – Being the major tourist attraction in Thoothukudi district, the temple enjoys excellent accommodation options. Within a 500m radius of the site, there are more than 200 budget hotels, lodges and homestays available with an average room charge for double room AC as INR 1,500 and non-AC as INR 1,000. Popular hotels in a 2 km radius include 3-star hotels such as Hotel Udhayam International, Skantha Regency etc. One can also find comfortable rooms, cottages and dormitories in the TTDC Guest House at a nominal tariff. Apart from hotels, there are four lodges directly run by the Thiruchendur temple Devsathanam Board with 287 units (cottages, single and double rooms) at INR 50-100 per day.
7. **Association with Community** – Thiruchendur Murugan temple offers various social services like running an orphanage, sponsoring education for the needy and conduction of marriages for the poor at minimal cost. The temple has also rented out shops to the locals in the sannidhi street. People celebrate Skanda Sasti festival with much grandeur. The various mandapams in the temple complex also act as resting areas at night for pilgrims travelling by foot from Chennai in devotion.

Figure 7-1: Location and Existing Layout of temple precinct

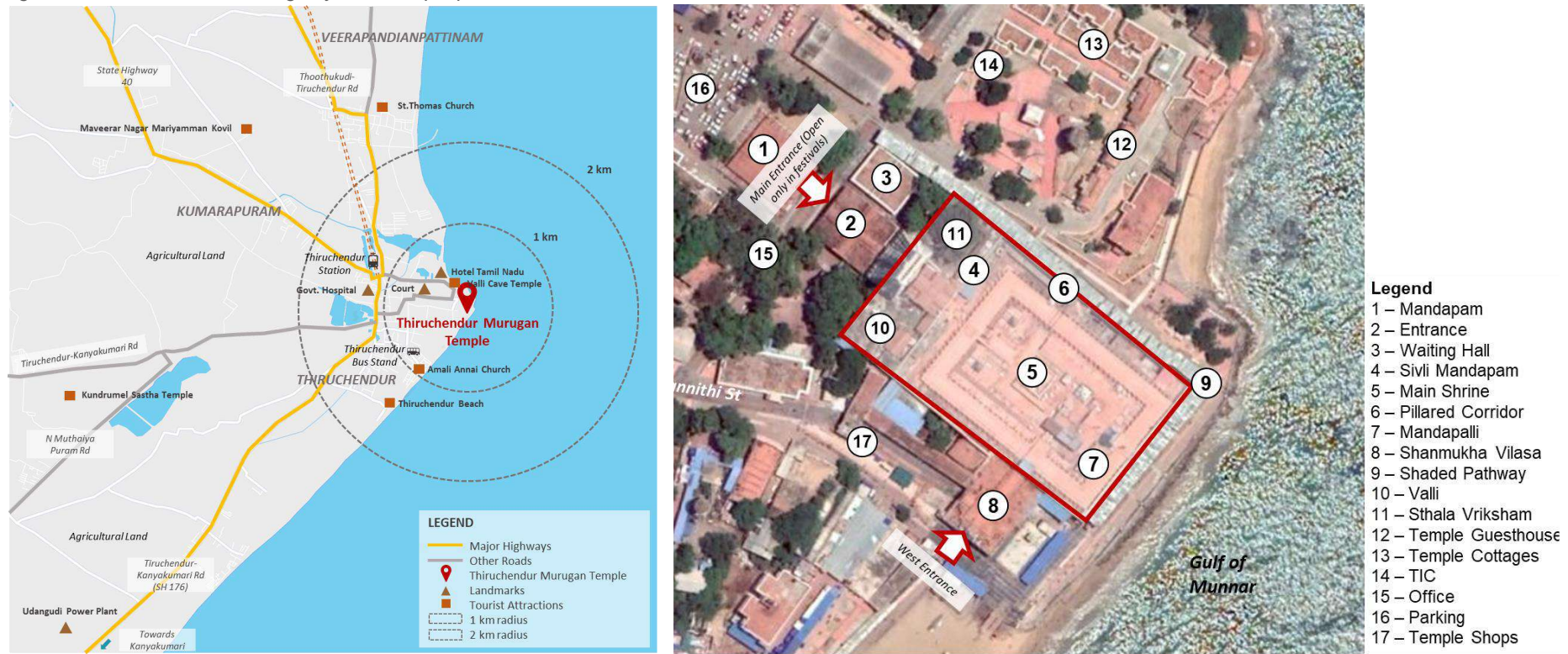


Figure 7-2: Existing Layout of temple complex



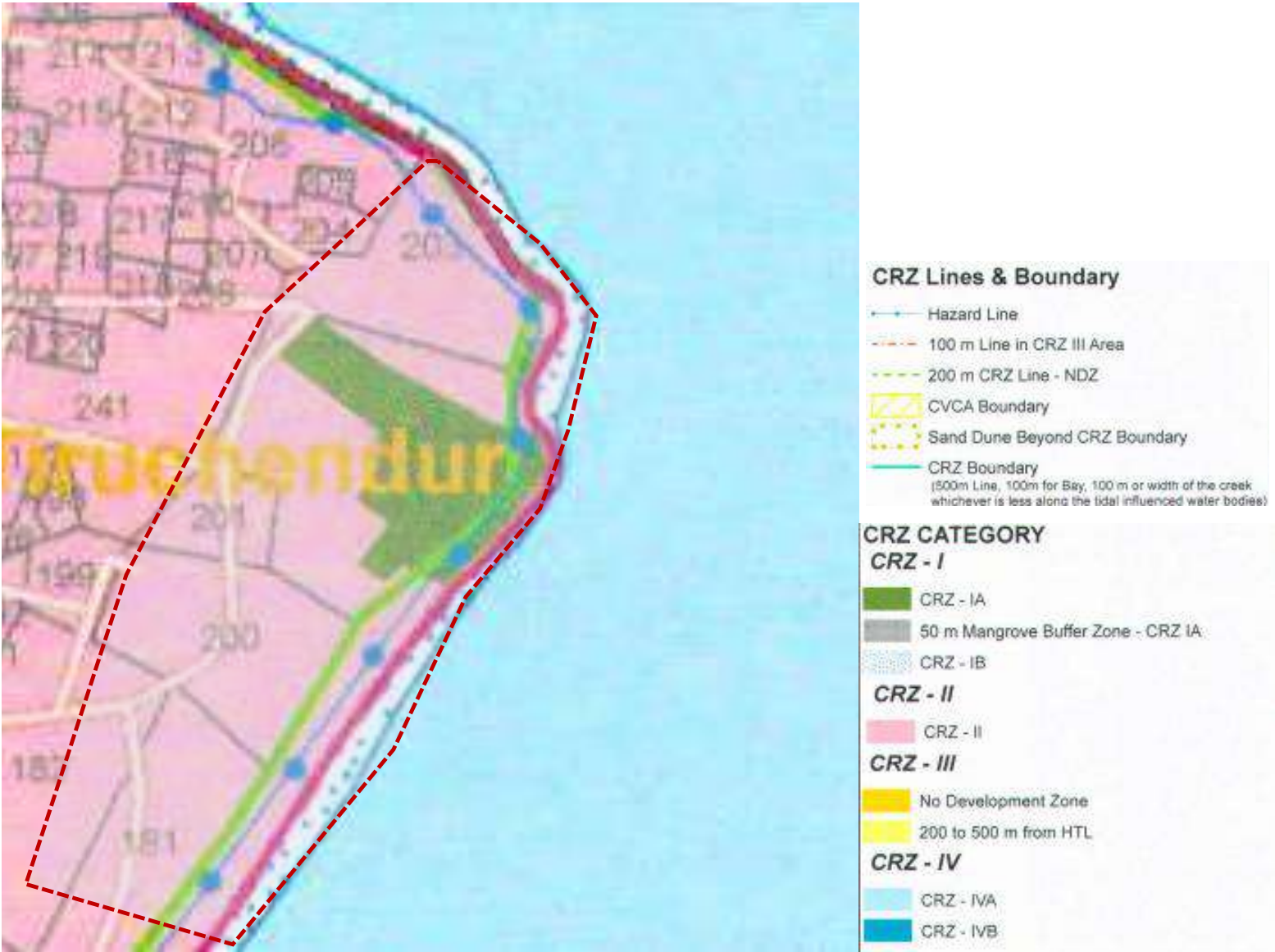
Site Pictures







Figure 7-3: CRZ Boundary



Vision for the Site

Thiruchendur Murugan Temple and subsequently the Thiruchendur beach area experience a very large footfall of pilgrims. In the streets directly around the Temple, improvements can be made with measures of Traffic Calming and Pedestrianisation. The large land parcel owned by the temple behind the beach is used by unregulated parking and hawkers. This area could be planned efficiently, with defined parking spaces. This would create safer and more attractive landscaped pedestrian space. An extended shaded beach promenade with additional seating, food & beverage choices, and places for recreational and leisure can be developed. The redeveloped Thiruchendur beach would become a vibrant hub, visited by both locals and tourists from all walks of life and socio-economic backgrounds.

- **Target Visitor** – The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic. Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

Further, tourist groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** - The site is categorized as a **Very High Tourism Site** with **Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	5,273	10,446	14,877
High Value Tourists (HVT) (Both domestic and foreign)	4	10	14
Maximum Carrying Capacity	2,67,848		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Master Plan Concept

The streets leading up to the Thiruchendur Murugan Temple main entrances should become a much more appealing, safe pedestrian experience for both Tourists and Pilgrims when walking through these narrow streets. A combination of Traffic Management and Pedestrianisation allows the creation of an attractive Pedestrian Friendly public spaces in this historic, most scenic, and crowded part of the city. The streets are already mostly used by pedestrians only, but can be improved in terms of Landscaping, Street Furniture and Façade Beautification. The carrying capacity of the streets in terms of tourist crowds will be increased by not allowing any randomly parked vehicles here anymore and give way to pedestrians.

The Beachfront should be programmed and landscaped in a manner which entices more people during the day and in the evening. The Northern portion of the beachfront promenade (Nalikinaru Way) has an extensive cover focusing on pilgrims waiting in line for the Temple. This promenade should be upgraded and extended to the South along the beachfront and the focus in the southern portion more on leisure and relaxation: to enjoy the sunset views by providing extensive steps to sit and more variation in amenities appealing to different audiences: affordable food and beverage kiosks for all, but also commercially operated cafes should be planned to attract the high value tourists. A large Event Plaza is planned for e.g., large religious or cultural festivals and gatherings.

One of the major aspects of the Tourist's experience when visiting a major Temple complex like Thiruchendur Murugan Temple which needs to be improved is the lack of proper tourist information and engaging background information about the Temple. To address all of the above, a Site Interpretation / Tourist Facilitation Centre is proposed at an open space close to the Temple.

Since enough space is available, towards the Southern end of the Temple owned area a cluster of guest houses / dormitories for pilgrims and Temple's staff could be planned.



Pedestrianisation streets around Temple



Upgrading Beachfront Promenade



Different Food & Beverage options for wide range of visitors

Hard Interventions

- 1. Traffic Calming, Pedestrianisation Improvements streets around the Temple** - Infrastructure Created: ~500-meter-long x 10 meter wide hard landscaped pedestrianised and traffic calmed space.
- 2. Thiruchendur Murugan Temple Interpretation Centre** - Infrastructure Created: Prototype 2 ~750 sq. m. of built-up area
- 3. Upgrading and Extension Beachfront Pedestrian Promenade –**
Infrastructure created – 750 meter x 6 meter hard landscaping, ample seating and shading structures, and other street furniture and trees.
- 4. Pedestrian Space Landscaping –** The entire public realm behind the beach is focused on vehicular circulation and parking. To change that clearly demarcated and landscaped space needs to be carved out for pedestrian movement only.
Infrastructure created – 10,000 sq.m. hard landscaping, with street furniture, trees
- 5. F&B Kiosks –** At two places next to the Beachfront Promenade and the Event Space two pavilions are planned for several Food & Beverage Kiosks / Cafes. Since both sites are located next to large parking lots, this would also be the ideal location to allow Food Trucks to be parked too.
Infrastructure created : 400 sqm built up area
- 6. Hawkers Pavilion Canopy –** At one place next to the Beach front Promenade a large pavilion / canopy structure is planned as the designated area for hawkers. This should come to replace the unorganized vendors that take up valuable parking or pedestrian circulation space. Beyond the designated hawker area a zero-tolerance policy for hawker encroachment should be enforced.
Infrastructure created : 800 sqm built up area canopy structure
- 7. Event Space with Stage** - Infrastructure created – 3,000 sqm event square and podium (300 sq.m.)
- 8. Temple Guest Houses, Dormitories** - At the southern end of the Plot behind the beach four low rise buildings could be planned as guest houses, dormitory accommodation, and some ancillary facilities for pilgrims.

