



# **Mannar Development Plan 2021-2030**



**Urban Development Authority  
Ministry of Urban Development & Housing**





## **Mannar Development Plan: - 2021-2030**

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Website – [www.uda.gov.lk](http://www.uda.gov.lk)  
Email – [info@uda.gov.lk](mailto:info@uda.gov.lk)  
Telephone - +94112873637  
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Mannar Development Plan 2021-2030 mainly consists of three parts as Part I, II, III. The part I consists of the background study, preliminary studies, the need of the plan, the palning freawork, the SWOT Analysis and the part II consists of the Planning and Building Guideliness and zoning guideliness pertaining to the planning boundary for the period of 2021 – 2030.

The part III consists of the Zoning boundaries with coordinates and all the annextures.

Mannar Development Plan 2021 – 2030 has been prepared by the Northern Provincial Office, Urban Development Authority. This has been done with the advice and guidance of various sections and resource persons of the UDA.

### **Supervision**

Archt. Harshan De Silva Chairman-UDA, Plnr N.P.K, Ranaweera, Director General-UDA, Plnr. H.A.Dayananda, Additional Director General-UDA, Plnr. M.P.Ranatunga, Deputy Director General (Planning) -UDA, Attorney at Law C. Jayawardena, Consultant (Legal)-UDA, Plnr. D.B.S.K. Dissanayake, Director (Western Province Division)-UDA, Plnr. Priyani Nawarathne, Director (Strategic Planning)-UDA.

### **Planning Team**

K.Jeevagan (Deputy Director), P.Ragavan (Town Planner), T.Premraj (Town Planner), S.Tharaga (Town Planner), Y.Arthy (Town Planner), E.Rukshana (Town Planner)

### **Supportive Team**

Strategic Planning Division – UDA (Supervision, monitoring and gazetting)

Environment and Landscape Division – UDA (Preparation of the PORS, DRR, Conservation, Cultural & Heritage Plans)

GIS Division – UDA (Providing Arc GIS Spatial data layers & technical assistants)

Research and Development Division – UDA (Conduct awareness programs to introduce new techniques)



## **Acknowledgement**

Mannar development plan has been prepared by the Northern Provincial Office of the UDA with the consultation from the stakeholder agencies and the support from several individuals.

Our sincere gratitude is extended to Minister of Urban Development and Housing, Honorable Mahinda Rajapaksa for given priority to prepare the development plans with his guidance & encouragements. Further it is our privilege to Dr. Nalaka Godahewa, State minister of Urban Development, Cost Conservation, Waste Disposal and Community Cleanliness and Mr. Sirinimal Perera Secretary of the Ministry of Urban Development and Housing for their guidance and support in this process.

Our special thanks is extended to the Chairman, Council members, Commissioners, & Staff of the local authorities of Mannar UC and PS for their valuable contribution to prepare the plan.

Special thanks is extended to all the Stakeholder agencies for shared the datas and information and given valuable suggestions and comments to prepare a successful plan and further grate ideas and comments given by the general public, focused group discussions & business forums.

Appreciatively thankful to Chairman of UDA Archt. Harshan De Silva, Director General of UDA Plnr. N.P.K. Ranaweera, Additional Director General of UDA Plnr. H.A. Dayananda, Deputy Director General (Planning) of UDA Plnr. M.P.Ranatunga, Director Northern Province of UDA Plnr. D.B.S.K.Dissanayake, Consultant (Legal) of UDA Attorney at Law C. Jayawardena, Director (Strategic Planning) of UDA Plnr. Priyani Nawarathne on behalf of the planning team for their incomparable courage, guidance and welcoming support.

Special thanks is extended to Strategic planning division, Research & Development division, GIS division, Environmental & Landscape division and Enforcement division for their continuous support to complete this plan and all the staff of UDA is given their support in numerous ways.

Further special thanks is extended to every individuals who were supported for the development plan preparation in numerous ways.

## Hon. Minister's Foreword



The Urban Development Authority was established under the Urban Development Authority Act No. 41 of 1978, for the systematic planned urban development in the declared urban areas and continue to actively contribute towards it.

Steps have been taken to formulate comprehensive development plans for each urban development area, based on the efficient and effective use of physical space so that all areas of Sri Lanka make an equal contribution to the development process of the country.

The Mannar town provide services to a large population. Accordingly, Mannar Island Planning Area has the potential to become a town that continues to provide residential and commercial services. This potential is further enhanced by the natural ecosystem, renewal engery, Marian resource of the surrounding area and the geographical locations of the island; added more value of the planning area. These development plans aim to develop the Mannar Island by utilizing the potential of the area.

For the realization of His Excellency the president's vision "Vistas of Prosperity" the new Re-urbanization Programme has been formulated in wide consultation with Professionals, Specialists, Stakeholders & communities with strategies having an excellent technological methodology and innovative approach.

Accordingly, I commend the Chairman of the Urban Development Authority, the Director General, the planning teams and all the officers of the Urban Development Authority who assisted in making this work a success. Further, I also appreciate and believe through the support and contribution of the relevant Local Government Institutions, Public and Private Sector Institutions and the general public Mannar Island Development plan would be successfully implemented.

**Hon. Mahinda Rajapaksa (M. P)**

Minister of Urban Development & Housing

## **Hon. State Minister's foreword**



As a pioneer in Sri Lanka in achieving modern sustainable development goals, the Urban Development Authority has a great responsibility. Accordingly, it is essential to prepare development plans for the Urban Development Areas declared by the Hon. Minister in charge of the subject in terms of the Urban Development Authority Amendment Act No. 04 of 1982 (Part II, Section 8A (1)).

The development plans thus formulated are primarily aimed at building a productive citizen, a happy family, a dignified society and a prosperous nation, which are the core aspirations of the vistas of prosperity. I also believe that these development plans will go a long way in achieving the objectives of urban development and guidelines through a formal reurbanization plan that will bring economic stability to the urban population.

Therefore, I would like to express my heartfelt gratitude to the planning team and to all those who have played a very responsible role in preparing this plan and I hope that you will all contribute to the expectations of the vision of prosperity.

**Dr. Nalaka Godahewa (M.P)**

State Minister of Urban Development, Coast Conservation,  
Waste Disposal and Community Cleanliness

## **Hon. Chairman's forward – Urban Development Authority**



Throughout the last four decades, Urban Development Authority has been serving as the apex planning authority in Sri Lanka having the statutory powers to prepare and enforce urban development plans.

Urban Development Plans cover a number of fields including optimum, effective and efficient use of land and managing the quality of its environment. These development plans are prepared for the promotion and guidelines of public well-being in urban areas and the people.

According to the present government's manifesto, it is compulsory to prepare development plans for areas which have been declared as urban development areas by the subject minister as per section 8 A (1) under part II of Urban Development Authority Act No. 04 of 1982 (Amendment).

The Development Plan for Mannar Island urban development area has been prepared for the period 2021– 2030 considering the physical, economic, social and environmental factors, while successfully overcoming the challenges in preparing the development plan through tools and methodologies with which the Urban Development Authority is equipped.

Therefore, I extend my heartfelt gratitude to the planning teams who dedicatedly worked for ensuring successful completion of this plan and to those who contributed in numerous ways. At the same time I also expect that all parties who contributed for the preparation of this plan will also effectively contribute in future as well for successful implementation of the plan.

**Archt. Harshan De Silva**

Chairman

Urban Development Authority

## **Hon. Chairman's forward \_Mannar UC**



This Plan has been prepared for the Development of Mannar Island for 2030. It is a welcome feature of this plan in that, an accurate analysis had been undertaken, priority being given on the basis of the immediate intervention areas as to which project should be undertaken in which area, which and where activities should be implemented.

There is no doubt that Mannar Island will be converted into a beautiful, fertile, resourceful area by 2030, when the implementation of all the identified projects in the plan surpassing political interventions.

Particularly, it gives great pleasure that Mannar UC area had been fully incorporated in this plan. Further, the prepared project proposals for the UC to be implemented efficiently and arrangement had to be undertaken to administer the UC in the future.

I wish to state that all should join hands beyond all projects, for this plan to be implemented properly and to undertake Development and express my best wishes for the plan to succeed. I congratulate the UDA who had prepared this plan in a proper manner.

**Antony Davidsaon**

Chairman

Mannar Urban Council

## **Hon. Chairman's forward\_Pesalai PS**



With pleasure and pride, I welcome the Development plan for Mannar Island. I thank to Ministry of Urban Development and Housing for prepared development plan for considered the growth center of the Mannar Pradeshiya Saba.

I also welcome development work to be carried out in the areas are Pesalai Harbour, coastal roads, Mannar Frontal Park, Wind mill-Electricity project, Modern Market complex, Pesalai and Thalaimannar Public Bus Stand, planned by UDA based on the resourceful villages of the Mannar Pradeshiya saba of Mannar Island such as Thalaimannar, Pesalai, Tharapuram and Thalvupadu. There is no doubt in that if these Development plans implemented by 2030 and this area will become a Best Town.

As our area consists of 34 Grama Niladhari Divisions of our PS, from Thalaimannar Pier to Uyilankkulam, with, more than 12,400 families, as well as, valuable historical areas, the effort put in developing this area, improving the Tourist sector is most welcome.

I am very happy in declaring with pride that, I shall provide the full cooperation of my administration, my people's representatives and myself, to complete this development Project within the 2030 period.

I wish and welcome that the famed Mannar area glitter with greatness utilizing all the untapped resources of Mannar area by 2030.

**S.H.M.Mujahir**

Chairman

Pesalai Pradeshiya Sabha

Mannar

## **Preface**

This development plan has been prepared for the implementation of the development of Mannar Island (UC and PS) by 2030. Mannar town is the capital of the Mannar District which has the population approximately 66,000 with land extent of 143 km<sup>2</sup>. And it has high potential for marine resources, wind and energy and tourism covering significant geographical locations like Island and coastal line which will act as major economic boost to entire Mannar Island.

In order to tap the potentials, vision, goal & objectives has been formulated. And through the strategic plans, list of projects has been identified and pritorized based on the immediate intervention areas such as North part of the Island, consisting with the fishery related developments, Southern part of the Island covering the tourism and energy developments, Western and Eastern part of the Island covering the tourism & environmental related developments project and in between the middle part of the Island encouraging the residential, mixed and the industrial activities.

On this basis; the Mannar Island Development Plan 2021-2030 which is prepared consists with three main parts such as part I, part II, and part III. The part I consists of the background study. Preliminary studies, the need of the plan, the planning framework, the SWOT analysis and the plan. Part II consists of the Planning and Building Guideliness and zoning guideliness pertaining to the planning boundary for the period of 2021 – 2030. The Part III consist of the zoning boundaries with the cordinates and all the annextures.

Part One - Chapter 1 of the plan detailed out the meaning of the term development plan, its legal context, the stakeholders of the plan, its context and the planning process followed chapter 2 & Chapter 3 respectively include the planning area, history of the area, boundary delineation of the area and need of the plan in detail. Chapter 4 Vision, Goals and Objectives and Strategic Plans while Chapter 5 include the detailed description on the baseline SWOT analysis foe each Goal. Further, Chapter 6 of the plan describe the conceptual plan and proposed land use development plan. Under that the main strategic plans of the Mannar Development Plan such as Road and Transport Development strategy, Sustainable Environment development strategy, Economic development strategy, Infrastructure development strategy and implementation strategy has been detailed out as sub sections.

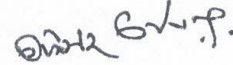
Similarly, Part Two - Chapter 7 has been dedicated to describe planning & Building guidelines and in chapter 8 described the identified zones and zoning guidelines and Chapter 9 included proposed road width, building line and reservations.

Thus, the intention of this Authority and the Government of Sri Lanka is to implement the Mannar Island Development Plan 2021-2030 in near future.



**APPROVAL OF THE DEVELOPMENT PLAN FOR THE MANNAR URBAN COUNCIL  
AREA & PRADESHIYA SABHA AREA**

I, Mahinda Rajapaksa, Minister of Urban Development and Housing do hereby approve the development plan for the Mannar Urban Council Area & Pradeshiya Sabha Area, having considered the recommendation made by the Board of Management of the Urban Development Authority on 24<sup>th</sup> September, 2020 by virtue of the powers vested in me under section 8 "F" of the Urban Development Authority (Amendment) Act No.4 of 1982.



**Mahinda Rajapaksa (M.P)**  
**Minister of Urban Development and Housing**

Ministry of Urban Development and Housing,  
17<sup>th</sup> and 18<sup>th</sup> Floors,  
"Suhurupaya",  
Sri Subhuthipura Road,  
Battaramulla.

**Date: 15 April, 2021.**





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The Gazette of the Democratic Socialist Republic of Sri Lanka

EXTRAORDINARY

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## PART I : SECTION (I) — GENERAL

### Government Notifications

#### APPROVAL OF THE DEVELOPMENT PLAN FOR THE MANNAR URBAN COUNCIL AREA & PRADESHIYA SABHA AREA

I, Mahinda Rajapaksa, Minister of Urban Development and Housing do hereby approve the development plan for the Mannar Urban Council Area & Pradeshiya Sabha Area, having considered the recommendation made by the Board of Management of the Urban Development Authority on 24th September, 2020 by virtue of the powers vested in me under Section 8 “F” of the Urban Development Authority (Amendment) Act, No. 4 of 1982.

MAHINDA RAJAPAKSA (M. P.),  
Minister of Urban Development & Housing.

Ministry of Urban Development & Housing,  
17th and 18th Floors,  
“Suhurupaya”,  
Subhuthipura Road,  
Battaramulla,  
15th April, 2021.

07 - 586/1



**NOTICE OF APPROVAL OF THE DEVELOPMENT PLAN FOR THE URBAN COUNCIL OF MANNAR AND THE PRADESHIYA SABHA LIMIT OF MANNAR**

NOTICE is hereby given to the General Public of the Democratic Socialist Republic of Sri Lanka under Section 8(G) of the Urban Development Authority Law No. 41 of 1978 as amended by the Act, No. 4 of 1982 that I, Mahinda Rajapaksa, the Minister in charge of the subject of Urban Development & Housing by virtue of the powers vested in me under Section 8(F) of the said Act, have approved the Development Plan for the Urban Council of Mannar and the Pradeshiya Sabha Limit of Mannar, prepared under Section 8(A) of the said Act on the 15th day of April, 2021.

**MAHINDA RAJAPAKSA (M.P),**  
Minister of Urban Development & Housing.

Ministry of Urban Development & Housing,  
17th and 18th Floors,  
“Suhurupaya”,  
Subhuthipura Road,  
Battaramulla,  
12th July, 2021.

07 - 586/2

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**APPROVAL OF THE DEVELOPMENT PLAN FOR THE URBAN COUNCIL OF MANNAR AND THE PRADESHIYA SABHA LIMIT OF MANNAR**

PUBLIC are hereby informed that the Development Plan prepared for the Urban Council of Mannar and the Pradeshiya Sabha Limit of Mannar under Section 8(A) of the Urban Development Authority Law No. 41 of 1978 as amended by the Act, No. 4 of 1982, has been approved on 15th April 2021, by Hon. Mahinda Rajapaksa, Minister of Urban Development & Housing by virtue of powers vested on him under Section 8(F) of the said Act.

Arch. **HARSHAN DE SILVA,**  
Chairman,  
Urban Development Authority.

12th July, 2021.

07 - 586/3

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## PART I



# Chapter 01

## Background of the Development Plan

### 1.1. Introduction

UDA is the regulatory body of the urban development of Sri Lanka. Thus, it has been empowered to function as the key urban planning implementing agency in the country by UDA Act No 41 of 1978. Development plan preparation for the declared area of UDA is vital aspect under the legal background of the authority. Considering these scenarios development plans are prepared under the Act No 4 of 1982; it explains that (Part II section 8A [1]) UDA has power to prepare the Development Plans for the UDA declared areas in order to guide & promote the development in the area.

Accordingly Mannar Town Council area was declared as urban development area on 1st June 1979 under the UDA Act No: 41 of 1978. Later on, in 22nd March 1993 the entire Mannar Island was declared as urban development area by the Urban Development Authority under the Urban Development Act No 41 of 1978 and Gazette Notification No 759/1. As a result of declaration of Mannar Island area as an urban development area, UDA (NP) office has given the priority to prepare the development plan for Mannar Island while considering the social, economic, physical & environmental aspects.

### 1.2. Stakeholders of the plan

Several key Stakeholders have been involved during the various stages throughout the process of Preparation of the Mannar Development Plan. These stakeholders have cooperated with us at key stages such as data collection, analysis, problem identification, formulation of strategies, as well as when new guidelines were formulated to address key issues in this area.

#### ❖ Main Stakeholders

1. Mannar UC
2. Mannar PS

#### ❖ Resource Persons

1. Sustainable Energy Authority
2. Central Environmental Authority

3. Coast Conservation Department
4. Department of Archaeology
5. Road Development Authority
6. Road Development Department
7. NARA
8. Sri Lanka Port Authority
9. National Water Supply and Drainage Board
10. Board of Investment of Sri Lanka
11. Department of Fisheries and Aquatic Resource
12. Industrial Development Board
13. Northern Provincial Council
14. Department of Fisheries
15. Manthai Saltern LTD
16. Land Use Policy Planning Department
17. Department of Wildlife Conservation
18. Disaster Management Center

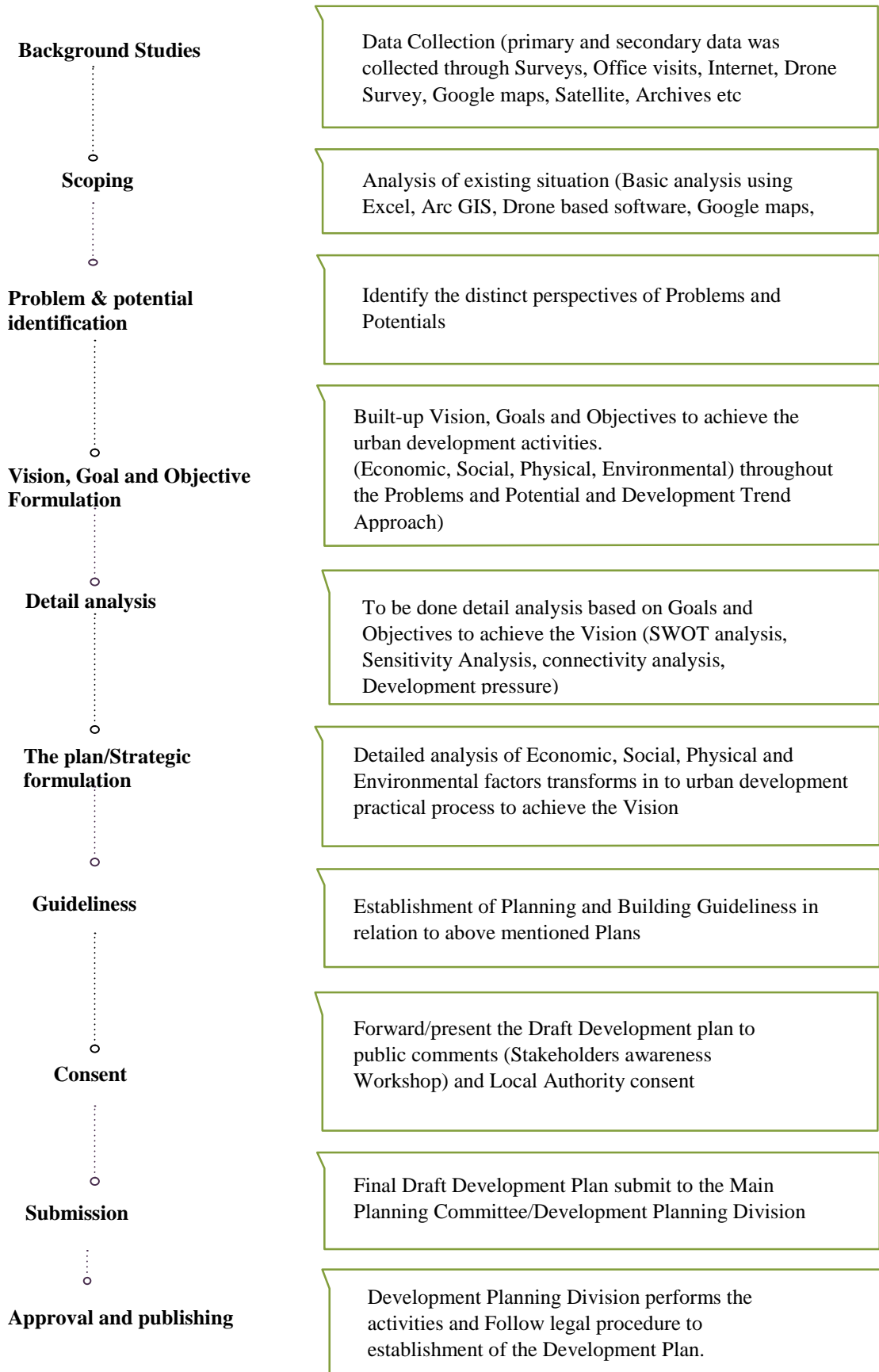
The Northern Provincial office, UDA was responsible for the preparation of this development plan.

### **1.3. Scope of the Development Plan**

Further, mainly this development plan touched the areas of, physical infrastructure developments, industrial improvements consisting with; fishery, energy and tourism sectors. Not only that, conservation of environmental resources of Mannar Island is a major challengeable and predominant area which covered under the environmental plan. Further heritage and historical valuable places are considered to be rehabilitated under the environment and tourism plan. Entire Mannar declared area is taken as consideration and this development plan is purely covered the local context.

Through this development plan emphasis to tapped the untapped resources of Mannar Island and create a path for make a strong Economic, Environmental, Healthy and Wealthy area by the end of 2030. Also hope to develop this plan in the national level context in future.

### 1.4. The Planning Process



## **Chapter 02**

### **Background Study**

#### **2.1. The Planning Area**

Mannar district is situated in the western side of the Northern Province of Sri Lanka. It's bordered to the West by the Gulf of Mannar and Palk Strait, to the North by Kilinochchi District, to the South by Wilpattu National Park and to the East by Anuradhapura District. It has total land area of 2,002 km<sup>2</sup> of which, over 50% is covered by forest. The district has coastline of 222 km (including lagoons), a fresh water area of 4,867 ha and a brackish water area of 3,828 ha.

This district consist an area that is Island and part of the Main land. Apart from the thin strip of land that joins the peninsula to the mainland, Mannar Island is also connected by the causeway over the shallow waters forming a 4.5 km stretch of A14 Madawachchiya –Thalaimannar main road.

Mannar Island has been known historically by names of “Manthei”, “Mathota”, “Mahathiththa”, “Mahaputu” “Mawatuthota” Mannar. It's called an islet, is in fact a peninsula formed in a shape of a tongue. At Talaimanar, the Western most tip of the Island; it is almost connected to the Dhanuskodi, and the eastern most tip of peninsula of Southern India by a reef of corals submerged in the Palk Straits. Mannar Island consists two local authorities as follows Mannar UC and part of the Mannar PS and 38 Grama Nilathari Divisions and 104 villages.

Mannar UC area was declared as Town Council on 1 June 1979 under the Urban Development Authority act 1978No: 41 of 1978 as an urban development area gazette notification no is 38/16. In 2005, it was ungraded as Urban Council under the gazette notification No: 1423/2, and as an urban area under Urban Council Ordinance no. 41 of 1939.Later on, in 1998 March 22<sup>nd</sup> entire Mannar Island was declared as urban development area by the Urban Development Authority under the urban development act 1978 and gazette notification no 759/1.

## 2.2. Planning and Situational Context

The preparation of the town development plan for Mannar Urban Area was started in early 2017 although a comprehensive study of the city's structure and its surrounding aspects was carried out to find out the context of the Mannar area. Mannar town is the large urban area of the Mannar district which is situated in Mamar island. The total land extent of the Island is 143.21 square kilometres with 66,087 population in year 2016.

The current population growth rate is in declining trend which recorded as (-8 %) in 2012, (-0.5) in 2013, (0.7%) in 2015 and (-0.3 %) in the year 2016. Gross population density in the Mannar Island is 466 persons per square kilometre in 2016. Erukkalampitti East and Pesalai North, Tharapuram East and Paddithodam GN Divisions are recorded as high population density areas and Kaddukkarankudiyiruppu, Perriyanavakulam and Thullukudiyiruppu GN Divisions are recorded as very low population density areas which have less than 90 persons per square kilometer in 2016. (Refer Annexure1: Population Density Map).

According to the available data in the year of 2016; the ethnic composition of the Mannar Island is such as Tamils, Muslims and Sinhalese respectively as 56%, 43.9% & 0.1%. The daily commuting population around 10,000 persons are coming to the city to fulfil their needs. Most of the people are coming for the commercial purposes and to get the administrative services. When considering the night time population; within the Mannar Island, there are less activities during the night time. (Refer Annexure 2: Arrivals of Commuters).

When considering the housing units of the Mannar Island, it's nearly 12840 housing units which are occupied by 17835 families within the entire Mannar Island. It expresses that there is a requirement of housing units in future by considering the present housing deficits recorded as around 4995. The reason for this situation is low income, inadequate infrastructure and etc.

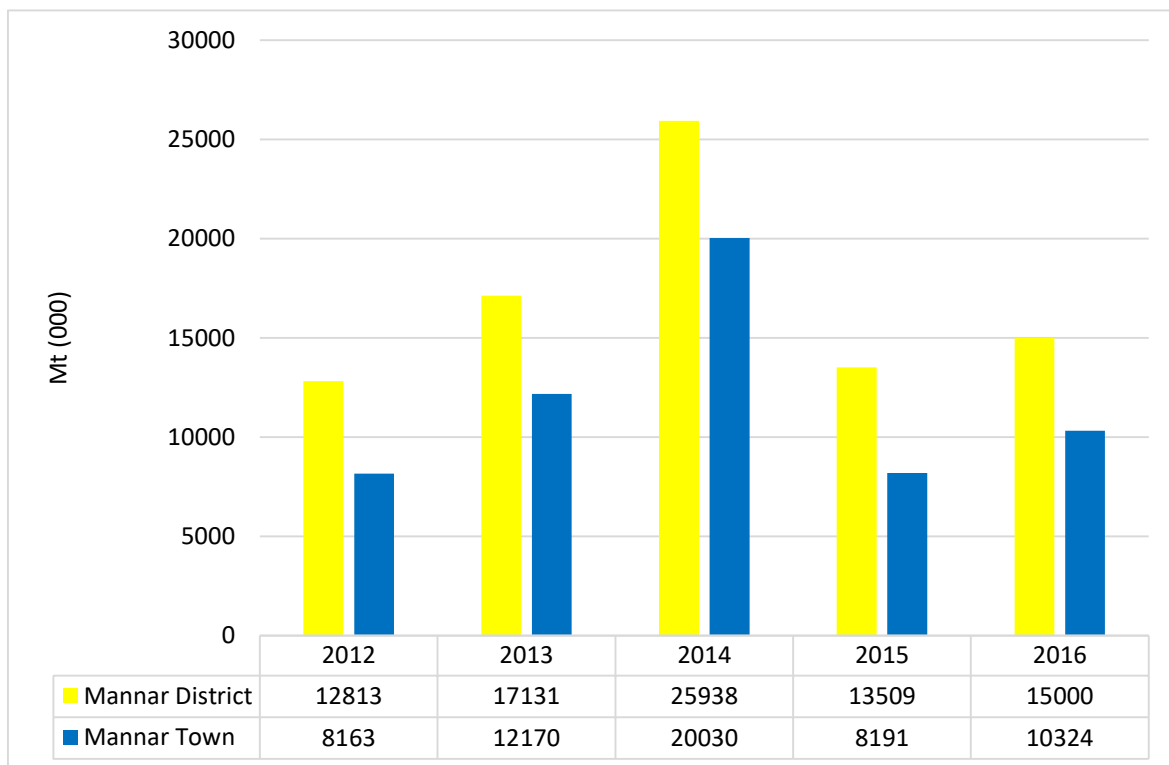
The majority of the households (74%) belong to permanent housing units on the other hand, less number of house holders (16%) have semi - permanent housing units and there are 10% of housing units having temporary structure. The highest housing density is recorded in the Pesalai North, Pattithodam and Panankaddikottu East and low density is recorded in Tharapuram East. Gross housing density in the Mannar Island area is 90 houses per square kilometer in 2016.

The sectoral composition of the economic activities of the Mannar Island consisting with agriculture, industry & service respectively as 39.3%, 51% & 9.7%. According to the economic, sectoral composition, 36.4% of the population engaged in fishing sector out of the agriculture

sector. And consisting the employment pattern of the area, unemployment rate is 7.1% which reflect higher than the national level. (Refer Annexure 3: sectoral composition).

The Mannar Island has high potential marine resources as Gulf of Mannar, coastal belt with potential fishing areas. Accordingly; 2016 statistical report states that total fish production of Mannar District is nearly 16000 MT. Out of that, Mannar Island produced nearly 10324 MT. When considering the dry fish production, from 2012- 2016, Mannar Island produced averagely 1800MT dry fish. In 2016, the total dry fish production is recorded as 516 MT. Out of the total population nearly 22,345 fishing population from 5779 families are engaging in fishing activities from 19 fishing villages. Around 5247 number of fishermen currently engage in these fishing activities. Fishing is an important economic activity of the people who live in Mannar Island. Most of the fishermen are living in the Thalaimannar, Pesalai, Thalvupadu, Panankaddukottu and Pallimunai areas.

**Figure 1: Fish Production of Mannar District and Island (Mt) 2011-2016**



Source: Department of Fisheries & Aquatic Resources

According to the service sector; it is accounted about 51 % of the total population involves in service sector. Such as Government Sector is 9%, Business is 11.9%, Labour is 17.3%, Self-employment is 7.6%, Pension is 3.9% and NGO is 0.8%. The town is potential for whole sale business and retail trade and functioning as administrative capital as well as having offices such

as District Secretariat, Urban Council, other Government Departments and other services such as Teaching Hospital, Schools, Financial Institution, Main Bus Stand, Market, Fish Market and Multi – Purpose Shops are found in the town center. Nearly 80% of the administrative offices are located within the town center.

Mannar District has high potential industrial resources which are Palmyrah, Sea shells, and Marine related resources. Before the local conflict, Mannar Island is completely involved with fishing related industrial activities. But at the present, only few numbers of industrial activities are being operated. Hence, the government and other institutions are ready to invest in industrial sector. In addition to that two large scale industries are identified within the Island which is namely garments and salt pan.

When considering about the infrastructure facilities; water supply is identified as prominent element. Mannar town has been facing problems to access drinking water. Because Mannar is an Island, and people depend on ground water for their day to day needs but that is salty and not suitable for drinking. Therefore, main source of water for the Island is Pipe born water which is supplied by National Water Supply and Drainage Board. Three sources of water supply are available in present Mannar Island namely, Murunkan water supply scheme, Keeri well water at UC and ground water within Pesalai PS area. At present, 60% of the people are getting water from Murunkan water supply scheme and 40% of the people receiving water from ground water out of 9000m<sup>3</sup> per day in the Mannar Island. (Refer Annexure 4: Existing Water Usage\_ Mannar Island)

According to the Ceylon Electricity Board Report, it says that people who are living in Mannar Division have electricity connection it means 100% of the area has electricity supply from the CEB. According to the telecommunication aspect Telecom (SLT) has been providing their service to entire town and CDMA, ADSL are available in addition to that. In 2013, following service had been introduced by SLT, introduced Multiple Service Access Nodes, Business Digital Subscriber Line, Wi-Fi facilities within the Mannar Island Area.

When considering the social infrastructure aspect, health and education take place a prominent role. When considering health facilities in Mannar Island, there is one District General Hospital and three Divisional Hospitals. When considering the available bed capacity of the General Hospital nearly 350 beds and 60 beds in other Divisional Hospitals respectively. Total indoor patients (bed) days recorded as approximately 60, 000 per year in the District General Hospital particularly in 2016 also above 60,000 patients are occupied that 350 beds. Bed occupy rate is 45.73. As well as other three Divisional Hospital indoor patients (bed) days recorded as below



1000 occupied nearly 60 beds. Moreover, there are 08 registered private dispensaries and also daily 100 – 150 patients are getting treatment. In addition, there are about 50 - 80 patients who are obtaining special consultancy services from these dispensaries. The Mannar District General Hospital is the only one major hospital for Mannar District. There is a severe shortage of personnel medical and services such as laboratory facilities are poor.

Mannar District has two main educational zones: Madu zone for the inner area of Madu and Mannar zone for the coastal areas which is consisted with three DS Divisions which are namely Mannar Town, Musali and Nanaatan. According to the available data only 40 schools are functioning in the Mannar Education Zone at present situation. Mannar Island itself has 25 schools.

Mannar Zone has two types of schools which are 04 National schools and 21 Provincial schools as well as there is no any Private school within the zone. These 21 schools are occupied by Tamil speaking Tamil community students at the same time balance 04 schools are occupied by Tamil speaking Muslim community students. Within the Mannar Zone there are 743 Teachers for entire student population. The student and teachers ratio is 1:17.

**Table 1: Students, Teachers ratio: 2010\_2015**

year	Mannar Zone		
	No of students	No of Teacher	Studet Teacher Ratio
2010	21417	1173	1:18
2011	22112	1188	1:18
2012	22840	1377	1:16
2013	23255	1421	1:16
2014	23240	1364	1:17
2015	23543	1428	1:17

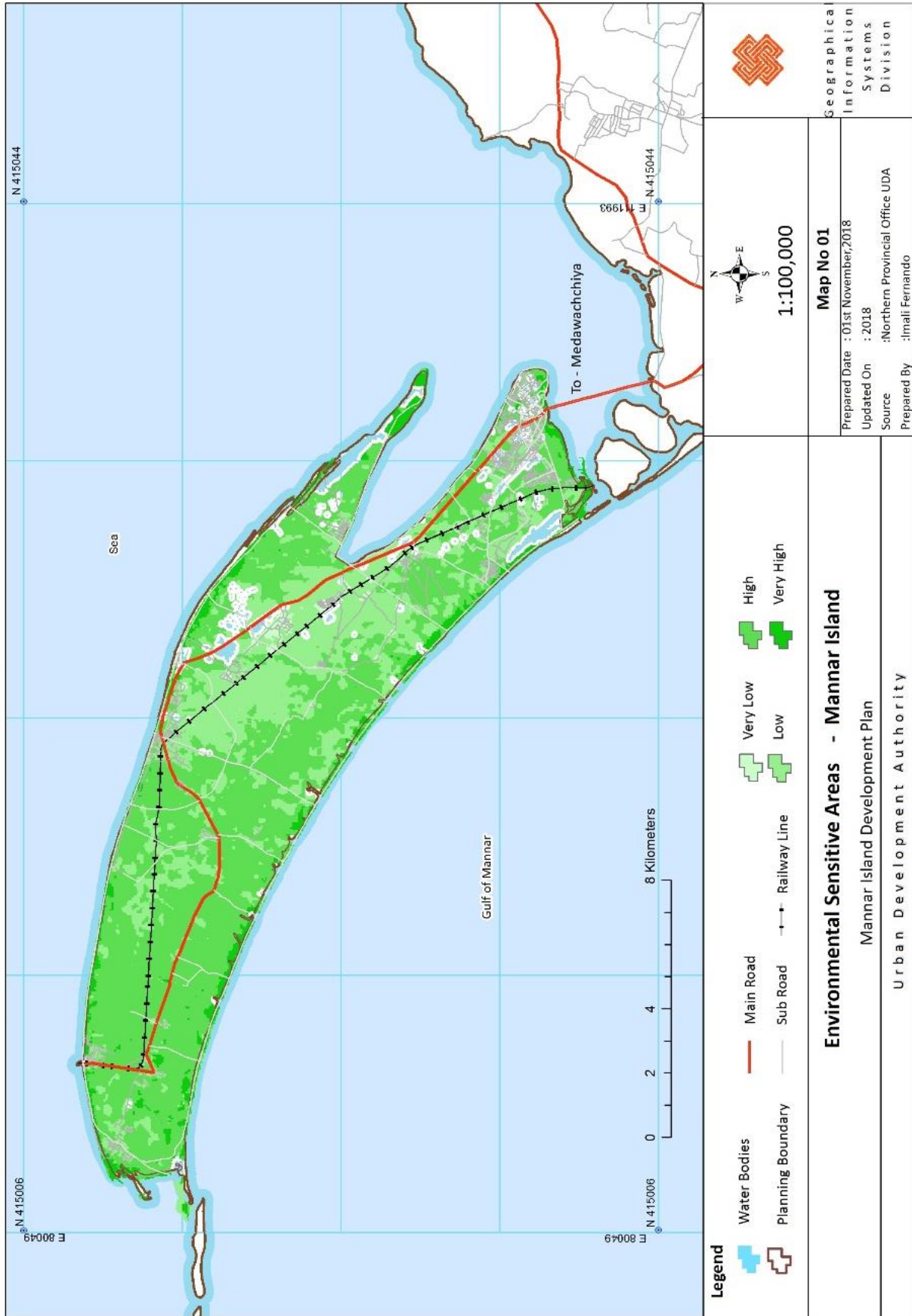
Source: Zonel education department, Madhu Zone\_2015

When considering the drainage system, the study area contains with 18 number of water bodies. But most of them are encroached. These water bodies are connected with an existing drainage network. Under the UNOPS drainage construction project, drainage system of the Mannar town has been developed. It is supported to mitigate the flood situation through their drainage network. (Refer Annexure 5: Catchment Details - Drainage Project, UNOP-2012). Currently 25.5 metric ton solid waste generated per day by the entire Mannar Island. Out of the total waste; nearly 68% produced by the residential activity and 4% produced by industrial sector and 28% produced by commercial sector. The CBD area solid waste is collecting daily and from other areas twice a week. At present there are three places used for dumping purpose which are located at UC and PS area covering 8 acres land. There are no any proper waste collection and dumping method.

Very high environmental sensitive areas are seen in the coastal belt of the Island. (Refer the Map 1: Environmental Sensitive Analysis). Almost all the area contains with flat terrain. Since Mannar is an Island it has own unique context. Around 396 ha or 2.78% of land identified as low land out of total land use of entire Mannar Island those areas are Eluthur, Panankaddikottu West, Pettah, Tharapuram East and Thulukkudiyiruppu. But higher amount of land utilized within the urban council area. When considering the development purpose, the land is demanding factor at Mannar. Mannar Island is classified under Sri Lanka's arid zone and Temperature range from 28°C to 33°C and the highest temperatures are normally recorded during the month of April and May. Considering the unique character of climate and wind, it has greater potential for renewable energy such as wind power and solar energy. Regarding the ecological systems in Mannar Island mangroves takes special place.

The Gulf of Mannar Island possesses unique mangrove vegetation and many kinds of mangroves can be seen in this region. It is interesting to note that such vegetation consists of species belonging to *Rhizophora*, *Avicennia*, *Bruguiera*, *Ceriops*, *Lumnitzera*, etc. Further the Gulf of Mannar area is rich in salt marsh vegetation than other coastal areas of the country. Also salt marshes are found near the mangroves, and are also adapted to flow- in and out of the daily tide. Plants that grow in salt marshes are adapted to tolerate water flooding and changes in saltness.

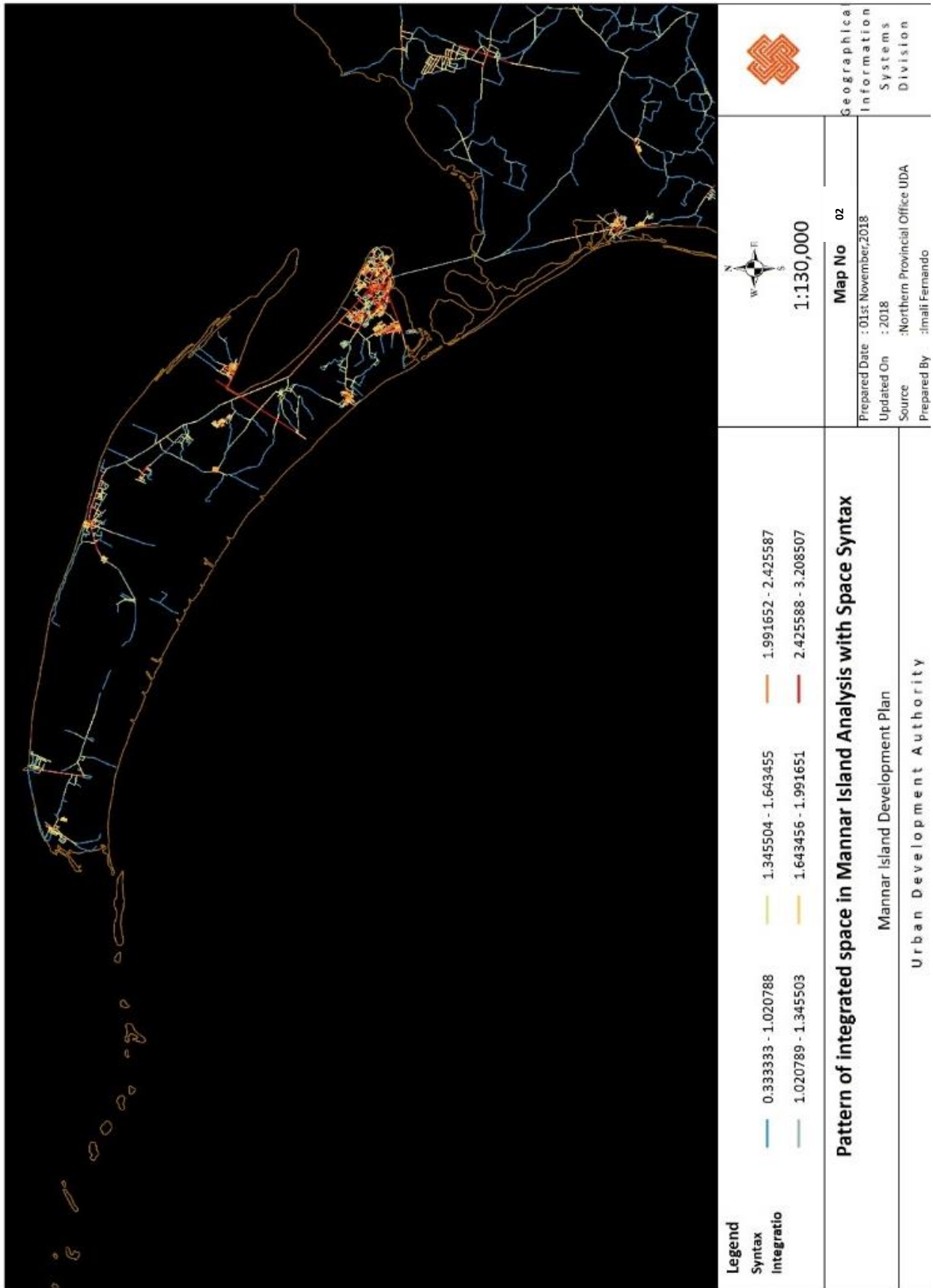
Map: 1 Environmental Sensitivity Analysis



According to the development pressure analysis, high development pressure can be seen in Mannar UC area and Pesalai Town. The high development pressure area identified as along the A14 Road. At the same time, rest of the areas which are having less development pressure (Refer the development pressure map). So there is potential to develop the Mannar Island in future and also there are many lands available for future development. Mannar Island contains several tourism hotspots which can attract local and foreign tourists such as Adams Bridge, Baobab Trees, Bird Sanctuary, Wilpattu National Park, and Mannar Fort.

Space Syntax is a method for describing and analysing the integration of road network. According to this analysis, the high integration of roads are recorded in the Mannar UC area compare to the other towns in Mannar District. Moderate road intergration can be seen in Pesalai, Erukalampity & Thalvupadu according to the analysis, above mentioned areas have the high potential for the development activities in future.

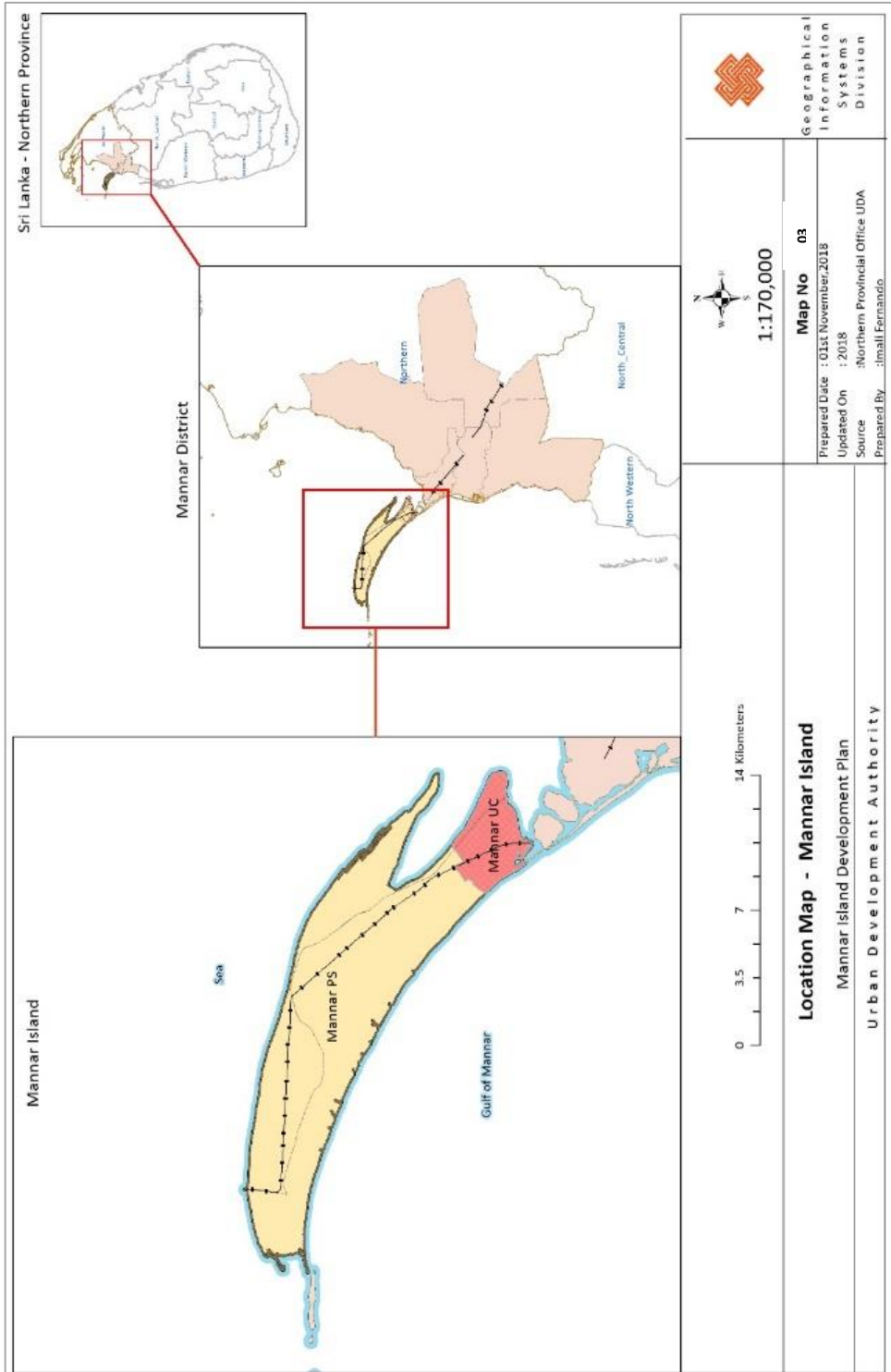
Map: 2 Space Syntax Analysis



### 2.3. Delineation of the Planning Boundary

The Mannar Island covers mannar UC & PS area, in addition to 38 Grama Niladhari Divisions from the Mannar Island. Which is quite large at 142 square kilometre. When the delineation of the planning areas is examined based on the three aspects such as functional boundary, geographic boundary and administrative boundary.

**Map: 3 Declared Mannar Island Planning Area**

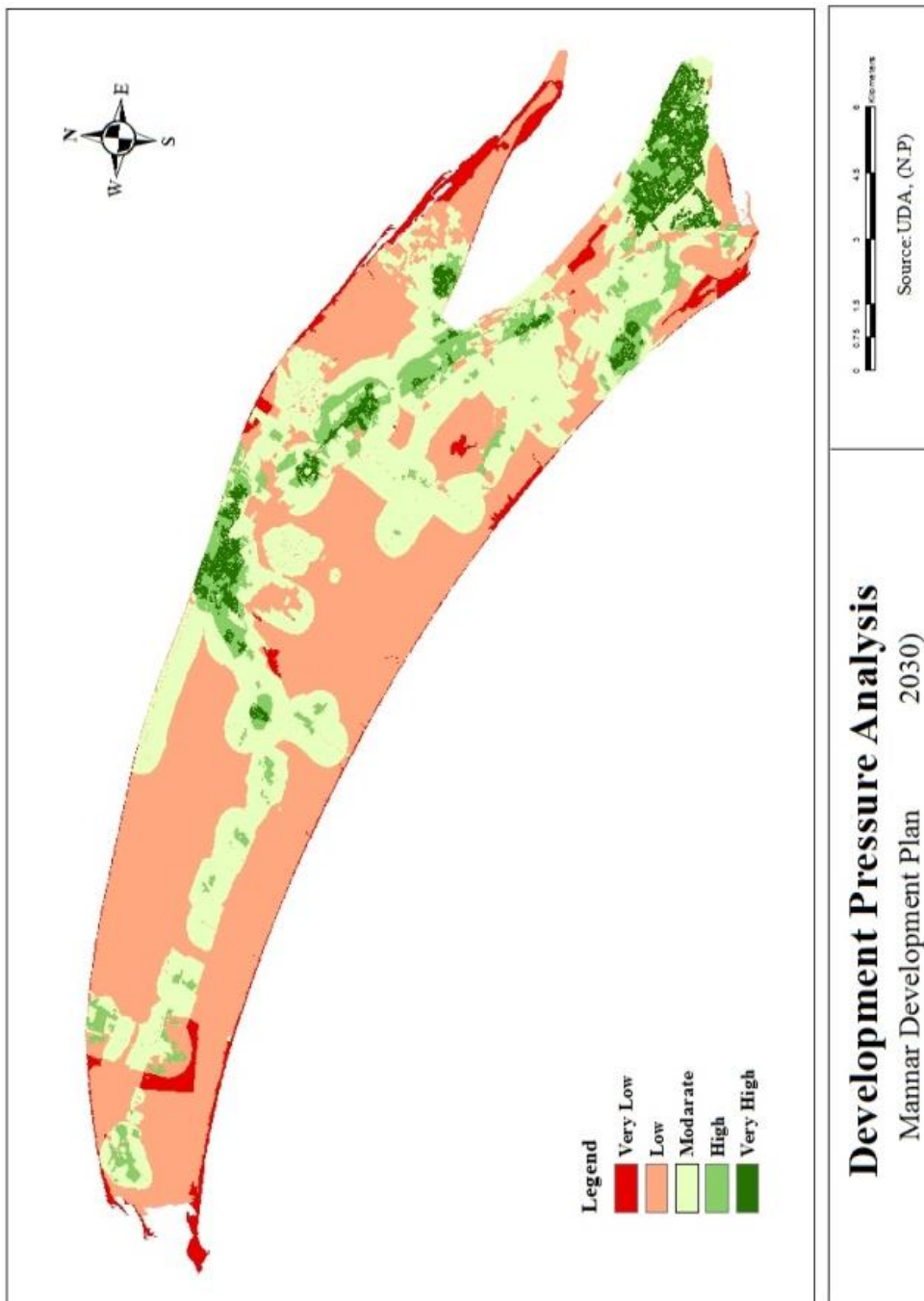




Based on the development pressure analysis, high development pressure can be seen in Mannar UC area and Pesalai town at the same time, rest of the areas which are having less development as well the development trends and encourage the development activities from Mannar town to Thalaimannar along with the A14 road. Further Island has the potential for marine resource, wind energy, solar energy, tourism activities and industrial activities.

Therefore, Entire Island has been taken as functional boundary in order to prepare the development plan for the Mannar Island. An analysis of the development pressure it can be seen in below map.

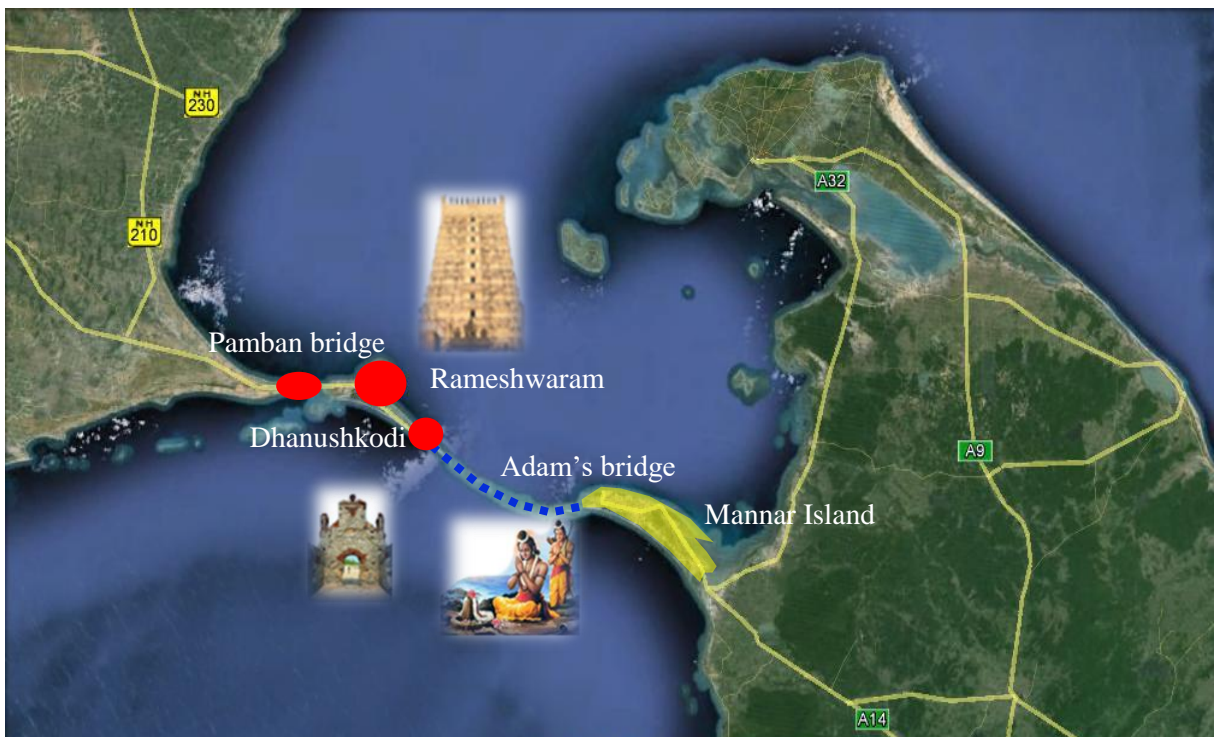
**Map: 4 Development Pressure Analysis**



When identifying the results of the analysis that are relevant to the proposed development plan, the activities that spread from the main urban centers towards sub urban centers along the road Which clearly explain the urban character of planning area.

Another aspect considered was the geological characteristics of the area, it has the marine resource in and around the Island with potential geographic character as coastal, lagoon areas and the chain of limestone which Adam's brige. Therefore, Mannar Island taken as geographic boundary in order to protect the geographic character of the Island and tap the available resources.

**Figure 2: Situational Context**



Source: Prepared by UDA (NP)

The area of the Mannar Island Development Plan (2021– 2030) is demarcated within the boundaries that was derived by a combination of the function, geographical characters of that area and the administrative boundaries consisted with UC and PS area of Island.



## Chapter 03

### The Need of the Plan

Mannar Island Development Plan is prepared to address the issues emerged as well as harnessed the potentials of the area. Plans are prepared to these areas which are already identified as significant development pressures or some of the negative effects of growth and development in an effort to find solutions to these problems. Also, to manage future growth and meet and address local issues through the alignment of local area planning. Issues of the Mannar Island are identified through the view of the planner, detailed analysis and stakeholder's view regarding the area. Problems are prioritized according to the context, magnitude and significance and the need of the development plan of Mannar Island which can be identified as follows;

- Planning area to be develop as a National City in order to the government policy
- Untapped Resources
- Locational advance in the context of international linkage & Investment pressure

#### Key concern 1

Planning area to be develop as a National City in order to the government policy

The Planning area is being rapidly urbanised due to the local conflict its placement within Northern Province. Therefore, entire Mannar declared area is taken as consideration and this development plan is purely covered the local context; through this development plan emphasis to tapped the untapped resources of Mannar Island and create a path for make a strong Economic, Environmental, Healthy and Wealthy area by the end of 2030. Hope to develop this plan in the national level context (National City) in future in order to the government policy.

#### Key concern 2

Untapped Resources

Mannar Island is enriched with high potential of having marine resources, sandy beaches, suitable weather and climate for fishing and energy (Availability of potential for wind and solar power) and rich bio diversity of Gulf of Mannar. It is a place which is having more natural resources but improper development guidelines and promotions influencing for untapped potentials.

The marine resources are the major potential of Mannar Island which is prominent at the southern part of the Island. The major potential of Gulf of Mannar is identified as a richest coastal region in the Asia and also NARA identified as comprising with over 3200 marine species of plants and animals and the first biosphere in the South-East region. It is one of the most biologically diverse coastal region. And also can be found many indigenous endemic species consisting with; 398 vertebrates including freshwater fishes, amphibians, reptiles, birds, and mammals and 98 invertebrates (dragonflies and butterflies) were reported within the six coastal DSDs in the Gulf of Mannar. Among them 31 vertebrates are endemic and proposed endemic species, 66 migrant bird species, two introduced freshwater fishes and eight domesticated mammal species specially Dugong. Marine resources act as a catalyst for future development of the Mannar Island. Although, currently 10% of the marine resources are utilized rest of the resources are remaining as untapped.

Mannar Island is still placed as a second level fishery producer in the Northern Province but if harness the potentials of Mannar can be the first level in the orders in the entire province. Based on the situational analysis, there is a potential territory for the current fish catchment area is demarcated about 200 nautical miles but the local fishing community using only 25-40 nautical miles with the lack of fishery related infrastructure such as absence of advanced fishing methods, equipment, anchoring points, storage, transportation facilities and absence of a fishery harbor. And at present only 18 numbers of multi day boats are available for fishing activity. Therefore its leads to lowest fish production need of the contribution 4% of the national production.

There are several constraints in the transport system in the absence of inter connection between the mode of transport, service centers and South and North coast of the Island with fishing camps. Therefore, unable to get maximum utilization of available resources in and around Island. It is proposed to get maximum utilization from available resources while create a comprehensive road network including capacity maximization to provide affordable, accessible and dynamic public transportation system for all (local and foreign people) while ensure the safe and convenient movement for people and freight.

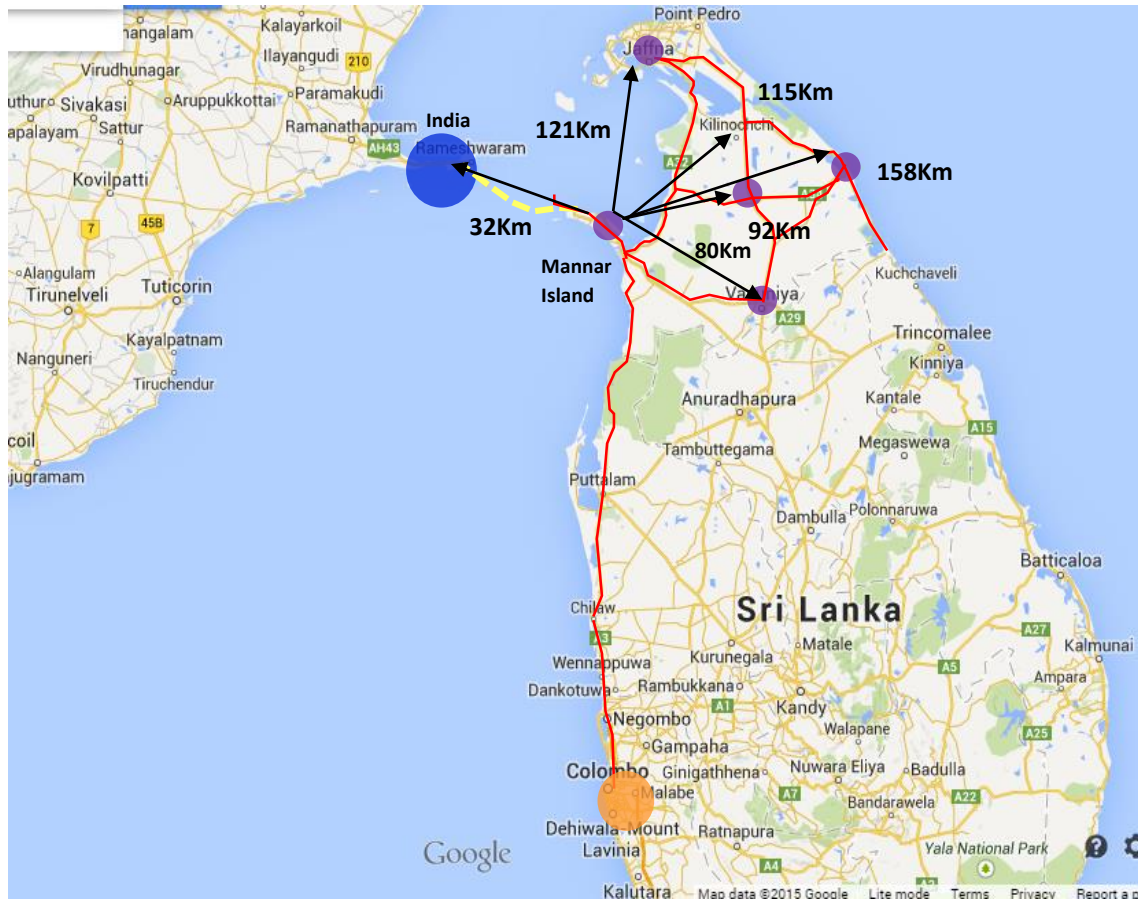
### Key concern 3

#### Locational advance in the context of international linkage & Investment pressure

The geographical location, Mannar Island has the potential to provide strong links with the India. Specially, Thalaimannar is the closest point to danuskodi of India. Which is the prime location to maintain the linkage with India. In accordance with the government policy aims to implementation of better infrastrucuter development within the planning area. It will provide significant contribution

for goods transport and as well as passenger transportation and tourism industry. Mannar town provides service as a market place for the fishing commodities in and around the surrounding hinter lands.

**Figure 3: International, National & Regional Linkages**



Considering the renewable energy of the planning area; Mannar Island having 45-50 km/h wind speed & Global Horizontal Irradiation of 2100. Due to this Sustainable Energy Authority (SEA) identified Mannar Island as one of the richest sustainable energy generating source in Sri Lanka. The developable land availability and suitable weather conditions are major supportive potentials for the enhancement and sustainability of the energy resource. But potential of resource is not yet tapped. Even though Mannar Island covered by sandy beaches, Keeri beach is the only one which is facilitated with very limited resources as tourism related activity area. Significance is to tap the available resource is an essential future need for Mannar to preserve the available resources for the future sustainability with boost the future domestic and regional economy of entire Mannar Island. Therefore, lots of investors are ready invest their money under using these potentials.

Another major needful area is “Limited and Absence of Tertiary Education”. Due to the inadequate and absence of tertiary education, enormous amount of the total population turning into unskilled

labours class which is adverse the economy and leaving an enormous number of the population into seasonal workers or into unemployment. There are 13000 individuals living in the Mannar Island under the (06-18) age group; out of this 8% of the population sitting for Advance Level Studies. And from that, only 100 to 150 number of populations selected for higher education. Balance 900 student population which could be consider as the eligible population for vocational and tertiary education. At present, they don't have any opportunities for tertiary education. Therefore, this situation creates unskilled labours as well as unemployment. In order to enhance the economic growth of the city by developing the skilled Development Plan labour force through the proposed vocational and tertiary educational development in Mannar Island. These all identified issues which are significant for the future development of Mannar. Therefore, solve these identified issues are predominant activity to boost the future economic of Mannar Island. And it is the path to achieve the futuristic vision of "The Speaking Seascape and Magnet Marine".

## Chapter 04

### The planning framework

#### 4.1. Vision

“The Speaking Seascape and Magnet Marine”

#### 4.2. Vision Statement

**Speaking seascape** refer to art works that represent the sea. Also consists with Marine art or Maritime art, the term seascape is most commonly used to reflect the marine variety. Seascapes typically depict views at sea or views from the fore shore. The ocean, beaches, coastlines, and boats at sea, nautical images these elements make up seascape art sense. Especially this term represents the environment of Mannar.

**Magnet Marine**, the entire Mannar Island will play as magnet and it will attract the people. The term represents the development of fishery and energy.

Mannar is a place which consisting with more natural and coastal marine resources. Also, it has high potential for tourism, energy and fishery sector depended on the sustainability. Not only that; but also, preservation and conservation of the environmental resources is need. Here vision focus to utilize the environmental resources of Mannar in proper way with preservation and conservation. Therefore, the term speaking seascape is used to enhance the coastal and marine resources of gulf which is having a very rich coastal biodiversity in the South Asia.

In 2030 the entire Mannar economic activities will be open directly to the other regions through boosting the development of fishery, tourism and energy through utilize the resources. Not only that; Mannar will be act as a magnet of Sri Lanka to attract the entire country and to become stable in national level economy as well.

### 4.3. Goals of the Development Plan

- 1 To become a Fishery Giant in northern region
- 2 A Perfect place for renewable energy
- 3 Enhance the experience of natural environment & significant sites

### 4.4. Objectives of the Development Plan

#### Goal 1:

- Facilitate to increase the 6% of fishery industrial sectoral contribution to national economy by 2030.
- Facilitate to educate 50% of eligible labour force population as skilled / knowledgeable people for marine industry related activities in every year.
- To create inter linkages between south and North coast of Island by connecting fishing camps/ service centers by 2030.

#### Goal 2:

- To facilitate to generate 10 % of energy from wind & solar per day for national grid by 2030

#### Goal 3:

- The existing natural ecosystem will be conserved and preserved by 2030.
- Archeological value of cultural and historical sites of Mannar will be enhanced by 2030
- To attract 3000 tourists to boost the marine tourism by end of 2030.

## Chapter 05

### SWOT Analysis

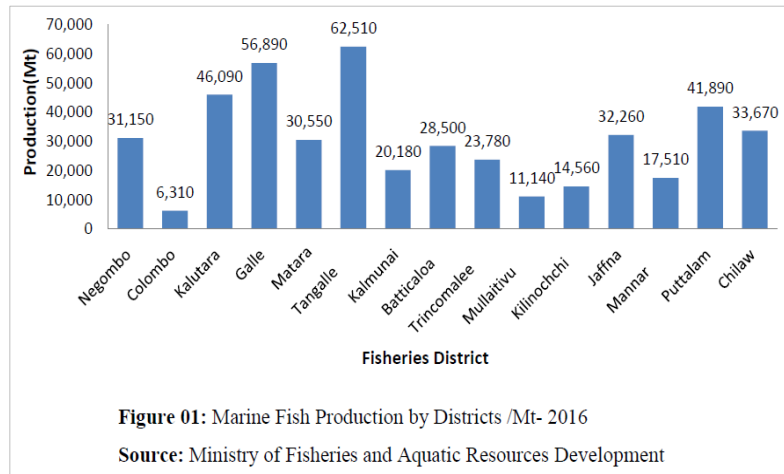
#### Goal 1: To become a Fishery Giant in Northern Region

<p><b>STRENGTHS</b></p> <ol style="list-style-type: none"> <li>1. Mannar is 2nd place in Fishery production in Northern region</li> <li>2. 36% of the labour force are involve in fishery activities</li> <li>3. Being an island (with 87km costal Line)</li> <li>4. Ideal climate condition (Temp 24-35 °C, South West and North East Monsoon)</li> <li>5. 200 NM for fishing activities</li> <li>6. Situated in richest fishery grounds</li> </ol>	<b>S</b>	<b>W</b>	<p><b>WEAKNESSES</b></p> <ol style="list-style-type: none"> <li>1. Lack/inadequate of related facilities               <ol style="list-style-type: none"> <li>1.1 Fishery related tertiary education</li> <li>1.2 Absence of advance equipment &amp; techniques related to deep sea fishing</li> <li>1.3 Absence of harbour, anchoring points, jetties.</li> <li>1.4 Inadequate fish processing centers</li> <li>1.5 Inadequate linkages between fishing camps and fishery related market.</li> </ol> </li> </ol>
<p><b>OPPORTUNITY</b></p> <ol style="list-style-type: none"> <li>1. Proposed harbour project at Pesalai</li> </ol>	<b>O</b>	<b>T</b>	<p><b>THREATS</b></p> <ol style="list-style-type: none"> <li>1. Invasion of Indian fisherman</li> </ol>

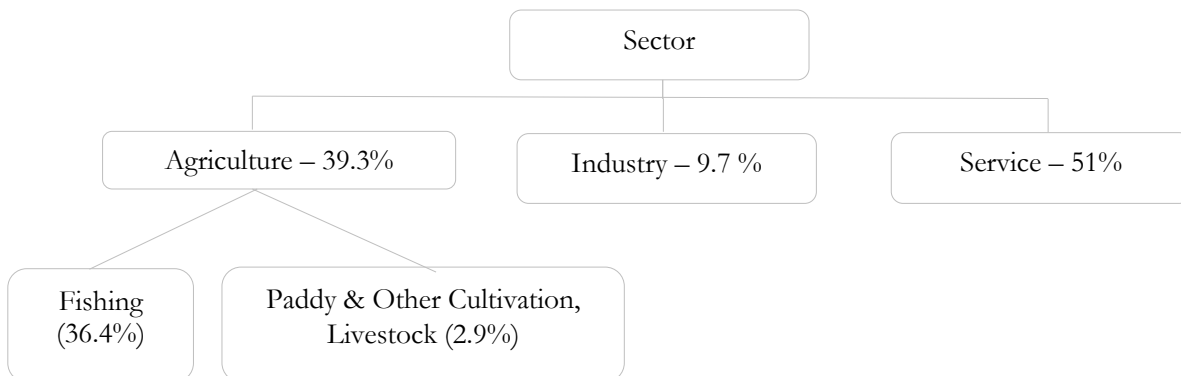
**STRENGTHS**

**1. Mannar is 2<sup>nd</sup> place in Fishery production in Northern region**

In 2016, marine fish production of Mannar is 17 510 Mt which contributes 4% of the national production as well as 23% of the Northern Province production at the same time Mannar is 2<sup>nd</sup> place in Northern region on fishery production.



**2. 36% of the labour force are involve in fishery activities**

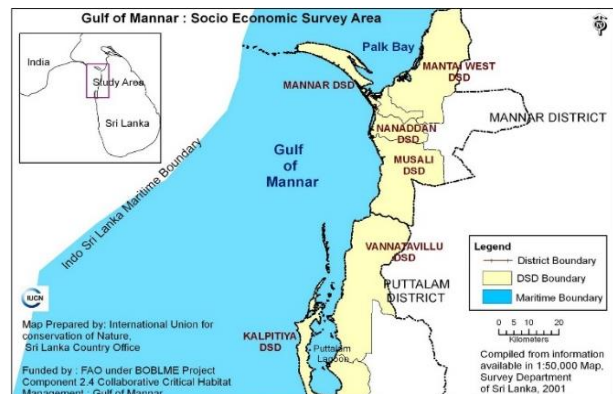


Source: Statically Hand book (2017), District Secretariat, Mannar

Economy of Mannar Island is predominantly depending on the fishery sector as 36.4% of the labour force population engaged.

**3. Being an island (with 87km costal Line)**

Mannar Island is covering with 87km length of costal belt with the potential areas of fishery activities also which is situated in the richest fishery ground of Gulf of Mannar.





#### 4. Ideal climate condition (Temperature 24-35 °C, South West and North East Monsoon)

Mannar Island is classified under Sri Lanka's arid zone where a tropical dry climate is prevalent. Due to that tropical climatic condition Mannar is famous for dry fish production. When considering the dry fish production, Mannar Island produced averagely 1800 Mt dry fish from 2012 – 2015. When considering the entire Mannar district, the higher dry fish production was recorded as 7780 Mt in 2015. And also, Mannar Island is experiencing by both monsoon North East and South West which is possible for the fishing activity throughout the year.

#### 5. 200 NM for fishing activities

At present, fishing activities covering out 25-40 Nautical miles due to the absence of the advanced technology and equipment usage. But obligatory sea boundary is 200 Nautical miles for Mannar Island.



Source: Fishery department, Mannar

## WEAKNESSES

### 1. Lack/inadequate of related facilities

- Absence of harbour, anchoring points, jetties and inadequate fish processing centres
- Inadequate linkages between fishing camps and fishery related market
- Fishery related tertiary education
- Absence of advance Equipment & techniques related to deep sea fishing

Although Mannar Island has high potential for fishing, fishery related infrastructure facilities are inadequate. Therefore, majority of the fishermen engaging in offshore fishing which is creating more problem in term of the production and market activity. There is no any proper harbour, jetty or anchoring point with in Mannar Island. For example (Pallimunai): In dry season, nearly half of the year fisherman has to push or drag the boat manually more than 1.5 km to reach the water line. It creates difficult for loading and unloading of fishes and fishing equipment as well as spent unnecessary time and energy. At the same time, presently fishing boats are anchoring at sea shore where corrosion, high tide are possible to occur there is no safe for boats.

Considering the fish production, there are four ice factories functioning with the capacity of 50Mt per day. This situation creates much inconvenience for fishermen and reduces the market value for Mannar fresh fish and dry fish. Also, mostly they export their product as raw material because of absence of processing industry. There are 19 number of fishing villages are existing along the coastal belt which are not interconnected via roads especially south and north coast of the Island. Therefore, difficulties in convey the fishery products as well as market.

At present, one of the major issues is unavailability of tertiary education especially marine related education sector in Mannar and due to this most of unskilled labours in the fishery sector. Therefore, the people faced difficulties to handle new technology or equipment in fishing activity to get maximum fish production. As well as its leads to increase the cost of production and more time and energy consumption.

Absence of advance equipment & techniques related to deep sea fishing. There is no any mutli day boats available, therefore specially practiced to fishing in the offshore area which is creating least production with available resources.

## **OPPORTUNITIES**

### **1. Proposed harbour project at “Pesalai”**

Proposed fishery harbour project at Pesalai funded by ADB which will be implemented by 2020.

## **THREATS**

### **1. Invasion of Indian fisherman**

Poaching of the Indian fishermen was highly dominant in the Sri Lankan sea territory near Mannar Island. They able to catch more fish within short time period by using modern equipment and

technology which local fishermen didn't have that. Therefore, exploitation of local marine resource and income of local people affected to the local economy. Table Shows below the details of Indian fishermen arrested within Mannar Island by the Navy of Sri Lanka in the past years.

**Table 1: Invasion of Indian Fisherman**

Year	No of fishermen arrested
2015	98
2016	90
2017	60

Source: Department of fisheries and aquatic resources, Mannar district office

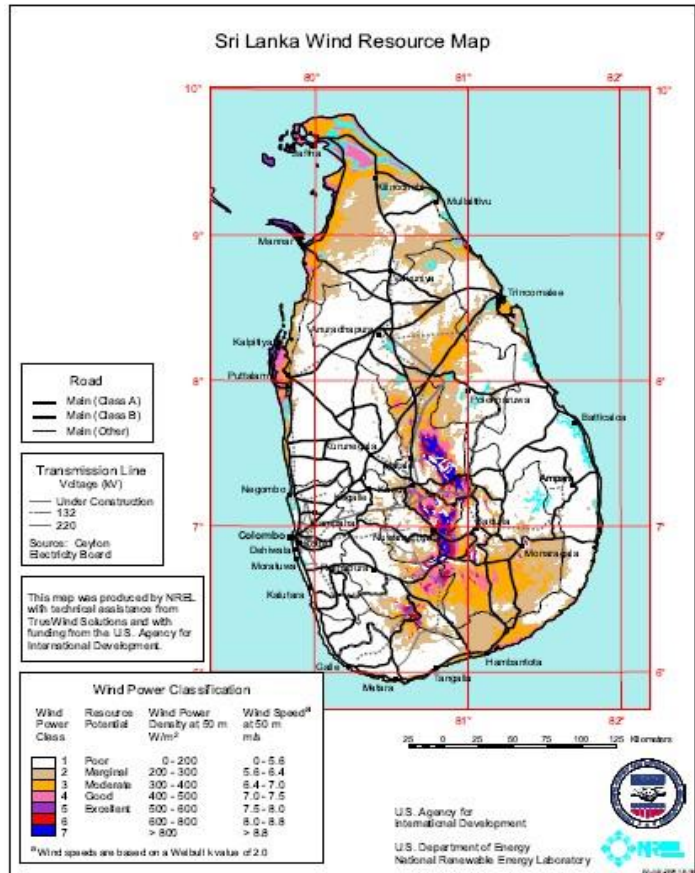
## Goal 2: A perfect place for energy

<p><b>STRENGTHS</b></p> <ol style="list-style-type: none"> <li>1. Wind availability (wind speed 45-50Km/h- North/East and South/West monsoons)</li> <li>2. Appropriate climate for solar energy (solar 2100 GHI)</li> <li>3. 80 % of untapped developable land</li> </ol>	<b>S</b>	<b>W</b>	<p><b>WEAKNESSES</b></p> <ol style="list-style-type: none"> <li>1. Private ownership of the available land</li> </ol>
<p><b>OPPORTUNITIES</b></p> <ol style="list-style-type: none"> <li>1. Wind power project by SEA</li> <li>2. Declared as a sustainable energy development area by SEA</li> </ol>	<b>O</b>	<b>T</b>	<p><b>THREATS</b></p> <ol style="list-style-type: none"> <li>1. Possible renewable energy projects by SEA in other parts of the nation.</li> </ol>

**STRENGTH**

**1. Wind availability (wind speed 45-50Km/h- North/East and South/West monsoons)**

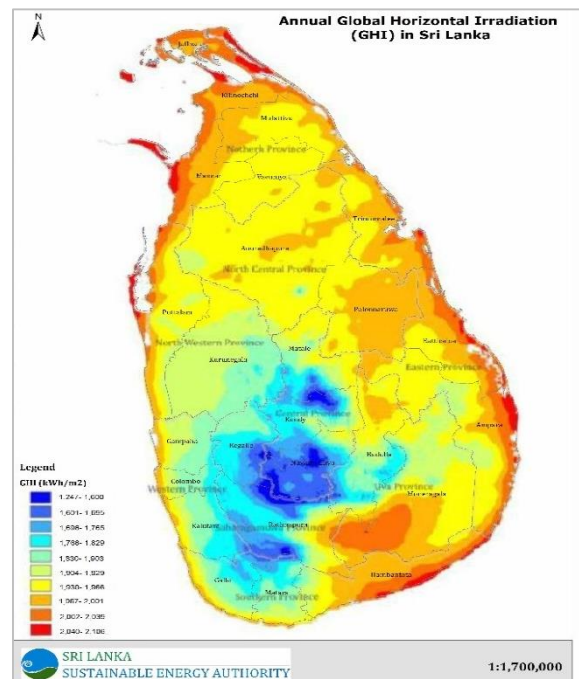
According to the study done by SEA, Mannar Island is identified as the high potential area for wind-based energy development. Mannar Island experiencing North-East and South – West monsoons respectively throughout the year with the wind speed of 45 -50 Km/h. This is identified as most ideal wind speed to generate energy by wind turbines. A technical study by SEA proved that, in the Sri Lankan Island, Mannar Island stand with elite wind speed.



Source: National Renewable Energy Authority

**2. Appropriate climate for solar energy (solar 2100 GHI)**

Since Mannar Island is located in the arid zone, the Mannar Island is exposing to enormous amount of sunlight almost 9 months in a year. A study by Sustainable Energy Authority revealed that, only Mannar Island and Hambantotta area are stand with the high potential for solar based energy generation with the GHI of 2100. This study proves that Mannar Island with the strength to produce solar based energy almost throughout the year.



Source: National Renewable Energy Authority

### 3. 84 % of untapped developable land

Establishing renewable energy generating sources such as wind turbines and solar panel parks required large number of lands for implementation. When considering Mannar Island as a place for renewable energy and the land availability, the untapped developable lands should be a great strength.

Map: 5 Existing Land use Map





There are 84% of the land of the Mannar Island is untapped developable land including vast no man areas. So, this a great strength to develop Mannar Island as a perfect place for renewable energy.

## **WEAKNESS**

### **1. Private ownership of the available land**

Even though Mannar Island has the 84% of the untapped developable land for potential renewable energy generation, when comes to the land ownership it has been identified as an obstacle for such development.