Infrastructure Created: ~16,000 sq. m. of built-up area (four 2 storey courtyard buildings), and 2400 sq. m. soft landscaping



Interpretation Centre Thiruchendur Murugan Temple



Upgrade Landscaping Beachfront



Pavilions and Kiosks for Food & Beverage

9. **Temple Staff Quarters** - One of the buildings at the southern end of the Plot behind the beach could be planned as dormitory /living quarters for the Temple Staff.

Infrastructure Created: ~4,000 sq. m. of built-up area (one 2 storey courtyard buildings), 600 sq. m. soft landscaping.



Events Space and Podium for Religious or Cultural Festivals



Pilgrim Accommodation and Temple Staff Quarters

Soft Interventions

1. **Events** – The local Corporation or the Tourism Department could organise various events at the Events Area – (when it is not used during the Religious Festivals) for eg small-scale concerts, performances, community events etc. This would help to popularise the beach to all segments of visitors.

2. **Promotion** – The Tourism Department should promote the entire renewed Thiruchendur Murugan Temple Beach, and events / activities held there, on its various platforms, following redevelopment.

3. **Engaging the Local Community** – Planning for a dedicated hawker pavilion, the Pedestrianisation and traffic calming in the Old Town area, Beach Cleaning and many of the other Public Space Interventions can only be achieved with the local community brought in as an active participant in the planning, design, and operations of these interventions. This is the only way to create ownership with important stakeholders and more assurance the maintenance and cleanliness of these important public spaces will be taken seriously

Amenities Plan

1. **Toilets** – In addition to the current Public Bathrooms, more adequate number of toilets/changing rooms are proposed to be provided in the newly developed areas behind the Beach. Both public-access and paid-access toilets should be provided.

2. **Lighting** – Improved streetlighting focusing on pedestrians is proposed to be provided along the Beachfront promenade, the pedestrianised streets, all public plazas, the Event Square and parking areas. Streetlamps design are proposed to follow the same design guidelines as for the street furniture.

3. **Street furniture** – The existing street furniture needs improvement and be thought of in a more comprehensive and sustainable manner. Currently the street furniture is not sufficient nor comfortable. An international standard to the the design and quality of the street furniture should be the benchmark. The street furniture needs to become an integral part of the Public Space Landscape Design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for any future addition or change to the street furniture from seating benches, shading devices, canopies, cycle racks, dustbins, bollards, paving materials, way finding etc.

4. **Planting & landscaping** – More planting is required along the Beachfront Promenade and other Pedestrianized Spaces to create more shaded areas to make the space attractive also during the daytime. More greenery in the shape of shrubs will also help to demarcate different zones better and sculptural and

flowering trees are required to beautify certain important spaces and emphasize certain vistas and viewpoints.

- 5. Signage** – Signage is proposed to feature Tamil, English and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
- 6. Parking** – Surface parking is proposed to be replanned and improved with an extra parking lot to maximise the number of ECS spots available. *Infrastructure Created: 12,000 sq. m. hard landscaped area parking area for cars and 12,000 sq. m. hard landscaped area parking area for buses.*
- 7. Technology Interventions** – Being a flagship tourism site, Thiruchendur Murugan Temple Beach should offer all technological conveniences and employ technological tools for optimal management. These include:
 - a. Free WiFi
 - b. Compatibility with TN Assist App
 - c. AR Experiences
 - d. CCTV coverage
 - e. Security beacons / panic buttons at remote parts of Site
 - f. Electronic visitor counters

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Pedestrian and traffic calmed space (10m wide)	500m
2	Temple Interpretation Centre	750 sqm
3	Beachfront Pedestrian Promenade	4500m sqm
4	Pedestrian space landscaping	10000 sqm

#	Project Component	Scale
5	F & B Kiosks	400 sqm
6	Hawkers Pavilion Canopy	800 sqm
7	Event space with stage	300 sqm
8	Temple guest house, dormitories Soft landscaping	16000 sqm 2400 sqm
9	Temple staff quarters Soft landscaping	4000 sqm 600 sqm

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Pedestrian and traffic calmed space	500
2	Temple Interpretation Centre	42
3	Beachfront Pedestrian Promenade	195
4	Pedestrian space landscaping	21
5	F & B Kiosks	80
6	Hawkers Pavilion Canopy	11
7	Event space with stage	5
8	Temple guest house, dormitories	1,845
9	Soft landscaping	2
10	Temple staff quarters	465
11	Soft landscaping	1
Total		INR 30 - 33 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) *Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- b) *All revenues are unescalated.*
- c) *Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

The following revenue sources are expected for the site:

1. **Kiosks** – Captures 2 kiosks at the facilitation centre, each to be rented out at INR 1 Lakh per annum.
2. **Yatri Niwas** – Capturing 120 keys with average yearly occupancy of 60% at INR 1100 per room and additional revenues of 20% over room revenues.
3. **Retail/ Hawker zone** – Captures renting out of 1200 sqm of built-up space at INR 600 per sqm per annum.
4. **Space on Hire** – Capturing 4 events per month at INR ~5,500 Lakhs per event.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 3 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. Assuming **4 Help-desk staff** for the facilitation centre, amenity block, and the retail area.
 - b. Assuming **4 security personnel** for the facilitation centre, yatri niwas, and the parking.
 - c. Assuming **4 Administration staff** to overlook the operations of the facilitation centre, yatri niwas, retail spaces, education hall and the meditation centre.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 3 Cr.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple and the entire Gopuram trail.

The interventions proposed at the site are largely for improving crowd management and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the proposed interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the Yatri Niwas at the site to private operators for better efficiency and long-term sustainability:

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost Lakhs)	(INR	Phasing	Funding Agency
1	Pedestrian and traffic calmed space	500		Y0 – Y2	HR & CE
2	Temple Interpretation Centre	42		Y0 – Y2	HR & CE
3	Beachfront Pedestrian Promenade	195		Y0 – Y2	HR & CE
4	Pedestrian space landscaping	21		Y0 – Y2	HR & CE
5	F & B Kiosks	80		Y0 – Y2	HR & CE
6	Hawkers Pavilion Canopy	11		Y0 – Y2	HR & CE
7	Event space with stage	5		Y0 – Y2	HR & CE
8	Temple guest house, dormitories	1,845		Y0 – Y2	PPP - OMT
9	Soft landscaping	2		Y0 – Y2	HR & CE
10	Temple staff quarters	465		Y0 – Y2	PPP - OMT
11	Soft landscaping	1		Y0 – Y2	HR & CE
Total		INR 30 - 33 Cr.			

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1.45L²⁴ man-days of construction labour (spread across 1 – 2 years of implementation)

During Operations: Jobs created during operations will entail:

²⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

- Accommodation Facility = 86 man – days per day²⁵
- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days²⁶
- Retail and F&B spaces = 5 Persons²⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 3,55L man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,495 Cr. at the site²⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

²⁵ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

²⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

²⁷ Assuming average 2.5 persons per kiosk / shop

²⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 7-4: Proposed Master Plan – Thiruchendur Murugan Temple



Annexure: Proposals for Planning Interventions

This chapter captures a glossary to guide through various interventions planned / proposed at the sites.

1.1 Glossary of Proposed Interventions

This section contains standard proposals for the following:

1. Tourist Facilitation Centres
2. Stand-alone Conveniences
 - a. Community Toilet Block
 - b. Pay & Use Toilet Block
 - c. Smart Toilet
 - d. Drinking Water Station
 - e. Changing Area
 - f. Activity Operator's Booth
 - g. Footwear Stand
 - h. Footwear Storage
3. Circulation & Landscaping
 - a. Circulation
 - b. Paved Walkway in flat terrains
 - c. Paved Walkways in hilly terrains
 - d. Boardwalks
 - e. Stilted Boardwalks
 - f. Canopy Walks
 - g. Pedestrian Over-Bridge
 - h. Ropeway
 - i. Paved Road
 - j. Waterfront Promenade
 - k. Traffic Island
4. Rest Areas
 - a. Holding Area (Crowd Management)
 - b. Shading Device Type 1 (Tensile Structures)
 - c. Shading Devices Type 2 (natural material)
 - d. Beach Shack
5. Street Furniture
 - a. Railings (Steel)
 - b. Railings (Wooden)
 - c. Street Lighting
 - d. Yard Lighting
 - e. Monument Lighting
 - f. Dustbins
 - g. Seats
 - h. Bollards
6. Landscaping
 - a. General Site Landscaping
 - b. Street Landscaping
 - c. Sports Courts
 - d. Skating Rink
7. Events / Community uses
 - a. Bandstand
 - b. Paved Event Area
 - c. Community Park
 - d. Children's Play Area
 - e. Community Gathering Area
 - f. Cultural Halls
 - g. Sculpture Garden
 - h. Amphitheatre
 - i. Swimming Pool

8. Signage

- a. Temple / Cultural Site
- b. Natural Site

9. Parking

- a. Paved Yard
- b. Multi-Level Car Parking (MLCP)
- c. E-Cycle Parking / Fixed Cycle Stand
- d. EV Hub
- e. Bus / EV Stop

10. Retail & F&B

- a. Retail Kiosk
- b. Retail Zone
- c. F&B Kiosk
- d. Dine-in Restaurant
- e. Outdoor Dining Area
- f. Hawker Zone

11. Site Attractions

- a. Viewing Tower
- b. Floating Jetty
- c. Selfie Spots

12. Technology

- a. Packages for security, Wifi, TN Assist App, visitor counter and audio guides

13. Sustainability Measures

- a. Solar Power Systems
- b. Rainwater Harvesting

14. Civic Upgradation

- a. Community Education Drive
- b. Clean-up Drive
- c. Covered Stormwater Drains
- d. Underground Electrical Lines
- e. Sewage treatment Plant

15. Site Boundary

- a. Boundary Wall
- b. Fencing
- c. Gate Complex

16. Capital Projects

- a. 3 Star Hotels
- b. 4/5 Star Hotels
- c. Yatri Niwas
- d. Wayside Amenities

17. Tourism Desks

- a. Airport
- b. Railway Station

1.2 Prototypes – Amenities

This section would cover standardised interventions to be implemented across various sites. The following glossary contains the broad specifications, cost and reference images for such standard interventions.

1.2.1 Tourist Facilitation

- One of the major aspects of Tamil Nadu's tourism experience that needs to be improved on is the lack of proper amenities, tourist information and engaging background information at most of the Temple Sites, Heritage Sites, Nature Parks and other Preserved Habitats.
- To address all the above issues, Tourist Facilitation Centres are proposed at many sites throughout the state.
- While at few sites it might be possible to reuse existing dilapidated and/or underutilized buildings to house a Tourist Facilitation Centres, these will need to be newly developed at most of the sites. Thus, by creating a prototype or template design that can be easily replicated (with small adjustments to its size and layout, based on local site conditions and functional requirements), an effective cost saving can be made in the construction costs of Tourist Facilitation Centres.
- The Tourist Facilitation Centre's structure, over time, is also expected to become a familiar landmark for travelling tourists throughout the state.
- Further, considering the varied mix of sites with large differences in footfalls, six prototypes are suggested and detailed out in the following section.

1. Facilitation Centre Type 1

Type – Basic Facilitation Centre

Location – Large Pilgrim Temples

Components

- Ticket sales counter
- Helpdesk
- Gallery with displays to explain the heritage & cultural importance of the site
- Temple wares retail (pooja items, prasadam)
- Shoe Stand & Cloak Room

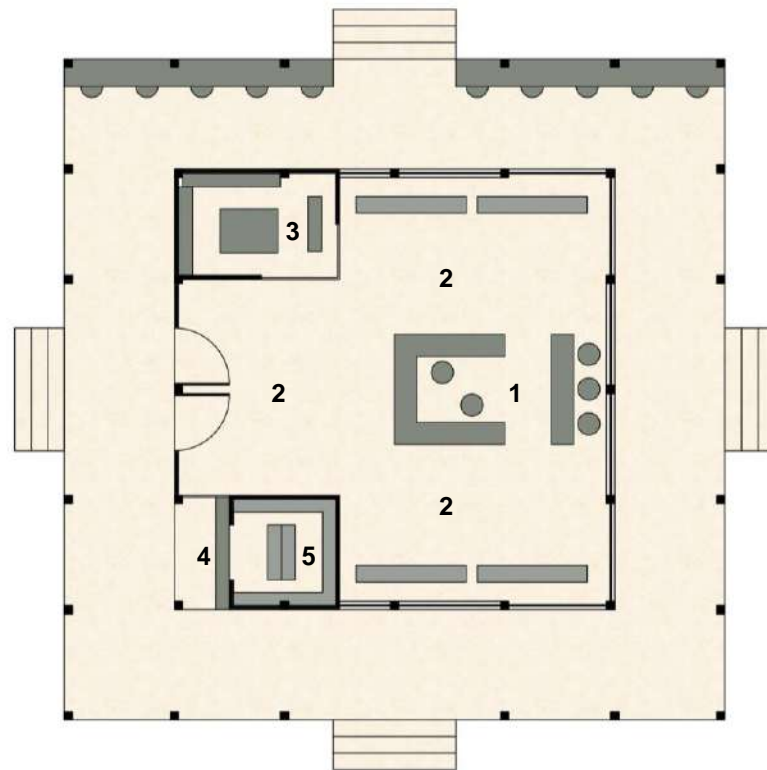
Design & Layout

- A newly built structure, the Centre could be located inside or just outside Temple premises (depending on land availability), in path of visitor movement.
- Covering a built-up area of ~150 sqm and an indoor space of ~60 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site (reduced in size, for sites that do not have enough vacant land).
- A prototype plan, housing requisite amenities for visitor facilitation, has been detailed out along with suggestive elevations & views.