According to the report of divisional secretariat office Mannar, among the 84% of the untapped developable land, more than 90% of the land ownership holds by the private owners. This private ownership of lands could cause delays and huge economical expenses while implementing renewable energy projects.

## **OPPORTUNITIES**

### **1. Wind power project by SEA**

To achieve that goal of, it has been identified the project of 39 wind turbine establishment in the south coast of the Mannar Island by SEA as an opportunity. This would be the first phase of the three-phase project which is expected to finish on 2022.

At the end of the project, it would contribute 100MW energy per day to the National Grid. This is 5% of the National Energy demand per day.

### **2. Declared as a sustainable energy development area by SEA**

Mannar Island has been declared as energy development area by SEA. This declaration would attract the interest of the investors to have sustainable energy generating projects which is an opportunity to achieve the ‘A perfect place for Renewable Energy’

## THREATS

### 1. Possible renewable energy projects by SEA in other parts of the nation.

SEA conducting the surveys and the studies all over the Sri Lanka to identify more suitable places for renewable energy. This process would decrease the importance of Mannar Islands' stands in terms of renewable energy generation.



Source: Sri Lanka Sustainable Energy Authority

**Goal 3: Enhance the experience of natural environment and significant sites**

<p><b>STRENGTHS</b></p> <ol style="list-style-type: none"> <li>1. Gulf of Mannar is the first biosphere reserve in ASIA</li> <li>2. Abundance of 3600 flora and fauna species can be seen in Mannar</li> <li>3. Nearly 30km sandy and shallow beaches available in Mannar</li> <li>4. Historical importance and significant sites are located in Mannar (Ex: Adam's Bridge, Dutch Fortress, Baobab Tress and St. Lucia Church)</li> <li>5. Scenic viewpoints enrich the environmental value of the Mannar</li> <li>6. Vankalai sanctuary was declared as 'Ramsar' site</li> </ol>	<b>S</b>	<b>W</b>	<p><b>WEAKNESS</b></p> <ol style="list-style-type: none"> <li>1. Improper facilities to access and experience the sites             <ol style="list-style-type: none"> <li>a. No proper access</li> <li>b. No proper guidance</li> </ol> </li> </ol>
<p><b>OPPORTUNITIES</b></p> <ol style="list-style-type: none"> <li>1. Proposed Nature Park Development</li> </ol>	<b>O</b>	<b>T</b>	<p><b>THREATS</b></p>



## **STRENGTHS**

### **1. Gulf of Mannar is the first marine biosphere reserve in ASIA**

The Gulf of Mannar is the biologically richest coastal region with 3,600 species of plants and animals known to live within its boundaries. In the Gulf of Mannar, several species of dolphins and whales and three species of endangered sea turtles. Furthermore, the Reserve is home to sea horses, 450 species of fish, hundreds of species of sea cucumbers, sponges, all kinds of corals and species of sea grass found nowhere else. In addition, more than 150 species of bird are found on islands in the reserve. Vital to the ecology of the reserve are the 17 species of mangrove which act as important fish nurseries.

The reserve covers 10,500 sq. km and has 21 islands with continuous stretches of coral reef. The core area of the reserve is comprised of a 560 km<sup>2</sup> core area of coral islands and shallow marine habitat. Commercial fishing is done in about 5,500 sq. km. and nearly 50,000 people dwelling in 47 villages along the coastline bordering the Gulf of Mannar depends directly on the natural resources of the Biosphere reserve for their livelihood.

The Reserve's fishery is dominated by fish species like lesser sardine, silver belly, mackerel, anchovy, thread fin, bream, lobster, molluscs and prawns. The fragile Coral reefs and the unique flora including Sea Grasses of Gulf of Mannar, which provide homes to an abundance of marine creatures, are under multiple threats.

### **2. Abundance of 3600 flora and fauna species can be seen in Mannar**

#### **a. Fauna Species**

World's richest marine biodiversity region including estuaries, beaches, forests, alga communities, sea grasses, coral reefs, salt marshes and mangroves. Other thing is International bird migratory path identified in Mannar. Nearly 149 species of birds including the very rare migrants like spot-billed duck, the comb duck and the gadwall can be especially mentioned. Those are timely to put Mannar on the birding circuit with attractive tour package conducted by local people familiar with birding hotspots. It will boost the local economy and encourage tourist attendance and help protect birds, other wildlife and their habitats

## b. Flora species

### • Mangroves

The largest mangrove area in the country is recorded in the Kala Oya and Malwathu Oya estuaries. Manda (*Avicennia marina*), Maha-Kadol (*Rhizophoramucronata*), Sudu-Kirala (*Sonneratiaalba*), Punkanda (*Ceriopstagal*) and Tela-kiriya (*Excoecariaagallocha*) are the dominant species and are distributed in more saline and flat land areas. *Avicennia marina* is more abundant as a mono-specific species towards inland. However, *Avicenna* can be seen near the coastal edge in the Mannar Pallimunai area. Scrutinizing the floristic diversity of mangroves of the area revealed that *Rhizophoramucronata* and *Avicennia marina* are the major mangrove species in the area. Associate mangrove species such as Bu-renda (*Clerodendruminerme*), Suriya (*Thespesiapopulnea*), Beli-patta (*Hibiscus tiliaceus*) and *Tamarixindica* were also found.



Source: Field Observation, 2017

### • Salt Marshes

The Gulf of Mannar area is richer in salt marsh vegetation than other coastal areas of the country. Salt marshes are found near mangroves and are also adapted to flow- in and out-of the daily tide. Plants that grow in salt marshes are adapted to tolerate water flooding and changes in saltiness. Salt marshes can be seen in Kaladi, Vankalai, Arrippu, inside the Wilpattu, Ailay at Illuvankulam, inside the Mannar Island and in Pallimunai. Extensive salt marshes occur in the Mannar area (mainly on tidal flats and containing about 56 species of marsh vegetation) in the coastal belt from Mantai to Vankalai. In this region, most of the Salt Marshes are covered by non-woody, small plants. These areas become extremely dry during the very long dry period and lose a lot of water, with the result that the area become very salty. Often, salt can be seen in these habitats during the dry season.

- **Mud flats**

Mudflats are found scattered around Mannar islands and Mantai West area lagoons and bays. (For an example Vankalai and Palakamunai). These mud flats are important in processing nutrients for the ecosystem and providing feeding areas for fish at high tide and for birds, especially migratory birds, at low tide. Mudflat habitats commonly appear in the natural sequence of habitats between sub tidal areas and terrestrial inland vegetation.

- **Sand dunes and Beaches**

Plants trap the sand from being blown away. The wind then starts eroding sand particles from the windward side and depositing them on the side protected from the wind. Gradually, this action causes the dune to move inland, accumulating more and more sand as it does so. Sand dunes can be seen in Nadukudah. Sand dunes have Creepers such as Spinifex (Sinhala: Maha-Ravanaravula, Tamil: Ravananmeesai, Scientific name: *Spinifexlittoreus*) and Bermuda grass (Sinhala:



Source: Field Observation, 2017

Ruha, Tamil: ArugamPillu, Scientific Name - *Cynodondactylon*).

- **Sea grass meadows**

The Gulf of Mannar coast and Islands have relatively dense growth of sea grass meadows, mainly between the mainland and the islands, as well as towards the seaward sides of the islands. In the seaward sides of the islands, sea grass appeared as patches. They are found about 2 to 3 km wide from the Island shores towards the open sea. The area between Pamban and Tuticorin has about 101 km<sup>2</sup> cover with dominant species, *Thalassiahemprichii*, and *Cymodoceaserrulata*. Many different kinds of sea grasses as Sea grass are found in these meadows sea grass is seen in Talaimannar and Pallimunai. Therefore, they serve to show us that there is damage to the environment. Also, many species of fish and other animals live among their leaves. Famous among the animals that live in sea grass meadows is the Dugong or Sea Cow.

- **Coral reef**

Coral reefs are found in shallow seas in the Bar Reef area, Mannar (off Pallimunai), South West of Mannar Island, Arippu, Silavatturai, and Vankalai and near Thomaiyar and Kokkupadyan.

Nearly 100 different kinds of corals have been found in the region, including Staghorn Coral, Encrusting pore and tony Coral. Also 200 different kinds of coral reef fish, with Damsel Fish as the most common are found.

### 3. Nearly 30km sandy beaches available in Mannar (South Coast)

Mannar possesses safe and lazy beaches with adjoining attractive Palmyra and Coconut plantation on proximity to cool fresh water stream. Into that one of the beautiful beaches in Mannar Island at Erukkalampiddy at though this beach is undeveloped and not properly maintained at present.

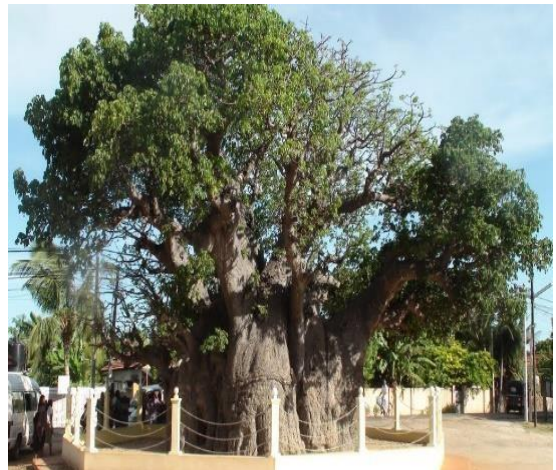
### 4. Historical importance and significant sites (Adam's bridge, Dutch Fortress, Baobab tree, St. Lucia Church)

- **Adam's Bridge**

Adam's Bridge, also known as Rama's bridge or Rama Setu, is a chain of limestone shoals, between Pamban Island, also known as Rameswaram Island, off the south eastern coast of Tamil Nadu, India and Mannar Island, off the north western coast of Sri Lanka. It has an area of about 50 square kilometres, mainly covered with vegetation and sand.

- **Baobab Trees**

Mannar Island is the only one of the place in Sri Lanka where Baobab trees are available. Baobab is a unique specie of tree: with an enormous barrel-like trunk of up to 9 meters in diameter, 19.5 m circumference and 7.5 m height. The name Baobab comes from the Arabic plant name *Buhibab*, while the scientific name is after the French Botanist M. Adanson (1727–1806). The Arab traders brought the Baobab tree and planted it in the hot sandy lands of Mannar. Baobab tree, native to Africa, was brought in for the sole purpose of feeding Arabian Camels. The Baobab belongs to the family Bombacaceae.



Source: Field Observation, 2017

- **Mannar Dutch Fort**

Fort is colonial monument in Mannar. It was built by the Portuguese in 1560 in the island of Mannar. Mannar Fort captured was by Dutch on 22 February 1658 and was rebuilt by the Dutch

in 1696. The Mannar Fort has four bastions and it's in abandon condition. . It is a square shaped fort with four bastions and is located next to the new bridge that connects the mainland with the Mannar Island. The Mannar Fort has four bastions and it's still in good condition although the building inside the fort has not been properly maintained. Currently the Sri Lankan Police occupy this fort.



*Existing situation of Dutch Fort in Mannar*

Source: Field Observation, 2017



*Aerial view of Dutch Fort*

Source: Google Earth

- **St.Lucia Church**

There are few attractive Tourism Places in Mannar Division. Among them St.Lucia Church which is located at Pallimunai was built during colonial period.



*St. Lucia Church in Mannar*

Source: Field Observation, 2017

## **5. Scenic viewpoints enrich the environmental value of the Mannar**

There are few scenic viewpoints which enrich the sense of Mannar and its character. Viewpoints can be seen in Vankalai Bird Sanctuary, Foreshore area, Urumalai Beach, Keeri Beach, Pesalai



Beach and Thalaimannar. In addition to that Vankalai bird sanctuary locates at the entry point of the Mannar Island which is a recreational place as bird watching spot. After passing the Vankalai bird sanctuary area especially next to that foreshore area can be seen which consists of historical places of Dutch fort and Pallimunai Church. And other part of the foreshore area consists with salt pan activities.



*Scenic view point of Mannar Light House at Thalaimannar*

Source: Field Observation, 2017



*Scenic view of entry point of Mannar Island*

Source: Google Earth

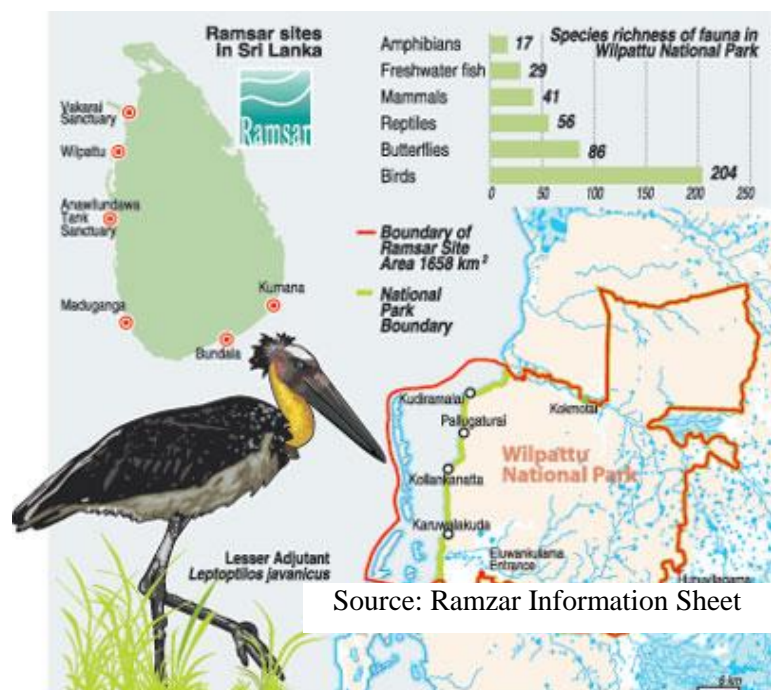
## **6. Vankalai sanctuary was declared as ‘Ramsar’ site**

The government of Sri Lanka has designated the Vankalai Sanctuary as its 4th Wetland of International Importance. As summarized by Marian Gwilliam, Assistant Advisor for

Asia/Oceania, Vankalai Sanctuary (8°56'N 079°55'E) is located North-West of Sri Lanka in the District of Mannar. This site covers an area of 4,839 hectare and consists of several ecosystems which range from arid-zone thorn scrubland, arid-zone pastures and maritime grasslands, sand dunes, mangroves, salt marshes, lagoons, tidal flats, sea-grass beds and shallow marine areas. Due to the integrated nature of shallow wetland and terrestrial coastal habitats, this sanctuary is highly productive, supporting high ecosystem and species diversity.

The site provides excellent feeding and living habitats for a large number of water bird species, including annual migrants, which also use this area on arrival and during their exit from Sri Lanka. It harbours more than 20,000 water birds during the migratory season, including the Northern Pintail (*Anas acuta*), Greater Flamingo (*Phoenico-pteris roseus*) and the Eurasian Wigeon (*Anas Penelope*), of which Vankalai Sanctuary supports 1% of the population of the latter two species. The site's coastal and marine ecosystems are important for over 60 species of fish, marine turtles, and rare species such as Dugongs (Dugong). These ecosystems provide important spawning and feeding grounds for juvenile fish species such as Trevally (*Caranx spp.*), Snappers (*Lutjanus spp.*), and also host a number of threatened species, such as the Green Turtle (*Chelonia Mydas*), Dugongs (Dugong), and Saltwater Crocodiles (*Crocodylus Porosus*).

Vankalai Sanctuary sustains diverse food chains, while also sustaining the livelihoods of fisheries-dependent communities in the area. Civil unrest has kept human activity out of this region for nearly two decades; hence there are only few permanent settlements in the area. Locals engage in small-scale livestock grazing, subsistence and commercial fishing. Part of the Vankalai Sanctuary is an archaeological site since it is partly located in the major port of ancient Sri Lanka, dated from 6th century BC to 13th century AD. The Department of Conservation is directly responsible for managing this diverse and culturally rich



wetland. Sri Lanka presently has 4 Ramsar Sites covering 13,361 hectares – the Convention’s global total is 1891 Ramsar Sites covering 185,464,092 hectares.

## WEAKNESS

### 1. Improper facilities to experience the sites

There is another barrier to experience the sites due to lack of proper guidance and access. Mannar Island has lot of tourism related potentials. But most of the tourists are not much aware to access these places. The reason behind is that there is no any proper tourism guide plans, and sign boards to attract the tourists and to direct the tourists for the tourism potential places. Even improper infrastructure facilities especially importantly improper roads fails to give easy accessibility to reach the sites. (Ex: Dutch fort, Baobab tree, foreshore area, historical value churches, Vangalai bird sanctuary, Urumalai beach, Keeri beach and Keeri well).



*Improper facilities to experience the sites*

Source: Field Observation, 2017

## OPPORTUNITIES

### 1. Proposed Nature Park Development

Vankalai Sanctuary which is covered part of the Main Land of Mannar including partly a Wetland, comprises Puliyantivu Island, Thirukethiswaram, Pallimunai, Vankalai and the strips of land on either side of the causeway connecting the island of Mannar to the mainland. Covering about 4,800 hectares of area consists of arid-zone thorn scrubland and pastures, waterholes and tanks, sand dunes, mangroves, salt marshes, lagoons and sea-grass beds and maritime grasslands.

Vankalai area which is declared as Vankalai bird sanctuary by Wildlife Conservation Department in 2008 and also Vankalai was covered under Ramzar Convention in 2010 (The Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat is an international treaty for the conservation and sustainable use of wetlands. Habitat is an international



treaty for the conservation and sustainable use of wetlands). Vankalai sanctuary is the shelter of thousands of migratory birds like spot –billed duck, comb duck, gadwall, long-toed stint, peregrine falcon etc. who are migrating from several parts of the country like Siberia, thousands of migrant birds arrive in Sri Lanka, making land fall in the Mannar region including Vankalai. Similarly when leaving the country at the end of the season, they use Vankalai as their last staging point. In order to the value of the Vankalai Sanctuary, UDA has decided to construct Facilitation Centre within Vankalai Sanctuary area and particularly proposed area is located near Mannar Bridge and 100 m away from the Mannar Fort.

## Chapter 06

### The plan

#### 6.1. Conceptual Plan

Conceptual Plan is interpreted the entire futuristic development of Mannar Island with four major aspects such as Township Developments, Fishery Developments, Renewable Energy Developments and Environmental Enhancement.

Considering the township development, the present township of urban council area is functional as the administrative capital of Mannar district. The future development of township consisting with the urban council area considered as a heart of the entire Island. This area will be considered as a Central Business District area and its prominent for commercial activities also will remain as the administrative capital of the district.

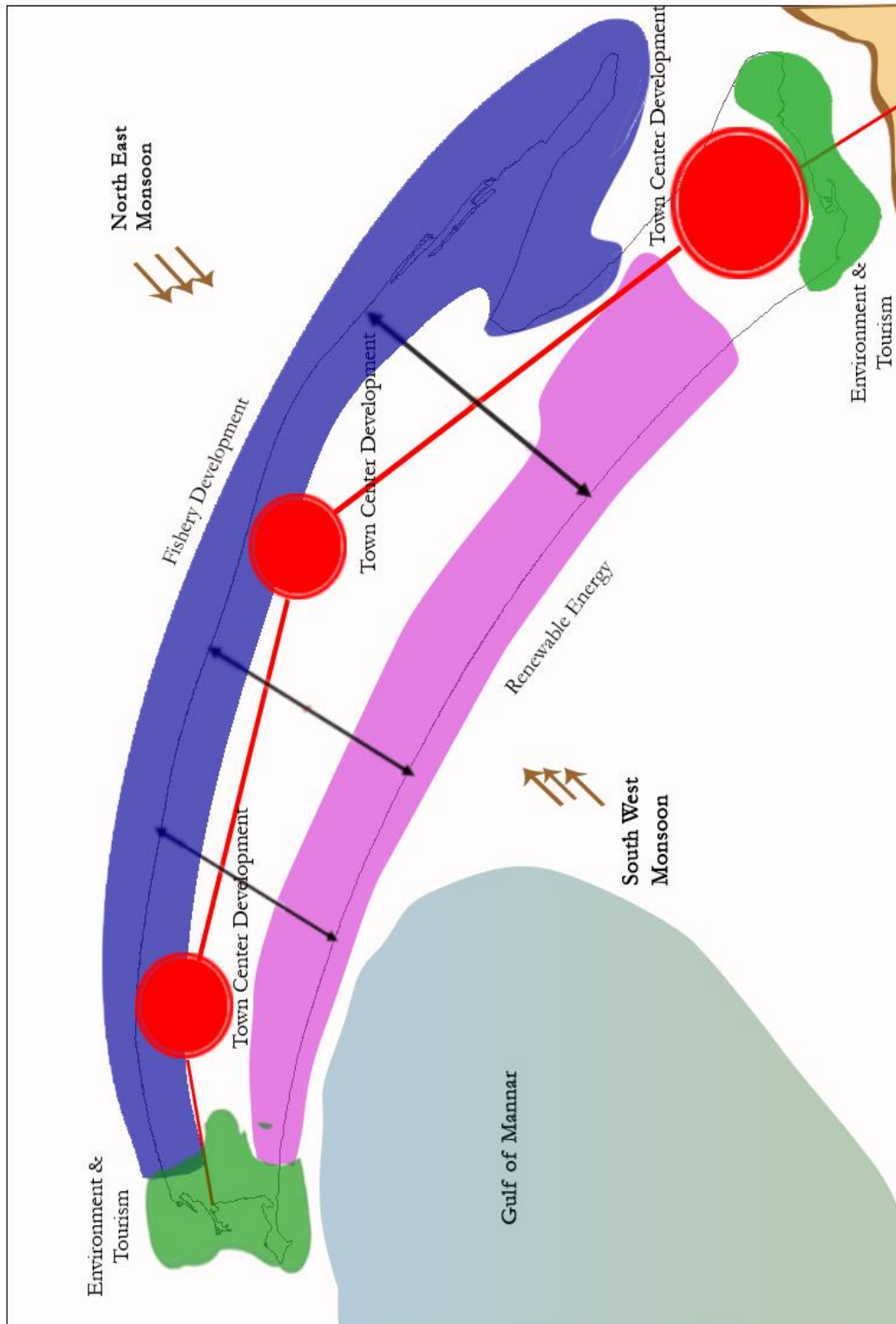
The future sustainable economic development of Mannar is completely depend on fishery and renewable energy. The Northern part of the Island will be facilitated with enormous number of fishery related facilities such as harbor, industrial zone, fishing camps, jetty and markets to achieve the goal of “To become the fishery giant in Northern region”. There might be other activities can be seen in the North coastal line, even though it’s been planned to achieve fishery related developments as prominent in the Northern line of the Island.

A14 road and its future improvements will be act as a back born of the entire Island. Small township developments consisting with; Tharapuram, Thaalvuppadu, Thalaimannar and Pesalai will be further strengthen and linked between each node through this main road. A14 and its improvement with RDA standard is a predominant action which taken to assist and achieve the futuristic goal of fishery giant through expand the fishery related marketing activities within the Island and other part of the country in the local and National level. Further, Linkages of Northern and Southern part of the Island enhance through proposed roads in-between Northern and Southern part of the Island.

The Southern part of the Island will be prepared for renewable energy related activities since part of Island has been declared as energy development area by SEA. Through the concept of this it has been targeted to achieve the goal of “A perfect place for renewable energy”. Further, other activities encouraged such as tourism and fishing activities while renewable energy developments as prominent in this area.

The foreshore area and West part of the Island will be consisting with environmental and tourism related activities. It's been planned to boost the tourism activities by enhancing the environmental elements.

Figure 4: Conceptual Plan



Source: Prepared by UDA (NP)

## **6.2. Proposed Land Use Plan**

Mannar Island is one of the strategic and ideal locations in Sri Lanka Context. The main pathway of the Island is starting from south part of the Island. This major and ideal entrance is connecting Mannar Island with entire Sri Lanka. Therefore, Essential need to preserve its existing natural character without collapse while the future developments.

Entire Urban form of Mannar will be giving the sense of a more interesting variations through different activities and transitions of different height limits which giving visual coherence and organization to the buildings, streets and space that make up the future urban environment of Mannar Island.

Physical space of proposed urban form is influenced and determined by the shape and mass of the Building the linkage is perceived physiologically and physically by the observer as well as the physical form of urban space and the shape of the building mass. In addition, the relationship also been seen visually on the quality of a Mannar Island is determined by the shape and size arrangements of future urban space.

Access path will be given a sense of old architectural character which belongs 200years old history and colonial experience through St. Lusia church and the Dutch Fort premises. Starting from the Dutch fort observer can be experiencing the real sense of the Marine village which expressing through low rise home staying tourism villas, tourism destination of bird sanctuary and fishery related activities. The building height of low-rise villas differentiate the church height and the fort premises and highlight these points as major nodes and land mark of Mannar Island.

Gradually these paths are leading via heart of the central Business district area. Variations of the activities can be seeing through prominent commercial activities. Building heights are gradually increased up to the north part of the Island. Banks, small and mass shops and all the financial activities. Lagoon shallow view can be experience once pass the urban council area of Mannar at the right side and same commercial tall buildings and prominent commercial activities can be seen at the left side of the area.

Noticeable activity variations start the transition point with mixed use activities and it's differentiated through floor area ratio, plot coverage and mixed urban activities. Nearby essential activities comprising with schools, hospitals and administrative structures for the local dwellers which assist and promote the walkability and urban design form of entire Mannar Island. Once seen the low-rise structure of mixed-use activities can be experience the pure wind through the

wind corridors close to 150m tallest wind turbines. Interface transition area between land and sea of experience through scenic view of coastal areas and tourist destinations and wind power plants are located at the right side of the coastal belt. Pesalai town centre can be emerged as a sub commercial centre which is next to the mixed activity zone and differentiating through gradually increasing of building heights. This area prominent with varieties of activities comprising with; mass scale of Industries, processing centres and fishery harbour. Low-rise building structure continuing from edge of the Pesalai town centre to Thalaimannar town centre and In-between these areas giving experience of Natural scenic views and nature conservation areas as well. Edge of the Thalaimannar town giving sense of the view of south India. (Refer the Annexure No: 6 Cross section).

This chapter explore the entire futuristic land use patterns, urban form of Mannar Island. Different variety of activities, structures and future economic developments collaboratively form the “Speaking Sea scape and Magnet Marine” of Mannar.

Map: 6 Proposed Land use Plan\_2030



### 6.3. Social and Physical Infrastructure Development Strategies

#### 6.3.1. Service Plan

Mannar Island Development Plan has the way of achieving “The Speaking Seascape & Magnet Marine” through the main three goals and objectives. By considering the main target of the development plan there is a need of having a proper service plan for addressing the vision of 2030. Service plan emphasis futuristic perspective of the housing, health, education and recreational sectors. The overall service plan is express how this each service will be facilitate through development plan and how these services will be transforming the image of entire Mannar Island.

##### a. Proposed Settlement Area

The proposed settlement area was defined based on the land suitability analysis by considering the aspects of liveability, safety, comfortability of living condition. Accordingly, Settlement areas were identified where the available critical urban nodes and the future development trends areas excluding environmental sensitive and special conservation areas.

Therefore, the establishment of the settlement area will be promoting the demand for residence population distribution by 2030. The plan targeting to cater future threshold population into seven settlement areas based on natural growth rate and the commuter population. Proposed settlement plan by 2030 shown in the Map No 7.

Demand Projection: Assumptions for Population and Housing forecast: -

- Average Growth rate size – 1.5
- Average household size – 3.7

**Table 2: Forecasted Population**

Year	Projected Population	Estimated Housing Requirement
2020	70100	18957
2025	75600	20422
2030	81400	22000

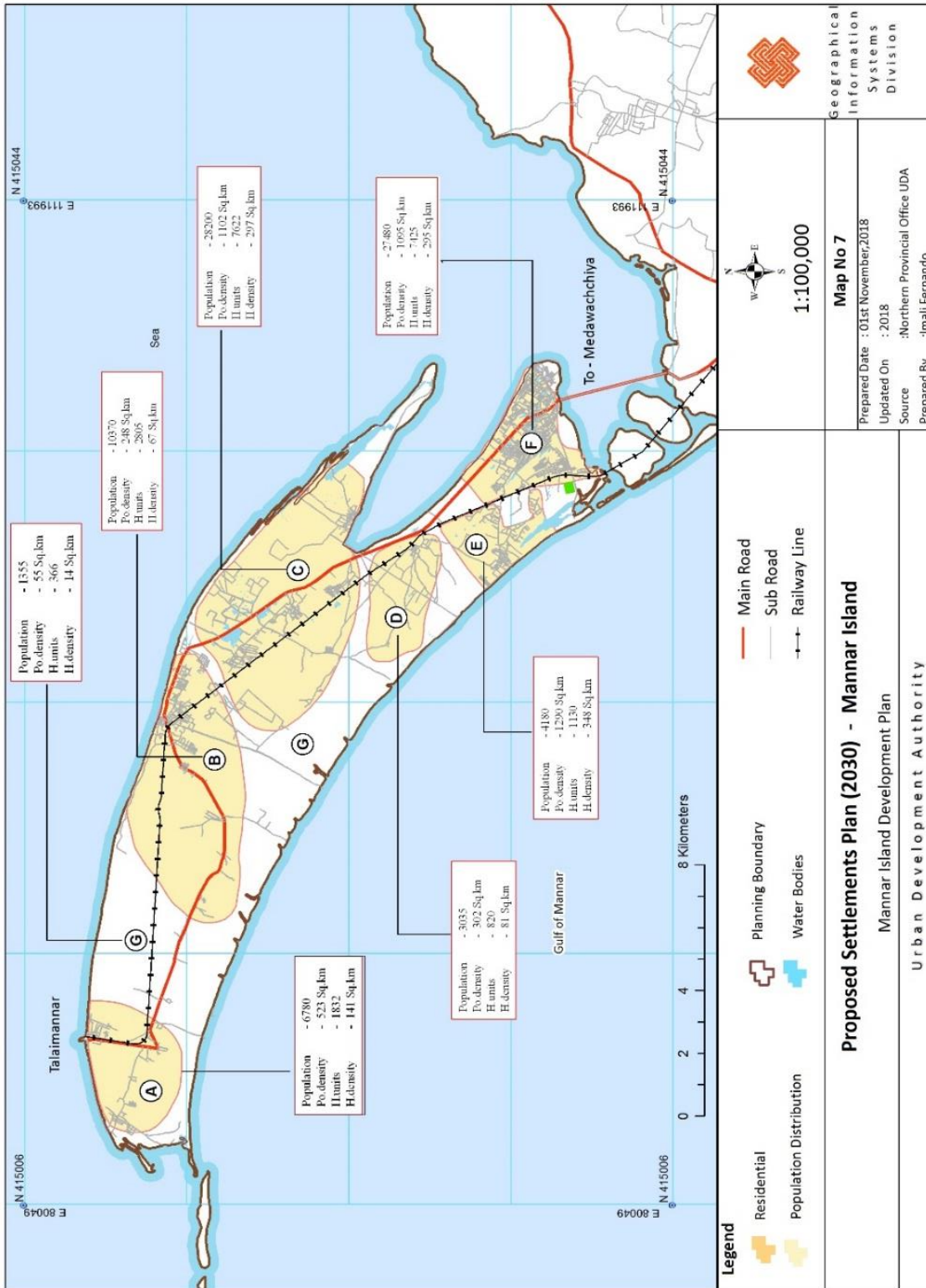
Source: Prepared by UDA (NP)

Accordingly, these zones will be accommodate around 81,400 population occupied by nearly 22000 housing units based on Natural growth rate in 2030. Day time commuter Population: Daily Commuting Population is around 10,000 to the city in order to fulfil their needs. Most of the people are coming for the commercial purposes and also to get the administrative service. It is expected



to attend 15,000 commuter population based on the future developments under the all aspects such as economic & tourism. Based on the existing services; The service plan will be address the issues and providing required services such as Housing, Health, Education and recreational services within the each residential zones.

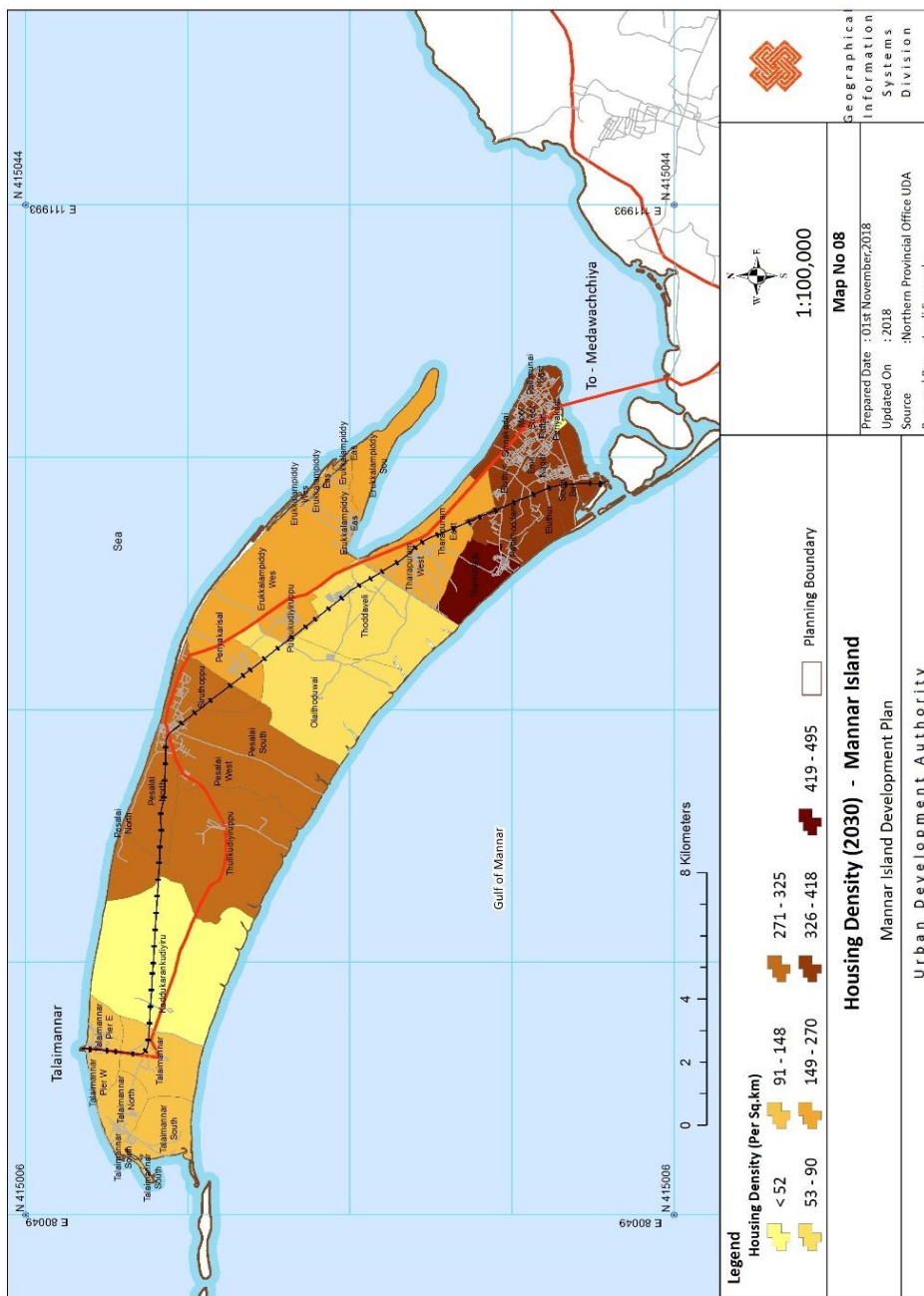
**Map: 7 Proposed Settlement Plan\_2030**





Housing Service: The Housing Strategy is an important element of the service plans to build a town where people want to work, rest, play and stay. Service plan, provides certain number of housing units and supportive services like health and Education. On this basis, the service plan mainly considering the futuristic perspective of the housing facilities. By means, housing development is providing from service plan itself, which is targeting to maintain the threshold population and facilitating their housing needs. In 2030, estimated housing units are 22,000 and will be accommodate around 81,400 population occupied in seven residential zones within Mannar Island. Out of that, Zone E will be a high-density area while Zone G will be a low-density area. Zone F and B will be in second & third order high dense area.

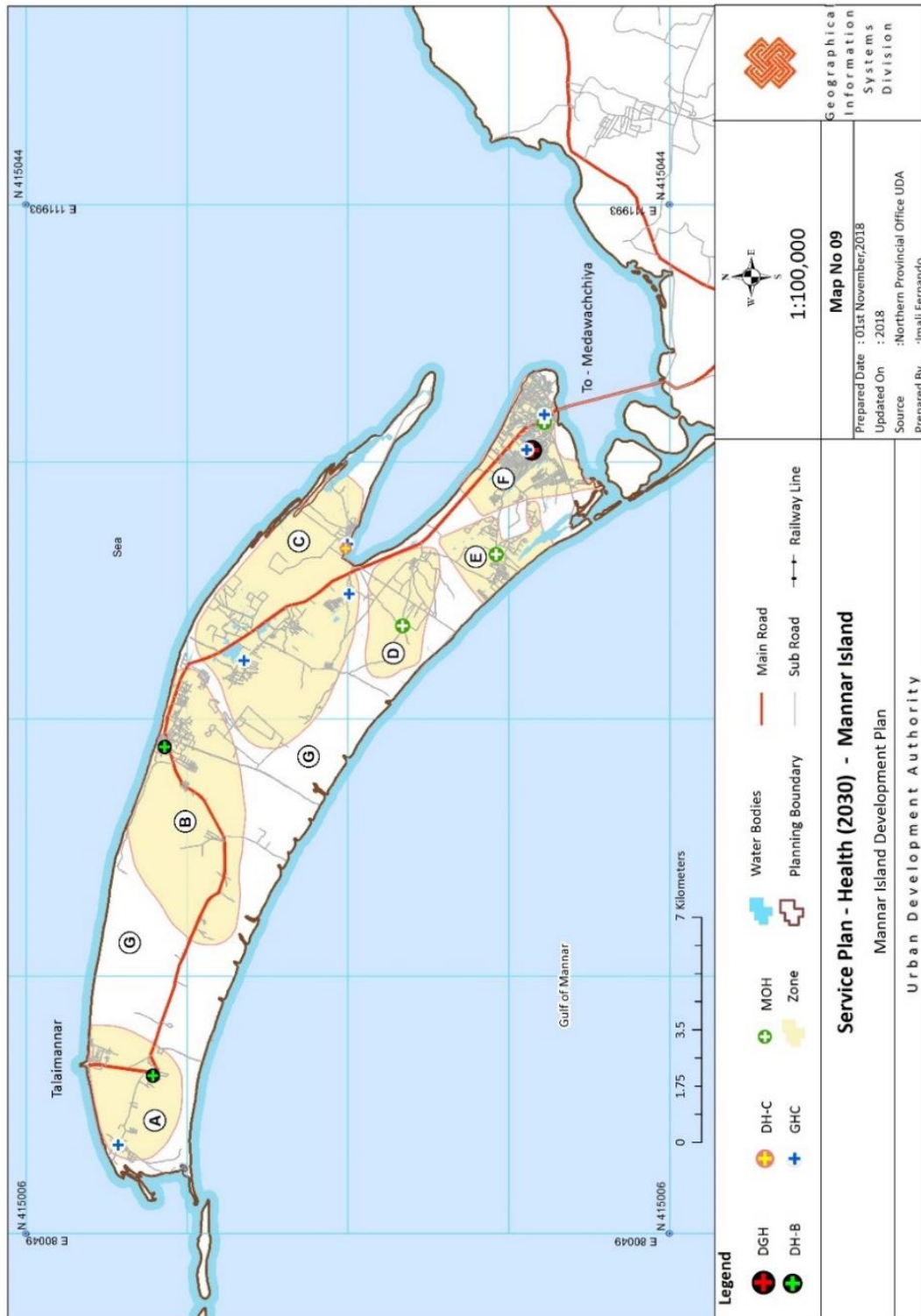
**Map: 8 Proposed Housing Density \_2030**



**b. Health Service**

In order to cater the development trends and demand on the health sector by 2030, existing district and divisional hospitals will be upgraded in terms of the quality and quantity. (Refere the Annexure No 7: Basic Details for hospital in Island need to be facilitate in future)

**Map: 9 Proposed Service Plan (Health) \_2030**



**c. Educational service**

At the existing situation, there are enough number of schools located within the identified each settlements zones and schools have less number of students population compare with the national standard by Education departments. In order to accommodate the student population anticipated by 2030, Development plan recommended for physical development as required buildings for these existing schools.