Broad Specifications

The building will be architecturally modern in design but inspired by the historic building traditions and built in keeping with the temple architecture. The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the temple.

Lump sum cost for module – INR 15-17 L



1. Help Desk & Ticket Sales Counter
2. Site Gallery (Basic)
3. Temple Ware Retail
4. Shoe Stand
5. Cloak Room

0 1 2 METERS



Front Elevation – Main Entrance



Side Elevation – Secondary Entrance



Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Typical Components: Tourist Facilitation Centre Type 1

2. Facilitation Centre Type 2

Type – Advanced Facilitation Centre

Location – Large Tourist and Pilgrim Temples

Components

- Ticket sales counter + audio guides + guides' station
- Helpdesk
- Site galleries with large format displays & VR experiences to explain the heritage and cultural importance of the site
- Temple wares retail (pooja items, prasadam) and Souvenir retail
- Shoe storage & protective foot cover distribution
- Cloak Room

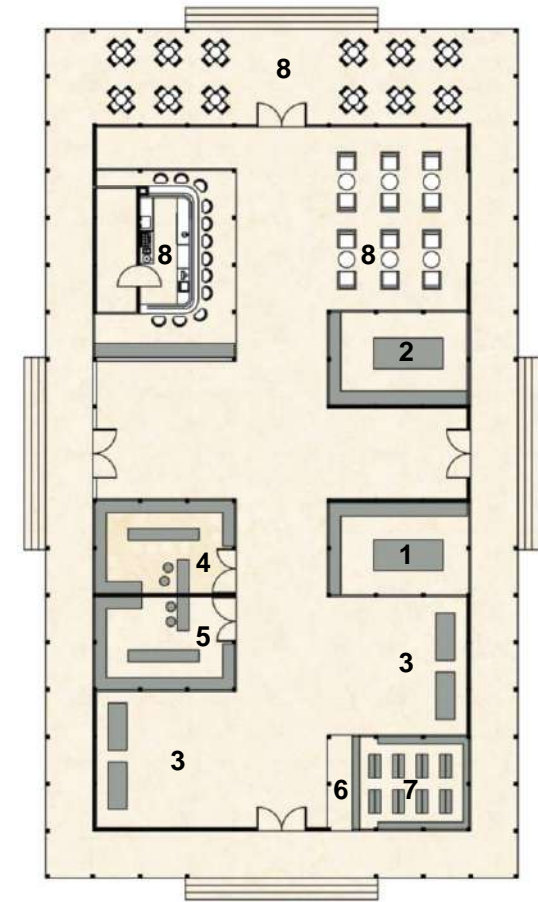
Design & Layout

- A newly built structure, the Centre could be located inside or just outside Temple premises (depending on land availability), in path of visitor movement.
- Covering a built-up area of ~750 sqm and an indoor space of ~330 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing state of the art facilities for visitor facilitation and engagement, has been detailed out along with suggestive elevations & views.

Broad Specifications

- The building will be architecturally modern in design but inspired by the historic building traditions and built reminiscing the temple architecture.
- The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the temple.
- The building should be sustainable with low-waste and preferably off-grid systems.

Lump sum cost for module – INR 40-45 L



1. Ticket Sales Counter + Audio Guides + Guides' Station
2. Helpdesk
3. Site Gallery with large format displays & VR Experiences.
4. Souvenir Retail
5. Temple Retail
6. Shoe Storage & Protective Cover Distribution
7. Cloak Room
8. F&B Stall and Seating Space

0 1 2 4 METERS



Front Elevation – Main Entrance



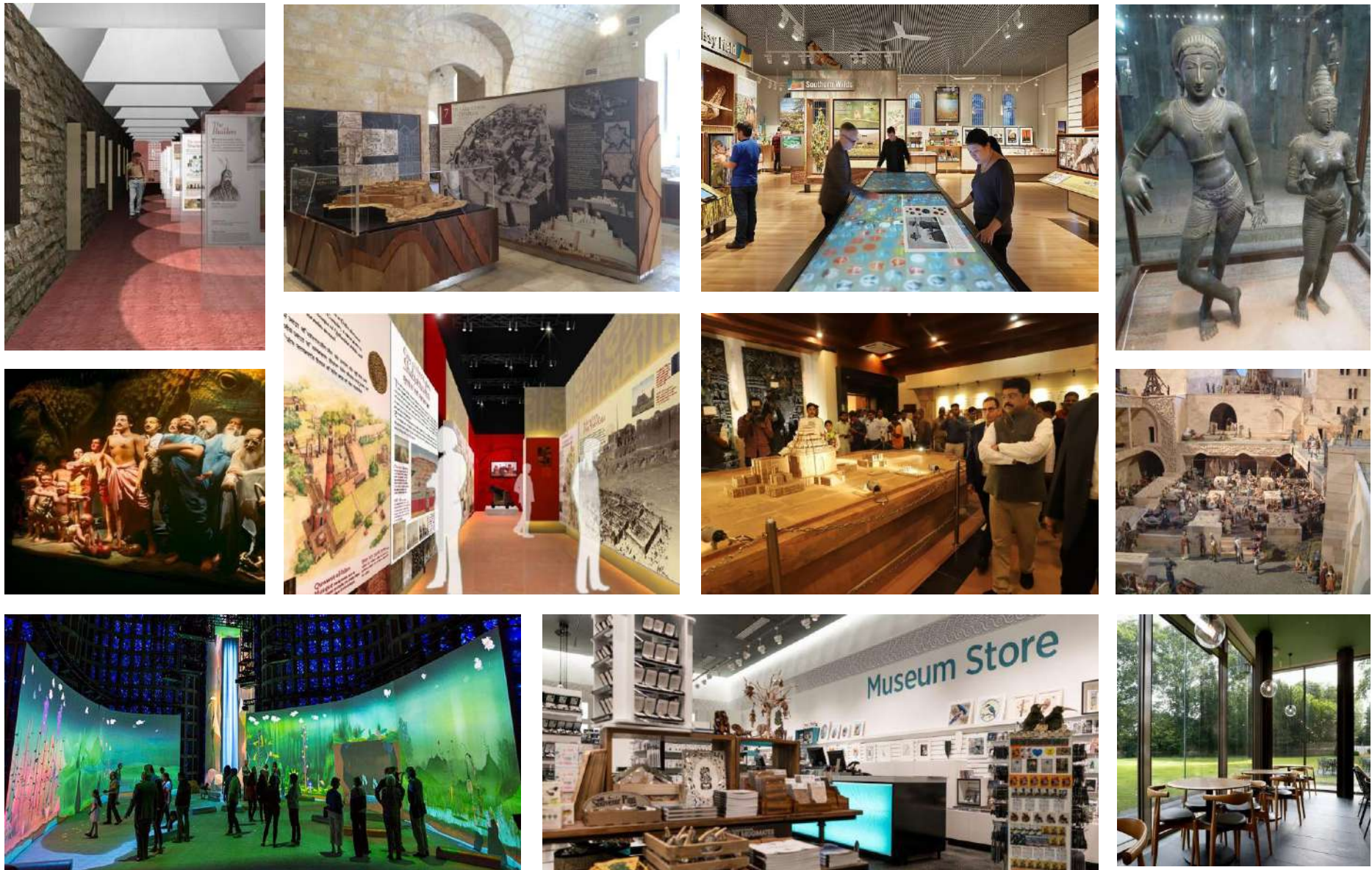
Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Architectural Design Features



Typical Components: Tourist Facilitation Centre Type 2

3. Facilitation Centre Type 3

Type - Basic Facilitation Centre

Location – Natural sites with local tourists only

Components

- Ticket sales counter
- Helpdesk
- Guides' station
- Site gallery with displays to explain the ecological importance of the site
- Cloak room
- F&B kiosks

Design & Layout

- A newly built structure, the Centre could be located close to the site entrance and/or in path of visitor movement.
- Covering a built-up area of ~150 sqm and an indoor space of ~60 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing requisite amenities for visitor facilitation, has been detailed out along with suggestive elevations & views.

Broad Specifications

- The building will be architecturally modern in design but inspired by the natural beauty of its surrounding landscape.
- The building should be constructed with natural and locally sourced materials as much as possible to best blend in and be sustainable, preferable with off-grid mechanisms and low-waste generation.

Lump sum cost for module – INR 20-25 L



1. Help Desk and Ticket Station
2. Guides Station
3. F&B Kiosk
4. Site Gallery (Basic)
5. Cloak Room

0 1 2 METERS



Front Elevation – Main Entrance



Side Elevation – Secondary Entrance



Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Typical Components: Tourist Facilitation Centre Type 3

4. Facilitation Centre Type 4

Type – Advanced Facilitation Centre

Location – Natural sites with local and high-value tourists

Components

- Ticket sales counter
- Helpdesk
- Guides' station
- Site galleries with large format displays & VR experiences to explain the ecological importance of the site
- Souvenir retail
- Dining area
- Cloak room
- Window for activity operators (optional)

Design & Layout

- A newly built structure, the Centre could be located close to the site entrance and/or in path of visitor movement.
- Covering a built-up area of ~700 sqm and an indoor space of ~350 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing state of the art facilities for visitor facilitation and engagement, has been detailed out along with suggestive elevations & views.

Broad Specifications

- The building will be architecturally modern in design but inspired by the natural beauty of its surrounding landscape.
- The objective is to achieve minimal visual disturbance due to the addition of a new structure to the natural setting of the site.
- The building should be constructed with natural and locally sourced materials as much as possible to best blend in and be sustainable, preferable with off-grid mechanisms and low-waste generation.

Lump sum cost for module – INR 50-55 L



1. Ticket Sales Counter
2. Helpdesk
3. Guides Station
4. Site Gallery with large format displays & VR Experiences.
5. Souvenir Retail
6. Dining Area
7. Cloak Room
8. Activity Operators and storage

0 2 4 METERS





Architectural Design Features



Typical Components: Tourist Facilitation Centre Type 4

5. Facilitation Centre Type 5

Type - Basic Facilitation Centre

Location – Heritage sites with local tourists only

Components

- Ticket sales counter
- Helpdesk
- Guides' station
- Site gallery with displays to explain the heritage and cultural importance of the site
- Cloak room
- F&B kiosks

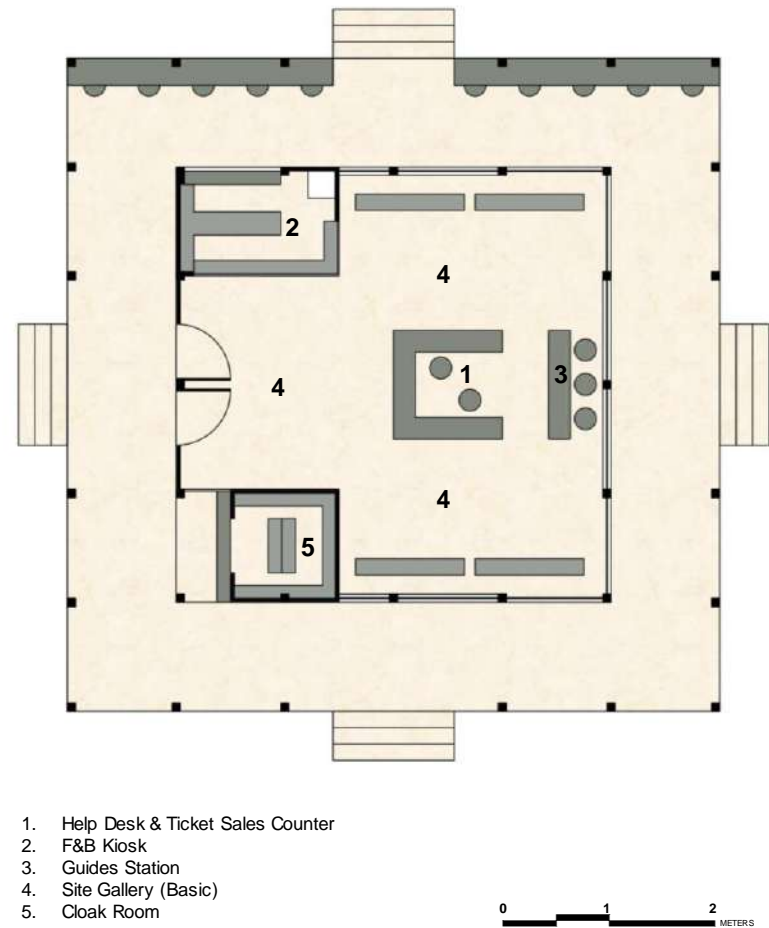
Design & Layout

- A newly built structure, the Centre could be located close to the site entrance and/or in path of visitor movement.
- Covering a built-up area of ~150 sqm and an indoor space of ~60 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing requisite amenities for visitor facilitation, has been detailed out along with suggestive elevations & views.

Broad Specifications

- The building will be architecturally modern in design but inspired by the historic building traditions and reminiscent of local architecture.
- The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the heritage site.

Lump sum cost for module – INR 20-25 L





Front Elevation – Main Entrance



Side Elevation – Secondary Entrance



Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Typical Components: Tourist Facilitation Centre Type 5

6. Facilitation Centre Type 6

Type – Advanced Facilitation Centre

Location – Heritage sites with local and high value tourists

Components

- Ticket sales counter
- Helpdesk
- Guides' station
- Site galleries with large format displays & VR experiences to explain the heritage and cultural importance of the site
- Souvenir retail
- Dining area
- Cloak Room
- Window for activity operators (optional)

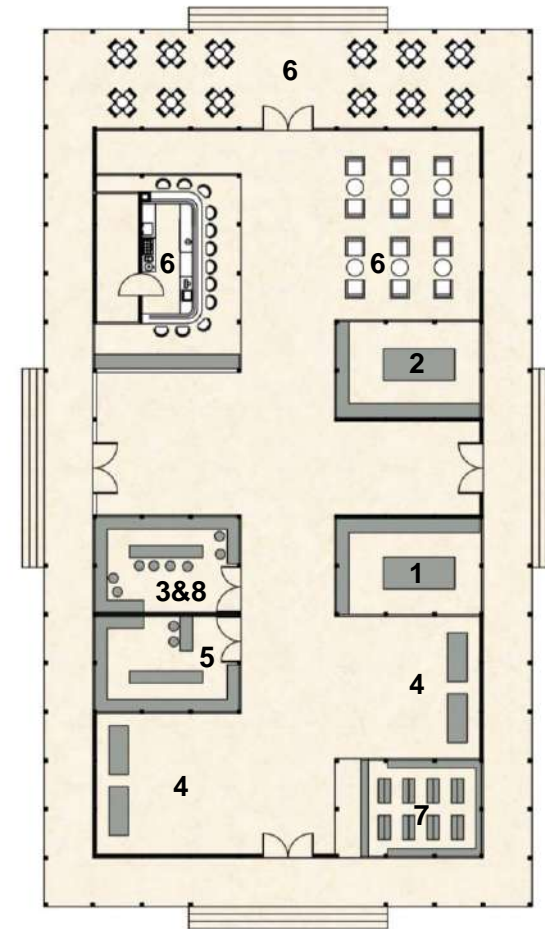
Design & Layout

- A newly built structure, the Centre could be located close to the site entrance and/or in path of visitor movement
- Covering a built-up area of ~750 sqm and an indoor space of ~330 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing state of the art facilities for visitor facilitation and engagement, has been detailed out along with suggestive elevations & views.

Broad Specifications

- The building will be architecturally modern in design but inspired by the historic building traditions and reminiscent of local architecture.
- The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the heritage site.

Lump sum cost for module – INR 50-55 L



1. Ticket Sales Counter
2. Helpdesk
3. Guides Station & Activity Operators Room
4. Site Gallery with large format displays & VR Experiences.
5. Souvenir Retail
6. Dining Area
7. Cloak Room
8. Window for activity operators (optional)

0 1 2 4 METERS



Front Elevation – Main Entrance



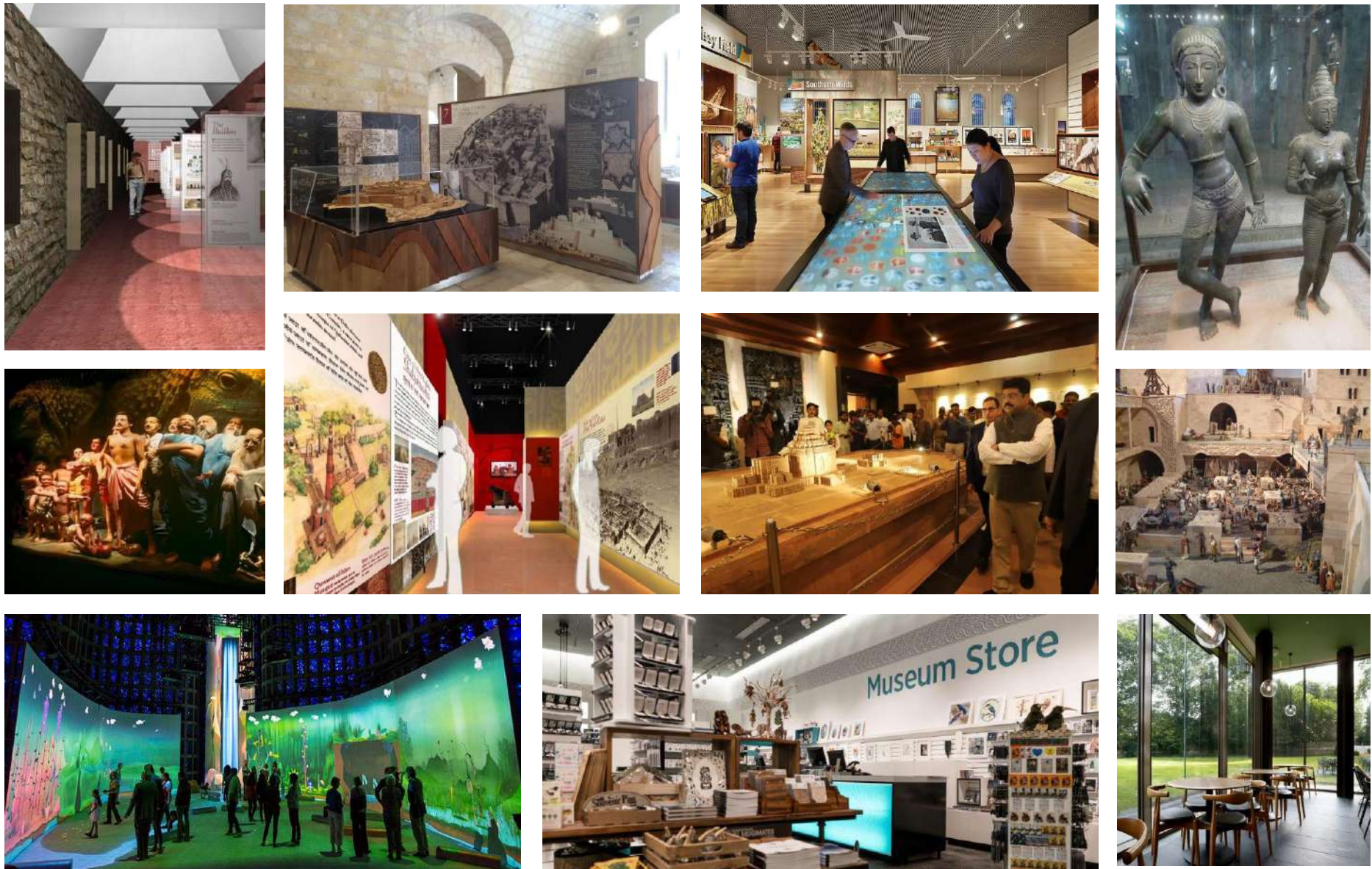
Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Architectural Design Features



Typical Components: Tourist Facilitation Centre Type 6

1.2.2 Stand-alone Conveniences

1. Community Toilet Block

Type – Basic Toilet Block with free access

Design & Specifications

- A community toilet block, separated into male and female facilities, could be built for local community & visitors at sites that are heavily visited by locals and/or located close to residential localities lacking such facilities.
- The female facility could house three WCs and three washbasins, while the male facility area could contain a WC, three urinals and three washbasins.
- A prototype plan, housing the requisite fixtures, has been detailed out.
- The toilet block could be built with locally sourced materials to reduce cost and be sustainable.

Lump sum cost for module – INR 4-6 L



2. Pay & Use Toilet Block

Type – Basic Toilet Block with nominal entry fee

Design & Specifications

- A pay & use toilet block could be built for tourists at sites that receive high tourist footfalls.

- The block, segregated into male and female facilities, could house at least one wheelchair compatible unisex toilet.
- The female facility could house three WCs and three washbasins, while the male facility area could contain a WC, three urinals and three washbasins.
- Further, depending on the land availability and site footfalls, nursing room with baby changing station could also be provided.
- An all-inclusive prototype plan, housing the requisite fixtures, has been detailed out.
- These toilet blocks provided across the state, could be built in bulk as prefabricated portable structures to save on cost and installation time.

Lump sum cost for module – INR 20-25 L



3. Smart Toilet

Type – High-tech Unisex Toilet Unit with paid access

Location – Anchor Sites

- A major issue faced by high value tourists across Tamil Nadu, highlighted in the baseline surveys, is the lack of uncontaminated, hygienic and well-maintained toilets at tourist destinations. Further, there is a willingness to pay for such quality amenities amongst this category of tourists.
- Thus, smart toilet unit could be installed at sites with high HVT footfalls. The high-tech unit will be a self-contained, self-cleaning, unisex toilet.

Design & Specifications

- A standalone unisex unit could be located close to tourist facilitation centre/ other tourist amenities. The unit will be designed for universal access with provisions for barrier free accessibility and wheelchair usage.
- The high-tech unit could be enabled with the following features:
 - Card/Coin validator system
 - Auto-flush and automatic surface cleaning mechanism to clean the toilet before and after usage
 - In-built water tank and roof-top solar PV
 - Motion sensors and LED indications to notify the user about the status of the system: ready, occupied, cycling (self-cleaning), or out of service.
 - Voice Guidance to help the user to operate the toilet without manual assistance
 - Display boards where instructions in Hindi and English shall be written for the aid of the user
 - GPRS Connectivity to help in the monitoring the health status of the unit
- These toilet blocks provided across the state, could be built in bulk as prefabricated portable structures to save on cost and installation time.

Unit Cost – INR 4-5 L



4. Drinking Water Station

Type – Basic Modular Unit with free access

- As highlighted by many tourists in the baseline surveys, availability of free drinking water was a major issue at tourist sites.
- Hence, drinking water stations with RO water coolers could be installed at all sites (except for the ones that already have functional drinking water facility).

Design & Specifications

- A standalone drinking water station could be located close to tourist facilitation centre/ other tourist amenities and in case of large sites, it could be located at various points in path of visitor movement. The unit could be designed for universal access.
- The drinking water unit could be a semi-walled unit with a roof over the water fountain area and concealed RO water purifier & cooler.
- For ease of procurement and installation, the water station could be a modular unit with number of water fountains decided as per the site footfalls.
- The unit could be built with locally available materials and adapted to site architecture.

Lump sum cost for module – INR 2.5-3 L



5. Changing Area

Type – Basic with nominal entry fee

Location – Beaches, waterfalls, temples with ablution / dress restrictions etc.

Design & Specifications

- A changing area block could be developed with 2 dry stalls, 2 shower rooms and 20 lockers in each module (segregated male & female modules). In addition to this, one wheelchair-compatible stall could be developed per block.
- The block could be located close to the beach/ waterfall or near the entrance of the temple, for the convenience of tourists.
- The changing area blocks could be built in keeping with the site & surroundings:
 - For beach / waterfall – the building could be built with natural and locally sourced materials, blending in with the surroundings. The block could be made sustainable with preferably off-grid systems and low-waste generation.
 - For temple sites – the building could be inspired by the historic building traditions and built in keeping with the temple architecture. The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the temple.

Lump sum cost for module – INR 5-7 L



6. Activity Operator's Booth

Type – Basic

Location – Sites with existing / proposed activities run by operator(s)

Design & Specifications

- A block for activity operators(s) could be built close to the area where activity is to be conducted, keeping in mind the path of visitor movement.
- The block could house information and booking counter for tourists along with a storage area for the operator's usage.
- An itinerary/ brochure stand could be installed for public access, to disseminate information on various activities possible in and around the site.