At present 90% of the advanced level students represent as the school leavers who are not engaging with any tertiary education and they are directly fallen into un-skilled labour category and engaging with fishing activity. Therefore, through service plan proposed to develop the marine related tertiary educational development. Therefore, proposed vocational training center will be located in south bar. (Refer Map: 10)

(Refer the Annexure No: 8 Existing Schools with Standards\_ Mannar Island)

(Refer the Annexure No: 9 Physical Need of schools\_ Mannar Islan)

Map: 10 Proposed Service Plan (Education) \_2030



**d. Recreational Service**

Under the service plan recreational development is one of the major components. Accordingly, there is demand for recreational activity in the urban area. In Mannar Island, there are enough bare lands and vacant land available without proper maintenance in terms of recreational service. In order to providing the proper recreation facilities to the people, proposed recreational activities such as parks, playground and public open spaces are among the proposed settlements area by 2030 in the different hierarchy. By 2030 it is expected to develop the healthy and liveable environment to local people. (Refer Map: 11)

**Map: 11 Proposed Service Plan (Recreation)\_ 2030**





### 6.3.2. Transportation Plan

Transport is relatively lesser problem in Mannar compare with other cities in Sri Lanka when considering the requirement of serving the current socio-economic activity of the city. There is an essential need for the Transport improvements to achieve the future developments of Mannar Island and support the futuristic major requirements. **A14 road** network considered as a Main transport access way of Mannar Island. The major priority is given for the transport plan is to improve the existing A14 road based on the assumption to achieve and boost the future economic developments of entire Mannar Island. Improvement of this road is a predominant development to enhance the mobility of the area specially assist the future industrial developments which will be locate on the next to the Pesalai town Centre consisting with mass scale processing centers and value added fishery industries and future harbor development.

It is proposed to create major networks between Central business district and sub town centers such as starting from Urban Council, Thalvupaadu, Thaarapuram, Erukalamcity, Pesalai and Thalaimannar. Enhance the inter-linkages between northern and southern part of the Island development at the second priority in the overall transport plan.

**Coastal road** which proposed around the entire Mannar Island will be create major connections in-between both side of the Island and will be give more accessibility throughout the area specially enhance and assist the tourism, industry and fishery developments within the Island area. Proposed **Service road** will be transfer the raw to other part of the Island from the Pesalai harbour and to cater the expected population of the township materials area in future.

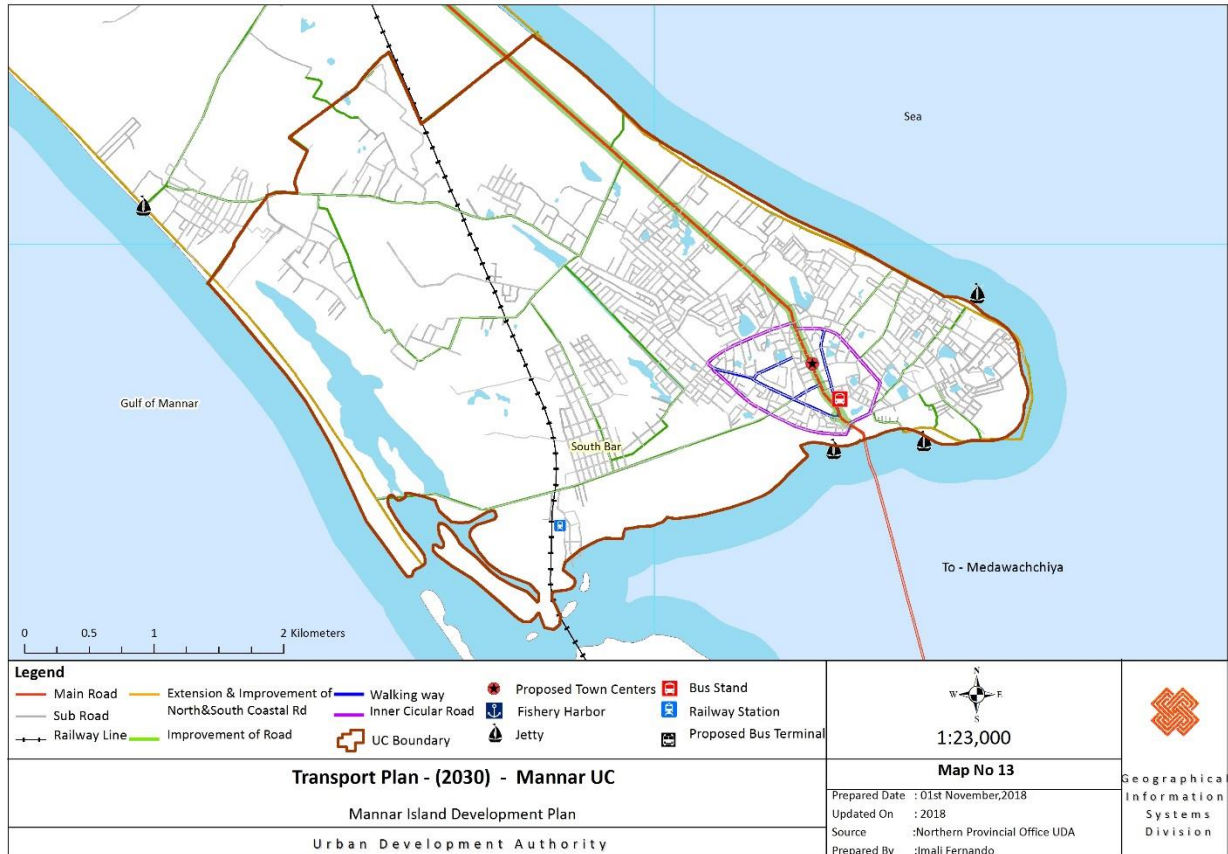
Map: 12 Proposed Transportation Plan for Mannar Island\_2030



There is an essential task to regulate the traffic which will be created due to future developments and enhance the accessibility. Inner circular road proposed around the urban council area due to divert unnecessary vehicle movement which will create traffic jam near the central business district area. Further to increase the connectivity within the island there will be road improvement around the Island; mainly closer to major town centres. (Refer the Annexure No 10 proposed road cross section)

And transportation related infrastructure facilities are more important to develop transportation network. Existing bus stand located at Mannar town which has inadequate facilities for the passengers. Therefore, through this plan it is proposed to redevelop the existing bus stand with appropriate facilities and further proposed to develop the bus terminal at Pesalai and Thalaimannar in order to future development in PS area. And also, it is proposed public transport system to cover proposed settlement area all over the Island. And existing vehicle parking area is located at causeway (in front of MPCS Building) which will be proposed to redevelop in order to regulate the traffic due to the proposed activities within CBD area also proposed to redevelop the existing public market including basement parking.

**Map: 13 Proposed Transportation Plan for Mannar UC\_2030**





### 6.3.3. Water supply Plan

Water plays a vital role in developing social, economic, environmental and physical aspects of city development. Also, water management of the city is very important in order to get optimum and sustainable usage of water in and around the city. At present, 60% of the people are getting water from Murunkan water supply scheme and 40% of the people receiving water from ground water in the Island out of 9000m<sup>3</sup> per day.

In 2030, water supply to be supplied for 81,000 populations and proposed development activities especially for the proposed industrial, Tourism and town center development. The estimated total water demand is around 14000 m<sup>3</sup> per day by 2030. (Refer the Annexure No 11: Water demand for Mannar Island (2021-2030). At the same time by 2030, its possible to get water from the different available sources shown in below table such as Keeri well, Giant tank (Murunkan Water Supply) and in addition to this good quality of ground water is available in the Pesalai Pradesa Sabha area.

And there is a proposed Greater Mannar Water supply Project for the Mannar district by National Water Supply and Drainage Board.

**Table 3: Available Water source**

<b>Water source</b>	<b>Capacity (m<sup>3</sup>/day) – 2030</b>
Ground Water at Pesala PS	
Keeri Water well	2250
Giant tank (Murunkan Water Supply)	15000
Proposed Greater Mannar Project	19000

Source: National Water Supply and Drainage Board, Mannar District

Map: 14 Proposed Water Supply Plan \_2030



### 6.3.4. Waste Management Plan

There are two dumping yards available which are located in UC and PS area. The urban council disposed waste in the Sinnakadai area which land owned by UC and PS dispose the waste in the Pesalai West area which land is owned by the Mannar PS. Both sites are in extent of 8 acres land for dumping and composting purpose. In addition, that, in Mannar UC has inadequate land allocation in order to meet the future demand.

Therefore, proposed to develop the existing Pesalai dumping site as covering sanitary landfill, composting and dumping purpose which is shown in the map No 15. Based on the future population growth and development trends, the future solid waste generation will increase and its composition will change by year. In 2030, waste will be generated from industrial, residential and commercial sectors.

There are many methods available to dispose of waste even though, the Sanitary landfill as a long-term solution to increasing waste in this particular area. Further 10 acres of land has been identified for future waste disposals at Pesalai area inside of the mixed development Zone. That land planned to be divided into several parts for different purpose such as one part of land the allocate for open dumps (6 acre) and part of the land use for composting practices (2 acre) also separation of waste for 3R mechanisms (2 acre).

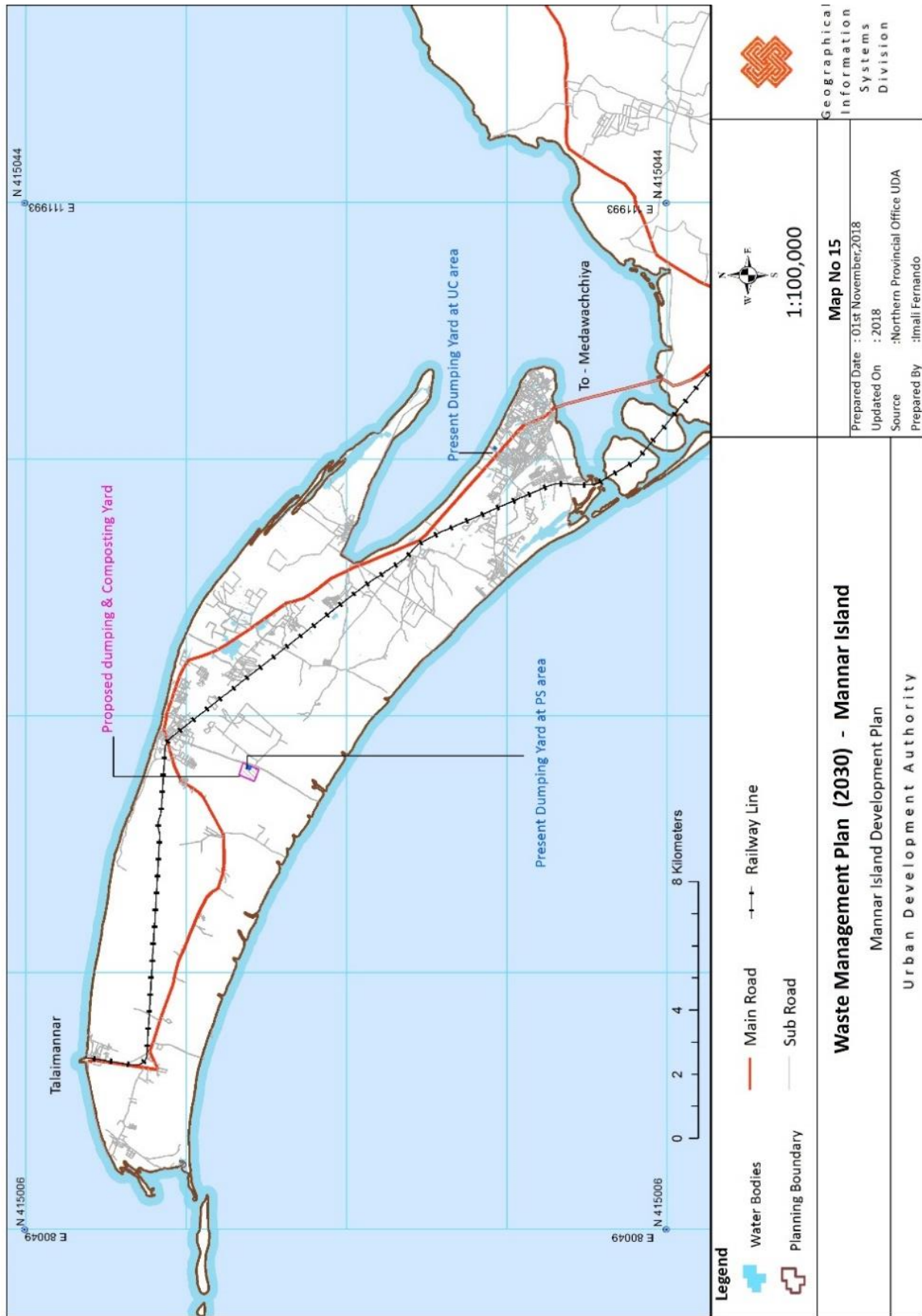
Where it's expected to manage around 100-ton waste per day. industrial waste should be manage into that industrial zone area as there is a guideline "Green building certification should be obtained" by carry out solid waste management actions will be there compulsorily.

**Table 4: Waste generation by 2030**

Sectors	Proposed	Total Waste Generation (per day 2030)
<b>Resident</b>	100,000	$100,00 \times 0.77 = 77 \text{ ton}$ <i>Standard – 0.77 kg per person</i>
<b>Commercial</b>	900	$900 \times 30 = 27 \text{ ton}$ <i>Standard – 30kg per day</i>
<b>Industry</b>	450	$450 \times 50 = 22.5 \text{ ton}$ <i>Standard – 50kg per day</i>

Source: Mannar CEA

Map: 15 Proposed Waste Management Plan \_2030



## **6.4. Economic Development Strategies**

### **6.4.1. Industrial Plan (Fishery, Energy)**

Industrial development helps in the rapid economic growth of the city while increase the per capita income. History of the economic development of the developed country shows that, there must be positive relationship with industrial sector development. It is possible to develop fishery related industries in Mannar island while tap the available marine related potentials of the Island which will be contribute to the national demand. At present, per capita consumption of fish, dry fish, canned fish has been increased at the national level and excess demand for the fish and fishery product. Due to this, Sri Lanka had to import 120,046 MT in 2015 to cater the demand expending 30,729 Mn LKR foreign exchange.

At this situation fishery related industrial plan is required for Mannar Island to increase the fish production from the available untapped marine resource and to uplift the living standard of the local people. Main strategy of the proposed industrial plan is to locate fishery harbour within the Mannar Island considering about the physical, social and economic activities. That is Pesalai area selected as the most suitable area for the fishery harbour development because this selected area has the highest fishery production (46% of Island production) and most of the people (60%) are engaging in fishery related activities. Therefore, in order to achieve strategy Pesalai area will be fishery-based town and to get more benefit than other fishery areas.

On the basis of Pesalai fishery harbour development project, industrial zone (zone 5) has been proposed to attract the fishery related compatible industrial activities within the proposed zone with the provision of basic infrastructure. There is a development of North costal road which will support to industrial development in terms of transfer the raw material and product to reach market. Also there are railway stations available in Pesalai and Thalaimannar town those can be used for freight transport of fishery products in future. Other than this, redevelopment of A14 road, improvement of roads (Refer Map No: 16) will be function as another major transport route to convey the fishery product to other region of the country.

And also, proposed to develop the fish markets at UC, Pesalai and Thalaimannar in order to create the market opportunity for the fishery products. Furthermore, to achieve the goal, it is proposed to develop the jetties in order that Northern region to became fishery giant (Refer Map No: 16) to get the maximum utilization of the marine resources as well as to uplift living standard of the local people. In addition to this, around 3500 number of job opportunities will be facilitated and around

1200 population to be attracted inside the Island by 2030 on the basis of above proposed industrial developments.

At the same time, Mannar Island has been identified as the high potential area for renewable energy generation by Sri Lanka Sustainable Energy Authority (SEA). Mannar Island stands with high potential for wind and solar energy with the 45 – 50 km/h wind speed almost all over the year and 2100 Solar GHI. There are patches of land covers has been already identified and declared as energy development areas by SEA.

Therefore, it is possible to develop energy related industries within the Mannar Island. In order to tap the available potential as well as to generate energy for national grid which was the goal; solar parks will be permitted within the proposed industrial zone (zone 5) and mixed development zone (zone 3) to produce the solar energy.

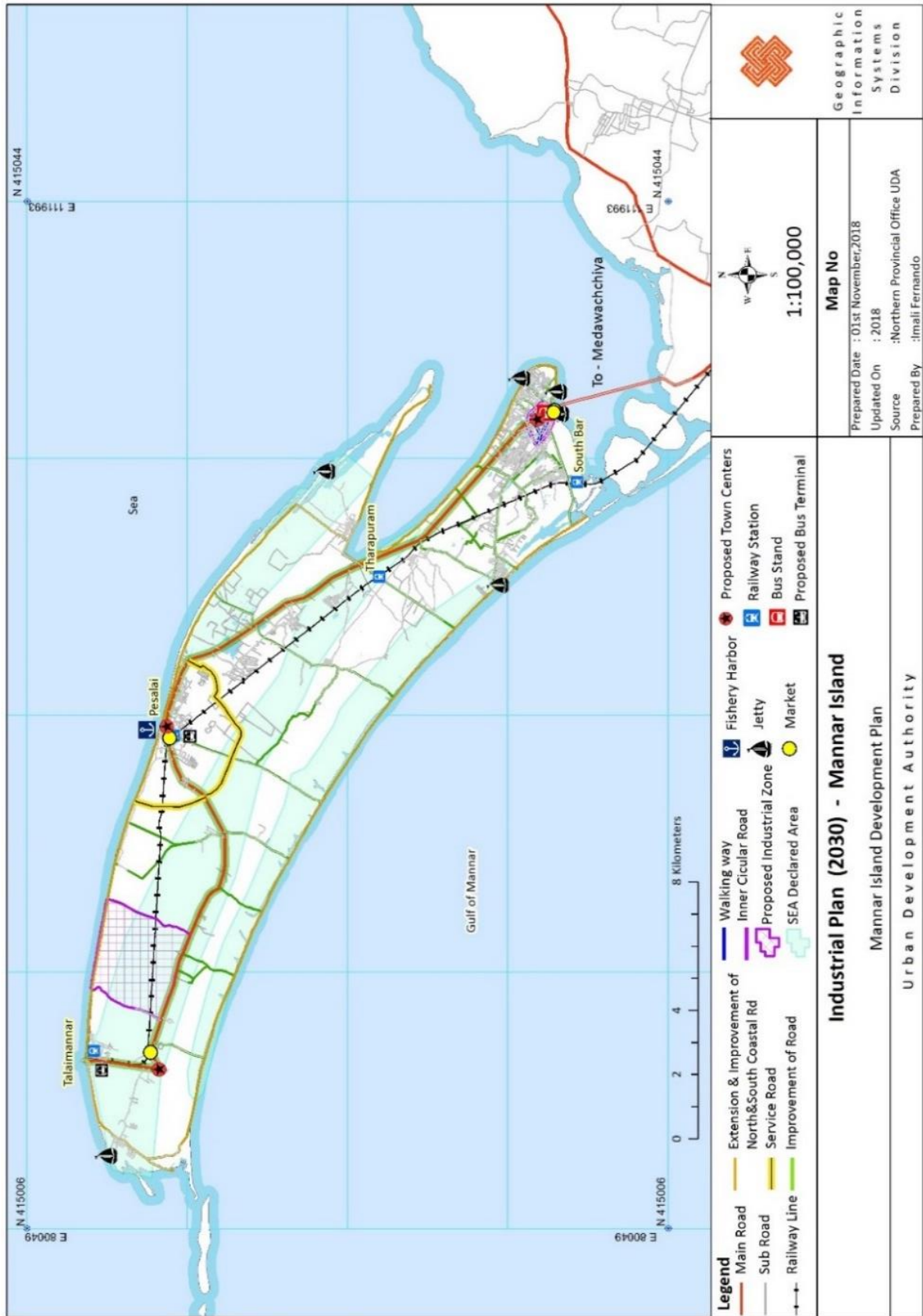
Furthermore, to achieve the goal, the below guidelines to be implemented in the Energy Development Areas by SEA:

- High priority was given to the wind turbines
- Maximum height of the building was limited to 9m
- Clearances should be obtained from SEA for any kind of development

Solar panels will be encourage all over the Mannar Island. Additionally, the industries and warehouses which will be located inside the zone 5 should have to install solar panels of their roof top area. Also, the necessary infrastructure facilities will be provided through the infrastructure plan in order to achieve the goal.



Map: 16 Proposed Industrial Plan\_2030



Refer the Annexure No 12: Industrial Category

## 6.5. Environmental Sustainable Strategies

The environment is one of the most valuable assets in the world. Mannar and Mannar people profaned with magnificent and diverse landscapes, coastlines and sea. The uplifting sights, sounds and smells of the natural and urban environments are integral to people daily lives. More fundamentally, the environment is nature's 'gift. It nourishes and nurtures all life, human, animal or plant. Even Mannar rely on blue and green spaces for food, water and the air breathe.

The vision for Mannar is "*The Speaking Seascape and Magnet Marine*". So, the speaking seascape represents the sea also it consists with marine art. The beaches, coastlines, boats at sea and nautical images these elements makeup seascape art sense. Also, one of the main goals for the vision of Mannar is "Enhance the experience of natural environment and significant sites". Initiatives to protect and improve the natural environment of Mannar and cultural heritages are valuable assets of stewardship by which people discharge their debt to it, and so are moral imperatives in themselves, but they are also economically sensible. A healthy environment supports a healthy economy.

Environment Plan of 2030 set out the approach to safeguarding Mannar environment and future proofing Mannar's economy for generations to come. They are complementary approaches that reinforce one another giving the relationship between the environment and the economy. Environment Plan will help to boost the productivity by enhancing our natural capital the air, water, soil and ecosystems that support all forms of life since this is an essential basis for economic growth and productivity over the long term.

Tourism sector is a main sector which boosts the local economy, in place of the reputation of Sri Lanka upturns and tourists make return visits to the island, fresh and unique destinations are required to accommodate for the ever-changing desires of tourists. The benefit of Mannar District, remaining largely undiscovered and undeveloped as an alternative tourist destination, is that it can more readily respond to new market demand and novel client groups compared with more established operators. A responsive industry will also explore the potential of existing untapped tourism opportunities such as the market for devout pilgrims. Satisfied and enthusiastic visitors will bring new awareness back home and encourage friends to share their experiences, providing on-going business for Mannar District. They will not only learn about Mannar but also how to help retain the character of the place while deepening their own travel experience. There are sound economic, social and environmental benefits for establishing Mannar District as an alternative tourist experience and destination.



In economic terms, tourism businesses ensure that they will employ and train local people, buy local supplies, use local services, attract “in country” and overseas investment, and as a result, stimulate a stagnant local economy. Social benefits can be achieved through maximizing the local population’s participation and involvement in decision-making. Wellbeing becomes contingent on the need to understand and respect prevailing traditions and customs so that local people are esteemed and not offended or marginalized. A green inheritance for future generations are safeguarded by maintaining or enhancing biodiversity and managing development and tourist numbers within acceptable resource limits so as to minimize any detrimental effects on the environment. Supporting Mannar’s approach to sustainable community-based tourism is social development through employment creation, income redistribution and poverty reduction. Other positive impacts include tourism as a force for harmony, improving and strengthening communities and strengthening public participation. Most importantly valued culture and traditions preserving and promoting cultural historical traditions and events, contributing to the conservation and sustainable management of natural resources; protecting local heritage and a renaissance in native cultures, cultural arts and crafts are necessary things.

In future, civic involvement and pride involving local communities in sustainable tourism development and operation through stimulating a feeling of pride in local and national heritage and raising local awareness of the financial value of natural and cultural sites.

### **6.5.1. Conservation and preservation**

#### **a. Conserve the value of archaeological, cultural and historical sites**

Mannar is blessed with a Portuguese and Dutch inspired fort built at a comfortable human scale at the entrance to the Island. The renovation of this historically significant structure is an important signature element in a new cultural site. So, in future renovate the Dutch Fort and promote the art gallery inside the fort to make functional space. Baobab tree is one of the unique trees for Mannar district which old as five hundred years. There are some baobab trees in existence and these trees need acknowledging and protecting. The trees will be visually giving sense of environmental heritage of Mannar. So, propose restriction guidelines regarding to the construction of buildings nearby the Baobab trees to preserve value of the historical tree at Pallimunai and Eluthoor. (50ft radius).

**b. Ensure the sustainable utilization of fish species in the Gulf of Mannar biosphere.**

The Gulf of Mannar Biosphere Reserve is the first marine biosphere reserve in Asia, located in the Southern part of the Bay of Bengal. The Gulf of Mannar is the biologically richest coastal region in India with 3,600 species of plants and animals known to live within its boundaries. In the Gulf of Mannar you can still see the globally endangered dugong, several species of dolphins and whales and three species of endangered sea turtles. Furthermore, the Reserve is home to sea horses, 450 species of fish, hundreds of species of sea cucumbers, sponges, all kinds of corals and species of sea grass found nowhere else. In addition, more than 150 species of bird are found on islands in the reserve. Vital to the ecology of the reserve are the 17 species of mangrove which act as important fish nurseries. (Source: Gulf of Mannar, Biosphere Reserve Project). So, the proposed project of establishment of research centre related to coastal and marine bio diversity would be promoted the mixed development zone.

**c. Conservation of sand dunes**

Sand dunes serve an important purpose by protecting inland areas from coastal water intrusion. They are able to absorb the impact and protect inland areas from high energy storms and act as a resilient barrier to the destructive forces of wind and waves. Mannar itself consisted with sand dune areas. But it is necessary to conserve the sand dunes areas which can be seen mostly in Mannar. So in future proposed to conserve sand dune area at Pesalai area and from Old Pier to Nadukudah area to Old pier strip.

**6.5.2. Landscape Management****a. Enhance the scenic viewpoints of seascape**

In the present situation there is a need to enhance the experience of natural environment and significant sites. Also, it is very much need to give good and memorable sense for the visitors those who enter to the Mannar Island. The proposed Nature Park development located at the entry point of Mannar and to facilitate the tourists this proposal has proposed by UDA. So Nature Park development will help to boost the productivity by enhancing Mannar's natural capital of air, water, soil and ecosystems that support all forms of life since this is an essential basis for economic growth and productivity over the long term. Additionally, Mannar has some beaches which can be converted as scenic viewpoints. For an example Urumalai beach, Nadukudah beach, Olathoduvai beach, Thottavali beach and Keeri beach. In addition to that develop lagoon front landscaping, enhance the Pesalai fishing area for bird watching and improve the foreshore environment. These

scenic viewpoints will be developed by seascape strategy and viewpoints should not disturb by the construction and advertisement boards. *(Refer the General Guidelines: Advertisement Control)*

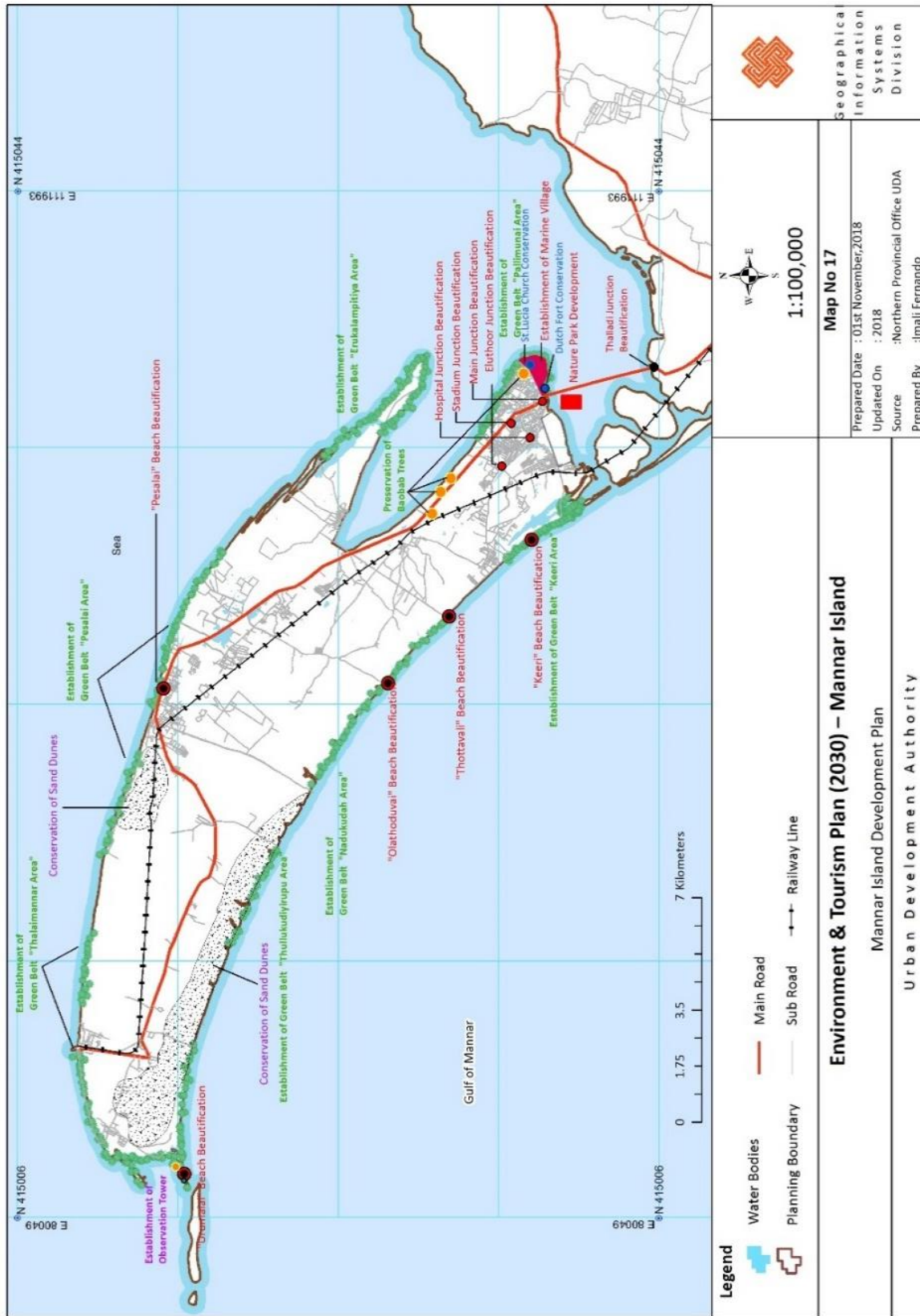
#### **b. Foreshore area Management (Promote marine tourism)**

Foreshore area is located in Mannar Urban council area. The foreshore strip is giving sense to the Mannar main entrance. In the current situation, Dutch Fort, aqua culture, cause way, fishing related activities, marine village and salt pan can be seen. There is absence of attraction along the foreshore area. There is a need to utilize the foreshore land and maximize the use of land for several purposes. Marine village will be play for the Mannar marine cultural pattern and tourism base activity. This marine village will be consisted of the Dutch fort also. Due to this reason marine village can intake the high number of tourists. Base for the marine village establishment can control the land encroachment. The marine based village stay accommodation will offers the ultimate way to gain a deep and more personalized knowledge of the lives of local people. This option will suit those staying for longer periods. In Mannar's marine village accommodation will range from huts to houses, open restaurants, cafes, shops, sea food selling shops, local handicraft shops, show rooms, art galleries, gift centers related to marine based products, boutiques and cabanas. Further eco-tourism activities like pleasure boat services, pedal boat services and traditional fishing for tourists also promoted in future. In addition to that village stay establishments currently being trialled have proved to be a delightful and enriching experience for host and guest alike. The local person benefits through exposure to a local view, an additional income stream, inspiration to improve their living conditions for better life.

#### **c. Junctions Beautification**

First impressions are extremely important, and the first impressions of all visitors to Mannar start with Thalladi junction and passing via the causeway. Visitors should be warmly greeted with Welcome signs at Mannar gateways and entrances to towns, flower plantings, well- kept town centers, and visitor signage promoting local attractions. City centers that are tidy, well-lit and planted with flowers and trees especially designed junctions are much more likely to attract visitors to stay and linger. Aside from the obvious aesthetic benefits, roadside junction's beautification, including landscaping and gardens can help drivers reduce stress, frustration, and aggression.

Map: 17 Proposed Environment & Tourism Plan\_2030



### 6.5.3. Disaster Risk Reduction

Mannar Island has little effects of flood, surge, drought, cyclone and tsunami. Based on that, UN-HABITAT identified some areas as multiple hazard risk zones. Apart from being at high risk from flooding, this location has several significant characteristics including that it is in close proximity to Thalaimannar light house, Adams' bridge, and the original end point of the Mannar railway line. As such it is anticipated that this could be a destination for tourist and would therefore benefit from a shady, livable environment for the proposed multipurpose greenbelt to be a success. Ensuring there are different species in a greenbelt is essential for establishing a diverse ecosystem. Generally, greenbelts should be around 50m in width to ensure the impact of storms and tsunami is reduced. Greenbelts will be located within the coastal zone which is under the control of the CCD and no permanent structures are allowed in this zone. Further, increasing community activities in vulnerable areas will also increase their exposure to disasters. Therefore, all activities need to be planned and implemented with strong safety measures inherent in the design. The design and implementation of greenbelts varies significantly are site-specific requiring advice. (*Source: Mannar, Disaster Risk Reduction and Preparedness Plan, Towards a Sustainable and Resilient City, Un-Habitat*)

#### **a. Increase the volume of water bodies and develop a well-connected canal network.**

This will be done by focusing on three interventions:

1. Remove garbage, slit and sediments in water bodies: Garbage, slit and sediment decrease the capacity of water bodies and block the flow of drains and canals. Creating a smooth flow of water will assist in dispersing water during floods and prevent the water from stagnating.
2. Identify crucial linkages in the canal network and maintain those linkage: Some natural linkages that previously connected water bodies are now no longer functioning; some have been disturbed by sand filling or other development reasons. Reconnecting these linkages will assist in creating a smooth flow of storm water, especially during heavy rain and storm surges.
3. Create canals where necessary to carry excess water in tanks: Where existing canals cannot cope with water discharge, investigation into creating new canals should be conducted to assist in limiting overflowing. If the water can be drained then the excess material can be excavated and removed from site.

*(Source: Mannar, Disaster Risk Reduction and Preparedness Plan, Towards a Sustainable and Resilient City, Un-Habitat)*

**b. Develop planned storm water drainage in built-up areas.**

The considerations when developing a storm water drainage network are peak volume of storm water runoff, geographic features of the area (elevation and slope), soil types, existing and proposed land uses and details of the existing drainage and road network. When developing a storm water drainage network, the peak volume of runoff rather than the average volume needs to be considered.

**6.5.4. Public open spaces**

**a. Active and passive recreation**

Parks and open spaces play an important role in making the town a desirable place to live, work and play. Parks improve our physical and psychological health, enhance community life, provide outdoor experience and serve as an anchor for strong neighbourhoods.

Public parks, and the passive and active recreation opportunities that they provide, are important contributions to the quality of life. Parks provide areas for outdoor recreation, a contrast to the highly urbanized environment, and access to natural beauty. Parks also provide a place for people to meet and a central location for socializing and community gatherings. In addition, recreation facilities provide educational opportunities.

While active recreation and passive recreation refer to different types of activities, both types of activities can be located together effectively in Mannar. Active recreation refers to a structured individual or team activity that requires the use of special facilities, courses, fields, or equipment. Eg. Volleyball, Football and Tennis. Passive recreation refers to recreational activities that do not require prepared facilities like sports fields or pavilions. Passive recreational activities place minimal stress on a site's resources; as a result, they can provide ecosystem service benefits and are highly compatible with natural resource protection. Ex: Running/jogging, cycling, swimming, wildlife viewing, observing and photographing nature, picnicking, walking, bird watching, historic and archaeological exploration etc.

- **Establishment of Parks and Playgrounds in Mannar Island**

Nearly 16.8 ha of land space covered the existing parks and playgrounds of whole Mannar Island. They have been categorized as 'Pocket Parks', 'Mini Parks', 'Local Parks', and 'Community

Parks' and 'Linear Parks'. Some of the existing parks and playgrounds should be redeveloped according to the proper public open space and recreational plan. To promote indoor passive recreational space such as Cultural Hall, Cinema Hall, Auditorium and Library; the guide plan area is the most suitable place. (Refer guide plan figure 2: Identified sub zone- Development Guide Plan Area and 7.2.5. Permissible uses, Maximum Height and Guidelines)

In addition to that some of the areas in Mannar UC & PS area are identified as potential areas to promote outdoor active recreational parks.

**Table 5: Proposed Public Outdoor Recreational Space Plan for Mannar Island - 2030**

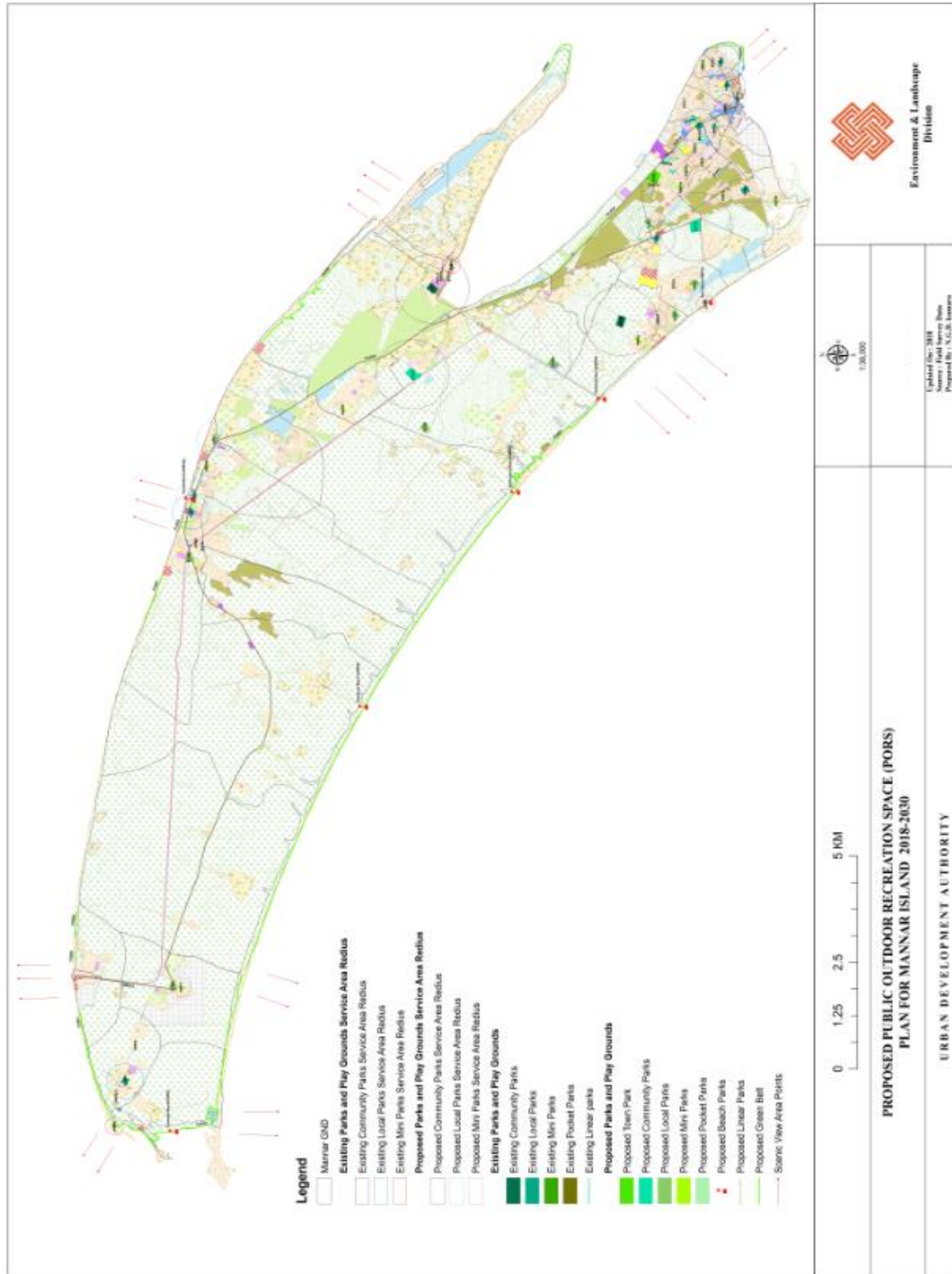
No	Type of Parks and Playground	Extent (ha)	Present Use/Uses	Proposed Use	GN Division
	Proposed Pocket Parks (PPP)				
1.	PPP <sub>1</sub>	0.2	Scrub	Pocket Park	Moor Street
2.	PPP <sub>2</sub>	0.1	Grassland	Pocket Park	Savatkaddu
3.	PPP <sub>3</sub>	0.2	Vacant Land	Pocket Park	Thalaimannar North
	<b>Proposed Mini Parks (PMP)</b>				
4.	PMP <sub>1</sub>	0.5	Vacant Land	Mini Park	Savatkaddu
5.	PMP <sub>2</sub>	0.6	Vacant Land	Mini Park	South Bar
6.	PMP <sub>4</sub>	1.0	Vacant Land	Mini Park	Eluthur
7.	PMP <sub>10</sub>	0.4	Vacant Land	Mini Park	Uppukkulam South
8.	PMP <sub>11</sub>	0.8	Scrub	Mini Park	Thallaimannar
9.	PMP <sub>12</sub>	1.0	Sand	Mini Park	Siruthoppu
10.	PMP <sub>13</sub>	0.3	Residential	Mini Park	Erukkulampiddy West
	<b>Proposed Local Parks (PLP)</b>				
11.	PLP <sub>1</sub>	2.6	Scrub	Local Park	Pattithoddam
12.	PLP <sub>2</sub>	1.7	Grassland	Local Park	Tharapuram East/Eluthur
13.	PLP <sub>5</sub>	2.8	Vacant Land	Local Park	Thottaveli
14.	PLP <sub>6</sub>	2.8	Vacant Land	Local Park	Pesalai North
	<b>Proposed Community Parks (PCP)</b>				
15.	PCP <sub>1</sub>	5.9	Scrub	Community Park	Pattithoddam
16.	PCP <sub>2</sub>	5.6	Vacant Land	Community Park	Thottaveli
	<b>Proposed Town Parks (PTP)</b>				



17.	PTP <sub>1</sub>	6.3	Vacant Land	Town Park	Eluthur
<b>TOTAL</b>		<b>33.2</b>			

Source: Environment and Landscape Division, UDA

Map: 18 Proposed Public Outdoor Recreation Space (PORS) Plan\_2030



## 6.6. Project Implementation Strategic Plan

### 6.6.1. Strategic Action Projects

The project Implementation strategic plan under the Mannar Island Development Plan 2021-2030 identified several projects for initial implementation to be in line with the Development Vision. Based on the need and the importance, those projects which can be implemented by based on priority of the project.

**Table 6: Proposed Strategic Action Projects**

Strategic Action Projects			
Priori tization No	Project	Duration of the project	Funding Source
1	Development of fishery harbor at Pesalai	Long term	Department of fisheries and aquatic resources, ADB
2	Development of Modern commercial complex at Mannar town	Medium term	LA, Public Private Partnership
3	Establishment of Marine Village at foreshore	Long term	LA, UDA, SLTDA, Public private partnership
4	Installation of Wind Turbines at south coastal	Long term	SEA, Public Private Partnership
5	Create access road of harbour development at south coastal	Medium term	LAs
6	Land Development for Industrial Zone at Kaddukarankudiyiruppu	Medium term	Ministry of Industry & BOI
7	Nature park development near the causeway (Vankalai facilitation center)	Medium term	UDA,LA
8	Development of Al fatha ground at Uppukulam	Short term	LA, Ministry of Industry and Commerce
9	Administrative Complex development at UC	Long term	Ministry of local government
10	Redevelopment of Fish market at UC	Long term	UDA, LA
11	Redevelopment of Bus Stand (CTB and Private) at UC	Medium term	UDA,LA

12	Improve the existing drainage & develop the drainage linkage	Long term	LA, Provincial council, NGO
13	Development of Modern market at Pesalai	Short term	LA, Provincial council
14	Renovation of the Dutch fort at UC	Medium term	Archeology department
15	Development of South coastal road at UC	Medium term	LA
16	Development of parking area at Causeway (in front of MPC Building) at UC	Short term	UDA,LA
17	Pesalai beach beautification project	Short term	LA, Provincial council
18	Redevelopment of vegetable market with commercial complex at UC	Medium term	LA, Provincial Council
19	Improvement and extension of roads – Inner circular road	Medium term	LA
20	Development of bus terminal at Thalaimannar	Short term	NTC
21	Thottavali beautification project	Short term	LA, Provincial council
22	Improvement and extension of roads – service road	Medium term	Public private partnership
23	Preservation of baobab trees at Pallimunai and Eluthoor	Short term	Archeology department
24	Redevelopment of Public Stadium at hospital road	Medium term	LA
25	Improvement of A 14 road	Long term	RDA
26	Establishment of Jetty at Erukalampity	Short term	Department of fisheries and aquatic resources, NGO
27	Development of fish Market at Thalaimannar	Medium term	LA
8	Redevelopment of Salt Pan at UC	Long term	Ministry of Industry, Manthai Saltern Pvt. LTD
29	Main junction beautification project at UC	Short term	LA, Provincial council, RDA
30	Redevelopment of Pallimunai Road	Medium term	LA
31	Keeri beautification projects	Short term	LA, Provincial council

32	Local Park Development at Pattithodam, Tharapuram, Thoddavali & Pesalai North	Short term	LA, Provincial council
33	Development of solar park at south & north coastal	Long term	SEA, Public Private Partnership
34	Establishment of Jetty at Pallimunai	Short term	Department of fisheries and aquatic resources, ADB
35	Community Park Development at Pattithodam & Thoddavali	Short term	LA, Provincial council
36	Establishment of Jetty at Thalvupadu	Short term	Department of fisheries and aquatic resources, NGO
37	Development of North coastal road (Phase 1)	Medium term	LAs
38	Establishment of observation Tower at Urumalai	Short term	SLTDA, Provincial Council
39	Eluthur junction beautification project	Short term	LA, Provincial council
40	Establishment of Green belt selected locations	Long term	LA, Provincial council, NGO
41	Redevelopment of Southbar Road at UC	Medium term	LA
42	Mini park Development at Savatkadu, Southbar, Eluthur, Uppukulam South, Siruthoppu, Thallaimannar & Erukampitty	Short term	LA , Provincial council
43	Development of North coastal road (Phase 2)	Medium term	LAs
44	Establishment of Jetty at Konthaipitty	Short term	Department of fisheries and aquatic resources, NGO
45	Establishment of research center related to marine bio diversity at UC	Short term	Education Ministry, NGO
46	Pocket park Development at Moor Street, Savatkadu & Thallaimannar	Short term	LA, Provincial council
47	Olaithoduvai beach Beautification	Short term	LA, Provincial council
48	Urumalai beautification project	Medium term	LA, Provincial council
49	Proposed Dumping & Composting Yard at Pesalai	Short term	LA, Provincial council

50	Improvements of other roads (Refer transport plan)		LA
51	Establishment of vocational training center at South bar, UC	Medium term	Ministry of Youth Affairs & skills development
52	Hospital junction beautification project	Short term	LA, Provincial council, RDA
53	Development of bus terminal at Pesalai	Short term	NTC,LA
54	Town Pond development project behind the Bus stand	Short term	LA, Provincial Council
55	Thalladi junction beautification project	Short term	LA, Provincial council, RDA
56	Development of facilitation center at Tharapuram	Short term	LA, Ministry of Industry and Commerce
57	Replanting Project (Refer Guide plan)		LA, UDA, SLTDA, Public private partnership
58	Establishment of Jetty at Thalaimannar	Short term	Department of fisheries and aquatic resources, NGO
59	Development of children park at Tharapuram	Short term	LA, Ministry of Industry and Commerce
60	Establishment of Jetty at Panankaddikoddu	Short term	Department of fisheries and aquatic resources, NGO
61	Town Park Development at Elunthoor	Short term	LA, Provincial council
62	Improvement of road behind the Bus stand	Medium term	LA, Public Private Partnership, Provincial Council
63	Redevelopment of existing canal behind the Bus stand	Medium term	LA, Public Private Partnership, Provincial Council


## 6.6.2. Action Project

### 1. Mannar Nature Park Development Project

#### Project identification

Project Title	Mannar Vankalai Facilitation Center (Nature Park) Development Project
Project	Enrich the scenic view of seascape and foreshore area of Mannar
Project Proposal	Enhancement of Landscape & Promotion of Recreational Activities

#### Project location

Location	<b><u>Province</u></b>	<b><u>Northern</u></b>	<b><u>District</u></b>	<b><u>Mannar</u></b>
	DS Division	Mannar Town DSD	LA	Mannar UC
Boundary	<b><u>North</u></b>	<b><u>East</u></b>	<b><u>South</u></b>	<b><u>West</u></b>
	Sea	RDA Road (Medawachchiya-Talaimannar Road)	Sea	Sea
Access	RDA Road (Medawachchiya-Talaimannar Road)			
Location Map				
Adjacent Land Uses (explain with map)	<p>Adjacent land is consisted with sea and the main access to the Nature Park is RDA Road (Medawachchiya-Talaimannar Road)</p> <p>Mannar bridge is connecting the Mannar Main Land and the Mannar island which is having the length of nearly 3.42 km. And the Nature Park is located nearly 3.1 km away from Mannar Main Land.</p>			

#### Project justification

Project Type	New	✓	Improvement		Extension	Land Development only
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Project Category	Conservation	Commercial	Landscape & Recreation	Heritage	Housing	Relocation	Infrastructure
			✓				
Project Aspect	Environment	✓	Economic		✓	Social	
Project Objective	<ul style="list-style-type: none"> <li>• To conserve indigenous flora and fauna of the Mannar Island</li> <li>• To provide better shelter and safe to migrant birds</li> <li>• To enhance eco-tourism related activities and contributing to National Economy</li> <li>• To upgrade livelihood of the local people through involving tourism related activities</li> <li>• To provide better impression who are visiting to Mannar Island</li> <li>• To create foreshore of the Mannar Island as a front area of the development</li> </ul>						
Rational of project	<p>In the present situation there is a need to enhance the experience of natural environment and significant sites. Also it is very much need to give good and memorable sense for the visitors those who enter to the Mannar Island. The Proposed Nature Park Development located at the entry point of Mannar Island. So in order to enhance the view point of Mannar and to facilitate the tourists this proposal has proposed by UDA.</p> <p>Further this project has proposed under the Environment Plan of 2030 for Mannar Development Plan to set out the approach to safeguarding Mannar environment and future proofing Mannar's economy for generations to come. They are complementary approaches that reinforce one another given the relationship between the environment and the economy.</p> <p>So Nature Park Development will help to boost the productivity by enhancing Mannar's natural capital of the air, water, soil and ecosystems that support all forms of life since this is an essential basis for economic growth and productivity over the long term.</p>						

### Property description




Present Land Ownership	Private		State		Other	Department of Wild Life Conservation



Free Encumbrances	Yes		No	✓	If No give details	Recently reclaimed by the RDA for their yard purpose when the construction of new bridge		
Details of the Ownership	Department of Wild Life Conservation							
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date		Land Extent		
	1720	K.Kanagasabai		2017.10.15		4 A	0 R	16.73 P

### Project description

Project Period	Short term (1 > year)	✓	Mid Term (1-3 year)		Long term (3 < year)		Total Estimated Cost	40 Mn	
Financing Method	Thuruwadula Programme by UDA (Stage I), Treasury Fund and fund from Mannar UC								
Description of the Project (with map)	<p>Developing the Nature Park Development by including relevant facilities including Facilitation Center, Information Center, Open Grass Area, Underground Facility Area and Elevated Podium, Performing Stage, Open Area for Public Gathering, Water Area, Shallow Water Walk Way, Summer Hut, Wide Glider Wheel Way, Interlock Blocked Paved Pathway, Restaurant and Viewing Deck, Informal Seats under the tree, Sandy Area, Jetty, Waiting Area, 100m Running Way, Tensile Structure Cover Children Play Equipment and Restaurant that will contribute to enhance the eco – tourism related activities to Mannar.</p> <p><i>Map: Refer the Annexure</i></p>								
Infrastructure Availability	Water	Required Capacity <b>Total: 6400 l per day</b>				Electricity	Required Capacity		
		Drinking Purpose: Average Person x Required Liters 200 x 2 Liters = 400 l							
		Bathing purpose including wash rooms Average Person x Required Liters 200 x 5 Liters = 1000 l							
		Restaurant purpose: 2000 l							
		Watering Plants: 3000 l							

	Available Capacity	-		Available Capacity	
	Solid waste Management system	Yes	✓	No	If No give suitable SWM proposal
Zone	Near to Zone 1(Character of the Zone is forehore area which is acting as entrance to the Mannar island)		Zoning compatibility	Yes	✓ No
<b>History (if it relevant)</b>					
<b>Present status (explain details with measurements)</b>					
<b><u>Existing situation</u></b>					
The proposed project's land is belongs to the Department of Wildlife Conservation. In the present situation there are 2 buildings located on land. One of the building is in abandon condition and another building has put up with only the foundation.					
<b>Description</b>	<b>No. of units</b>		<b>Length</b>		<b>Width</b>
<b>Building A</b> Foundation only available	-		11 m		3.5 m
<b>Building B</b> Abandon Building	-		10 m		3 m
<b><u>Photographs</u></b>					
					
Existing Building 'A' (Only foundation structure is remained at the existing situation)		Existing Building 'B'		View of Entire Land of Proposed Nature Park Development	
Note: The existing abandon buildings which is indicated as 'A' will be converted as restaurant and viewing deck and 'B' will be converted as Information Center in future.					
<b>Proposed plan &amp; building design requirements</b>					

1. Existing and Proposed Level
2. Soft Landscape Design
3. Hard Landscape Design
4. Drawing of Facilitation Center
5. Drawing of Information Center

*Refer the Annexures*

### Project budget

Activity	Cost (rs. Mn)
1. Site Preparation	1.00
2. Construction of retaining Wall	14.00
3. Construction of Service Building	2.50
4. Landscaping	9.00
5. Lighting	1.40
6. Outdoor Furniture	2.10
<b>Sub total i</b>	<b>30.00</b>
7. 10% Contingencies	3.00
8. Project Cost	33.00
9. Consultancy Fee (3%)	0.99
<b>Sub total ii</b>	<b>33.99</b>
10. NBT (2%)	0.68
11. Sub Total III	34.67
12. VAT (15%)	5.20
<b>GRAND TOTAL</b>	<b>39.87</b>

### Approval agencies

Activity	Relevant authority	Authorized person		
1. Land Clearance	Department of Wild Life Conservation	Director General		
2. Building for Facilitation Center	Urban Development Authority	Provincial		
3. Building for Information Center				
4. Open Grass Area				
5. Underground Facility Area & Elevated Podium				
6. Performing Stage				
7. Open Area for Public Gathering				
8. Water Area				
9. Shallow Water Walk Way				
10. Summer Hut			Central Environmental Authority	Chairman
11. Wide Glider Wheel Way				
12. Interlock Blocked Paved Pathway				
13. Restaurant & Viewing Deck				
14. Informal Seats Under the Tree				
15. Sandy Area				
16. Jetty				
17. Waiting Area				

18. <b>100m Running Way</b>			
19. <b>Tensile Structure Cover Children Play Equipment</b>			
20. <b>Restaurant</b>			
21. <b>Parking</b>	Road Development Authority	Chief Engineer	
22. <b>Maintenance &amp; Management (UDA will be signed Memorandum of Understanding with Local Authority)</b>	Mannar Urban Council	Chairman	
	Guideliness	Guidelines	
Guideliness and Guidelines	UDA Planning & Building Guidelines	<p>Clearance should be obtain from Urban Development Authority, Central Environmental Authority, Coast Conservation Department &amp; Department of Wildlife Conservation and Road Development Authority</p> <p><u>Guidelines for Zone 1:</u></p> <ol style="list-style-type: none"> <li>1. New development and extension should not disturb existing historical buildings of Dutch Fort and Pallimunai St.Lucia Church.</li> <li>2. Recommendation should be obtain from relevant agencies</li> <li>3. The maximum height should be less than 40 ft</li> <li>4. Live fencing or see through fencing allowed in front of the foreshore area</li> <li>5. Plot overage 50% should be maintained</li> </ol>	
Details of Attachments	<ol style="list-style-type: none"> <li>i. Survey plan</li> <li>ii. Map of Project</li> <li>iii. Existing and Proposed Level Drawing</li> <li>iv. Soft Landscape Design</li> <li>v. Hard Landscape Design</li> <li>vi. Drawing of Facilitation Center</li> <li>vii. Drawing of Information Center</li> </ol>		

## 2. Redevelopment of Bus Stand (CTB & Private) At UC

### Project identification

Project Title	Redevelopment of bus stand (CTB & private) at UC
Project	Town center improvement
Project Proposal	Enhance the related basic infrastructure facilities for the general public

**Project Location**

Location	Province	Northern	District	Mannar
	DS Division	Mannar Town	LA	MannarUC
Boundary	North	East	South	West
	Children Park	Park Road & Canal	Temporary commercial shops (belongs to Mannar UC)	A 14 Road & Thalaimannar Road
Access	A 14 road			
Location Map				
Adjacent Land Uses (explain with map)	Adjacent land is mostly owned by Mannar UC and consisted with children park and temporary commercial shops. The southern part of land consists with temporary commercial shops which are going to be remove and proposed to construct a commercial complex in that land. Also, many of administrative offices specially district secretariats and Mannar UC was located closer to the proposed project area.			

**Project Justification**

Project Type	New		Improvement	✓	Extension		Land Development only
Project Category	Conservation	Commercial	Landscaping	Heritage	Housing	Relocation	Infrastructure
Project Aspect	Economic			✓	Social		

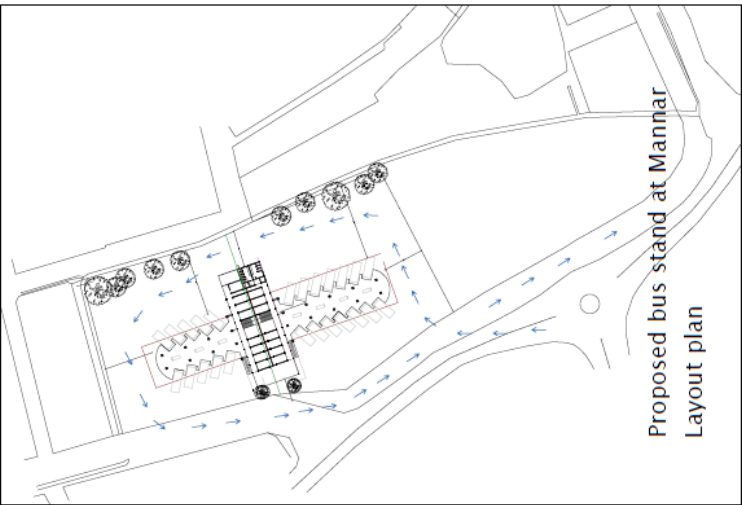
Project Objective	<ul style="list-style-type: none"> <li>To improve basic infrastructure facilities for the general people</li> <li>To provide affordable, accessible, and dynamic public transportation facilities to the passengers</li> <li>To integrate present CTB and private bus stand</li> <li>To reduce the traffic problems within core area</li> </ul>
Rational of project	Mannar Town is the capital of the Mannar district and providing services for the district population. As per the traffic survey carried out by the UDA, Northern Provincial Office, nearly 20,000 commuters visit Mannar Town from Mannar Island and the mainland of Mannar district to fulfill their needs related to health, educational and other services. The domestic and foreign tourists visit Mannar to spend their vacations. For such needs, they use public and private buses as the main mode of transportation. However, the public is suffering to get better facilities in the absence of proper transport related infrastructure, specially a bus stand with adequate facilities.

### Property Description

Present Land Ownership	UDA		Private		State	
Free Encumbrances	Yes	No	If No give details			
Details of the Ownership	Mannar UC					
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent	
	F.T.S.P 15 Supplement No:8 Sheet No: 78	S. Jacobpillai		2017.10.30	2.29 Acre	

### Project Description

Project Period	Short term (1> year)		Mid Term (1-3 year)	✓	Long term (3< year)		Total Estimated Cost
Financing Method	Ministry of megapolis and western development						
Description of the Project (with map)	The bus stand development consists with 16 bus bays and 12 number of commercial shops including relevant facilities; passengers waiting area, cafeteria, lobby area, ticketing counter, maintenance room, toilet and rest room (Refer the annexures)						
Infrastructure Availability	Water	Required Capacity		Electricity	Required Capacity		
		Available Capacity			Available Capacity		

	Solid waste Management system	Yes		No	If suitable proposal	No give SWM										
Zone	Zone 2 (Commercial Zone)		Zoning compatibility	Yes	✓											
<p>History (if it relevant) For Bus stand development, the Stakeholder's consultation conducted with all relevant authorities and the general public. The UDA negotiated with Mannar Urban Council for a MoU between the UDA and the Mannar UC for the development of the Bus stand since the land belongs to the UC.</p>																
<p>Present Status (Explain details with measurements) UDA has prepared the detail architectural drawings. The State Engineering Corporation (SEC) has prepared the Structural Engineering drawings and Contact has been awarded to Kanola Engineering and Construction, following the tender procedures.</p>																
<p><u>Existing Situation</u> Contact has been awarded to Kanola Engineering and Construction on June,2018. Construction was started and in progress</p>																
Description		No. of units	length	width												
Layout map																
<p>Proposed Plan &amp; Building Design Requirements</p> <ol style="list-style-type: none"> <li>1. Architectural design</li> <li>2. Structural engineering design</li> </ol>																
<p>Project Budget</p> <table border="1"> <thead> <tr> <th>Activity</th> <th>Cost (Mn)</th> </tr> </thead> <tbody> <tr> <td>Preliminaries</td> <td>10.0</td> </tr> <tr> <td>Site preparation</td> <td>12.0</td> </tr> <tr> <td>Construction of building</td> <td>75.0</td> </tr> <tr> <td>Finishing works</td> <td>18.0</td> </tr> </tbody> </table>							Activity	Cost (Mn)	Preliminaries	10.0	Site preparation	12.0	Construction of building	75.0	Finishing works	18.0
Activity	Cost (Mn)															
Preliminaries	10.0															
Site preparation	12.0															
Construction of building	75.0															
Finishing works	18.0															



<b>Total</b>	115.0 Mn	
Approval Agencies		
Activity	Relevant Authority	Authorized person
	Urban Development Authority	Director General
	Mannar PS	Chairman
	Mannar Town Divisional Secretariat	Divisional Secretary
Guidelines and Guidelines	Guidelines	Guidelines
	Please refer guide plan, zone 1 and general guidelines and guidelines	
Details of Attachments	<ol style="list-style-type: none"> <li>1. Front elevation</li> <li>2. Side elevation</li> <li>3. Floor plans</li> <li>4. Roof plan</li> </ol>	

### 3. Development of Fishery Harbort at Pesalai

#### Project identification

Project Title	Development of fishery harbor at Pesalai
Project	Fishery development in Pesalai
Project Proposal	Enhance fishing related infrastructure facilities

#### Project Location

Location	Province	Northern	District	Mannar
	DS Division	Mannar Town	LA	Mannar PS
Boundary	North	East	South	West
	West: sea side - 731594.19 N, 399039.32 E, land side - 731516.32 N, 399018.74 E East: sea side - 731339.39 N, 399520.00 E, land side - 731319.30 N, 399416.89 E			
Access	St. Joseph street			

<p>Location Map</p>	
<p>Adjacent Land Uses (explain with map)</p>	<p>Adjacent land is consisted with sea and scrub area and no any permanent building. The existing landing site is near by the proposed harbor development area.</p>

**Project Justification**

Project Type	New	✓	Improvement		Extension		Land Development only
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructure
Project Aspect	Economic			✓			
Project Objective	<ul style="list-style-type: none"> <li>• To improve the marine fisheries infrastructure</li> <li>• To improve the fish production, nutritional status, food security</li> <li>• To enhance the livelihood of the local people</li> </ul>						
Rational of project	<p>Main strategy of the proposed industrial plan in the development plan is to locate a fishery harbor within the Mannar Island considering about the physical, social and economic activities. That is Pesalai area selected as the most suitable area for the fishery harbor development because this selected area has the highest fishery production (46% of Island production) and most of the people (60%) are engaging in fishery related activities.</p>						

**Property Description**

Present Land Ownership	UDA		Private	✓	State
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Free Encumbrances	Yes	No		If No give details	
Details of the Ownership	3.5042 ha private ownership and 5.3556 ha state land				
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent

### Project Description

Project Period	Short term (1 > year)		Mid Term (1-3 year)	✓	Long term (3 < year)		Total Estimated Cost
Financing Method	ADB						
Description of the Project (with map)	Development of Pesalai fishery harbor is consist with 108030 m <sup>2</sup> basin area, 180 m jetty length, 420 m Quay wall length, 669 m main breakwater length and 338 m secondary breakwater length with relevant facilities(Auction hall, Net mending area, Admin building, Surveillance building, Canteen, Community hall, Quarters, Toilet, Security block, Fuel office, Satellite office, Transformer room, Generator room, Restaurant, Weigh bridge operator room, Sales outlet building and land space for offloading building). Also, it is possible to accommodate 75 local IMUL (up to 20m), 150 I-day(28ft) in 2022 and 150 local IMUL (up to 20m), 250 I-day(28ft) in 2022.						
Infrastructure Availability	Water	Required Capacity		Electricity		Required Capacity	
		Available Capacity				Available Capacity	
	Solid waste Management system	Yes		No		If No give suitable SWM proposal	
Zone	Zone 3 (Mixed Development Zone)		Zoning compatibility	Yes	✓		
History (if it relevant)							
Present Status (Explain details with measurements) In the present situation of proposed project land is a scrub area and no any permanent building.							

<u>Existing Situation</u>			
Description	No.of units	length	width
Layout map			
Proposed Plan & Building Design Requirements			
4. Architectural design			
5. Structural design			
Project Budget			
Activity		Cost	
<b>Total</b>			
Approval Agencies			
Activity	Relevant Authority	Authorized person	
	Ministry of fishery and aquatic resource development	Secretary	
	Coastal conservation department	Director General	
	Mannar PS	Chairman	
	Mannar Town Divisional Secretariat	Divisional Secretary	
	Central Environment Authority	Director General	
Guidelines and Guidelines	Guidelines	Guidelines	
	Please refer zone 3 and general guidelines and guidelines		

#### 4. Establishment of Jetty at Pallimunai

##### Project identification

Project Title	Establishment of Jetty at Pallimunai
Project	Fishery development in Pallimunai
Project Proposal	Enhance fishing related infrastructure facilities

**Project Location**

Location	Province	Northern	District	Mannar
	DS Division	Mannar Town	LA	Mannar UC
Boundary	North	East	South	West
	Sea	Sea	Sea	Pallimunai road
Access	Pallimunai road			
Location Map				
Adjacent Land Uses (explain with map)	Proposed site located nearby Pallimunai road at northern part of foreshore area within Mannar town			

**Project Justification**

Project Type	New	✓	Improvement		Extension		Land Development only
Project Category	Conservation	Commercial	Landscap e	Heritage	Housing	Relocation	Inf rasc tur e
Project Aspect	Economic			✓			
Project Objective	<ul style="list-style-type: none"> <li>• Facilitate the tourism master plan of Northern Province</li> <li>• Create direct access to the sea through Jetty</li> <li>• Create safe anchoring arrangement for boats at sea shore and easiest way for loading and unloading of fishes and fishing equipment</li> <li>• Increase the fishing capacity of the area and upgrade the living standard (Income) of fishing population</li> </ul>						

Rational of project	<p>Tourism Master Plan for Northern Province consists with 23 Islands in the western part of Northern Province. Most of the Islands have only vacant lands which have rich bio diversity with natural setting without population. Therefore, it is possible to develop this area as a tourism development area consists with islands and marine resources. Accordingly, Pallimunai become one of a strategic location which has direct and easiest access to the other island by sea route.</p> <p>Therefore, Pallimunai was identified as one of the water-based tourism development potential area consist with natural canal system which can be used for water based recreational facilities for local and foreign tourists. Although the natural canal is little far away from sea shore difficult to access to the canal. Due to this, it is difficult to tough the potential of tourism of the area. In this situation, Jetty development at Pallimunai as a priority project for this stage in order to create a direct link to the tourism potential area.</p> <p>Also, Pallimunai is one of the highest production fishery village situated within Mannar UC area while contributing nearly 16% of the total fish production of Mannar UC. Majority of the families (939 families, 3231 population) are engaging on fishing using 286 operating fishing craft. But, the village has less amount of fishing related infrastructure facilities. In dry season, nearly half of the year fisherman has to push or drag the boat manually more than 1.5 km to reach the water line. It is creating difficult for loading and unloading of fishes and fishing equipment as well as spent unnecessary time and energy. At the same time, presently fishing boats are anchoring at sea shore where corrosion, high tide, cyclone are possible to occur there is no safe for boats. Therefore, it is necessary to provide related infrastructure facilities specially Jetty.</p>

### Property Description

Present Land Ownership	UDA		Private		State	✓
Free Encumbrances	Yes	No	If No give details			
Details of the Ownership						
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent	

### Project Description

Project Period	Short term (1 > year)		Mid Term (1-3 year)	✓	Long term (3 < year)		Total Estimated Cost	
Financing Method	ADB							
Description of the	Consultancy study need to be done for the jetty design							

Project (with map)																																																														
Infrastructure Availability	Water	Required Capacity		Electricity	Required Capacity																																																									
		Available Capacity			Available Capacity																																																									
	Solid waste Management system	Yes		No	If No give suitable SWM proposal																																																									
Zone	Zone 3 (Mixed Development Zone)		Zoning compatibility	Yes	✓																																																									
History (if it relevant)																																																														
Present Status (Explain details with measurements) The fishermen are using manmade canal to drag/push the boats from sea shore																																																														
<u>Existing Situation</u>																																																														
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	Mannar Town Divisional Secretariat	Divisional Secretary																																																												
Guidelines			Guidelines																																																											



Guidelines and Guidelines	Please refer zone 3 and general guidelines and guidelines
Details of Attachments	

## 5. Renovation of Mannar Dutch Fort

### Project identification

Project Title	Renovation of Mannar Dutch Fort
Project	Conserve the value of archaeological cultural and historical sites.
Project Proposal	Renovation of Dutch Fort and marketing the historical value of Mannar for visitors

### Project location

Location	Province	Northern	District -Mannar
	DS Division	Mannar town DSD	LA- Mannar UC
Boundary	North	East	South
	Settlement	Sea	Sea
Access	RDA Road (Medawachchiya-Talaimannar Road)		

<p>Location Map</p>	
<p>Adjacent Land Uses (explain with map)</p>	<p>Adjacent land is consisted with sea, settlement and vacant land and also the main access to the Mannar Dutch Fort is RDA Road (Medawachchiya-Talaimannar Road) Particularly Mannar Dutch fort has outer moat.</p>

**Project JUSTIFICATION**

<p>Project Type</p>	<p>New</p>		<p>Improvement</p>	<p>✓</p>	<p>Extension</p>	<p>Land Development only</p>	
<p>Project Category</p>	<p>Conservation</p>	<p>Commercial</p>	<p>Landscape</p>	<p>Heritage</p>	<p>Housing</p>	<p>Relocation</p>	<p>Other</p>
<p>Project Aspect</p>	<p>Economic</p>	<p>✓</p>	<p>Environment</p>	<p>✓</p>			
<p>Project Objective</p>	<ul style="list-style-type: none"> <li>• Conservation the Dutch fort and leave it for future generation.</li> <li>• Enhance the heritage value of Mannar</li> <li>• To provide better impression who are visiting to Mannar Island</li> <li>• To create foreshore of the Mannar Island as a front area of the development</li> <li>• Marketing the heritage value by proposing the museum inside the fort</li> </ul>						
<p>Rational of project</p>	<p>In the existing situation the heritage value of Dutch fort is not reflecting the value and there is a need to be preserve the heritage value of Mannar by renovating the Dutch Fort. Also provide opportunity to develop the local business by promoting art gallery and museum which could be able to reflect the historical evidence of Mannar.</p>						

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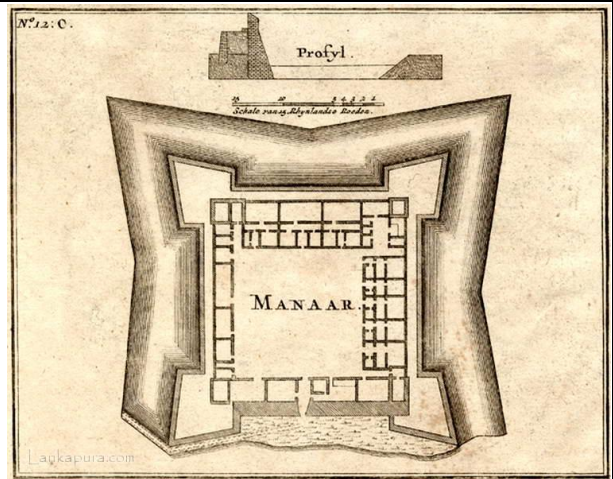
**Property description**

Present Land Ownership	Department of Archeology	✓	Private		State	
Free Encumbrances	Yes	No	If No give details			
Details of the Ownership	Ownership is for Department of Archeology					
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent	
					.....A	.....R

**Project description**

Project Period	Short term (1 > year)		Mid Term (1-3 year)	✓	Long term (3 < year)	
Financing Method	Department of Archeology					
Description of the Project (with map)	Mannar is blessed with Dutch inspired fort built at a comfortable human scale at the entrance to the Island. The renovation of this historically significant structure is an important signature element in a new cultural site.					
Infrastructure Availability	Water	Required Capacity		Electricity	Required Capacity	
		Available Capacity			Available Capacity	
	Solid waste Management system	Yes		No Should be provide	If No give suitable SWM proposal	
Zone	Zone 1 (Character of the Zone is foreshore area which is acting as entrance to the Mannar island)		Zoning compatibility	Yes	✓	
<b>History (if it relevant)</b>						

Mannar Fort is located on Mannar Island, Sri Lanka. It was built by Portuguese in 1560. The fort fell to the Dutch in 1658, and they rebuilt the fort in 1696. In 1795 the British occupied the fort following the surrender by the Dutch. It is a square shaped fort with four bastions and is located next to the new bridge that connects the mainland with the Mannar Island.



**Present status (explain details with measurements)**

Existing Situation

Roofless top and damaged structures are remained.

Description	No. of units	length	width

LAYOUT MAP

**Photographs**







**Proposed plan & building design requirements (if available)**

- ▶ Proposed Activities:
  - ▶ Renovate the Dutch fort with Dutch architectural style
  - ▶ Proposed to have museum & art gallery inside the Fort
  - ▶ Promote as a tourism place

**Project budget**

Activity	Cost (Rs. Mn)

<b>Total</b>		
<b>Approval agencies</b>		
<b>Activity</b>	<b>Relevant Authority</b>	<b>Authorized person</b>
Issuing approval based on compatible of guidelines	UDA	Provincial Director
Issuing approval based on archeological guidelines	Department of Archeology	Director General
Maintenance and management		
<b>Guidelines and Guidelines</b>	<b>Guidelines</b>	<b>Guidelines</b>
	UDA Planning & Building Guidelines	<p>Clearance should be obtain from Urban Development Authority, Central Environmental Authority, Coast Conservation Department and Road Development Authority</p> <p><u>Guidelines for Zone 1:</u></p> <p>All new developments and extensions should be compatible with the seascape view, colonial style, height, facade composition and character of the foreshore area.</p> <ol style="list-style-type: none"> <li>Seascape view: New developments should be compatible with the view of sea; means not to obstruct the visual link of sea; especially see through or live fencing allowed in front of the each and every plots not exceeding 6ft. <ul style="list-style-type: none"> <li>The maximum height of the concrete post is 6ft from the ground level and the size of the concrete post is 6" x 6"</li> </ul> </li> <li>Height: Be height should be consistent with the height of existing colonial buildings of Dutch Fort and St.Lucia Church on the same block; should not exceed the existing height of Dutch Fort building which is 20ft and height of St.Lucia church 80ft on the skyline of the part of the zone. <ul style="list-style-type: none"> <li>The immediate surroundings of the Dutch Fort should be constructed with maximum height of 15ft.</li> <li>The immediate surroundings of the St.Lucia Church should be</li> </ul> </li> </ol>

		<p>constructed with maximum height of 50ft.</p> <ol style="list-style-type: none"> <li>3. Colonial style: New developments shall compliment one of the existing historic Dutch Fort colonial style to support the historic context in terms of classic colonial colours accomplish creamy yellow, almond, white, petal pink, blue, beige and muted green.</li> <li>4. Greenery: New buildings and developments should use greenery facts to reduce the urban heat. <ol style="list-style-type: none"> <li>a) Greenery should be introduced on the roof top of the new buildings</li> <li>b) Outer moat of the Dutch fort area will have green space to increase the greenery. (Annexure 1)</li> <li>c) Edge of the foreshore area and beginning of the sea area will have tree line with the maximum height of 15ft.</li> <li>d) New developments are not allowed within the 30ft buffer zone of the Baobab tree to preserve the colonial plant species of Mannar. (Annexure 2)</li> </ol> </li> <li>5. Materials and details: New buildings should use materials similar to those in the zone or on the block, including similar colour. Materials should be used in a manner that creates details and small-scale elements that give buildings a three-dimensional character and a “human scale” especially at the ground level.</li> <li>6. Facade composition: Facade composition should include the following elements: <ol style="list-style-type: none"> <li>a) Sufficient percentage of windows and door openings, particularly at the first floor, so as to create a pedestrian friendly scale</li> <li>b) Green facade should be introduce for new buildings</li> </ol> </li> </ol>
Details of Attachments	Annexure 1 and 2	



## 6. Establishment of Observation Tower at Urumalai

### Project Identification

<b>Project Title</b>	Establishment of Observation Tower at Urumalai
<b>Project</b>	By establishing the observation tower provide opportunity for local and foreign visitors to enjoy the scenic view
<b>Project Proposal</b>	Promotion of local tourism

### Project location

<b>Location</b>	<b>Province</b>	Northern	<b>District</b>	Mannar
	<b>DS Division</b>	Mannar Town DSD	<b>LA</b>	Mannar PS
<b>Boundary</b>	<b>North</b>	<b>East</b>	<b>South</b>	<b>West</b>
	Sea	Sea	Land	Sea
<b>Access</b>	RDA Road (Medawachchiya-Talaimannar Road)			
<b>Location Map</b>				
<b>Adjacent Land Uses (explain with map)</b>	Adjacent land is consisted with sea, land and also the main access to the Observation tower is local authority road			

### Project justification

<b>Project Type</b>	New	✓	Improvement		Extension		Land Development only	
<b>Project Category</b>	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Other	
							Tourism	
<b>Project Aspect</b>	Economic	✓	Environment	✓	Social	✓		
<b>Project Objective</b>	<ul style="list-style-type: none"> <li>Promote coastal based tourism</li> <li>Enhance the scenic view point</li> <li>Develop the Mannar destination point</li> </ul>							
<b>Rational of project</b>	<p>In the existing situation the end point of Thalaimannar. Especially Urumalai area has high potential for coastal based tourism. There is a need to increase the amount of tourists but there is no any tourist spots to welcome and accommodate the tourists. The future objective is “To attract 3000 tourists to boost the marine tourism by end of 2030” to achieve the goal of “Enhance the experience of natural environment and significant sites”. So in future the Urumalai area will act as major tourism spot by developing the tourism potential developments.</p>							

### Property description

<b>Present Land Ownership</b>	Department of Wild Life Conservation	Private	State	
<b>Free Encumbrances</b>	Yes	No	If No give details	
<b>Details of the Ownership</b>	Ownership is for Department of Wild Life Conservation			

<b>Survey Plan Detail</b>	Survey Plan No.	Name of the Surveyor	Date	Land Extent		
				.....A	...R	.....P

**Project description**

<b>Project Period</b>	Short term (1 > year)	Mid Term (1-3 year)		Long term (3 < year)		Total Estimated Cost (Rs. Mn)
<b>Financing Method</b>	Department of Archeology					
<b>Description of the Project (with map)</b>	Provide opportunities for foreign and local tourists to enjoy the seascape of scenic view points at Urumalai area and especially provide place to observe the Adam's bridge view and the surrounding.					
<b>Infrastructure Availability</b>	<b>Water</b>	<b>Required Capacity</b>	Drinking Purpose: Average Person x Required Liters 100 x 2 Liters = 200 l	<b>Electricity</b>	<b>Required Capacity</b>	1200kw
		<b>Available Capacity</b>	-		<b>Available Capacity</b>	-
	<b>Solid waste Management system</b>	No should be provide		<b>If No give suitable SWM proposal</b>		Provide Garbage bins with separation method
<b>Zone</b>	Zone 6 (The Zone 6 is an ideal location which reminds the historical evidences that we had connection with South		<b>Zoning compatibility</b>	Yes	✓	No

	<p>India especially had connection with Rameshwaram. The zone is acting as Mannar Island's destination point which locates near to Adam's bridge)</p>				
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**History (if it relevant)**

**Present Status (Explain details with measurements)**

At present stage the vacant land is available. Proposed observation tower will be established with the 10 perch of land extent. Surround area consists with tourist cabanas and hotel. The rest of the part is owned by Department of Wild Life Conservation. Special features can be observed in this location like bird watching and the view of Adam's bridge.