Lump sum cost for module – INR 5-6 L



7. Footwear Stand

Type – Basic stand with free access

Location – Temples, Beaches, Waterfalls etc., with low footfalls

Design & Specifications

- Footwear stands could be provided (free of cost) for sites having footwear restrictions.
- The footwear stand could be placed near the site entrance, specifically near the area post which footwear restriction would be imposed.
- A modular stand could ensure easy replication and capacity addition based on the footfalls of the respective site.
- Each footwear stand could have 3-4 racks to ensure optimal usage as well as easy access.
- Seating area could be provided near the stand (optional) for ease of usage.

Lump sum cost for module – INR 1-1.5 L



8. Footwear Storage

Type – Manned facility with nominal fee

Location – Temples, Beaches, Waterfalls, etc., with high footfalls

Design & Specifications

- Manned footwear storage facility could be provided for high value sites having footwear restrictions.
- The facility could be placed near the site entrance, specifically near the area post which footwear restriction would be imposed.
- The storage facility could accommodate a footwear deposit & collection desk and shoe storage slots with associated token system.
- Seating area could be provided near the facility for ease of usage.

Lump sum cost for module – INR 2-3 L



1.2.3 Circulation & Landscaping

1. Circulation

Paved walkways

- Walkways could be developed with paver blocks at all tourist sites, except for sites with hilly / sloping terrain
- A standard width of 3m could be followed to achieve ease of movement for all
- The colour of the blocks could be decided as per the site and local colour palette
- Unit rate – INR 2,000 per m (for a standard width of 3m)



Paved walkways at hilly sites

- Concrete walkways could be developed at hilly sites/ site areas with sloping terrain
- A standard width of 3m could be followed to achieve ease of movement for all
- The walkway will be finished to ensure a levelled and non-slippery surface
- Unit rate – INR 2,750 per m (for a standard width of 3m)



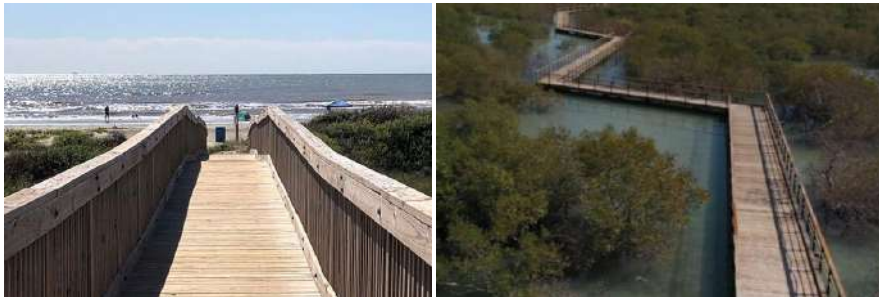
Boardwalks

- Boardwalks could be developed at sites with wet, loose, fragile, or marshy land to enable pedestrians to traverse the area
- These boardwalks could be built of wooden planks sourced locally, having a standard width of 3m
- Unit rate – INR 8,500-9,000 per m (for a standard width of 3m)



Stilted Boardwalks

- Boardwalks could be developed on stilts for sites where pedestrian movement is desired on water or through sensitive areas like mangroves
- The walkway could be built with a parapet/ railing on both sides for safety
- The stilted boardwalk could have a standard width of 3m for ease of movement
- Natural and locally sourced materials could be used for the construction of this elevated walkway
- Unit rate – INR 50,000-60,000 per m (for a standard width of 3m)



Canopy Walk

- Canopy walk, in essence a pedestrian bridge, could be developed at forest/ birdwatching sites as an eco-tourism attraction
- The elevated structure, usually built high above the ground, could provide pedestrian access to a forest canopy and allow tourists to experience nature in its entirety
- Built of natural and locally sourced materials, the walk could maintain a standard width of 3m and have extended areas at important viewpoints along the walk
- Unit rate – INR 35,000-40,000 per m (for a standard width of 3m)



Pedestrian over-bridge

- A pedestrian over-bridge could be built at sites where crossing an area over a considerable height is desired and/or as an attraction offering viewpoints to tourists
- A standard width of 3m could be followed to achieve ease of movement for all
- The design and materials of the bridge could be decided as per the site and its surroundings
- Unit rate – INR 1,20,000-1,50,000 per m (for a standard width of 3m)



Ropeway

- Ropeway could be developed at hill sites with high footfalls or sites where physical access is barred because of natural constraints, to aid access and offer aerial views of the surroundings.
- Motorized passenger cable cars, accommodating 4 to 8 passengers, suspended and pulled by cables could transport tourists to and fro.
- Two stations, with ticket sales facility, could be developed at both ends.
- Unit rate – INR 15-20 Cr per km



Paved road

- Asphalt paved roads could be developed at sites facing accessibility issues due to unpaved roads and/or bad quality of roads reaching up to the site.
- While the number of lanes could be decided as per the traffic flow, each lane to have a standard clear carriageway width of 3.75m.
- Further, to achieve a smooth paved road, the following steps could be observed:
 - Demolition and removal of the existing surface
 - Grading and sloping for appropriate drainage
 - Preparation of sub-base to support the asphalt surface
 - Addition of binder layer
 - Installation of the new asphalt surface
 - Smoothing of the transitions to existing driveways
 - Smoothing and compacting
- Unit rate – INR 3-3.2 Cr per lane-km

Waterfront promenade

- A waterfront development could be planned at sites abutting water bodies like lake, river, dam, ocean.
- A continuous paved walkway along the waterfront with landscaping, seating, shaded spaces and activity areas could be developed as a great destination for locals and tourists alike.
- The promenade could activate the waterfront area and be used throughout the day for activities like walking, jogging, outdoor exercising & yoga, observing sunrise / sunset, holding cultural events, evening markets, etc.
- Unit rate – INR 13,000-15,000 per m (for a standard width of 3m)



Traffic island

- A traffic island could be developed at major junctions in and/ or around the site, to channelize traffic and provide a refuge to pedestrians.
- While the size of the island could be decided as per the site and traffic flows, a minimum width of ~1.8m is suggested to safely accommodate a waiting pedestrian with a buggy.
- At major junctions, these traffic islands could also become landmarks with landscaping and / or decorative art / sculpture(s).
- Module cost – INR 1.5-1.7 Cr



2. Rest Areas

One of the essential components of circulation are the resting areas, especially for large tourist sites. The resting areas could include common holding areas or specific shaded areas within the site premise.

Holding area (Crowd management)

- Holding area could be a large semi-open space within the site which could act as resting areas during the non-peak season, doubling as a crowd management measure during the peak season.
- The holding area could be a typical module of ~500 sqft with seating facilities, provided as per site requirements and availability of space, strategically located in path of visitor movement.
- Module cost – INR 2-2.5 L

Shading devices type 1 (Tensile structures)

- Tensile structures could be used as shading devices for sites where temporary shading is required.
- These are typically polyethylene-based fibre sheets supported by tensile-stressed cable that can span across large areas.
- While the structure could be provided as per site requirements, a typical module could maintain a standard width of 3m.
- These structures could be used to accommodate seating areas, walkways, play areas, F&B kiosks, temporary markets, etc.
- Unit rate – INR 12,000-15,000 per m (for a standard width of 3m)



Shading devices type 2 (Natural Materials)

- Shading devices with natural materials could be used at sites with natural setting like forests, waterfalls, etc.
- The materials for these structures could be sourced locally to achieve sustainability and aim to blend in with the surroundings.
- While the structure could be provided as per site requirements, a typical module could maintain a standard width of 3m.
- Unit rate – INR 4,000-6,000 per m (for a standard width of 3m)



Beach Shack

- Beach shacks could be temporary structures provided at beach sites.
- These structures could have thatched roof, built using the locally sourced natural materials.
- At high value tourist sites which receive high footfalls, these shacks could also accommodate seating, lounge chairs, F&B kiosks, retail outlets, etc.

- A typical module could cover an area of 2m by 2m. The dimensions and number of modules could be modelled as per the site footfalls and availability of space.
- Module cost – INR 65,000-80,000



3. Street furniture

Railings type 1

- Mild steel railings could be installed at all sites, except natural sites
- These could be provided to ensure safety and support, with a standard height of 1.0 m.
- Unit rate – INR 2,500 per m



Railings type 2

- Railings made of natural and locally sourced materials could be installed at natural sites.
- These could be provided to ensure safety and support, with a standard height of 1.0 m.
- Unit rate – INR 2,000 per m



Street Lighting

- Streetlights could be installed at all sites that are accessible after sunset, to ensure safety and security.
- Ornamental light-post with energy-efficient luminaries and solar panel integrated system could be installed.
- An optimum height of 6m could be kept with a standard spacing of ~30 m between light poles.
- Unit rate – INR 1,600 per m (one light pole every ~12m)



Yard Lighting

- Yard lighting could be provided at sites that require lighting over a large area.
- The luminaires could be mounted at a minimum height of 20 m with a standard space-height ratio lying between 2.5 to 3.
- Unit rate – INR 4,000 per sqm (one light pole per 100 sqm)



Monument lighting

- Monument lighting could be provided at high value sites and / or sites with architectural or historical significance.
- While the type of lighting to be installed is dependent on a variety of site-specific factors, the aim is to create orientation points for visitors that are visible from a distance and bring the history & culture of the structure to light.
- Lump sum cost of module – INR 20-25 L



Dustbins

- Dustbins, in sufficient quantity, could be provided at all sites to maintain the site and keep the surroundings clean.
- A modular unit, with a bin cover and segregated wet and dry compartments, could be procured in bulk for all sites across the state.
- These dustbins could be fixed at a standard distance of 100m, achieving an effective distance of maximum ~50m from any point along the visitor's path.
- Unit cost – INR 2,000



Seats

- A modular unit with 3 seats could be designed and built in concrete at all sites.
- The seating could be provided in path of visitor movement to offer rest and convenience to visitors.
- The number of units and their locations could be decided as per site footfalls and space availability.
- Unit cost – INR 10,000



Bollards

- Bollards could be installed to prevent automobile traffic mixing with pedestrian movement.
- These could be located at sites where such mixing is to be restricted and / or where pedestrianization of a certain area is desired.
- Bollards could also be mounted to control overspill parking onto sidewalks.
- These could be spaced near enough to block ordinary cars/trucks, but spaced widely enough to permit wheelchairs, bicycles, and pedestrians to pass through.
- Unit cost – INR 5,000



4. Landscaping

General Site Landscaping

- General site landscaping, with soft landscaping elements like trees, shrubs, ornamental plants and turf, could cover ~10% of the site area.
- This green cover ensures rainwater absorption into the ground, air purification, reduction of ambient noise & temperature and offers a calm environment.

- Unit rate – INR 3.5-3.75 L per acre



Street Landscaping

- Street landscaping could be provided in case of large sites with internal streets and / or ~500m radius of high value tourist sites
- The street-sides could be developed as a continuous landscaped zone, with road-side curbs, planting strips, tree pits and trees that provide shade.
- Unit rate – INR 1-1.25 L per m



Sports Courts

- Sports courts could be developed at sites where such facilities are desired for visitor engagement and space activation.
- Concrete-paved multi-sports courts could be developed for flexibility of use.
- A modular 15m X 28m court could host a variety of sports, including basketball, volleyball, tennis, etc.
- Further, the size and type of sports court to be provided at the site could be decided on a case to case basis.

- Lump sum cost for module – INR 4-5 L



Skating rink

- Skating rink for public recreational purpose could be developed at sites where such facilities are desired for visitor engagement and space activation.
- Concrete flooring could be finished to ensure a smooth, slip-resistant and durable surface.
- While a sports rink could be developed of a minimum standard size of 15m X 30m and go up to 25m X 50m, dimensions for a recreational rink could vary from 10m X 10m to 20m X 20m. The size and type of rink could be decided according to the intent and availability of space at the site.
- Lump sum cost for module – INR 50-55 L (for a 210m long and 6m wide rink)



5. Events / Community uses

Bandstand

- Bandstand, a platform covered from top, could be developed at sites with large landscaped areas.
- Originally conceptualized to host band/ music performances, the semi-enclosed structured could be used as a resting space, picnic area, gathering zone.
- While the structure could be developed in any shape and size, it is typically built in a circular or polygonal plan.
- Lump sum cost for module – INR 3.5-4 L



Paved event area

- Event area could be developed at sites that host various events/ festivals throughout the year and have enough vacant area available in or around the site.
- A small stage with plug-n-play facility could be developed within a large open area to host the event.
- The size of stage and associated event area could be decided as per vacant land area available and peak footfalls received at the site.
- Unit rate – INR 1,800-2,000 per sqm



Community park

- Community park could be developed at sites that are located close to habitation(s) and have a large pool of vacant land available.
- The park could be used by the locals as well as tourists, for rejuvenation and recreation purposes.
- The size and activities hosted at the park could depend on the area of vacant land available and requirements of the local community.
- A typical community park could be developed with a combination of hard & soft landscaping and variety of activity areas like open gymnasium, OAT, gazebos, children's play area, etc.
- Unit rate – INR 700 per sqm



Children's play area

- Children's play area could be developed to engage the younger segment of visitors and increase the family-friendliness of the site.