**Photographs of existing situation**

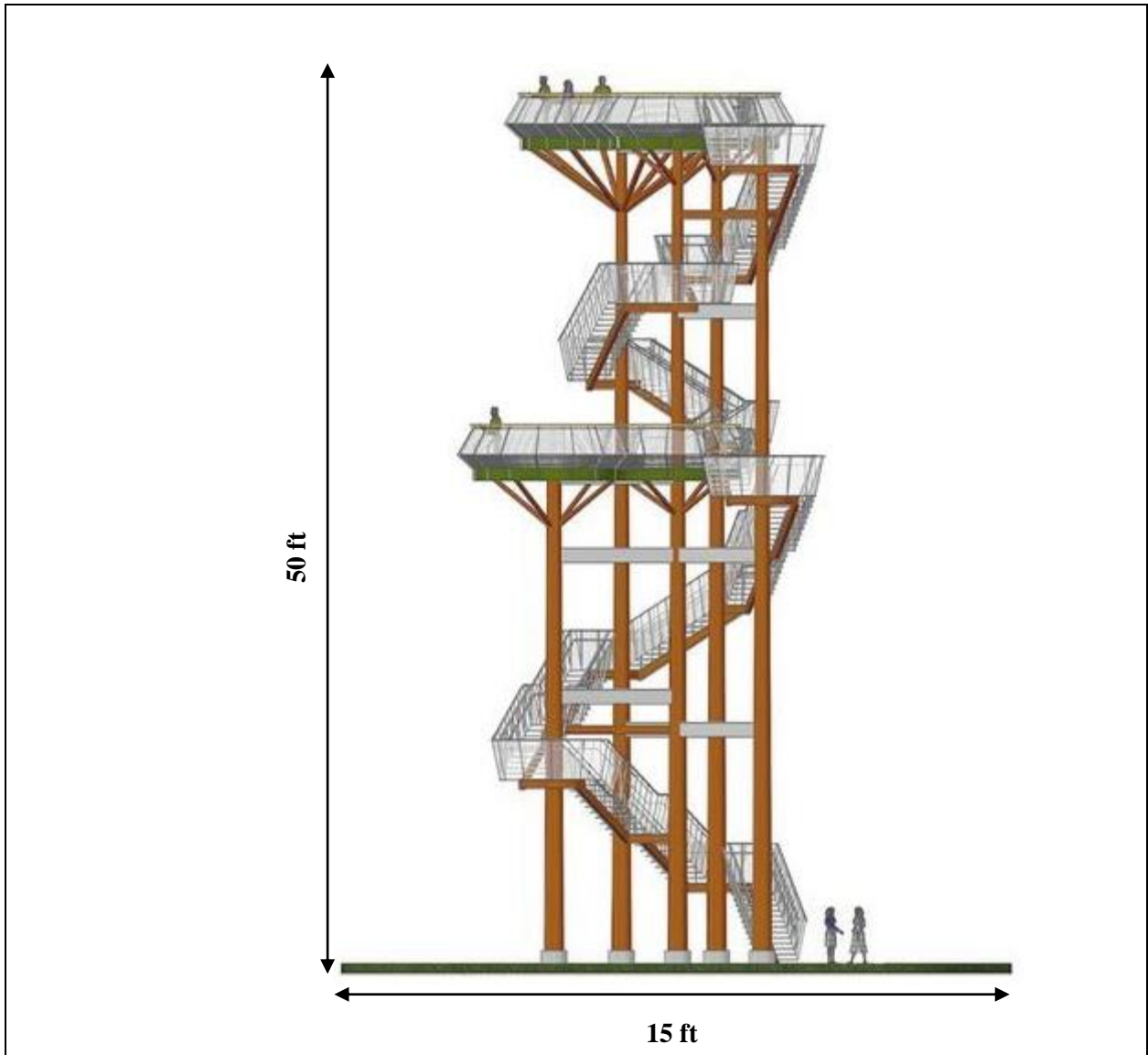


View of Urumalai Beach



View towards to Adam's Bridge

**Proposed plan & building design requirements (if available)**



**Project budget**

Activity	Cost (Rs. Mn)	
1. Site Preparation		0.50 M
2. Excavation		0.50 M
3. Timber Post Construction		0.75 M
4. Steel staircase		5.00 M
5. Timber Deck		0.40 M
6. Safety Glass		0.45 M
7. Lighting		0.40 M
8. Seating		0.20 M
9. Tensile Roof		0.30 M

<b>Total</b>			<b>8.5 M</b>
<b>Approval agencies</b>			
<b>Activity</b>	<b>Relevant Authority</b>	<b>Authorized person</b>	
1. Issuing approval based on compatible of guidelines	UDA	Provincial Director	
2. Issuing approval based on wild life clearance	Department of Wild Life Conservation	Director General	
3. Security clearance	Sri Lanka Navy	Commander of Navy	
4. Clearance related to Environmental Compatibility	Central Environmental Authority	Chairman	
5. Maintenance and management 6. (UDA will be signed Memorandum of Understanding with Local Authority)	Mannar Urban Council	Chairman	
<b>Guidelines and Guidelines</b>	<b>Guidelines</b>	<b>Guidelines</b>	
UDA Planning & Building Guidelines	Clearance should be obtain from Urban Development Authority, Central Environmental Authority, Coast Conservation Department, Department of Wild Life Conservation and for the security purpose clearance should be obtain from Sri Lanka Navy.  <u>Guidelines for Zone 6:</u>  1. Approvals should be obtain from relevant agencies 2. (CCD, CEA, Department of Wild Life) 3. Constructions are not allowed particularly in sand dune areas 4. Natural mangrove area should be preserve and constructions are not allowed. 5. Solid waste, sewerage and waste water management systems should be adopt		
<b>Details of Attachments</b>			

## 7. Establishment of modern commercial complex

### PROJECT IDENTIFICATION

Project Title	Establishment of Modern commercial complex at Mannar town
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Project	Town center development in Mannar
Project Proposal	Enhance the social infrastructure facilities of the area

**Project Location**

Location	Province	Northern	District	Mannar
	DS Division	Mannar Town	LA	Mannar UC
Boundary	North	East	South	West
	Bus stand	Canal	Pallimunai road	A14 road

Access	Thalaimannar road
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**Location Map**

Adjacent Land Uses (explain with map)	Proposed site was located in the entry point of Mannar Island and existing commercial shops are located within this land in a scatted manner. The land has surrounded by A 14 road and Pallimunai road
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**Project Justification**

Project Type	New	✓	Improvement		Extension		Land Development only	
Project Category	Conservation	Commercial	Landscap e	Heritage	Housing	Relocation	Infrastru cture	
Project Aspect	Economic			✓	Social			
Project Objective	<ul style="list-style-type: none"> <li>• Provide proper place for commercial shops with better facilities</li> <li>• Create marketing facility for local products</li> <li>• Uplift the lively hood of local people especially business community</li> <li>• Create easy access to the general public</li> </ul>							



	<ul style="list-style-type: none"> <li>• Increase the local authority income</li> <li>• Create a public gathering place</li> <li>• Create safety and healthy environment</li> </ul>
Rational of project	<p>Mannar Island is located within Mannar district which is consists with high density population also functioning as administrative and commercial capital of the Mannar district. Although this is functioning as a commercial capital of mannar district, the existing commercial shops are located in scatted manner with lack of related facilities.</p> <p>Also, the above said location is located in a strategic location near by the entry point of Mannar Island and surrounded by A 14 road and Pallimunai road which having high land value. But, at present the land is consist with commercial shops in a scatted manner which is creating visual pollution and give a negative thought for the people who are entering to the Mannar Island. Also, at present the above said land is underutilized.</p> <p>Also, one of the major economic bases of the Mannar Island is fishing which is presently does not get maximum utilization from the available resources due to the several reasons such as lack of marketing facilities, etc. Therefore, it is necessary to build a proper commercial complex with related facilities in order to solve the above issues.</p> <p>Other than this, the proposed commercial complex can be used as a public gathering place which is less in number at present. Also, the proposed commercial complex will be increased the income of the business people as well as local authority.</p>

### Property Description

Present Land Ownershi p	UDA		Private		State	✓
Free Encumbr ances	Y e s	No	If No give details			
Details of the Ownershi p	Mannar UC					
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent	
					0.5308 ha	

### Project Description

Project Period	Short term (1> year)		Mid Term (1-3 year)	✓	Long term (3< year)		Total Estimate d Cost	300 Mn
Financin g Method	Ministry of industry & commerce Local Authority							
Descripti on of the Project (with map)	Need to work out from the basic level as per the demand and requirement							
Infrastruc ture Availabil ity	Water	Required Capacity		Electricity	Required Capacity			
		Available Capacity			Available Capacity			

	Solid waste Management system	Yes		No	If suitable proposal	No	give SWM
Zone	Zone 2 (Commercial Zone)		Zoning compatibility	Yes	✓	No	
History (if it relevant)							
Present Status (Explain details with measurements) The part of proposed land is currently consists with commercial shops and part of the land in vacant position							
<u>Existing Situation</u>							
Description		No. of units	length	width			
Commercial shops							
Layout map							
Proposed Plan & Building Design Requirements							
7. Architectural design 8. Structural design							
Project Budget							
Activity			Cost				
<b>Total</b>			<b>300 Mn</b>				
Approval Agencies							
Activity		Relevant Authority			Authorized person		
		Ministry of industry and commerce			Secretary		
		Mannar UC			Chairman		
		Mannar Town Divisional Secretariat			Divisional Secretary		
Guidelines and Guidelines		Guidelines		Guidelines			
		Please refer zone 2, Guide plan guidelines, and general guidelines and guidelines					

Details of Attachments	
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## 8. Propose South Coastal Road Development Project

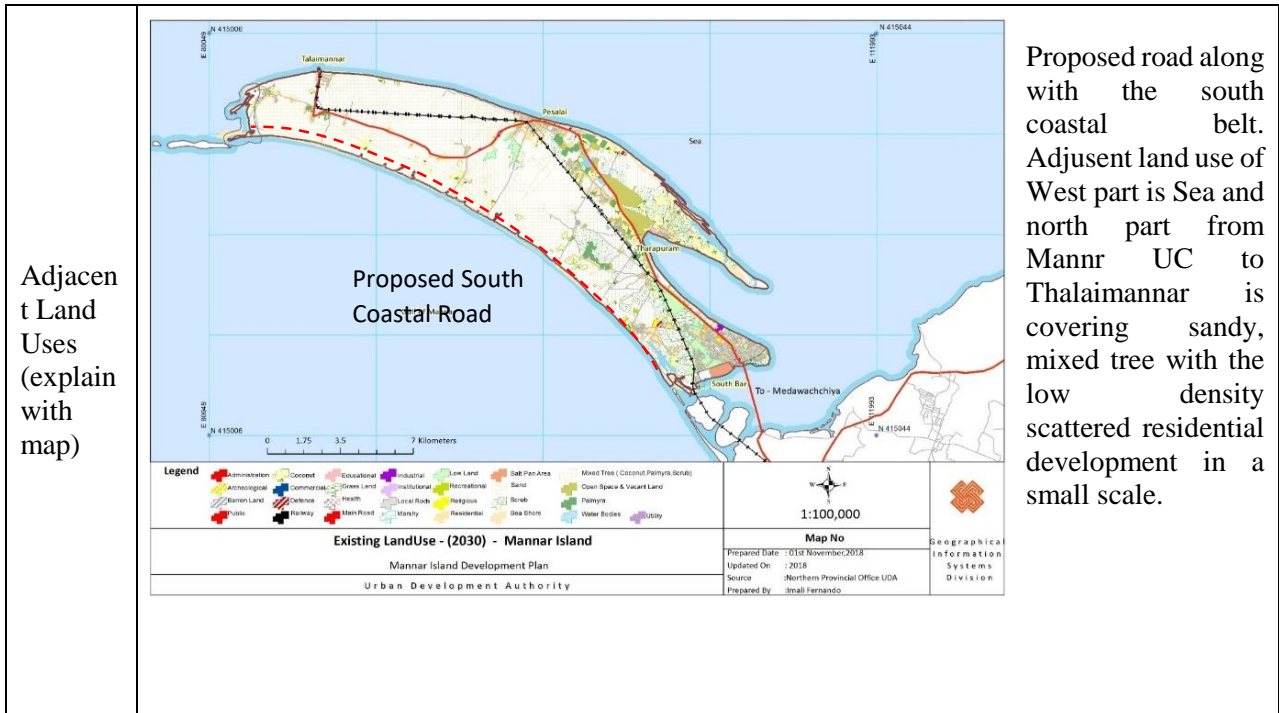
### Project Identification

Project Title	Development of South Coastal Road
Project	Road development
Project Proposal	Enhance the physical infrastructure development for the general public and investors

### Project Location

Location	Province	Northern	District	Mannar
	DS Division	Mannar	LA	Mannar UC&PS
Boundary	North	East	South	West
	South coast settlement	South coast settlement	South coast settlement	Sea
Access	CL0742, CL0870, CL1105, CL0625, CL0483 (Refer Annexure: proposed road width)			

Location Map	
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**Project Justification**

Project Type	New		Improvement		Extension		✓	Land Development only
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Other	✓
Project Aspect	Economic			✓	Social			
Project Objective	To create the inter linkages between the south coast and other part of the Island To facilitate the local community To attract the investors related to tourism related development projects							
Rational of project	Proposed project site is located at south coastal belt of Mannar Island which is having sandy beaches along the coastal and its having high potential for the tourism development activities as well as the wind energy also. And along the coastal belt, there are number of fishing camps are available which is major income source of the Mannar Island which are not connected with other part of the Island. At the same time, there is no inter linkages between the south and North part of the Island. Inadequate roads are available with very poor conditions which are sandy alleyways and gravel path.  Therefore, required to be propose the south coastal road in order to create the inter linkages North and South coastal and to tap the available resource in an efficient manner.							

**Property Description**

Present Land	UDA		Private	✓	State	✓
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Ownership						
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**Project Description**

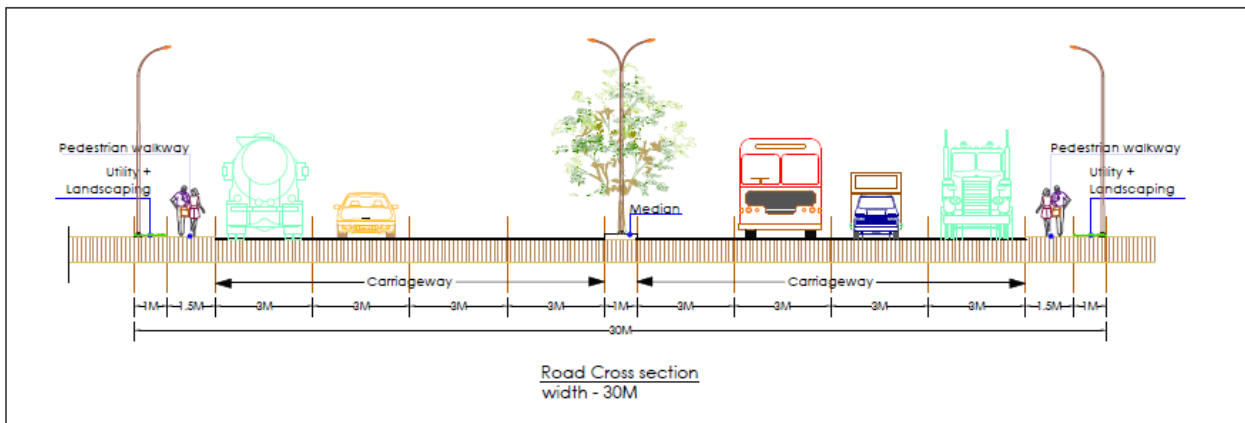
Project Period	Short term (1 > year)		Mid Term (1-3 year)	✓	Long term (3 < year)		Total Estimated Cost (Rs. Mn)
Financing Method	LA						
Description of the Project (with map)	Proposed road is along the south coastal belt about 24.5 km length and width is 30m including 8 lanes with walking path, utility and landscapes elements						
Zone	Mixed development zone		Zoning compatibility	Yes	✓	No	

Present Status (Explain details with measurements)

Existing Situation

Description	No.of units	length	width
At present, there is no continuity road along the coastal belt. But coastal roads are available in Keeri, thalvupadu and olaithoduvai beach areas with poor condition.		24.5 KM	15' available in some areas

Proposed Plan & Building Design Requirements (if available)



Project Budget

Activity	Cost (Rs. Mn)

<b>Total</b>			
<b>Approval Agencies</b>			
<b>Activity</b>	<b>Relevant Authority</b>	<b>Authorized person</b>	
Land clearance to be obtained	District Secretariat	Government Agent	
	Local Authority (Mannar UC and PS)	Chairman UC, Chairman PS	
	Coastal Conservation Department		
	Urban Development Authority		
Site Clearance			
Guidelines and Guidelines	Guidelines	Guidelines	
		Proposed road width 30m	

### 9. proposed as fatha playground development project

#### Project Identification

Project Title	As Fatha playground Development project
Project	Town Centre Development
Project Proposal	Enhance the Physical improvements (athletic sport ) for local people

#### Project Location

Location	Province	Northern	District	Mannar
	DS Division	Mannar Town	LA	Mannar UC
Boundary	North	East	South	West
	Uppukulam Pond	Mn/ Sithyvinayakar Hindu College	Cargills Food city	Uppukulam Mosque
Access	Pallimunai Road			

<p>Location Map</p>	
<p>Adjacent Land Uses (explain with map)</p>	<p>Proposed site located nearby Pallimunai road within mannar town</p>  <p>The Main access to the Al fathah Play ground is RDA Road (Pallimunai Road) In this Proposed site located nearby 400 m away from the A14 road</p>

**Project Justification**

Project Type	New	<input checked="" type="checkbox"/> Improvement		Extension		Land Development only	
Project Category	Conse rvation	Commercial	Landscape	Heritage	Housing	Relocation	Other
							<input checked="" type="checkbox"/> (R ecr eat io n)




Project Aspect	Economic		Social
Project Objective	<ol style="list-style-type: none"> <li>1. To provide the entertainment for local people around the area</li> <li>2. To enhance the physical development (sport specially football) of youth community in National Level</li> <li>3. Create healthy population in and around the area.</li> </ol>		
Rational of project	<p>The ground is situated in a high density area within the Mannar UC and it was once a famous ground for sport specially football. If it could be developed and reopened to use, many in the area would be benefited. In the present situation there is a need to enhance the physical development in and around the area via the sports activities. Further this project has proposed under the Service Plan Recreation of 2030 for Mannar Development Plan. , everybody needs leisure in their lives, to balance the stress of work and life. According to that, In this project targeting to encourage the leisure time activities of the local community. From that development people can improve their personal ability by practicing pursuits improving the mind. Not only that, through this project National Players and coaches will be developed in National level.</p>		

**Property Description**

Present Land Ownership	UDA		Private		State	✓
Free Encumbrances	Yes	No	✓	If No give details		
Details of the Ownership						
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent	
	-				.....A	.....R ...P

**Project Description**

Project Period	Short term (1> year)	✓	Mid Term (1-3 year)		Long term (3< year)		Total Estimated Cost (Rs. Mn)
Financing Method	Local Authority, Ministry of Industry & Commerce						
Description of the Project							

	<table border="1"> <thead> <tr> <th>Local Authority</th> <th>Mannar UC</th> </tr> </thead> <tbody> <tr> <td>Total Extent</td> <td>20 Acres 20 Perches</td> </tr> <tr> <td>Land Ownership</td> <td>Mosque</td> </tr> <tr> <td>TEC</td> <td>185 Mn</td> </tr> <tr> <td>Funding Source</td> <td>Min of Industry and Commerce</td> </tr> <tr> <td>Design &amp; Consultancy</td> <td>UDA</td> </tr> <tr> <td>Client</td> <td>Uppukulam Community</td> </tr> </tbody> </table> <p>This project has been identified to implement in 2018 and need to work out from the basic level as per the demand and requirement. Total estimate cost of this project is Rs. 20 Mn.</p>				Local Authority	Mannar UC	Total Extent	20 Acres 20 Perches	Land Ownership	Mosque	TEC	185 Mn	Funding Source	Min of Industry and Commerce	Design & Consultancy	UDA	Client	Uppukulam Community
Local Authority	Mannar UC																	
Total Extent	20 Acres 20 Perches																	
Land Ownership	Mosque																	
TEC	185 Mn																	
Funding Source	Min of Industry and Commerce																	
Design & Consultancy	UDA																	
Client	Uppukulam Community																	
Zone	Zone 3 (mixed development zone)	Zoning compatibility	Yes	✓ No														
<b>Present Status (Explain details with measurements)</b>																		
<u>Existing Situation</u>																		
Site photos																		
																		
<b>Proposed Plan &amp; Building Design Requirements (if available)</b>																		
Project Budget																		
<b>Activity</b>		<b>Cost (Rs. Mn)</b>																
Total Estimation		20 Mn																

<b>Total</b>			
Approval Agencies			
Activity	Relevant Authority	Authorized person	
	Ministry of industry and commerce	Secretary	
	Mannar UC	Chairman	
	Mannar Town Divisional Secretariat	Divisional Secretary	
Guidelines and Guidelines	Guidelines	Guidelines	
	Refer zone 3 guidelines and common general guidelines		


## 10. Development of fish market at Mannar project

### Project Identification

Project Title	Development of fish market at Mannar
Project	Town Centre Development
Project Proposal	Enhance the Physical improvements (athletic sport ) for local people

### Project Location

Location	Province	Northern	District	Mannar
	DS Division	Mannar Town	LA	Mannar PS
Boundary	North	East	South	West
	Uppukulam Pond	Mn/ Sithyvinayakar Hindu College	Cargills Food city	Uppukulam Mosque
Access	Pallimunai Road			

<p>Location Map</p>	
<p>Adjacent Land Uses (explain with map)</p>	<p>Proposed site located nearby Beach road within mannar town and A14 Road is another main access road to the fish market In this Proposed site located nearby 400 m away from the A14 road</p>

**Project Justification**

Project Type	New		Improvement	✓	Extension		Land Development only
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Other
		✓ /					
Project Aspect	Economic			✓ Social			
Project Objective	<ul style="list-style-type: none"> <li>• Enhance the local producers and their products.</li> <li>• Creating the market facility to increase the local level income</li> <li>• Create a public gathering place and business environment</li> </ul>						
Rational of project	<p>The proposed site is situated in the Mannar UC area. This area having high priority for the fishery development activities because there are number of fishing camp and transportation facilities are available in this area.</p> <p>Fishery is the major income source of the Mannar Island, the present situation there is a need to enhance the local economy and local procedures and their products. Therefore, required to be propose the redevelopment of fish market project within</p>						

	that area.
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**Property Description**

Present Land Ownership	UDA		Private		State		✓
Free Encumbrances	Yes	No	✓	If No give details			
Details of the Ownership	Mannar UC						
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent		
	-				..... A	.....R	

**Project Description**

Project Period	Short term (1> year)		Mid Term (1-3 year)		Long term (3< year)	✓	Total Estimated Cost (Rs. Mn)
Financing Method	Local Authority, <b>Min of Industry and Commerce</b>						
Description of the Project	Total Extent			80 Perches			
	TEC			250 Mn			
	Design & Consultancy			UDA			
	Client			Mannar UC			
Zone	Zone 3 (mixed development zone)		Zoning compatibility	Yes	✓	No	

**Present Status (Explain details with measurements)**Existing Situation

**This project has been identified to implement in 2018 and need to work out from the basic level as per the demand and requirement**

## Site photos



Proposed Plan & Building Design Requirements (if available)			
Project Budget			
Tentative Estimate	Rs 250 Mn including Tax		
Fund Requirement	Required Rs 50 Mn for completion of the project within 2018.		
The Total required funds	Rs 250 Mn		
Approval Agencies			
Activity	Relevant Authority	Authorized person	
	Ministry of industry and commerce	Secretary	
	Mannar UC	Chairman	
	Mannar Town Divisional Secretariat	Divisional Secretary	
Guideliness and Guidelines	Guideliness	Guidelines	
	Refer zone 3 guideliness and common general guideliness		

## 11. Development of New Market at Pesalai

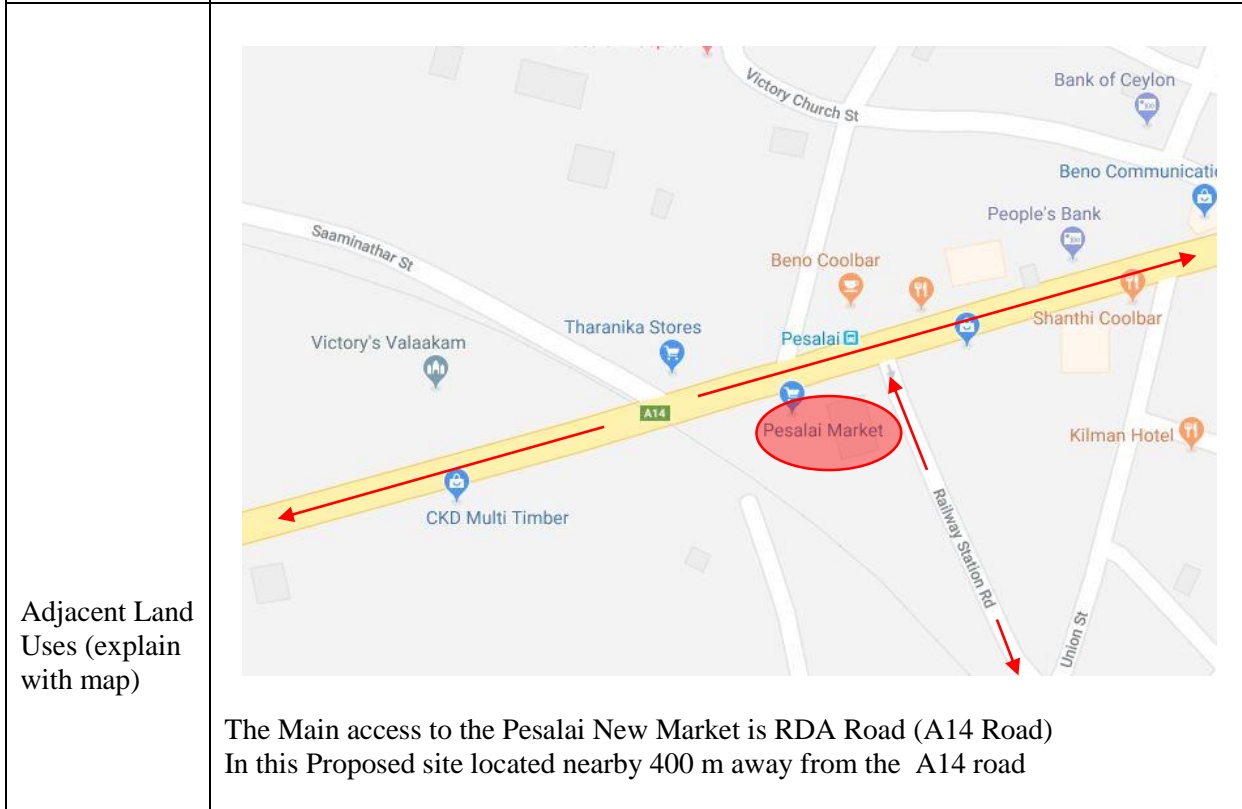
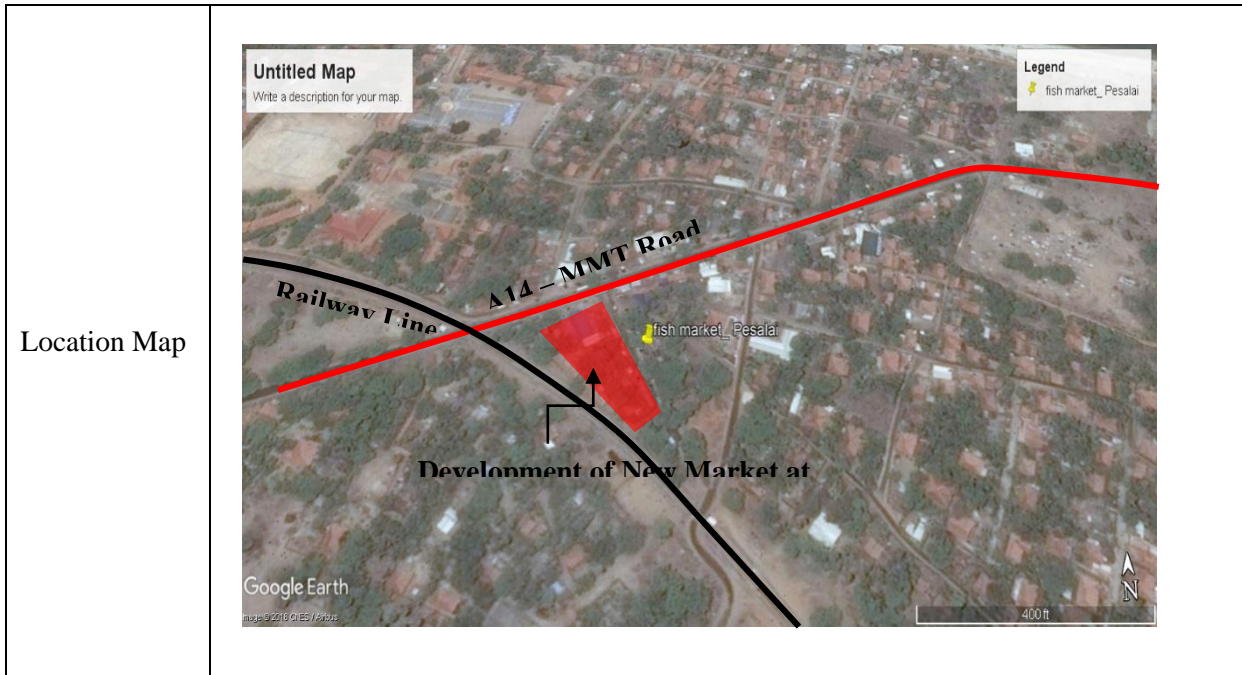
### Project Identification

Project Title	Development of New market at Pesalai
Project	Town Centre Development
Project Proposal	Enhance the marketing facilities for local producers

### Project Location

Location	Province	Northern	District	Mannar
	DS Division	Mannar Town	LA	Mannar PS
Boundary	North	East	South	West
	Madhawachiya – Thalaimannar Road	Railway station road	-	Saaminathar Road
Access	Railway Station Road			





**Project Justification**

Project Type	New	✓	Improvement		Extension		Land Development only
Project Category	Conser vation	Commercial	Landscape	Heritage	Housing	Relocation	Oth er
		✓					
Project Aspect	Economic			✓			



Project Objective	To create the market opportunity for the marine based products (fishery)
Rational of project	<p>At present, per capita consumption of fish, dry fish, canned fish has been increased at the national level and excess demand for the fish and fishery product. Due to this, Sri Lanka had to import 120,046 MT in 2015 to cater the demand expending 30,729 Mn LKR foreign exchange. At this situation fishery related industrial plan is required for Mannar Island to increase the fish production from the available untapped marine resource as well as uplift the living standard of the local people.</p> <p>In order to, proposed to <b>develop the new market Pesalai</b> in order to create the market opportunity for the fishery products.</p>

### Property Description

Details of the Ownership	<b>Fishery Harbour Corporation</b>				
Survey Plan Detail	Survey Plan No.	Name of the Surveyor	Date	Land Extent	
	-			.....A	.....R

### Project Description

Project Period	Short term (1> year)	✓	Mid Term (1-3 year)		Long term (3< year)		Total Estimated Cost (Rs. Mn)
Financing Method	Local Authority, Provincial Council						
Description of the Project							
Zone	Zone 3 (mixed development zone)	Zoning compatibility	Yes	✓	No		

### Present Status (Explain details with measurements)

Existing Situation	 
Proposed Plan & Building Design Requirements (if available)	

Project Budget			
Tentative Estimate	Rs 300 Mn including Tax		
Fund Requirement	Required Rs 50 Mn for completion of the project within 2018.		
The Total required funds	300 Mn		
Approval Agencies			
Activity	Relevant Authority	Authorized person	
Guideliness and Guidelines	Guideliness	Guidelines	
	Refer zone 3 guideliness and common general guideliness		

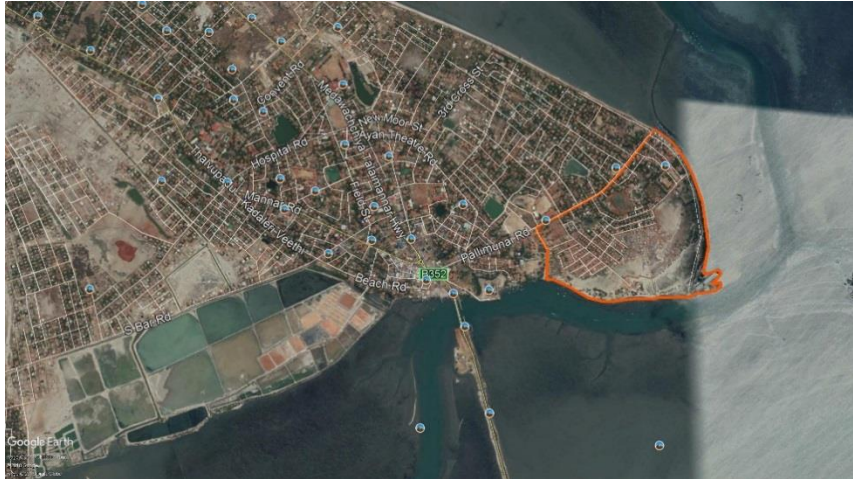

## 12. proposed establishment of marine village at foreshore

### Project Identification

Project Title	Establishment of Marine Village at Foreshore
Project	Establishment of Marine Village at Foreshore
Project Proposal	Marine Village at Foreshore

### Project Location

Location	Province	Northern	District	Mannar
	DS Division	Mannar	LA	Mannar UC
Boundary	North	East	South	West
	Sea	Sea	land	land
Access	Pallimunai road			


<p>Location Map</p>							
<p>Adjacent Land Uses (explain with map)</p>							<p>Land use of the marine village consist with Dutch fort, residential, religious, and open space.</p>
<p>Project Type</p>	<p>New</p>	<p><input checked="" type="checkbox"/></p>	<p>Improvement</p>	<p><input type="checkbox"/></p>	<p>Extension</p>	<p>Land Development only</p>	
<p>Project Category</p>	<p>Conser vation</p>	<p>Commercial</p>	<p>Landscape</p>	<p>Heritage</p>	<p>Housing</p>	<p>Relocation</p>	<p>In fr as tr uc tu re</p>
<p>Project Aspect</p>	<p>Economic</p>			<p><input checked="" type="checkbox"/></p>			
<p>Project Objective</p>	<ul style="list-style-type: none"> <li>• Provide better tourism base recreational facilities to the public</li> <li>• To development the marine base recreational in plan manner</li> <li>• To reduce the unauthorized construction</li> </ul>						
<p>Rational of project</p>	<p>The proposed project is located for entrains of the Mannar foreshow area. Presently open space, small scrubs, and some residential patches are there. If we propose the marine village we can utilize the land for marine base tourism. At the same time we can control the unauthorized constructions.</p>						

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### Property Description

Present Land Ownership	UDA		Private		State	
Free Encumbrances	Yes	No	If No give details			
Details of the Ownership						
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent	
					A	R

### Project Description

Project Period	Short term (1 > year)		Mid Term (1-3 year)		Long term (3 < year)	✓	Total Estimated Cost
Financing Method							
Description of the Project (with map)	<p>The marine village consist with coastal base tourism promotion project. The surrounding area have sea, small scale scrub, residential, st.lusia church, and Dutch fort. So natural and manmade tourism related things are located around the area. This marine village project is proposed by foreshow area. This foreshow area is the main entrance for Mannar island.</p> 						
Infrastructure Availability	Water	Required Capacity		Electricity	Required Capacity		
		Available Capacity			Available Capacity		
	Solid waste Management system	No		No	If No give suitable SWM proposal		

Zone	Mixed Development Zone	Zoning compatibility	Yes		No
History (if it relevant)					
Present Status (Explain details with measurements)					
<u>Existing Situation</u>					
Description	No.of units	length		width	
Layout map					
Proposed Plan & Building Design Requirements					
Project Budget					
Activity			Cost (Rs. Mn)		
Approval Agencies					
Activity	Relevant Authority	Authorized person			
Guideliness and Guidelines	Guideliness	Guidelines			
		Should maintain character of the fort and give identity to Mannar fort.			
		Should maintain the historic value of the identified building			



## **PART- II**

# Land and Building Development Stragic plan





## Chapter 07

### Development zones & zoning guidelines

#### 7.1. Introduction

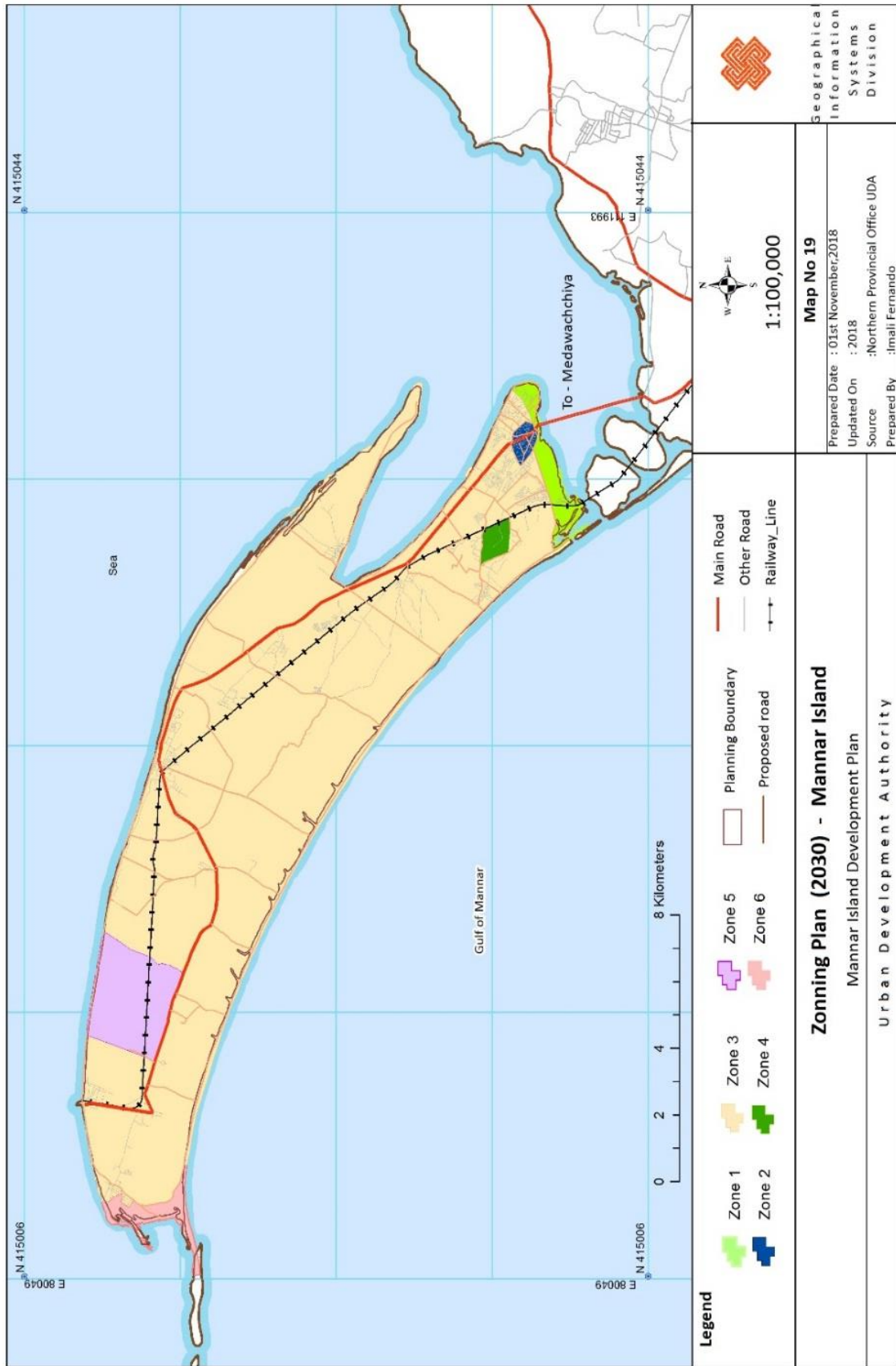
Mannar Island Development Plan (2021-2030) is developed to achieve the vision of “The sepeaking seascape and magnet marine” based on the expected development. This development plan has been introduced goals and objectives to achieve the vision for the next 10 years. In addition, six strategic plans have been introduced for the implementation of these goals and objectives. These Development Zones and Zoning Plan Guidelines can be introduced as one of the plans of those strategic plans. Especially, beyond the traditional land use and traditional zoning plans, this plan will provide the opportunity for development based on the density (density-based zone), and it is intended to create the proposed urban form. In this chapter, development zones and zoning guidelines have been described in detail. In here, development zones, zoning factor, boundary coordinates of development zones, permissible uses for development zones and common guidelines affecting those development zones have been described. It can be said that the preparation of this zoning plan and its boundary verification is a result of a few specific points or some of the analysis. For this purpose, mainly it is further to identify the planning concept of the Mannar Island development plan (2021-2030), the development sensitivity analysis, development pressure and space syntax analysis, the analysis of residential developmental ability in the area and the analysis of the development potential, and the expansion of infrastructure facilities have used to identify these zones.

#### 7.2. Development zones

The proposed development zones are:

No	No. of Zone	Name of the Zone
1.	Zone 1	Foreshore zone
2.	Zone 2	Commercial Zone
3.	Zone 3	Mixed Development Zone
4.	Zone 4	Conservation Zone
5.	Zone 5	Industrial Zone
6.	Zone 6	Tourism & Environmental Zone

Map: 19 Proposed Zoning Plan



### 7.3. Zoning Factor

#### The basis of develop the zone factor

In the density-based zoning, zone factor is the determined factor for extent of the development within each zone. The extent of development in the area can hold,

- Based on the environmental / cultural/ sensitivity of the area
- The infrastructure availability such as access roads, water supply, drainage, sewerage and etc to cater to the development
- The carrying capacity in terms of geographic condition, population density and etc

Therefore, the zone factor was calculated by considering the expected development intensity in terms of demand for space and availability of infrastructure facilities. In order to calculate the demand for space in 2030 based on the proposed densification the total expected residential population and commuter population was estimated.

Accordingly, in the futuristic view expected to accommodate the population is around 81000 according to the vision by 2030. The above forecasted population was distributed among the proposed six zones based on the land suitability analysis for the human habitation which was considered the aspects for the residential development such as away from sensitive areas, distance to roads, availability of public transport facilities, urban centers and social infrastructure facilities.

In addition to the residence population, the expected commuter population was estimated around 15000 in order to get the services according to the development proposals based on the vision. The expected commuter population was distributed among the proposed six zones based on the character and the available services by 2030.

To accommodate estimated population, the future space generation was calculated while considering the urban form, special concern areas (SEA declared area), environmental sensitivity areas and proposed development activities.

Therefore, the zone factor was calculated using the following formula:

$$\text{Zone Factor} = \text{Total Expected Floor Area} / \text{Available Developable Land Area}$$

The total expected floor area was calculated with the sum of residential floor space and service floor space (such as commercial, finance, tourism, recreational, health, education, administration

and industry) within each proposed six zones to accommodate estimated population. And, Available developable land area was calculated; deduction of conservation area and utilities areas from the total extent of every zone. Therefore, the zone factor for every zone are as follows:

Zone No	Zone factor	colour
Foreshore Zone	0.5	
Commercial Zone	1.5	
Mixed development Zone	1.0	
Conservation Zone	0.0	
Industrial Zone	0.5	
Environment & Tourism Zone	0.5	

Determination of Permissible Floor area for developments According to the Form 'A' 'B' in Schedule 6 to Part IV of the Extraordinary Gazette Notification No. 2235/54 dated Thursday 08th July 2021, the coefficients applicable to the Mannar Development Plan indicated by the Form A and B. In determining the open space of the building pertaining to the said permissible floor area, the form 'E' of the above Gazette is indicated and it is specified in the Mannar Development Plan, Form E.

**Table 7: Zone Factor Calculation**

Form A - Table of Permissible Floor Area Ratio for Zones

<b>Form A: Permissible floor Area Ratio</b>													
Land extent (Sq.M)	Zone factor = 0.50 - 0.74				Zone factor = 1.00-1.24				Zone factor = 1.50-1.74				
	Minimum Road Width				Minimum Road Width				Minimum Road Width				
	**6m	9 m	12m	15m or above	**6 m	9 m	12m	15m or above	**6 m	9 m	12m	15m or above	
150 less than 250	0.8	0.9	0.9	0.9	1.6	1.7	1.8	1.9	2.4	2.6	2.7	2.8	
250 less than 375	0.9	1.0	1.2	1.3	1.8	2.2	2.4	2.7	2.6	3.2	3.6	4.0	
375 less than 500	0.9	1.0	1.2	1.4	1.9	2.2	2.5	2.8	2.7	3.3	3.8	4.2	
500 less than 750	1.0	1.1	1.3	1.5	2.0	2.3	2.7	3.0	2.8	3.4	4.0	4.5	
750 less than 1000	1.0	1.2	1.4	1.7	2.1	2.4	2.9	3.3	3.1	3.6	4.3	5.0	
1000 less than 1500	1.1	1.3	1.5	1.8	2.2	2.5	3.0	3.6	3.2	3.8	4.6	5.5	
1500 less than 2000	1.1	1.4	1.7	2.0	2.3	2.7	3.4	4.0	3.4	4.0	5.0	6.0	
2000 less than 2500	1.2	1.5	1.8	2.1	2.4	2.8	3.5	4.2	3.5	4.2	5.2	6.5	
2500 less than 3000	1.2	1.6	2.0	2.4	2.5	3.2	4.0	4.7	3.6	4.4	5.5	7.0	
3000 less than 3500	1.3	1.7	2.1	2.5	2.6	3.4	4.2	5.0	3.7	4.6	6.0	7.5	
3500 less than 4000	1.4	1.8	2.2	2.6	2.8	3.6	4.3	5.3	3.8	4.8	6.3	7.7	
More than 4000	1.5	1.9	2.3	2.8	3.0	3.8	4.5	5.5	4.0	5.0	6.5	8.0	
UL - Unlimited													
Floor area allocated for parking facilities area not calculated for FAR													
Above Floor Area Ratio shall not be applicable for the zones where number of floors or FAR indicated under the zoning guidelines													

Above permissible FAR may be restricted under the development plan on the slope of the land
Clearance shall be taken from National Building Reserach Organization for the lands having slope morethan 11 <sup>0</sup>
* FAR more than or equal to 10.0 shall be permitted only for the roads having minimum of 12m ( from road center) Building Line, if not maximum FAR shall be limited to 9.0
**Minimum road width of 7m shall be considered for the roads identified as 7m wide road in the particular development Plan

## Form B - Number of Floors for 03m &amp; 4.5m Wide Roads.

Form B - Number of Floors for 3.0m & 4.5m wide Roads						
Minimum Road Width	Minimum Site Frontage	Plot Coverage*	Maximum Number of Floors			
			Zone Factor 0.5 - 0.74	Zone Factor 0.75 - 1.24	Zone Factor 1.25 - 3.49	Zone Factor 3.50 - 4.00
3.0m	6m	65%	1 (G)	2 (G+1)	3 (G+2)	3 (G+2)
4.5m	6m	65%	1 (G)	2 (G+1)	3 (G+2)	4 (G+3)

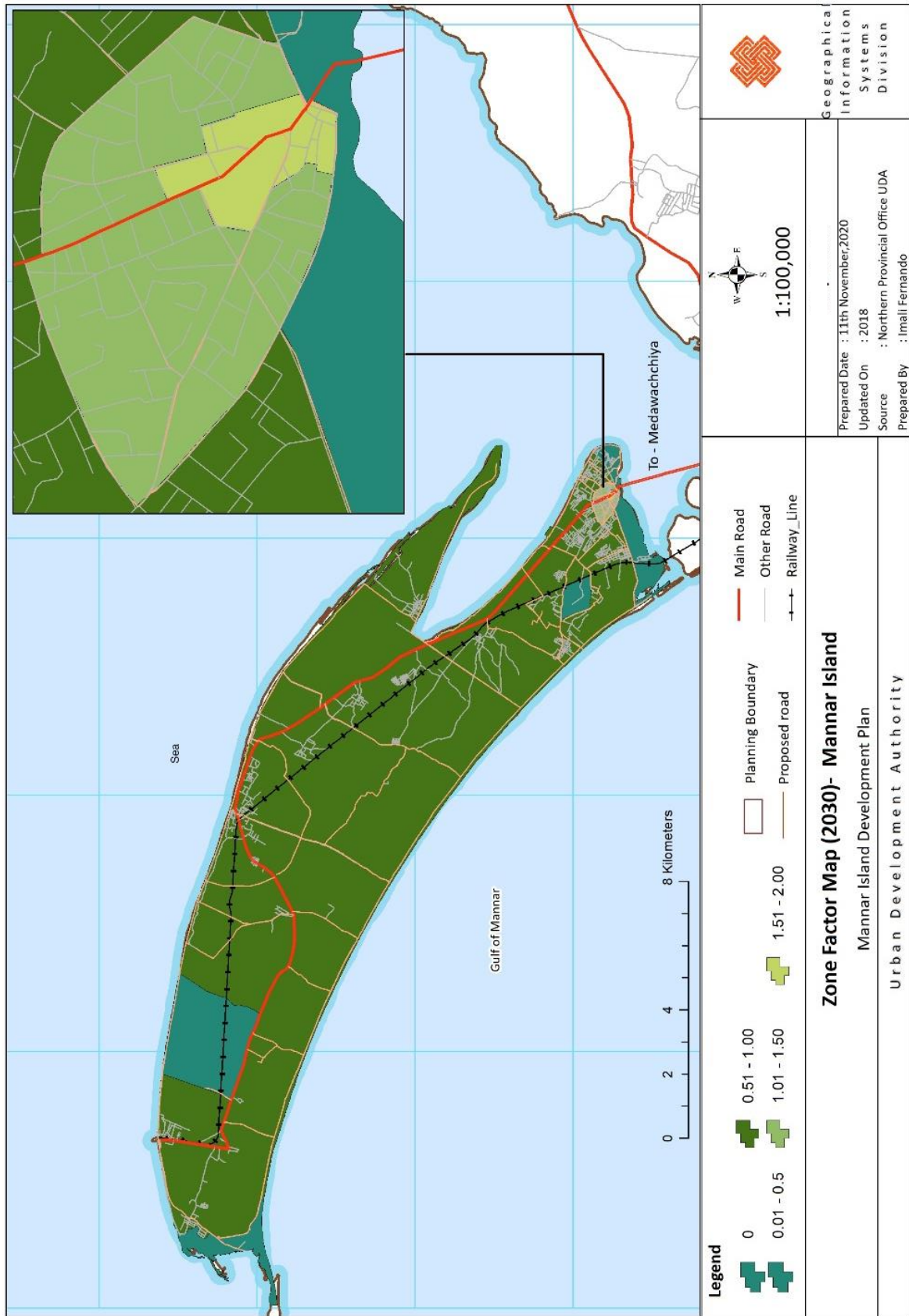
Number of floors are indicated including parking areas  
Number of units allowed for each road shall not be changed  
\* Where no plot coverage specified under the zoning guideliness

## Form E - Setbacks

Building Category	Building Height (m)	Minimum Site Frontage (m)	Plot Coverage *		Rear Space (m)		Side Space (m)		Light Well for NLV	
			Non Residential	Residential	When no NLV is taking this end	When NLV is taking this end	When no NLV is taking this end	When NLV is taking this end	Minimum width	Minimum Area
Low Rise	less than 7	6	80%**	65%	2.3m	2.3m	-	2.3m	2.3m	5 Sq.m
	7 less than 15	6	65%	65%	3.0m	3.0m	-	3.0m	3.0m	9 Sq.m
Inter Mediate Rise	15 less than 30	12	65%	65%	4.0m	4.0m	1.0m and 3.0m	4.0m	4.0m	16 Sq.m
Middle Rise	30 less than 50	20	65%	65%	4.0m	5.0m	3.0m both side	5.0m	5.0m	25 Sq.m
High Rise	50 less than 75	30	50%***	50%***	5.0m	6.0m	4.0m both side	6.0m	6.0m	36 Sq.m
	75 and above	Above 40m	50%***	50%***	5.0m	6.0m	5.0m both side	6.0m	6.0m	****

NLV - Natural Light & Ventilation  
Building Height - Height between access road level to roof top or roof level (Including parking floors)  
\* Where no Plot Coverage specified under the zoning regulations  
\*\* The entire development is for non-residential activities  
\*\*\* 65% plot coverage can be allowed only for the podium level not exceeding 20% of the tower height or 12 floors which ever is less  
\*\*\*\* Minimum area shall be increased by 1 Sq.m for every additional 3m height

Map: Zoning Factor Plan 2021-2030





## **7.4. Common guidelines for Planning Area**

This chapter describes the general guidelines for all declared zones in addition to the permissible uses and zoning guidelines that have been introduced in each zone of the proposed zoning plan as outlined in Chapter 8.

- 7.4.1 These guidelines apply to the entire area within the administrative limits of the Mannar Island Urban Development Area which has been declared as an Urban Development Area in the Extraordinary Gazette Notification No. 759/1 and 22.03.1993 under Section 3 of the Urban Development Authority Act No. 41 of 1978.
- 7.4.2 In addition to the provisions of this zoning plan, the Planning and Development Regulations applicable to any development work is regulated by the Gazette Notification No. 2235/54 dated 08th of July 2021. The said legalized Planning and Development Guidelines also apply to the Mannar Development Planning Area.
- 7.4.3 Floor area of every zone will be decided based on the schedule of form A, B & C (Zone Factor)
- 7.4.4 If the development or land falls within the two type of zones, where the major portion of such development or land covered in the particular zone; which will be the zone of the development or land.
- 7.4.5 If a land is situated at a boundary of two different zone with the different characters, then the first lot of the boundary of the zone can exercise the character of the next zone.

## **7.5. Permissible Height according to Visibility Analysis**

### **7.5.1. Purpose of the Visibility Protection**

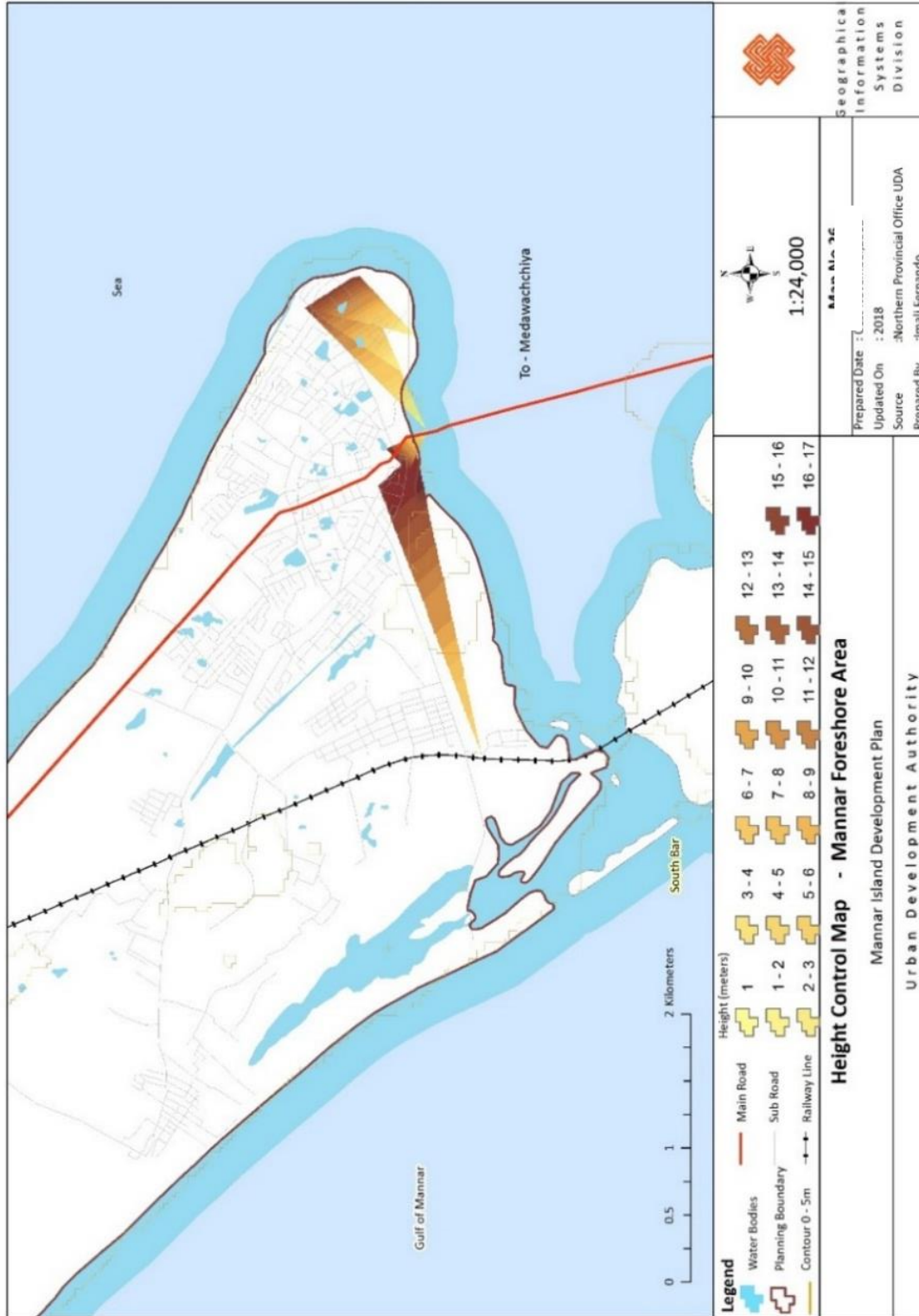
The visibility analysis was done based on futuristic urban form to define the permissible height of the area. In the current situation, mosque has identified as tallest building in the guide plan area (CBD Area). Which is nearly 62 ft. The height of the mosque was taken to do the visibility analysis for the development guide plan. The height of some particular sub zones will be defined based on the visibility analysis specially the sub zones which are falls nearby the mosque area. It is solely a statement of Planner's objective and vision for a particular area. It covers planning and designing policies, guidelines on land use, transport, environmental improvement, pedestrian and open space



system, building height, intensity of development, commercial, administrative, conservation and redevelopment of areas and buildings.

**7.5.2. Permissible height map for identified visibility protecting corridors**

*Map: Permissible height map for identified Visibility protecting corridor*



## Chapter 08

### Proposed Zoning Guideliness

The zoning plan of the Mannar Development Plan has identified six development zones and the development guideliness applicable to each zone are as follows:

#### 8.1. Guideliness and Permissible Uses for Proposed Zone

##### 8.1.1. Zone 01\_Foreshore Zone

The Zone 1 is confined as Mannar foreshore area which is acting as entry point to the Mannar Island. Especially the foreshore area consists with Dutch fort, Salt pan, historic valuable St. Lucia Church, Mosque, settlements and fish market. There is a need to enhance the experience of entrance which has symbolic character to be preserved. Also, it has such marine related activities which have to be develop in future as well.

The guideliness and permissible uses of Foreshore zone of Mannar zoning plan have listed below in table;

*Table 8: Zoning guideliness for foreshore Zone*

a.	Zone Boundaries (Coordinates)	Refer the Annexure No:13
b.	Zoning Factor	0.50
c.	Permissibe height limits	<ol style="list-style-type: none"> <li>1. Be height should be consistent with the height of existing colonial building of Dutch Fort on the same block; should not exceed the existing height of Dutch Fort building which is 6m. The immediate surroundings of the Dutch Fort should be constructed with maximum height of 4.5m.</li> <li>2. Any construction allowed within the visibility corridor shall be followed the maximum height identified by visibility analysis (as St. Lucia Church is taken as a point for visibility analysis _Refer the Height control map)</li> <li>3. The areas which are not falls according to visibility analysis; the authority will define the height by</li> </ol>

		considering the adjacent points which are included in visibility analysis.
d.	Permissible Maximum plots coverage	Commercial : 80% Residential : 60% Others : 60%
e.	Other details regarding the zone	<ol style="list-style-type: none"> <li>1. New massive developments not allowed in the foreshore area to maintained as view of sea; see through or live fencing can be used/allowed for boundary demarcation with maximum eight of 2m <ul style="list-style-type: none"> <li>• The maximum height of the concrete post is 2m from the ground level and the size of the concrete post is 6” x 6”.</li> </ul> </li> <li>2. Greenery: Introduce greenery facts to reduce the urban heat. <ul style="list-style-type: none"> <li>• Edge of the foreshore area and beginning of sea area will have tree line with the maximum height of 4.5m.</li> <li>• New developments are not allowed within the 9m buffer zone of the Baobab tree to preserve the colonial plant species of Mannar.</li> </ul> </li> </ol> <p>(Refer the Annexure No 19: Buffer zone of Baobab tree)</p>

**Table 9: Permissible uses for Foreshore Zone**

No	Permissible uses	Minimum Extent of the land (sqm)
<b>Commercial</b>		
i.	Retail shop	150
ii.	Fish/meal market	
iii.	Ornamental shops	
iv.	Gift center	
v.	Art gallery	
<b>Residential</b>		
i.	Single Units House	150
<b>Education</b>		
i.	Government Schools	2000
ii.	Montessori	500
iii.	Tuitions center < 25 (students)	500
<b>Health</b>		

i.	Primary medical care unit	500
ii.	Pharmacy	
iii.	Dispensary	
<b>Institute</b>		
i.	Government institutions/office)	500
<b>Social Service</b>		
i.	Playground	4000
ii.	Recreation	150
iii.	Community center	150
<b>Tourism</b>		
i.	Hotels < 10 rooms	1000
ii.	Small hut & Cabanas	1000
<b>Industry</b>		
i.	Micro scale Industries	300

Refer the Annexure No 20: View from Nature Park and left side of the Mannar Island and Right side of the Mannar Island

### 8.1.2. Zone 02 Commercial Zone

Zone 2, proposed to develop as high dense development activities focus to commercial activities with in this zone. And, character of the zone will be maintained as commercial with the trade and business activities in order to deliver the services to the Mannar Island and neighborhood towns. Further, core area defined as development guide plan area within this proposed zone 2 which is differ from zone 2 based on the character and proposed development activities.

The guideliness and permissible uses of Commercial zone of Mannar zoning plan have listed below in table;

**Table 10: Zoning guideliness for Commercial Zone**

a.	Zone Boundaries (Coordinates)	Refer the Annexure No:14
b.	Zoning Factor	1.50
c.	Permissibe height limits	Based on the zoning factor, the height will be permitted.
d.	Permissible Maximum plots coverage	Commercial : 80% Residential : 60% Others : 60%
d.	Other details regarding the zone	-

Table 11: Permissible Use for Commercial Zone

No	Permissible uses	Minimum Extent of the land (sqm)
<b>Commercial</b>		
i.	Retail shop	150
ii.	wine shop	
iii.	Stores <100 sq.m (floor area)	
iv.	Art gallery	
v.	Gift center	
vi.	Ornamental shops	
vii.	Shows room	500
viii.	Fish/meal market	300
ix.	Vegetable market	300
x.	Whole sale shop	500
xi.	Supermarket	1000
xii.	Fuel station	1000
xiii.	Restaurants	500
xiv.	Hotel	1000
<b>(a.) Residential</b>		
i.	Single Units House	150
ii	Apartments	1000
<b>(b.) Education</b>		
i.	Montessori	300
ii.	Tuitions center >25 (students)	300
<b>(c.) Health</b>		
i.	Primary medical care unit	500
ii.	Pharmacy	150
iii.	Dispensary	150
iv.	Private Hospital	1000
v.	Laboratory	150
<b>(d.) Institute</b>		
i.	Government institutions/office)	500
ii.	Financial institutions	500
iii.	Professional office	150
<b>(e.) Social Service</b>		
i.	Playground	4000
ii.	Recreation	250
iii.	Community center	150
iv.	Library	150
v.	Day care center	250
vi.	Cultural hall	2000
vii.	Gymnasium	150
viii.	Spa Center	
ix.	Beauty Parlors	

x.	Theaters	1000
<b>(f.) Tourism</b>		
i.	Hotels < 10 rooms	1000
ii.	Rest house/Restaurants	1000
iii.	Tourist Information Centre	150

\* This guidelines is not applicable for the guide plan available area

### 8.1.3. Zone 03\_Mixed Development Zone

Proposed zone 3 is moderate density of the development within Mannar Island which is proposed to develop as mixed use of the developments within this zone in terms of attract and encourage the developments this zone. Therefore, by 2030 planned to encourage the development activities in terms of the scattered development whole over the Island while utilize the potential resources as coastal belt with sandy beaches, sand dunes patches, wind availability, marine resources and strategic investments on the energy development and fishery development.

The guideliness and permissible uses of Mixed Development zone of Mannar zoning plan have listed below in table;

**Table 12: Zoning guideliness for Mixed Development zone**

a.	Zone Boundaries (Coordinates)	Refer the Annexure No:15
b.	Zoning Factor	1.00
c.	Permissibe height limits	Based on the zoning factor, the height will be permitted and within the Sustainable Energy Authority (SEA) declared area of Pradeshiya Sabha area building height subject to SEA.
d.	Permissible Maximum plots coverage	Commercial : 80% Residential : 60% Others : 60%
e.	Other details regarding the zone	<ol style="list-style-type: none"> <li>1. If any development comes under SEA declared area (Gazette notification No.1858/2 on 2014.04.17) clearance should be obtained from SEA.</li> <li>2. If any development comes within 300m from coastal area, clearance should be obtained from CCD.</li> </ol>

		<p>3. If any development comes within SEA declared area, clearance should be obtained from SEA.</p> <p>4. If any development comes above 372m<sup>2</sup> (4000sq.ft), Road width should be minimum 9m.</p> <p>5. In sand dune area, if any structures comes more than 150 sq.m, plot size should be more than 80P and plot coverage should not less than 50%.</p> <p>(Refer the Annexure No 21: Sand dune Area Map &amp; Cross Section for Southern Coastal Line of Mannar Island)</p>
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**Table 13: Permissible Uses for Mixed Development Zone**

No	Permissible uses	Minimum Extent of the land (sqm)
<b>Commercial</b>		
i.	Retail shop	250
ii.	Fish/meal market	1000
iii.	Vegetable market	
iv.	Whole sale shop	
v.	Supermarket	
vi.	wine shop & Bar	150
vii.	Stores < 500 sq.m	1000
viii.	Fuel station	1000
ix.	Art gallery	250
x.	Gift center	
xi.	Ornamental shops	
xii.	Shows room	1000
xiii.	Service station	
xiv.	warehouse	
<b>Residential</b>		
i.	Single Units House	250
ii	Apartments	2000
iii.	unit house	1000
<b>Education</b>		
i.	Montessori	500
ii.	Tuitions center >25 students	
iii.	School	2000
iv.	Tertiary	5000
v.	Research institute	1000
<b>Health</b>		
i.	Primary medical care unit	500
ii.	Pharmacy	250
iii.	Dispensary	200
iv.	Laboratory	150



v.	Private Hospital	5000
vi.	Ayurvedic hospital	5000
vii.	Divisional Hospital	5000
<b>Institute</b>		
i.	Government institutions/office)	500
ii.	Financial	
iii.	professional	
iv.	Quaters	
<b>Social Service</b>		
i.	Playground	4000
ii.	recreation	500
iii.	Community center	
iv.	Sport club	
v.	Library	1000
vi.	Day care center/Elders home	
vii.	Cultural hall	2000
viii.	Gymnasium	500
ix.	Spa Center	
x.	Beauty Parlors	2000
xi.	Theaters	
xii.	Cemetery/Crematorium/	5000
<b>Tourism</b>		
i.	Hotels > 10 rooms	2000
ii.	Cabanas	
iii.	Rest house/Restaurants	1000
iv..	Tourist Information Centre	250
v.	Circuit bungalow	1000
<b>Industry</b>		
i.	Micro scale Industries	1000
ii.	Medium scale Industries	1000
iii.	Ware House	1000

#### 8.1.4. Zone 04\_Conservation Zone

Proposed demarcated zone 4 is low density development which is required to be conserve and preserve because of the underground fresh water availability which area owned and maintained by National Water Supply and Drainage Board due to extract the water for water supply Purpose. Identified area (zone 4) is one and only fresh quality of water ource available within Mannar Urban Council and at present water supply distributed from this water source about 2250 m<sup>3</sup> per day.

The guideliness and permissible uses of Conservation zone of Mannar zoning plan have listed below in table;

**Table 14: Zoning guidelines for Conservation Zone**

a.	Zone Boundaries (Coordinates)	Refer the Annexure No:16
b.	Zoning Factor	0.0
c.	Permissible height limits	Based on the zoning factor the height will be permitted
d.	Permissible Maximum plots coverage	60% plot coverage will be permitted for this Zone
d.	Other details regarding the zone	For all kind of development, the clearance should be obtained from NWS&DB

**Table 15: Permissible Uses for Conservation Zone**

No	Permissible uses	Minimum Extent of the land (sqm)
<b>Commercial</b>		
i.	Retail shop	150
<b>Residential</b>		
i.	Single Units House	150
<b>Institute</b>		
i.	Government institutions/office,Water related only)	500

### 8.1.5. Zone 05 Industrial Zone

Expected nature of zone 5 is moderate density development which will be maintained as predominantly industrial. The development plan itself demands a prominent area for industries through the goals. Specially to accommodate fishery related industries and solar park. Therefore, around 5 % of the total land here by identified as the zone for prominent industrial activities.

The reason behind the selection of this particular location is followed:

1. Pesalai town ship will be facilitated with a massive fishery harbour. This would generate more fish cultivation so fishery related industries. There so it's ideal to have some place near by the harbour for fishery related industries for easy access. Since fishery related industries could cause enormous amount of public inconvenient, it should be away from the dense populated area or any nearby residential settlements. Proposed area for zone -5 is almost no men area; in actual figures, total residential dense is less than 2% of the total proposed land.

2. Comparatively Pesalai, Thalaimannar and the surrounding fish camps are identified as the highest fish producing areas inside the Mannar Island. So, it's rational to have a place which could nearby to all those fish camps.
3. Also, Pesalai area has been proposed as the second order town center through the development plan. So, it's ideal to have area near by a township to get the necessary facilities.
4. Access is very important when proposing an industrial based zone. In this proposed zone, it's been take in to account that there are two nearby railway stations which are Pesalai and Thalaimannar. Also, the one and only 'A' grade road available inside the Mannar Island which is A14 touch the edge of the proposed zone – 5. Also, there is a proposal of northern coastal road and proposed improvement of roads inside the demarcated zone – 5. (Refer transport plan map \_Volume I)
5. Land availability is another decisive factor on zone – 5. More than 98% of the proposed land area is developable land, notability there is no any settlements.
6. Basic infrastructures for any kind of developments are already available in the boundary of the proposed zone – 5. Infrastructures such as water, electricity and communication are already available in the area. Further extension of these infrastructure facilities won't cost much for a developer since all of them are around.

The guideliness and permissible uses of Industrial zone of Mannar zoning plan have listed below in table;

**Table 16: Zoning guideliness for Industrial Zone**

a.	Zone Boundaries (Coordinates)	Refer the Annexure No:17
b.	Zoning Factor	0.50
c.	Permissibe height limits	Based on the zoning factor the height will be permitted

d.	Permissible Maximum plots coverage	<table border="1"> <thead> <tr> <th>Type of the Development</th> <th>Maximum Plot Coverage</th> </tr> </thead> <tbody> <tr> <td>Industries</td> <td>60%</td> </tr> <tr> <td>Quarters</td> <td>60%</td> </tr> <tr> <td>Stores &gt; 100 sq.m</td> <td>60%</td> </tr> <tr> <td>Day Care centre</td> <td>NCPA</td> </tr> <tr> <td>Bank</td> <td>80%</td> </tr> <tr> <td>Ware houses</td> <td>60%</td> </tr> <tr> <td>Retail shops</td> <td>80%</td> </tr> </tbody> </table>	Type of the Development	Maximum Plot Coverage	Industries	60%	Quarters	60%	Stores > 100 sq.m	60%	Day Care centre	NCPA	Bank	80%	Ware houses	60%	Retail shops	80%
		Type of the Development	Maximum Plot Coverage															
		Industries	60%															
		Quarters	60%															
		Stores > 100 sq.m	60%															
		Day Care centre	NCPA															
		Bank	80%															
		Ware houses	60%															
Retail shops	80%																	
NCPA * for the plot coverage & general guideline refer National guidelines for child day care centres in Sri Lanka by National Child Protection Authority.																		
e.	Other details regarding the zone	<ol style="list-style-type: none"> <li>1. No development shall be permitted without solar panel installations on the roof top area for all kind of industries and warehouses.</li> <li>2. No ground water extraction shall be permitted.</li> <li>3. Internal service roads should be maintaining the minimum width of 20 feet for industries and warehouses.</li> <li>4. Green building certification should be obtained.</li> <li>5. Clearance should be obtained from CEA, CCD and relevant authorities if necessary</li> </ol>																

**Table 17: Permissible Uses for Industrial Zone**

No	Permissible uses	Minimum Extent of the land (sqm)
<b>Commercial</b>		
i.	Retail shop	150
ii.	Stores >100 sq.m	300
<b>Institute</b>		
i.	Bank	300
ii.	Quarters	
<b>Social Service</b>		
i.	Day care center	500
<b>Industry</b>		
i.	Medium scale Industries	1000
ii.	Large scale industries	3000
iii.	Ware House	2000

### 8.1.6.Zone 06\_Environment & Tourism Zone

The Zone 6 is an ideal location having less density which reminds the historical evidences that we had connection with South India especially had connection with Rameshwaram. The zone is acting as Mannar Island's destination point which locates near to Adam's bridge. In addition to that bird

watching, mangrove patch, huge sand dunes and natural beach can be experienced. There is a need to develop this place as a tourism destination in future.

The guidelines and permissible uses of Environmental & Tourism zone of Mannar zoning plan have listed below in table;

**Table 18: Zoning guidelines for Environment and Tourism Plan**

a.	Zone Boundaries (Coordinates)	Refer the Annexure No:18
b.	Zoning Factor	0.5
c.	Permissible height limits	Based on the zoning factor the height will be permitted
d.	Permissible Maximum plots coverage	60% plot coverage will be permitted for this Zone
e.	Other details regarding the zone	<ol style="list-style-type: none"> <li>1. Approvals should be obtain from relevant agencies (CEA and Department of Wild Life).</li> <li>2. If any development comes within 300m from coastal area, clearance should be obtained from CCD.</li> <li>3. If any development comes within the sand dunes area, clearance should be obtained from CEA.</li> </ol>

**Table 19: Permissible Uses for Environment and Tourism Plan**

No	Permissible uses	Minimum Extent of the land (sqm)
<b>Commercial</b>		
i.	Super market	150
ii.	Wine shop	500
iii.	Ornamental shops	150
iv.	Gift center	
v.	Art gallery	
<b>Residential</b>		
i.	Single Units House	150
<b>Education</b>		
i.	Research Institute	500
<b>Social Service</b>		
i.	Gymnasium	300
ii.	Recreation	
iii.	Spa center	
<b>Tourism</b>		
i.	Hotels >10 rooms	2000
ii.	Cabanas	5000

iii.	Circuit bungalow	1000
iv.	Restaurants	1000
v.	Tourist Information Centre	1000

## 8.2 Development Guide Plan

### 8.2.1. Introduction

The Development Guide Plan area has specific guidelines of the zoning plans and building guidelines, introduced under section 39 of the planning and building guidelines for the core area. The zoning plans and building guidelines define special requirements and conditions designed for the Core Area as it is selected as Development Guide Plan area especially which falls under the commercial zone, while the Development Guide Plan refer to such guidelines modified to suite local conditions in terms of environmental characteristics, commercial characteristics, administrative characteristics, architectural design and urban form. In addition to that visibility analysis was done based on futuristic urban form to define the permissible height. In the current situation mosque has identified as tallest building in the guide plan area. The height of the mosque was taken to do the visibility analysis for the development guide plan.

The height of some particular sub zones will be defined based on the visibility analysis specially the sub zones which are falls nearby the mosque area. It is solely a statement of Planner's objective and vision for a particular area. It covers planning and designing policies, guidelines on land use, transport, environmental improvement, pedestrian and open space system, building height, intensity of development, commercial, administrative, conservation and redevelopment of areas and buildings.

**Figure 5: Existing Situation of Development Guide Plan Area of Mannar Island**



Source: Prepared by UDA (NP)

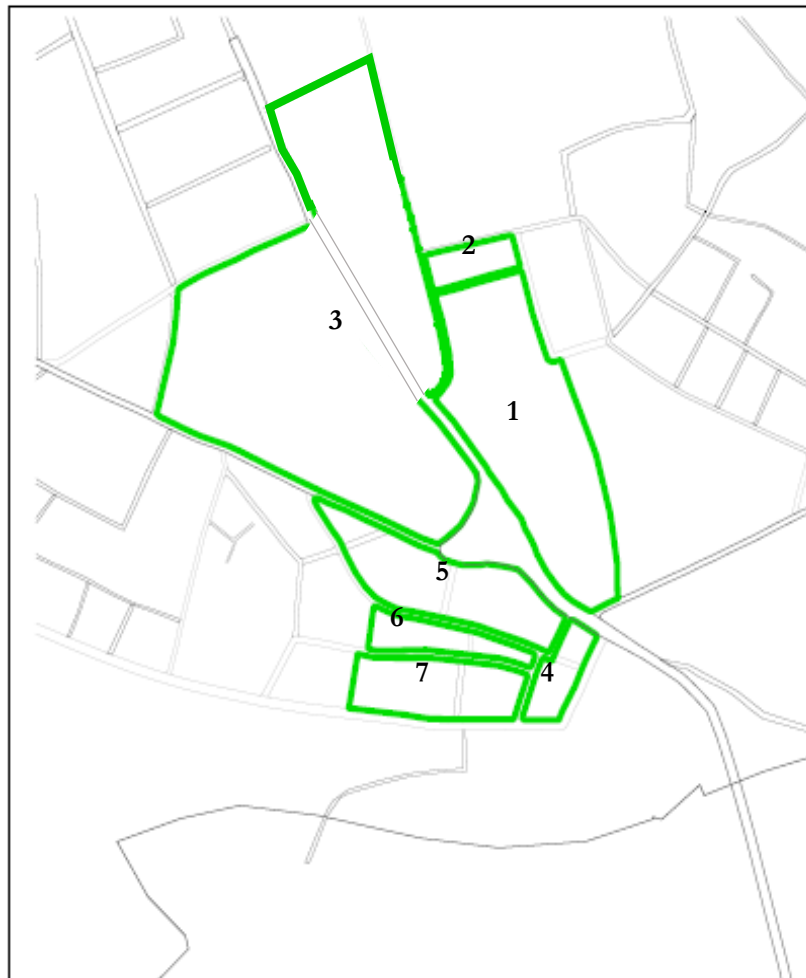


The purpose of the Development Guide Plan is to provide direction to investors and land owners on what land can be used for future development. It is the regulatory framework reference for development control at the operational level of the planning system which will guide for the sustainable development in future.

In the existing situation Sub Zone 1 consists of commercial and public amenities, Sub Zone 2 consisted with commercial and Children Park and Sub Zone 3 consists with institution and Sub zone 4 and 5 consisted with commercial, Sub Zone 6 consists of commercial plus religious activity and the Sub Zone 7 consists of commercial and Residence.

The land extent, plot coverage and Floor Area Ratio details of the existing situation is mentioned as below Map and table.