- A typical play area is designed to provide a safe environment for play and could include recreational equipment such as the seesaw, merry-go-round, swing set, slide, jungle gym, chin-up bars, sandbox, spring rider, etc.
- Lump sum cost for module – INR 5-6 L



Community gathering area

- Community gathering areas could be modelled as per the availability of space and site requirements.
- These could range from a small seating area around a tree to stepped seating area used for community congregation.
- Lump sum cost for module (small seating area around a tree) – INR 5-6 L



Cultural Halls

- Cultural halls could be developed, to host weddings or events, at sites where such facilities are desired and vacant land area is available in or around the site.
- The cultural hall could be developed with basic infrastructure in place, including electrical & water connection, toilets, parking area, etc.
- Lump sum cost for module – INR 60-80 L (2,000 sqft hall)



Sculpture garden

- Sculpture garden is an outdoor exhibit area, usually accommodating several permanently sited installations made in durable materials and set in a landscaped setting.
- Sculpture gardens could vary greatly in size and scope, generally revolving around a site-specific theme.
- Unit rate – INR 2,200 per sqm



Amphitheatre

- An amphitheater, also known as open air theater (OAT), could be developed as an open-air venue with a central stage to host events, community gatherings, performances, etc.
- Usually, it requires an average of 7.5 sqft per person, including the seating area and the space for aisle-ways.
- The size of amphitheater could be decided as per site requirements and space availability.
- Unit rate – INR 20,000 per sqm



6. Swimming pool

- Swimming pool could be developed where such facility is desired at a site
- A standard swimming pool with 5 swimming lanes could be developed with a width of 12.5m and length of 25m.
- Further, the size of the pool could vary greatly and be decided as per site requirements and land availability.
- Lump sum cost for module – INR 5-8 L



1.2.4 Signage

1. Package 1 – Small Temple / Cultural site

- A basic package of signages could be installed at all small temple / cultural sites.
- This package could include the following:
 - Site map at entry
 - Directional signage at 4-5 key points on tourist path
 - Descriptive placard on Site's importance
- The signages could be in theme with the historic setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 65,000



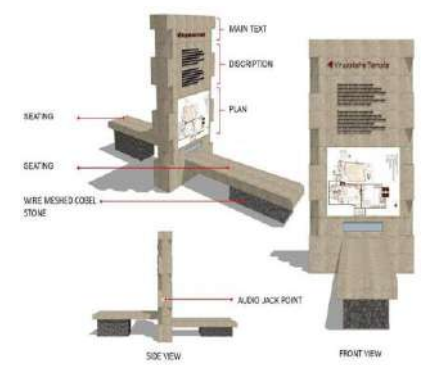
2. Package 2 – Intermediate | Temple / Cultural site

- An intermediate package of signages could be installed at all intermediate temple and cultural sites with good footfalls.
- This package could include the following:
 - Site map at entry & 4-5 key points on tourist path
 - Directional signage at 25-30 key points
 - 5 descriptive placards on Site's importance & important highlights
- The signages could be in theme with the historic setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 3,20,000



3. Package 3 – Anchor | Temple / Cultural site

- An all-inclusive package of signages could be installed at all anchor sites.
- This package could include the following:
 - Site map at entry & 4-5 key points on tourist path
 - Directional signage at 25-30 key points
 - 5 descriptive placards on important highlights
- The signages could be in theme with the historic setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages could have a premium finish with Glass and / or Brass Inlay along with LED lighting. The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 6,00,000



4. Package 4 – Basic | Natural site

- A basic package of signages could be installed at all small natural sites.
- This package could include the following:
 - Site map at entry
 - Directional signage at 4-5 key points on tourist path
 - Descriptive placard on Site's importance
- The signages could be in theme with the natural setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 65,000

5. Package 5 – Intermediate | Natural site

- An intermediate package of signages could be installed at all intermediate natural sites with good footfalls.
- This package could include the following:
 - Site map at entry & 4-5 key points on tourist path
 - Directional signage at 25-30 key points
 - 5 descriptive placards on Site's importance & important highlights
- The signages could be in theme with the natural setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 3,20,000

6. Package 6 – Anchor | Natural site

- An all-inclusive package of signages could be installed at all anchor / high value natural sites.
- This package could include the following:
 - Site map at entry & 4-5 key points on tourist path
 - Directional signage at 25-30 key points
 - 5 descriptive placards on important highlights
- The signages could be in theme with the historic setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages could have a premium finish with Glass and / or Brass Inlay along with LED lighting
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 6,00,000



1.2.5 Parking

1. Paved Yard

- Designated parking area with a paved yard could be developed at all sites that currently lack adequate parking facility.
- The no. of ECS to be provided calculated as per TN Unified Building Bylaws and type of development (existing as well as proposed).
- The dimension of the parking stall for different vehicles, as per TN Unified Building Bylaws, shall be:

Vehicle Type	Breadth (in m)	Length (in m)
Car	2.5	5.0
Two-Wheeler	1.0	1.8
LCV	3.5	7.0
Lorry/ Bus	3.5	10.0

- Two ECS, for parking of vehicles of differently abled people, to be provided near entrance with a minimum width of 3.6m.
- Unit rate – INR 1,600 per sqm



2. Multilevel Car Parking (MLCP)

- MLCP could be developed at high footfall sites that are currently facing parking issues along with scarcity of land available in & around the site.
- MLCP could be either conventional or automated/ mechanized type, depending on which efficient space utilization and cost estimation could be made.
- Unit rate – INR 15,000 per sqm



3. E-cycle Parking | fixed cycle stand

- E-cycles/ cycle parking stands could be provided at sites that fall under holistic mobility plans, forming an integral part of promoting sustainable modes of transportation.
- A single cycle U-rack could park 2 cycles at a time with two cycles covering an area of 0.8m X 2.1m. These racks could be spaced at a standard distance of 1.2m.
- For E-cycles, stands could be fitted with charging points, occupying an area of 1.8m X 1.8m per unit that accommodates two e-cycles.
- Unit cost – INR 15,000-18,000



4. EV Hub (with charging point)

- Electric vehicle hubs could be developed as part of a holistic mobility plan, forming an integral part of promoting sustainable modes of transportation.
- An EV hub is essentially a stand for EVs with charging stations installed.

- The dimension of a parking stall for a six-seater EV shall be 1.5m X 3.5m.
- Unit rate – INR 10,000 per sqm

5. Bus / eV Stop

- Bus/ EV stops could be developed as part of a larger mobility plan, placed strategically to aid visitor conveyance.
- A typical stop could be developed as a shaded seating area used for boarding and alighting a bus/ EV, preferably located at a distance of ~1.5m from the curb.
- Lump sum cost for module – INR 20-22 L (2,000 sqft hall)



1.2.6 Retail & F&B

1. Retail Kiosk

- Retail kiosk(s) could be developed at sites that attract good footfalls, to render higher visibility to local products as well as increase visitor engagement and spending at the site.
- Standard module(s) of 3m X 3m could be installed as per space availability and site footfalls.
- Further, the placement of these retail kiosks could be done while keeping in mind the path of visitor movement, in order to achieve maximum visibility.
- Unit cost – INR 1.5-2 L



2. Retail Zone

- A dedicated retail zone could be developed at high value sites, offering souvenirs and local products to high footfalls received at the site.
- A standard module could include a row of shops located in path / view of visitor movement.
- This retail offering would not only improve tourist experience at the site but will also add a source of revenue generation.
- Unit rate – INR 20,000 per sqm



3. F&B Kiosk

- F&B kiosk(s) could be developed at sites for tourist convenience, especially at secluded sites.
- Standard module(s) of 3m X 3m could be installed as per space availability and site footfalls.
- Unit cost – INR 1.5-2 L

4. Dine-in Restaurant

- A typical restaurant could include an entrance area, dining area, kitchen, storeroom, hand washing area and staff & customer toilets.
- While a restaurant requires an average area of ~1.5 sqm per seat, the type of restaurant and number of seats provided could vary as per site requirements and footfalls expected.
- Unit rate – INR 45,000 per sqm

5. Outdoor dining area

- Outdoor dining area could be developed as an extension to an indoor dining area and/or associated with F&B kiosk(s).
- A typical outdoor dining area could be developed as a paved open space with fixed benches, trees and dustbins installed, along with a toilet block and drinking water fountain located in proximity.
- Unit rate – INR 3,300 per sqm



6. Hawker Zone

- Hawker zone could be developed to provide a dedicated space for local road-side vendors and hawkers.
- A typical hawker zone could be developed as a paved open space with hawkers' platforms, doubling as lockable storage spaces.
- Other ancillary developments could include fixed benches, trees and dustbins, along with a toilet block and drinking water fountain located in proximity.
- Unit rate – INR 1,400 per sqm

1.2.7 Site Attractions

1. Viewing tower (natural sites)

- Viewing tower(s) could be developed at sites that offer picturesque views from a height, especially at natural sites like forests, beaches, dams, etc.
- These towers could be developed with locally sourced materials like bamboo, locally available wood, etc; reaching a standard height of 6m and hosting a 3m X 3m enclosure at the top.
- Lump sum cost for module – INR 20-25 L



2. Floating Jetty (waterbodies)

- A floating jetty, essentially a platform / walkway projecting from land out into water, could be developed at sites that host a large waterbody. It could be used to access boats and various other water rides possible at the site.
- Floating jetties could be developed in a whole range of sizes and shapes to cater to vessels ranging from a small canoe to an ocean-going trawler. It could be built in sizes ranging from 6m to 12m and widths varying from 1.5m to 3.5m.
- Unit rate – INR 60,000 per sqm



3. Selfie Spots

- Selfie spots could be created at tourism sites to attract the millennial and gen z generation visitors. In this new social media age, such attractions would also get featured and automatically promoted on various online platforms.
- These spots could be created with walls murals, swings placed at picturesque locations, frames and signs like “I ♥ Chennai”.
- Unit cost – INR 0.5-1 L



1.2.8 Technology

1. Package 1 – Basic (all sites)

- A basic package of technology integration could be installed at all sites.
- This package could include the following:
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner

- CCTV coverage at up to 3 locations
- Lump sum package cost – INR 0.6-1 L

2. Package 2 – Basic (large sites)

- For large sites, a basic package of technology integration adapted to a larger area could be installed.
- This package could include the following:
 - Electronic Visitor Counter at entry points
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at key locations
 - WiFi bollards and/or enclosures at key locations
- Lump sum package cost – INR 7-10 L

3. Package 3 – Anchor Sites

- For anchor sites sites, an advanced package of technology integration could be installed.
- This package could include the following:
 - Electronic Visitor Counter and body scanner at entry points
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage servicing the entire site area
 - WiFi bollards and/or enclosures across the site
 - Audio Guides with RFID points at all key attractions within the site
- Lump sum package cost – INR 12-15 L

1.2.9 Sustainability measures

Green measures could be implemented as much as possible at all locations, and specifically at locations with environmental sensitivities (hill stations, coastal towns, riverfront towns, etc.)

1. Solar Power Systems

- Solar power systems are, in essence, a set of installations where photovoltaic (PV) panels are used to harvest solar power. These could be installed on ground as a standalone development and/or on rooftop of built structures.

- Ground-mounted solar farms are generally large-scale installations that supply power at utility level, while the rooftop mounted installations supply power locally to the building and associated developments.
- Depending on the availability of vacant land and serviceable rooftop area, solar power systems could be installed at all sites.
- Unit rate – INR 5,000 per sqm



2. Rainwater harvesting

- Rainwater harvesting measures could be taken within all site premises (roof top and campus) for conservation of rainwater. The standards to be followed for rainwater harvesting structures are described in TN Unified Building Bylaws.
- A typical system consists of collection from roof-like structure and redirection to a tank, cistern, deep pit (well, shaft, or borehole), aquifer, or a reservoir with percolation.
- Unit rate – INR 1,750 per sqm

1.2.10 Civic Upgradation

1. Community education drive

Community education drive(s) could be programmed to deliver basic skills to tourism-based communities, like cleanliness, basic service techniques, etiquette, communication skills, first aid, business skills, etc.

- The intent is to build a large pool of workforce with basic tourist skills, suitable for the large number of entry level jobs in various segments.
- For example, training camps could be set up for Kanchipuram silk saree weavers and sellers. They could be trained in basic skills as well as specialised skills like

how to engage tourists in tours of weaving units, selling the products at right price, etc.

- Further, general awareness campaigns could make the local community aware about impact of good tourism on their livelihoods and the ways in which they can be a part of the tourism ecosystem.
- Lump sum one-time mobilization cost – INR 35,000

Such camps, imparting free training to all, could be organized every 6 months on alternating basis between flagship hubs / rural tourism linked hubs. Such trainings could be championed by the DoT, delivered through authorized training service providers or NGOs.

2. Clean-up drive

Clean-up drive(s) could be programmed to raise community awareness on the importance of cleanliness and inculcate a sense of responsibility towards the city & surroundings.

- The intent is to achieve a sustainable system of maintaining cleanliness, mobilized through activating the community spirit.
- For example, cleanliness drives could be organised at Marina Beach, involving govt. staff, school / college students, etc.
- These drives could be accompanied with mid-day meal distribution.
- Lump sum one-time mobilization cost – INR 45,000

Such drives could be organized every 6 months at anchor sites / popular landmarks in the city. These could be championed by the DoT, delivered through govt. departments, private sponsors or NGOs.

3. Covered Stormwater drains

Stormwater drains are designed to drain excess rain and ground water from impervious surfaces. Covered stormwater drains offer various advantages over surface drains, including reduction in organic & inorganic pollution of water, breeding of disease-causing agents, growth of aquatic weeds, etc.

- Thus, stormwater drains with a drain cover could be ensured across all sites and their immediate surroundings.
- Stormwater drain's capacity (dictating its size and slope) could be decided as per the area to be served and rainfall intensity.
- Unit rate – INR 18,00,000 per km



4. Underground electrical lines

Underground electrical lines offer various advantages over overhead cables that are generally used. This includes, less susceptibility to external weather conditions (storm, rain, snow) and better aesthetics. While undergrounding of power lines can increase the initial costs of electric power transmission and distribution, it can decrease operational costs over the lifetime of the cables.

- Undergrounding of electrical lines could be done in 500m buffer area of anchor sites.
- This could ensure uninterrupted views of the monument and render better aesthetics to the surroundings, creating an inviting experience for the visitors.
- Unit rate – INR 14-16 L per km

5. Sewage Treatment Plant (STP)

Sewage treatment is the process of removing contaminants from municipal wastewater, containing mainly household sewage plus some industrial wastewater. Physical, chemical, and biological processes in an STP are used to remove contaminants and produce treated wastewater that is safe enough for release into the environment.

- STP(s) could be installed, wherever necessary, to treat wastewater before it can be discharged into the environment.
- Such measures could be implemented as much as possible at all locations, and specifically at locations with environmental sensitivities (coastal towns, riverfront towns, beaches, boathouses, etc.)
- Lump sum module cost – INR 1 L per MLD

1.2.11 Temple Tanks Restoration

Temple tanks was an ancient technology that formed integral part of the temple architecture in various part of India. Often they are considered as sacred and hence many rituals are associated with the tanks. They were used to collect water to recharge the aquifer, to later be extracted through personal wells. These tanks served as a benchmark of the city's underground resource, making its fluctuating level visible. These tanks played three important roles:

- As a storage, which acted as an insurance against low waterfall periods and helped recharge the ground water in the surrounding area
- Prevented soil erosion and wastage of runoff waters during heavy rainfalls, thus, acted as flood control instrument.
- As a device crucial for maintaining the overall ecosystem of the area. This includes maintaining the microclimate of the area, playing important role in socio-cultural activities at community level.

Nataraja Temple, Chidambaram & Mylapore Temple in Tamil Nadu and Bhoga Nandeeshwara Temple in Bangalore are some of the prominent examples of temple tanks.



Current Issues

Today, urbanization has resulted into depletion of ground water levels due to increased surface run-off of the rainwater. These traditional systems have been forgotten leading to interrelated disasters of floods, drought and pollution. These urban conditions have impacted the temple tanks

- **Loss of water in the wells** – Most of the temple tanks are experiencing the loss of water. This can be attributed to the following
 - **Surface run-off** – Rainwater is not being allowed to recharge the aquifers resulting into run-off.
 - **Clogged inlets** -Direct collection of rainwater is limited so these tanks rely on the feeding lines to feed them with water from the surrounding catchment. Due to lack of awareness, the feeding lines have been clogged with debris, garbage and encroachment.
 - **Government ignorance** – The government’s focus has been to store water for festivals rather than focusing on recharge. This has resulted into sealing of inlets for storage and using concrete at the base of the tank.
- **Cleanliness** – Due to lack of awareness among the masses and lack of maintenance, these reservoirs have become dumping grounds for garbage. Also, the catchment area has been encroached with activities like parking, shops and public utilities. This has resulted into contaminated water entering from these areas into the reservoir.

Restoration

The restoration of temple tanks is needed to be taken up to resolve the issues of cleanliness and tanks drying up. Several methods such as use of bioswales, cleaning of water inlets, growing plantation around the water body, fencing, etc. Bioswales are ditch with vegetation and a porous bottom. They help capture rainwater from large areas by filtering out pollution.

HR&CE has recently taken up restoration of 15 temple tanks in Chennai. The restoration has included:

- De-silting of tanks
- Creation of chambers around tank to divert runoff water from street and roof top of neighboring houses to the tank
- Recharge wells (4-10 wells per tank) at bottom of the tanks

The cost allocated for the work is INR 2.03 Cr for 15 tanks i.e. ~INR 12-15 L per tank.

1.2.12 Site Boundary

1. Boundary wall

- Boundary wall, typically built of masonry blocks, could ensure safety & security at all sites.
- A standard boundary wall of 2m height could be built along the periphery of the site, barring the entrance point(s).
- Unit rate – INR 4,000-6,000 per m

2. Fencing

- In case of large sites, like forests, wildlife sanctuaries, etc., fencing could be done to mark the site boundary and avoid encroachments.
- A standard fencing of 2m height, typically built in wrought iron, could be provided along the periphery of the site.
- Unit rate – INR 3,000-3.500 per m

3. Gate complex

- For sites that currently lack a dedicated entrance gate, gate complexes could be developed.
- A typical module of in and out gates, with a highly visible signage announcing the site, could be developed.
- The signage could be designed as per the site and be reflective of its offerings.
- Lump sum module cost – INR 1.5-2 L

1.2.13 Capital Projects

1. Hotels

Accommodation is an important component of the tourism landscape. It contributes to the overall tourism experience through the standards of facilities, amenities and services offered.

3-star Hotels

- 3-star hotels are associated with the following typical characteristics:
 - Above-average accommodation facilities
 - High quality amenities
 - Variety of services

- Spacious public area
- As per the checklist issued by MoT, 3-star hotels would have to incorporate the following facilities:
 - Min. 130 sqft bedroom, min. 36 sqft bathroom
 - Min. one multi-cuisine restaurant cum coffee shop and 24-hour room service
 - Provision of visitor services like valet parking, paid transportation on call, left luggage facilities
- Unit rate – INR 30-35 L per key

4 / 5-star Hotels

- 4 / 5-star hotels are associated with the following typical characteristics:
 - Luxury accommodation facilities
 - Premium amenities
 - Personalised services and intensive guest care
 - Quality finishes and attention to detail
- As per the checklist issued by MoT, 4 / 5-star hotels would have to incorporate the following facilities:
 - Min. 140 / 200 sqft bedroom, min. 36 / 45 sqft bathroom
 - Min. one multi-cuisine restaurant cum coffee shop, one specialty restaurant and 24-hour room service
 - Provision of visitor services like valet parking, paid transportation on call, left luggage facilities laundry, fitness area
 - Provision of facilities like business centre, swimming pool, conference facilities
- Unit rate – INR 65 L – 1 Cr per key

2. Yatri Niwas (pilgrim accommodation)

Yatri Niwas generally provides affordable accommodation to pilgrims and travellers visiting the city. Such affordable accommodations could be developed, especially in temple towns like Kanchipuram that host large no of pilgrims throughout the year.

- The development could include dormitories, rooms with attached washrooms and communal dining areas.
- The no of keys could be decided as per site area and tourist footfalls in the region.
- Further, community halls and open areas could also be accommodated within the development, to host community festivals and events.
- Unit rate – INR 15-20 L per key

3. Wayside amenities

Majority of the tourists in Tamil Nadu move around the state via road. While Tamil Nadu has a well-developed road network, it is lacking in passenger services along the highways. Thus, wayside amenities, for the convenience of travellers, could be built on major state routes.

- As per the availability of land, development could have the following components:
 - Fuel station
 - F&B area – restaurant(s), food court, kiosks
 - Toilet block & drinking water facility
 - Parking area
 - Motel rooms & dormitory for drivers
 - Retail arcade
 - Village Haat / Farmer's market / handicraft shops
 - Tourist information kiosk
 - First aid & bank ATM



1.2.14 Tourism Desk

1. Airport

Tourism desks could be developed at airports, preferably located near the baggage concourse in the arrivals area.

- It could be developed as a module of information desk set against the backdrop of an attractive mural, representing varied TN tourism offerings.
- Operational 24*7, the helpdesk could provide information with free leaflets, brochures & maps of destinations and aid visitors in planning their itinerary.
- The facility will cater to high value tourists and thus high level of services could be offered.
- Lump sum module cost – INR 1-2 L



2. Major railway station

Tourism desks could be developed at major railway stations to aid the domestic as well as foreign tourists travelling via trains.

- It could be developed as a module of one kiosk built in theme of TN tourism.

- Operational 24*7, the helpdesk could provide information with free leaflets, brochures & maps of tourism destinations and aid visitors.
- Lump sum module cost – INR 0.8-1 L



1.3 Urban Design Guidelines

Traffic Calming and Pedestrianisation

Temple Towns – Respecting the original Urban Design

- The analysis of the Temple Towns of Tamil Nadu, in relation to its urban context, demonstrates the need for a solution that tackles the problems of urban congestion, disorder, and ambiguity of access and circulation in a religious setting. There is a multidimensional challenge of designing for order amidst the chaos of the dense and animated street culture of a temple town. By developing an infrastructural language that welcomes the progressive urban trends of commercialization and growth, while maintaining a sensitivity that caters to the traditionally bound culture, a new urban vernacular is proposed. The intent is to preserve the sacredness of the South Indian spiritual experience while allowing for a layered cultural experience, that can be enjoyed by all kinds of people; from local residents and visitors of the temples, to pilgrims and tourists.
- A large tower or gopuram, often ranging from 50 - 250 feet high, stands as a transition from the end of a long temple street tightly knit in the urban fabric to the sacred entrance of the temple. The monumentality of the temple tower allows for a permanent landmark to which city dwellers and outsiders can easily navigate, especially as the religious space remains deeply embedded within the complex urban fabric.
- Often known as Sannadhi Street, the main temple street is often lined with permanent, air-conditioned stores, that dissolve into informal vendor stalls as one approaches the temple gopuram and gateway into the temple. With this, any devotee can buy what they need at stalls right before entering the sacred place, creating an interesting urban condition on the main temple street. Thus, the street edges and surface serves as infrastructure for a variety of commercial activity, ranging from pavement vendors to concrete buildings.
- The main gopuram is one of the main attractions for tourists when visiting the Temples and can only be admired from a distance. To allow for the gopuram to shine and take centre stage in the Pilgrims' and Tourists' experience upon arrival, the overall strategy to the Public Space planning around the Temples in Tamil

Nadu should be to focus on a clear Pedestrianisation, Traffic Calming and Parking Management Strategy. The interventions should focus on the Sannadhi Street: using its historical, cultural & spatial significance and to bring back some of its faded glory, by giving visitors the space to walk up to the Temple unhindered by traffic and parked vehicles. This allows Pilgrims to buy their Temples offering at their leisure and tourist to frequent Tourist Shops & small eateries along the way, which will also help the local business community to benefit more from the visitors to the Temple.

- The strategy is for all visitors to comfortably disembark their vehicle at the first part of the Sannidhi Street where, through Traffic Calming measures, more pedestrian space is created and cars are only allowed to drive in one direction. The second part of Sannidhi Street, closest to the Temple, should be completely pedestrianized.
- Available (Temple or Government owned) plots in the area could become designated Car Park areas.



Sannadhi Streets: with and without traffic and parking

Pedestrianisation

- Converting a regular street or an area to pedestrian-only use is called pedestrianisation. Pedestrianisation usually aims to provide better accessibility & mobility for pedestrians and enhance the amount of shopping & other business activities in the area. Further, the intent of pedestrianisation is to improve the attractiveness of the local environment in terms of better aesthetics, reduced air pollution & noise and increased safety; avoiding the danger of crashes involving motor vehicle with pedestrians.
- The process of Pedestrianisation and removing car-parking / vehicular access to the front of shops has always been a contentious issue with the local shop owners. However, for decades now Pedestrianisation has been implemented in historic cities the world over and has always proven to benefit the local shop owners too, with significant increase of footfall.
- Addition of soft & hard landscaping and proper street furniture to the place often turns the pedestrianized street into a popular public place in a city, to visit and spend time.

Traffic Calming

- Traffic calming uses physical design and other measures to improve safety for pedestrians and cyclists. It is a tool to combat speeding and other unsafe behaviours of drivers in areas with high footfalls. It aims to encourage safer, more responsible driving and potentially reduce traffic flow.
- In case Pedestrianisation is not possible due to specific traffic circulation in the area or the need for cars to access certain buildings, Traffic Calming can be the right solution to improve the pedestrian friendliness without entirely restricting cars from the street.
- The physical measures recommended in some of the historic parts of tourists centres with high footfalls include widening of pedestrian space significantly, allowing a narrower carriageway for motorized vehicles (often one-way only) and demarcating dedicated drop-off and pick up zones.
- Double car parking on the carriageway is no longer possible since this would obstruct all traffic flow. Bollards and planters are generally used to ensure that motorized vehicles remain out of the pedestrian only space.



Pedestrianisation



Traffic Calming

Hill Stations and other Heritage Towns

- For most Tourist Sites in Tamil Nadu the strategy is how to increase tourist footfall, Tamil Nadu's Hill Stations have the opposite problem: too many tourists during the peak season now overwhelm the Hills Stations' infrastructure, roads, streets, parks and viewpoints, which have reached their maximum carrying capacity. The strategy for Tamil Nadu's Hill Stations to manage these large tourist numbers better is to encourage tourists to use other types of transportation than private cars and to encourage visiting outside the peak season.
- Pedestrianisation of the most popular commercial streets in the Hill Stations is the only way forward to bring back some of the original charm to these old towns. The comprehensive Pedestrianisation and Beautification of the old Mall Road in Shimla is one of the good examples in India, that highlights the difference that removal of vehicular traffic and car parking can make to the tourist's experience of a Hill Station.
- Pedestrianisation of the most popular commercial streets means that MLCP(s) at key locations will need to be constructed, in combination with wider Traffic Calming measures like one-way traffic circulation and wider pedestrian footpaths in the central areas with the highest footfall.
- An important more sustainable solution to the limited carrying capacity of roads, streets, parks and natural viewpoints of the Hill Stations is ultimately to bring down the number of tourists arriving by private vehicle. A solution that could be considered is to start selling a maximum number of day/weekend tickets during peak season for private cars and buses to enter the Hill Station. The ticket can be easily purchased via the TN Assist App on Smartphone and to be checked at entry point in the Hill Station. Higher tourist taxes linked to vehicles depending on the season could also be used to encourage tourists to come in the low season and come more often by train, public bus or taxi & not by private vehicles.



*Pedestrian Mall – Shimla,
Himachal Pradesh*



*No dedicated Pedestrian
Space at Bazaar Roads,
Ooty*

Urban Conservation

- A shift in mind set is required in heritage conservation policies - to be not just about protecting the large monuments of great historical importance. The vast amount of built heritage that consists of private properties (primarily homes) is left mostly unprotected, whilst it's these buildings that have shaped over centuries the historic fabric of towns and neighbourhoods most popular with tourists. Tourism has actually been one of the major driving forces behind the resurgence of the popularity of historic old towns and cities around the world. Tamil Nadu's cities, towns and villages have a tremendous built heritage to offer that goes beyond the Temples, Churches and Forts. Urban Conservation should not be considered as a policy that is just about preservation and hampers economic prosperity but be understood as the smart and sustainable way it has proven the world over to draw in new business and to create many meaning jobs for the local community.
- With so much heritage buildings and structures being lost to rapid commercialization, it's high time that Heritage Protection is taken more seriously. This could be done by improving the general Planning Guidelines of existing urban areas to include more Area Specific Urban Design and Landscape Design Guidelines for historic areas with large concentrations of heritage buildings and streetscapes.
- Public Buildings of historical importance that will lose or have already lost their original use should be conserved, restored and given a new use. After renovation, these could be given on long term lease or sold for Tourist related activities (museum, coffee bar, restaurant, bakery, souvenir shop, hotel, art gallery, etc), via PPP and be managed & operated by professional businesses in Hospitality and Tourism, Retail, Leisure.
- The PPP professional (developers/business in hospitality, retail and leisure) will be able to professionally renovate, operate and maintain the buildings on a long-term lease. The buildings could become a hub of (middle to high end) tourist shops, cafes, restaurants, bakeries, art galleries, theater, boutique hotel etc.
- Buildings of historical importance that are private property (for example private residences) should also be preferably restored to their former glory. They can

remain either a private property or be sold to a professional hospitality operator. In case the building is retained by same private owner, the public funding of renovation should allow for at least certain opening hours for visitors. Incentives could be put in place for owners to rent out rooms as Bed & Breakfast or start small business as Tourist Shop, Café, and Gallery etc. Financial and regulatory incentives could also attract professional hospitality operators to buy, renovate and operate historically significant buildings as Hotel-Resort. (3-5 star hotels) With this, higher spending tourist groups could be attracted. (Benchmark: Fort Cochin, Puducherry, Galle Fort, Sri Lanka).



Tourists Shopping in Historic Urban Environment



Historic Buildings turned into Heritage Hotels and Restaurants

Façade Beautification Strategy 1: Restoration Street Facades Heritage Buildings

- Most Historic Urban Streetscapes in India (with the exception of the most important Monuments e.g. the Temple or Palace) are severely neglected and have lost their glory to unsightly additions to the facades (like hoardings & AC units), unsympathetic modern redevelopment and simple lack of maintenance. As described in the previous paragraphs, this aspect of historic conservation needs careful consideration.
- While enough of the historic buildings have survived the test of time, a concerted effort by all stakeholders is required to bring the important heritage streets' architectural beauty back to its original state. The ensemble of the individual buildings and facades make up the historical character that really epitomizes the unique essence of a city or place that attracts tourists as much as the main attraction.
- Examples of this type of façade restoration of entire streets, in recent years, have been successfully executed in the Fort /Ballard Estate (Mumbai), the streets opposite the City Palace of Jaipur and in Little India in Singapore.



Restoration street facades of heritage buildings

Façade Beautification Strategy 2: Rebuilding Street Façade in Traditional Architecture

- Some streets that are historically significant and attract a lot of tourist footfall (eg the main Urban Plaza, Sannadhi or Bazaar), over time, have lost most of their original buildings to modern redevelopment or in some cases have never had a fitting street façade at all. In these cases, a more radical approach could be appropriate, involving a reconstruction or complete recreation of new building facades that look historically and architecturally more appropriate. In this way a stronger uniformity can be brought to the historic area, celebrating the architecture of the main monument nearby or taking inspiration from other remaining original historic buildings in the area.
- Examples of this type of façade reconstruction of entire streets have successfully been executed along the Golden Temple Road and Front Plaza (Amritsar) and in major historic areas of several cities in Europe after WW2 (e.g. Warsaw, Poland).



Reconstruction street façades in traditional architecture

Mixed Use Tourism and Leisure Node Master Planning

Introduction

- For many years, tourism and leisure related facilities grew organically near the most popular tourist spots of great cultural, natural, or recreational significance. In the last decade, however, the surge in global tourism, on the back of cheap air travel and the exponential growth in demand from the burgeoning middle class in the region, has left the authorities looking for ways to increase and geographically spread their tourism facilities in a more strategic manner. The carrying capacity of some nature parks, beaches, and islands in India and Southeast Asia have reached their limit and public infrastructure is buckling under the pressure of unchecked development. Various Hill Stations in India, like Ooty, are buckling under the volume of traffic, piles of litter, and cheap commercialization. Besides, eco-systems in nature parks are under threat across the region.
- One important step forward in the development of a more sustainable approach for handling the growth in the tourism sector is to plan for large-scale Tourism Nodes with a concentration of resorts, leisure, and tourist attractions along with the coastal and lakeside areas around the State. Focusing on the concentration of development in particular areas gives the opportunity to be more restrictive of development in the nearby natural countryside areas. This will help in retaining its quiet natural form, undisturbed by haphazard tourism development.

Master planned Tourism Development versus unplanned small-scale Tourism Development

- The perception might be that the large green sites planned and developed in a relatively short span of time, by the nature of their size could become old-fashioned and car-centric developments, which results in loss of relationships with native landscapes, cultures and peoples. However, the opposite is true, when planned in a smart and sustainable way.
- Scale of development shall consider the efficiency principle, the carrying capacity of the local environment and respect the human scale on the urban design level. Mostly small scale, plot by plot, organically grown green site developments form endless ribbons of tourism accommodations along thoroughfares. This results in a non-walkable tourist centre/destination, leaving behind no public space to walk comfortably. The ribbon development of small



Large Scale Master Planned Pedestrian Friendly Coastal Tourism

scale individual hotels, private villas (airbnb) being built randomly along the ECR in south of Chennai is a prime example of lack of strategic regional planning and unsustainable tourism. The only way to get there and around is by private vehicle, whilst the natural beauty of the area is being compromised by over-commercialization. Moreover, the capacity of public utilities and infrastructure including sewage, potable water, solid waste collection, roads and public transit is often not keeping up with the incremental and haphazard tourism development which causes even greater damage to the local environment.

Master planned Tourism Developments as a Sustainable Alternative

- In large scale planned tourism developments, utilities and infrastructure are an integral part of the Master plan. The economies of scale make it financially more interesting for the authorities and private stakeholders to invest in such a large scale planned development. The investment in all the infrastructure, utilities and recreational open space is shared in these kinds of developments.
- Large masterplan developments provide the opportunity to plan for an entire pedestrian friendly network of streets, plazas and boulevards. Forms of sustainable local tourist transportation can be incorporated which includes electric shuttle buses, bicycle sharing schemes, water transport and cable cars, instead of solely relying on taxis and private vehicles to get around.
- A well thought out urban design of the built fabric for any large-scale tourism development will ensure that it respects the human scale. With an emphasis on low rise buildings, narrow shaded streets and small building footprints, conducive for a personal sense of safety, comfort and interest will entice people to explore the area by foot. The larger scale of the development along with a walkable environment will guarantee the footfall and therefore, the commercial success for a wider variety of leisure, hospitality, and restaurant businesses that will thrive in each other's close proximity.
- For large Greenfield tourism developments, the rich natural and/or cultural context of a site (or its lack thereof), are critical to addressing the quest to find a new tourism development's Unique Selling Propositions. The idea of 'theme-parking' by randomly borrowing historical elements and juxtaposing them onto incongruous functional and visual elements needs to be avoided. Architecture and landscape design always need to focus on authenticity, incorporating historical, cultural and traditional elements sensibly, while addressing contemporary planning needs and building methods.



New Hill Stations: Eco Friendly Lakeside Tourist Hubs

Coastal Tourism: New Tourism and Leisure Node Developments

- The Tourism Nodes should be provided along with the Pedestrian Friendly Environment. A mixture of different attractions and facilities that can engage people and keeps them occupied for a 3-4-day stay shall be provided. Besides leisure resorts, and hotels, tourist shops, restaurants, events, nightlife, water sports, active recreation, wellness, nature and culture shall be provided.
- These new Nodes or Tourism Hubs should be planned in areas with the highest tourist footfall from domestic and international travellers. These should remain in proximity to the big cities to catch the urban middle-class market of Tamil Nadu, looking for a short weekend break or relaxing leisure holiday not too far from home.
- The following areas are considered to have huge potential:
 1. Along coast between Chennai - Puducherry: eg. Kovalam, Muttakadu, Mamallapuram (Kanchipuram District);
 2. Along coast on south of Puducherry (Cuddalore and Nagapattinam District);
 3. Near Rameshwaram: eg. Mandapam Beach, Gulf of Mannar Marina National Park (Ramanathapuram District);
 4. Near Thiruchendur (Thoothkuddi District);
 5. Near Kanyakumari: eg. Kovalam Beach, Mutton Beach (Kanyakumari District)

Hill Stations: New Tourism and Leisure Node Developments

- The carrying capacity (of accommodation and recreation and tourism attractions) of the Hill Stations can be diversified and increased by looking at new Tourism Hubs at nearby Lakes, Reservoirs and Parks, since they provide the Leisure and Recreation opportunities one can't find in the Hill Stations themselves. Since the impact on the natural environment in the mountains is an essential consideration, these Tourism Nodes will be a combination of Leisure Tourism with Eco, Nature, Adventure, Agri and Wellness Tourism.
- The following areas are considered to have most potential:
 1. Near Ooty/Connoor (Avalanche Lake etc);
 2. Near Kodaikanal/Palani Hills;
 3. Near Yercaud;
 4. Near Yelagiri;
 5. Near Valparai;
 6. Sathanur Dam



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