**Figure 6: Identified Sub Zone - Development Guide Plan Area**



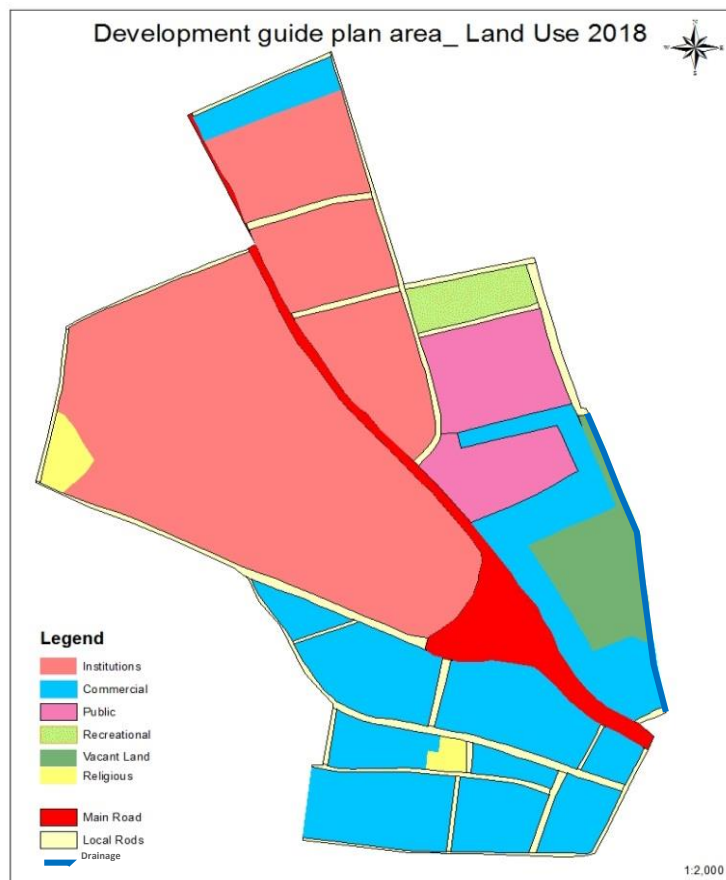
Source: Prepared by UDA (NP)

**Table 20: Details of land extent, plot coverage and Floor Area Ratio**

Zone	Use	Land extent (sq.m)	Plot coverage	FAR
1	Commercial + Public amenities	19408	53	0.15
2	Commercial + Children Park	1945	81	0.8
3	Institution	40710	38	0.53
4	Commercial	2123	58	0.58
5	Commercial	8292	81	1.77
6	Commercial + Religious	2620	90	2.13
7	Commercial + Residence	5539	47	0.58

Source: Prepared by UDA (NP)

The existing land use of the development guide plan area is consisted with nearly 44.66% of institution and 27.53% of commercial uses. The rest of the parts are consisted with public, religious, recreational, vacant land, Main Road and local Roads.

**Figure 7: Land use Map of Development guide plan area**

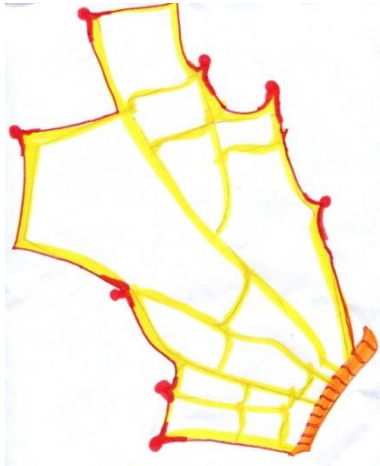
Source: Prepared by UDA (NP)

**Table 21: Existing land use of the development guide plan area**

Land use	Extent(km <sup>2</sup> )	%
Institution	0.044	44.66
Commercial	0.027	27.53
Public	0.008	7.97
Religious	0.001	1.35
Recreational	0.002	1.97
Vacant Land	0.004	4.47
Main Road	0.005	5.54
Local Road	0.006	6.52
Total	0.099	100.00

Source: Prepared by UDA (NP)

### 8.2.2. Vision for Development Guide Plan



The vision for the development guide plan is “**CROWN OF CITY**”. The Mannar Town is functioning as Administrative Capital for entire Mannar District and development guide plan area is having high concentration of commercial activities.

In future this development guide plan area will act as crown of the Mannar especially in terms of admin, institution and commercial. Not only that but also this development guide plan area will function as service provider for entire Mannar District.

### 8.2.3. Brief Description of Development Guide Plan Area

According to the zoning plan; Zone 2, proposed to develop as high dense development activities focus to commercial activities with in this zone. And, character of the zone will be maintained as commercial with the trade and business activities in order to supply the services to other towns. Within the commercial zone; the development guide plan area has defined which is having 0.1 sq.km land extent.

**Figure 8: Identified Location of Development guide plan Area**

Source: Prepared by UDA (NP)

#### 8.2.4. SWOT Analysis for Development Guide Plan area

##### STRENGTHS

1. Increasing demand of commercial activities
2. Higher percentage (67%) of state land
3. Service provider for entire Mannar district (Administrative, Trade and commerce, Utility and Marketing services)
4. Ongoing projects (CTB and Private Bus stand) – ( 16 bus bays with other related facilities)
5. Entry point of the Mannar Island

##### WEAKNESSES

1. Horizontal development with scattered manner for institutions (Ground floor building 22, G+1= 7, G+3=1)
2. Absence of parking space specially in commercial area
3. Higher plot coverage especially in commercial areas.

<b>Plot coverage</b>	<b>Building (%)</b>
100	49
80-99	14
<80	37

4. Less plot size in commercial area

<b>Plot size (P)</b>	<b>%</b>
<2	30
2-4	31
4-6	16
>6	23

5. Narrow roads due to violation of guidelines (Street line and building line)

6. Inconvenient environment (absence of greenery, shady, walkability)

## **OPPORTUNITIES**

1. Proposed projects (Redevelopment of public market, Development of commercial complex).

### **8.2.5. Permissible uses, Maximum Height and Guidelines**

#### **▪ SUB ZONE: 1**

According to the proposed development guidelines the sub zone 1 will have entirely commercial and public amenities character with green space including utility provision. As this is the main entry point of Urban Council area; it is a need to give proper sense to this place. The available land area for the development is 14706 m<sup>2</sup>. Currently CTB and Private Bus stand project has been started and shopping complex is proposed to construct in future.

i. Permissible Uses

- a. CTB and Private Bus stand
- b. Shopping Mall/ Commercial Complex
- c. Public Parking area

ii. Maximum Height of the building : 12-15 m

- iii. Guidelines
  - a. Minimum Plot size should be 80 Perch
  - b. The maximum Plot Coverage is 60%
  - c. Green Space including utility provision should have 40%
  - d. Boundary wall is not allowed and boundary shall be demarcated with soft landscape
  - e. Required parking shall be provided within the premises (*Refer the general Guidelines*)
  - f. Vehicle circulation should be shown in the plans
  - g. Advertisement board except name of the building are not allowed in this zone
  - h. Green belt should be maintained along the 1m reservation of the canal for both side
  - i. Building line (*Refer the Proposed Road Width Table No 22 & 23* )

- **SUB ZONE: 2**

Also the current trend of the sub zone 2 has encroached by haphazard development of small retail shops and less attractive of children park area as this place need to be regenerate with the plot size and plot coverage of the area. So this zone is meant for commercial activity with high plot coverage and attractive children park.

- i. Permissible Uses
  - a. Commercial
  - b. Children Park
- ii. Maximum Height of the building : 6-9 m
- iii. Guidelines
  - a. Minimum Plot size should be 6 Perch
  - b. The maximum Plot Coverage is 80%
  - c. Boundary wall is not allowed and boundary shall be demarcated with soft landscape
  - d. Parking should be 50% and required parking should be provided within the premises
  - e. Masonry boundary wall is not allowed for children park

- f. Prior approval should be obtained from the UDA before displaying advertisement board
- g. Building line (*Refer the Proposed Road Width Table No 22 & 23* )

▪ **SUB ZONE: 3**

Administrative complex, financial institution and offices for professionals will be permitted in future through the development guide plan. Even though Mannar Town is functioning as administrative capital of the entire Mannar District so it a need to maintain the character of sub zone 3. Also it is a main focal point to achieve the Mannar's development Guide Plan's vision as well and also the available developable land area 32162 m<sup>2</sup>.

- i. Permissible Uses
  - a. Administrative Complex
  - b. Financial Institution
  - c. Professional Office
- ii. Maximum Height of the building : 12-15 m
- iii. Guidelines
  - a. Minimum Plot size- 20 Perch
  - b. The maximum Plot Coverage is 60%
  - c. Green Space including utility provision should have 40%
  - d. See through boundary walls are recommended and 1/3 of the boundary wall height shall be masonry wall.
  - e. Existing historical building should be preserved.
  - f. New residential development should not be allowed.
  - g. Required parking should be provided within the premises
  - h. Green building certification should be obtained
  - i. Building line (*Refer the Proposed Road Width Table No 22 & 23* )

▪ **SUB ZONE: 4**

Existing character of the zone is commercial development which is consist with 2 lot as Sathosa building which under construction and Public market which is in poor condition therefore through this plan planned to redevelop the market complex with the provision of basement parking.



- i. Permissible Uses
  - a. Commercial complex
  - b. Market Complex
- ii. Maximum Height of the building : 12m-15m
  - a. Commercial complex – 15m
  - b. Market Complex – 12m
- iii. Guidelines
  - a. Sub division not allowed
  - b. Plot Coverage- 80%
  - c. Green Space including utility provision - 20%
  - d. Boundary wall not allowed
  - e. Required parking should be provided within the Building line
  - f. Green building certification should be obtained
  - g. Building line (*Refer the Proposed Road Width Table No 22 & 23*)

▪ **SUB ZONE: 5**

Highly Commercial developments agglomerated within this zone due to the available B class access road with high dense developments. And there is a huge demand for the commercial development trends in near future. Therefore proposed to develop this zone as commercial development with the following guide.

- i. Permissible Uses
  - a. Commercial activity
  - b. Financial institution
- ii. Maximum Height of the building : 12m
- iii. Guidelines
  - a. Minimum Plot Size – 6 Perch
  - b. Plot Coverage- 80%
  - c. Green Space including utility provision - 20% with green land scape
  - d. Boundary wall not allowed
  - e. Required 50% parking should be provided within the Building line. (Service charges to be paid for local Authority vehicle for required 50% parking).
  - f. Building line (*Refer the Proposed Road Width Table No 22 & 23*)

**▪ SUB ZONE: 6**

Highly Commercial developments agglomerated within this zone with the small plot size about below 2-4 perches land with 95% plot coverage due to the available access road for both side of the building which is front and back yard access. And there is a considerable demand for the commercial development. Therefore proposed to develop this zone as commercial development with the following guide.

- i. Permissible Uses
  - c. Commercial activity
  - d. Financial institution
- ii. Maximum Height of the building : 17 m
- iii. Guidelines
  - a. Minimum Plot Size – 6 Perch
  - b. Plot Coverage- 80%
  - c. Green Space including utility provision - 20% with green land scape
  - d. Boundary wall not allowed
  - e. Required parking shall be accommodate in public parking in Zone 1 and required service charges to be paid for local Authority.
  - f. Roof mounted advertisements/ signs are prohibited except name of the building.
  - g. Building line (*Refer the Proposed Road Width Table No 22 & 23* )

**▪ SUB ZONE: 7**

At present, this zone consisting with the commercial and residential development with the poor condition and 65% of the plot coverage. This zone situated and compatible with the foreshore development area. Therefore, proposed to develop this zone including the commercial and hotels development to cater the foreshore tourism development demand as well and following guide to be considered.

- iv. Permissible Uses
  - e. Commercial activity
  - f. Hotels and restaurants

- v. Maximum Height of the building : 12m
- vi. Guidelines
  - a. Plot size: 6 Perch
  - b. Plot Coverage- 80%
  - c. Green Space including utility provision - 20%
  - d. Required parking should be provided within the Premises
  - e. New residential development should not be allowed.
  - f. Boundary wall – See through boundary walls are recommended and 1/3 of the boundary wall height shall be masonry wall.
  - g. Building line (*Refer the Proposed Road Width Table No 22 & 23* )

## Chapter 09

### Proposed road width, Building Line

The road network of the Mannar Island area is maintained by various institutions such RDA, RDD & LA (UC and PS). In the Local Authorities roads which are categorized as 7m, 9m, 12m and above 12m roads. The details of the roads are indicated in the following table.

#### 9.1. Proposed road widths are in operation

*Table 22: Proposed Road width & Building line\_UC*

"Serial No"	Road ID	Road Name	"Proposed Road Width" (m)	"Street line" (m)	"Building line" (m)
1	C0001	Thalaimannar Main Road	15	7.5	15
2	CL0001	Thalvupadu - Mannar Road	15	7.5	7.5
3	CL0002	Fish Market Road	12	6	6
4	CL0003	Internal Road	7	3.5	6
5	CL0004	Centre Bazar Road	7	3.5	6
6	CL0005	Internal Road	7	3.5	6
7	CL0006	Fishermen Society's Building Road	7	3.5	6
8	CL0007	2nd Shop Road	7	3.5	6
9	CL0008	Internal Road	7	3.5	6
10	CL0009	Internal Road	7	3.5	6
11	CL0010	Internal Road	7	3.5	6
12	CL0011	Internal Road	7	3.5	6
13	CL0012	Theater Road	7	3.5	6
14	CL0013	Internal Road	7	3.5	6
15	CL0014	Internal Road	7	3.5	6
16	CL0015	Internal Road	7	3.5	6
17	CL0016	Uppala Road	7	3.5	6
18	CL0017	Multi Purpose Building Road 2nd Cross Street 1st Lane	7	3.5	6
19	CL0018	Internal Road	7	3.5	6
20	CL0019	Internal Road	7	3.5	6
21	CL0020	Multi Purpose Building Road 2nd Cross Street	7	3.5	6
22	CL0021	Multi Purpose Building Road	9	4.5	6
23	CL0022	Multi Purpose Building Road 1st Cross Street	7	3.5	6

24	CL0023	Post Office Road			6
25	CL0024	Vairavar Kovil Road	9	4.5	6
26	CL0025	Railway Station Road	12	6	6
27	CL0026	Field Street	12	6	6
28	CL0027	Pettah 2nd Cross Street	9	4.5	6
29	CL0028	Pettah 3rd Cross Street	7	3.5	6
30	CL0029	Pettah T Road	7	3.5	6
31	CL0030	Pettah 4th Cross Street	9	4.5	6
32	CL0031	Thalaimanar Main Road - 1st Cross Street by road	7	3.5	6
33	CL0032	Thalaimannar Main Road - 1st Cross Street	7	3.5	6
34	CL0033	Field Street Cross Road	7	3.5	6
35	CL0034	6th Cross Street	7	3.5	6
36	CL0035	Thalaimannar Main Road - 2nd Cross Street	7	3.5	6
37	CL0036	Thalaimannar Main road 2nd Cross Street by road	7	3.5	6
38	CL0037	Thalaimannar Main Road - 3rd Cross Street	7	3.5	6
39	CL0038	Thalaimannar Main Road - 4th Cross Street	7	3.5	6
40	CL0039	7th Cross Street	7	3.5	6
41	CL0040	Internal Road	7	3.5	6
42	CL0041	Hospital Road	12	6	15
43	CL0042	Rainbow Road	7	3.5	6
44	CL0043	St.Joshep Road 1st Cross Road	7	3.5	6
45	CL0044	St.Joshep Road	7	3.5	6
46	CL0045	Convent road 1st cross Street	7	3.5	6
47	CL0046	Convent Road	12	6	6
48	CL0047	Lotus Pond Road	7	3.5	6
49	CL0048	Internal Road	7	3.5	6
50	CL0049	Internal Road	7	3.5	6
51	CL0050	Internal Road	7	3.5	6
52	CL0051	Internal Road	7	3.5	6
53	CL0052	Internal Road	7	3.5	6
54	CL0053	Sebastiyar Road Convent Road joint Road	7	3.5	6
55	CL0054	Convent School Road	9	4.5	6
56	CL0055	Convent School Road 1st Cross Street	7	3.5	6

57	CL0056	Old ACLG Office Road (Annai Thiresa Road)	7	3.5	6
58	CL0057	4th Cross Street of Hospital Road - Convent Behind Road	7	3.5	6
59	CL0058	5th Cross Street of Hospital Road - Next Road of Cont.B.Road	7	3.5	6
60	CL0059	Internal Road	7	3.5	6
61	CL0060	7th Cross Street of Hospital Road - RDS Building Road	7	3.5	6
62	CL0061	8th Cross Street of Hospital Road (Perukkamaram Road)	7	3.5	6
63	CL0062	Internal Road	7	3.5	6
64	CL0063	Lady's Hostel Road	7	3.5	6
65	CL0064	Donbosco Road	7	3.5	6
66	CL0065	Velankanni Road	7	3.5	6
67	CL0066	Thoma Road	7	3.5	6
68	CL0067	Thaninayagam Adikal Road	12	6	6
69	CL0068	Christhu arasar road	7	3.5	6
70	CL0069	Rayappar Road	7	3.5	6
71	CL0070	St.Sebastiyar kovil suruva road	7	3.5	6
72	CL0071	St.Anthoniyar Road	7	3.5	6
73	CL0072	Pavuladiyar Road	7	3.5	6
74	CL0073	Internal Road	7	3.5	6
75	CL0074	St.Sebastiyar Kovil beside Road	7	3.5	6
76	CL0075	St.Sebastiar kovil behind road 1st Cross	7	3.5	6
77	CL0076	St.Sebastiar kovil behind road	7	3.5	6
78	CL0077	Thaninayagam Adikal Road 4th Cross	7	3.5	6
79	CL0078	Thaninayagam Adikal Road 3rd Cross	7	3.5	6
80	CL0079	Thaninayagam Adikal Road 2nd Cross	7	3.5	6
81	CL0080	Thaninayagam Adikal Road 1st Cross	7	3.5	6
82	CL0081	South Bar Road	12	6	15
83	CL0082	Abraham Road	7	3.5	6
84	CL0083	St.Thiresa Road	7	3.5	6
85	CL0084	Internal Road	7	3.5	6
86	CL0085	Internal Road	7	3.5	6
87	CL0086	Internal Road	7	3.5	6
88	CL0087		7	3.5	6
89	CL0088	Joshep Road	7	3.5	6
90	CL0089	loorthu Road	7	3.5	6

91	CL0090	Joshep Road 2nd Cross Road	7	3.5	6
92	CL0091	Internal Road	7	3.5	6
93	CL0092	Internal Road	7	3.5	6
94	CL0093	Internal Road	7	3.5	6
95	CL0094	Loorthu Road 1st Cross	7	3.5	6
96	CL0095	Loorthu Road 2nd Cross	7	3.5	6
97	CL0096	Internal Road	7	3.5	6
98	CL0097	Joshepvaz Road	7	3.5	6
99	CL0098	Internal Road	7	3.5	6
100	CL0099	Joshepvaz Road 1st Cross	7	3.5	6
101	CL0100	Joshepvaz Road 2nd Cross	7	3.5	6
102	CL0101	Joshepvaz Road 3rd Cross	7	3.5	6
103	CL0102	Joshepvaz Road 3rd Cross by Lane	7	3.5	6
104	CL0103	Internal Road	7	3.5	6
105	CL0104	Internal Road	7	3.5	6
106	CL0105	Internal Road	7	3.5	6
107	CL0106	Joshepavz Road 4th Cross by Lane	7	3.5	6
108	CL0107	Joshepavz Road 4th Cross	7	3.5	6
109	CL0108	Internal Road	7	3.5	6
110	CL0109	Internal Road	7	3.5	6
111	CL0110	Internal Road	7	3.5	6
112	CL0111	Panankaddu koddu Fish Market Road	7	3.5	6
113	CL0112	Internal Road	12	6	6
114	CL0113	Internal Road	7	3.5	6
115	CL0114		7	3.5	6
116	CL0115	65 Housing Scheme Main road	7	3.5	6
117	CL0116	Internal Road	7	3.5	6
118	CL0117		7	3.5	6
119	CL0118		7	3.5	6
120	CL0119	Internal Road	7	3.5	6
121	CL0120		7	3.5	6
122	CL0121		7	3.5	6
123	CL0122	Dilasall Road	7	3.5	6
124	CL0123	Stadium Behind Road (New Metology Dept Road)	7	3.5	6
125	CL0124	Matha Kovil Road	7	3.5	6
126	CL0125	Matha Kovil Road - 1st Cross Street	7	3.5	6



127	CL0126	St Xavir Boys National School Road 1st Lane	7	3.5	6
128	CL0127	Sivan Kovil Road 1st Lane by Lane	7	3.5	6
129	CL0128	Sivan Kovil Road 1st Cross	7	3.5	6
130	CL0129	Internal Road	7	3.5	6
131	CL0130	Internal Road	7	3.5	6
132	CL0131	Internal Road	7	3.5	6
133	CL0132	Killary Pre school Road	7	3.5	6
134	CL0133	Killary Pre school Road - 1st Cross Street	7	4.5	6
135	CL0134	Internal Road	7	3.5	6
136	CL0135	Killary Road	7	3.5	6
137	CL0136	Sivan Kovil Road	7	3.5	6
138	CL0137		7	3.5	6
139	CL0138		7	3.5	6
140	CL0139		7	3.5	6
141	CL0140		7	3.5	6
142	CL0141	Sivan kovil Road 2nd Lane	7	3.5	6
143	CL0142	Chavatkaddu St.Anthonyar Kovil Road	12	6	6
144	CL0143	Internal Road	7	3.5	6
145	CL0144	Chavatkattu Internal Road	7	3.5	6
146	CL0145	Seminary Road	12	6	6
147	CL0146	Seminary Road 4th Cross Street (AGAPE) 1st Cross	7	3.5	6
148	CL0147	Internal Road	7	3.5	6
149	CL0148	Internal Road	7	3.5	6
150	CL0149	Internal Road	7	3.5	6
151	CL0150	Seminary Road 4th Cross Street (AGAPE)	7	3.5	6
152	CL0151	Seminary Road 3rd Cross Street	7	3.5	6
153	CL0152	Seminary Road 1st Cross Street	9	4.5	6
154	CL0153	Seminary Road 2nd Cross Street	9	4.5	6
155	CL0154	Internal Road	7	3.5	6
156	CL0155	Seminary Road 5th Cross Street	7	3.5	6
157	CL0156	Seminary Road 6th Cross Street	7	3.5	6
158	CL0157	Seminary Road 7th Cross Street	7	3.5	6
159	CL0158	Internal Road	7	3.5	6
160	CL0159	Seminary Road 8th Cross Street	7	3.5	6
161	CL0160	Seminary Road 9th Cross Street (My Xavier's Road)	7	3.5	6

162	CL0161	Internal Road	9	4.5	6
163	CL0162	Periyakamam 100 Housing Scheme Main Road	15	7.5	6
164	CL0163	Periyakamam 100 Housing Scheme Main Road 1st Cross street	7	3.5	6
165	CL0164	Internal Road	7	3.5	6
166	CL0165	Internal Road	7	3.5	6
167	CL0166	Periyakamam 100 Housing Scheme Main Road 3rd Cross Street	7	3.5	6
168	CL0167	100 Housing Scheme Marakalai Road 3rd Lane	7	3.5	6
169	CL0168	100 Housing Scheme Marakalai Road	7	3.5	6
170	CL0169	100 housing Scheme Marakalai Road 3rd Lane	7	3.5	6
171	CL0170	Internal Road	7	3.5	6
172	CL0171	Internal Road	7	3.5	6
173	CL0172	Internal Road	7	3.5	6
174	CL0173	100 Housing Scheme Marakalai Road 1st Lane	7	3.5	6
175	CL0174	101 Housing Scheme Marakalai Road 4th Lane	7	3.5	6
176	CL0175	Periyakamam 100 Housing Scheme Main Road 6th Cross Street	7	3.5	6
177	CL0176	Periyakamam 100 Housing Scheme Main Road 7th Cross St - 1st L	7	3.5	6
178	CL0177	Internal Road	7	3.5	6
179	CL0178	Periyakamam 100 Housing Scheme Main Road 7th Cross Street	7	3.5	6
180	CL0179	Internal Road	7	3.5	6
181	CL0180	Internal Road	7	3.5	6
182	CL0181	Periyakamam 100 Housing Scheme Main Road 8th Cross Street	7	3.5	6
183	CL0182	Internal Road	7	3.5	6
184	CL0183	Internal Road	7	3.5	6
185	CL0184	Internal Road	7	3.5	6
186	CL0185	Periyakamam Main Road 2nd Cross Street	7	3.5	6
187	CL0186	Internal Road	7	3.5	6
188	CL0187	Internal Road	7	3.5	6
189	CL0188	Internal Road	7	3.5	6
190	CL0189	Periyakamam Main Road	12	6	6

191	CL0190	Thalaimannar Main Road - Periyakamam 3rd Cross Road	7	3.5	6
192	CL0191	Periyakamam Main Road 1st Cross Road	7	3.5	6
193	CL0192	Thalaimannar Main Road - Periyakamam 3rd Cross Road	7	3.5	6
194	CL0193	periyakamam Main Road 3rd Cross Street	9	4.5	6
195	CL0194	Periyakamam Main Road 4th Cross Road	7	3.5	6
196	CL0195	Periyakamam Main Road 4th Cross Road 1st Lane	7	3.5	6
197	CL0196	Eluthoor Periyakamam Joint Road	9	4.5	6
198	CL0197	Periyakamam Main road 7th Cross road	7	3.5	6
199	CL0198	Periyakamam Main road 9th Cross road	7	3.5	6
200	CL0199	Eluthoor Periyakamam Joint Road - 1st Lane	7	3.5	6
201	CL0200	Internal Road	7	3.5	6
202	CL0201	Internal Road	7	3.5	6
203	CL0202	Internal Road	7	3.5	6
204	CL0203	Thalaimannar Main Road - Periyakamam 5th Cross Road 2nd Lane	7	3.5	6
205	CL0204	Internal Road	7	3.5	6
206	CL0205	Internal Road	7	3.5	6
207	CL0206	Thalaimannar Main Road - Periyakamam 4th Cross Road	7	3.5	6
208	CL0207	Thalaimannar Main Road - Periyakamam 5th Cross Road 1st Lane	7	3.5	6
209	CL0208	Thalaimannar Main Road - Periyakamam 5th Cross Road	7	3.5	6
210	CL0209	Internal Road	7	3.5	6
211	CL0210	Internal Road	7	3.5	6
212	CL0211	Eluthoor Periyakamam joint Road - 2nd Lane	7	3.5	6
213	CL0212		7	3.5	6
214	CL0213	Thalaimannar Road Joint Thalvupadu Main road 1st Cross Road	7	3.5	6
215	CL0214	Thalaimannar Road Joint Thalvupadu Main Road 2nd Cross Road	7	3.5	6
216	CL0215	Thalaimannar Road Joint Thalvupadu Main Rd St.Alosious Road	7	3.5	6
217	CL0216	Internal Road	7	3.5	6
218	CL0217	Internal Road	7	3.5	6
219	CL0218	Eluthoor Road	21	10.5	10.5

220	CL0219	Periyakamam Playground Road	7	3.5	6
221	CL0220	Eluthoor Amman kovil behind Road	7	3.5	6
222	CL0221	Eluthoor Amman Kovil Road	7	3.5	6
223	CL0222	Agas Hottel Road 2nd Cross	7	3.5	6
224	CL0223	Internal Road	7	3.5	6
225	CL0224	Agas Hottel Road 1st Cross	7	3.5	6
226	CL0225	Agas Hottel Road	7	3.5	6
227	CL0226	Infant Jesus 3rd Cross Road	7	3.5	6
228	CL0227	Infant Jesus 2nd Cross Road	7	3.5	6
229	CL0228	Infant Jesus 1st Cross Road	7	3.5	6
230	CL0229	Infant Jesus Temple Road	7	3.5	6
231	CL0230	Infant Jesus Puram Road	7	3.5	6
232	CL0231	Infant Jesus Puram Road 2nd Lane	7	3.5	6
233	CL0232	Periyakamam Main Road 6th Cross Road	12	6	6
234	CL0233	Internal Road	7	3.5	6
235	CL0234	Periyakamam Main road Perukkamaram road	12	6	6
236	CL0235	100 Housing Scheme 2nd Cross	12	6	6
237	CL0236	Periyakamam 100 Housing Scheme Main Rd 9th Cross Street	7	3.5	6
238	CL0237	101 Housing Scheme 5th Cross	7	3.5	6
239	CL0238	Internal Road	7	3.5	6
240	CL0239	Chavatkaddu Vehicle Garage Road	9	4.5	6
241	CL0239	Infant Jesus Puram Road 1st Lane	7	3.5	6
242	CL0240	Chavatkaddu Vehicle Garage Road 4th Cross Street	7	3.5	6
243	CL0241	Chavatkaddu Vehicle Garage Road 3rd Cross Road	7	3.5	6
244	CL0242	Chavatkaddu Vehicle Garage Road 2nd Cross Street	9	4.5	6
245	CL0243	Chavatkaddu Vehicle Garage Road 1st Cross Street	7	3.5	6
246	CL0244	Chavatkaddu Self Reliance Housing Scheme Road	7	3.5	6
247	CL0245	Internal Road	7	3.5	6
248	CL0246	Chavatkaddu Vehicle Garage Road 2nd Cross Street by Lane	7	3.5	6
249	CL0247	Chavatkaddu Self Reliance Housing Scheme Road 2nd Cross St	7	3.5	6
250	CL0248	Chavatkaddu Self Reliance Housing Scheme Road 1st Cross Lane	7	3.5	6

251	CL0249	Chavatkaddu Children Park Road	7	3.5	6
252	CL0250	RDHS Beside Road	7	3.5	6
253	CL0251	Puthumai Matha 5th Cross Road	7	3.5	6
254	CL0252	Geevapuram Main Road	7	3.5	6
255	CL0253	Internal Road	7	3.5	6
256	CL0254	Internal Road	9	4.5	6
257	CL0255	Internal Road	7	3.5	6
258	CL0256	Internal Road	7	3.5	6
259	CL0257	Internal Road	7	3.5	6
260	CL0258	Internal Road	7	3.5	6
261	CL0259	Internal Road	7	3.5	6
262	CL0260	Internal Road	7	3.5	6
263	CL0261	Internal Road	7	3.5	6
264	CL0262	Internal Road	7	3.5	6
265	CL0263	Internal Road	7	3.5	6
266	CL0264	Internal Road	7	3.5	6
267	CL0265	Thalvupadu Main Road - Emilnagar 1st Cross Joint Thommaiyar	7	3.5	6
268	CL0266	Thalvupadu Main Road - Emilnagar 1st Cross	7	3.5	6
269	CL0267	Internal Road	7	3.5	6
270	CL0268	Thalvupadu Main Road - Emilnagar 2nd Cross	7	3.5	6
271	CL0269	Internal Road	7	3.5	6
272	CL0270	Internal Road	7	3.5	6
273	CL0271		7	3.5	6
274	CL0272	Internal Road	7	3.5	6
275	CL0273	Thalvupadu Main Road - Emilnagar 3rd Cross	7	3.5	6
276	CL0274	Thalvupadu Main Road - Emilnagar 4th Cross	7	3.5	6
277	CL0275	Thommaiyar Road	7	3.5	6
278	CL0276	Thommaiyar road - 2nd Cross Street 1st Lane	7	3.5	6
279	CL0277	Thommaiyar road - 2nd Cross Street 2nd Lane	7	3.5	6
280	CL0278	Thommaiyar road - 2nd Cross Street	7	3.5	6
281	CL0279	Thommaiyar road - 1st Cross Street	7	3.5	6
282	CL0280	Internal Road	7	3.5	6

283	CL0281	Thalvupadu Main road - Emilnagar 6th Cross	7	3.5	6
284	CL0282	Thalvupadu Main road - Emilnagar 6th Cross 1st Lane	7	3.5	6
285	CL0283	Thalvupadu Main road - Emilnagar 6th Cross 2nd Lane	7	3.5	6
286	CL0284	Thalvupadu Main road - Emilnagar 6th Cross 3rd Lane	7	3.5	6
287	CL0285	Thalvupadu Main road - Emilnagar 6th Cross 4th Lane	7	3.5	6
288	CL0286	Jeevapuram Fattima Matha Main road	7	3.5	6
289	CL0287	Jeevapuram Main road 11th Cross road	7	3.5	6
290	CL0288	Jeevapuram Main road 10th Cross road	7	3.5	6
291	CL0289	Jeevapuram Main road 9th Cross road	7	3.5	6
292	CL0290	Jeevapuram Main road 8th Cross road	7	3.5	6
293	CL0291	Jeevapuram Main road 7th Cross road	7	3.5	6
294	CL0292	Jeevapuram Main road 6th Cross road	7	3.5	6
295	CL0293	Jeevapuram Main road 5th Cross road	7	3.5	6
296	CL0294	Jeevapuram Main road 4th Cross road	7	3.5	6
297	CL0295		7	3.5	6
298	CL0296		7	3.5	6
299	CL0297	Tharavankoddai - Keeri Main Road	12	6	6
300	CL0297		7	3.5	6
301	CL0298		7	3.5	6
302	CL0299		7	3.5	6
303	CL0300		7	3.5	6
304	CL0301		7	3.5	6
305	CL0302		7	3.5	6
306	CL0303		7	3.5	6
307	CL0304		7	3.5	6
308	CL0305	PutPuthumai Matha 5th Cross 7th Lane	7	3.5	6
309	CL0306	Puthumai Matha 5th Cross 6th Lane	7	3.5	6
310	CL0307	Puthumai Matha 5th Cross 5th Lane	7	3.5	6
311	CL0308	Puthumai Matha 5th Cross 4th Lane	7	3.5	6
312	CL0309	Puthumai Matha 5th Cross 3rd Lane	7	3.5	6
313	CL0310	Puthmai Matha 5th Cross 2nd Lane	7	3.5	6
314	CL0311	Puthumai Matha 5th Cross 1st lane	7	3.5	6
315	CL0312	Puthumai Matha road	12	6	6

316	CL0313	Jimron Nagar St.Joshep Play Ground Circle Road	7	3.5	6
317	CL0314	Internal Road	7	3.5	6
318	CL0315	Internal Road	7	3.5	6
319	CL0316	Internal Road	7	3.5	6
320	CL0317	Internal Road	7	3.5	6
321	CL0318	Pansala Road	7	3.5	6
322	CL0319	Santhipuram 1st Cross Street	7	3.5	6
323	CL0320	Santhipuram Main Road	7	3.5	6
324	CL0321	Santhipuram Main Road	12	6	6
325	CL0322	Santhipuram 4th Cross Street	7	3.5	6
326	CL0323	Santhipuram 4th Cross Street	7	3.5	6
327	CL0324	Santhipuram 4th Road	7	3.5	6
328	CL0325	Internal Road	7	3.5	6
329	CL0326	Santhipuram 5th Road	7	3.5	6
330	CL0327	Internal Road	7	3.5	6
331	CL0328	Internal Road	7	3.5	6
332	CL0329	Santhipuram 6th Road	7	3.5	6
333	CL0330	Internal Road	7	3.5	6
334	CL0331	Internal Road	7	3.5	6
335	CL0332	Santhipuram 7th Road	7	3.5	6
336	CL0333	Internal Road	7	3.5	6
337	CL0334		7	3.5	6
338	CL0335	Santhipuram 1st Cross Road	7	3.5	6
339	CL0336	Santhipuram Main Road - 1st Cross Street	7	3.5	6
340	CL0337	Santhipuram Main Road 2nd Cross Street	7	3.5	6
341	CL0338		7	3.5	6
342	CL0339	Santhipuram 2nd Cross Road	7	3.5	6
343	CL0340	Santhipuram Main Road 3rd Cross Street	7	3.5	6
344	CL0341	Santhipuram Main road 4th cross street	7	3.5	6
345	CL0342		7	3.5	6
346	CL0343	Santhipuram Main road 5th cross street	7	3.5	6
347	CL0344	Santhipuram Main Road	7	3.5	6
348	CL0345	Santhipuram Main road 6th Cross street	7	3.5	6
349	CL0346	Santhipuram Main road 7th Cross street	7	3.5	6
350	CL0347	Santhipuram Main road 8th cross street	7	3.5	6
351	CL0348	Santhipuram Main road 9th cross street	7	3.5	6



352	CL0349	Santhipuram Main road 7th cross street 2nd lane	7	3.5	6
353	CL0350	Santhipuram Main road 7th cross street 1st lane	7	3.5	6
354	CL0351	Internal Road	7	3.5	6
355	CL0352	Internal Road	12	6	6
356	CL0353	Internal Road	7	3.5	6
357	CL0354		7	3.5	6
358	CL0355		7	3.5	6
359	CL0356		7	3.5	6
360	CL0357	Internal Road	7	3.5	6
361	CL0358		7	3.5	6
362	CL0359		7	3.5	6
363	CL0360	Santhipuram 6th Croos Road	7	3.5	6
364	CL0361	Internal Road	7	3.5	6
365	CL0362	Santhipuram 7th Croos Road	7	3.5	6
366	CL0363	Internal Road	7	3.5	6
367	CL0364	Santhipuram 8th Croos Road	7	3.5	6
368	CL0365	Internal Road	7	3.5	6
369	CL0366	Santhipuram 9th Croos Road	7	3.5	6
370	CL0367	Internal Road	7	3.5	6
371	CL0368	Internal Road	7	3.5	6
372	CL0369	Jimron Nagar Annai Thiresa Road	12	6	6
373	CL0370		9	4.5	6
374	CL0371		7	3.5	6
375	CL0372		7	3.5	6
376	CL0373		7	3.5	6
377	CL0374		7	3.5	6
378	CL0375		7	3.5	6
379	CL0376		7	3.5	6
380	CL0377		7	3.5	6
381	CL0378		7	3.5	6
382	CL0379		7	3.5	6
383	CL0380		7	3.5	6
384	CL0381		7	3.5	6
385	CL0382		7	3.5	6
386	CL0383		7	3.5	6
387	CL0384		7	3.5	6

388	CL0385		7	3.5	6
389	CL0386		7	3.5	6
390	CL0387		7	3.5	6
391	CL0388	Southbar Railway Station Road	7	3.5	6
392	CL0389	Southbar Main road to Railway Station Road - 1st Cross	7	3.5	6
393	CL0390	Internal Road	7	3.5	6
394	CL0391	Southbar Village Main Road 1st Cross	7	3.5	6
395	CL0392	Internal Road	7	3.5	6
396	CL0393	Internal Road	7	3.5	6
397	CL0394	Southbar 1st Cross	7	3.5	6
398	CL0395		9	4.5	6
399	CL0396		7	3.5	6
400	CL0397		7	3.5	6
401	CL0398		7	3.5	6
402	CL0399	Southbar 3rd Cross	7	3.5	6
403	CL0400	Southbar 2nd Cross	7	3.5	6
404	CL0401		9	4.5	6
405	CL0402		9	4.5	6
406	CL0403	Thoddakadu Main Road	12	6	6
407	CL0404	Thoddakadu Murukan Kovil Road	7	3.5	6
408	CL0405	Thoddakadu Murukan Kovil Road - 1st Cross Street	7	3.5	6
409	CL0406	Thoddakadu Murukan Kovil Road - 2nd Cross Street	7	3.5	6
410	CL0407	Thoddakadu Murukan Kovil Road - 3rd Cross Street	7	3.5	6
411	CL0408	Internal Road	7	3.5	6
412	CL0409	Internal Road	7	3.5	6
413	CL0410	Internal Road	12	6	6
414	CL0411		9	4.5	6
415	CL0412	Tharavankoddai - Ashoka Road	7	3.5	6
416	CL0413	Tharavankoddai - Thurkai Illam Road	7	3.5	6
417	CL0414	Tharavankoddai - Thiruvalluvar Road	7	3.5	6
418	CL0415	Tharavankoddai - Rosemadha Kovil Road	7	3.5	6
419	CL0416	Tharavankoddai 4th Cross Road	7	3.5	6
420	CL0417	Internal Road	7	3.5	6
421	CL0418	Tharavankoddai 5th Cross Street	7	3.5	6
422	CL0419	Tharavankoddai Phalmyrah Board Road	7	3.5	6

423	CL0420		7	3.5	6
424	CL0421	Tharavankoddai St.Michel Road	7	3.5	6
425	CL0422	Tharavankoddai 7th Cross Street	7	3.5	6
426	CL0423	Tharavankoddai 8th Cross Street	7	3.5	6
427	CL0424	Tharavankoddai 9th Cross Road	7	3.5	6
428	CL0425	Tharavankoddai 10th Cross Road	7	3.5	6
429	CL0426		7	3.5	6
430	CL0427	Tharavankoddai 11th Cross Road	7	3.5	6
431	CL0428	Keeri Main Road - 2nd Cross Street	7	3.5	6
432	CL0429	Keeri Tharavankoddai Joint Road - 4th Cross Street	7	3.5	6
433	CL0430	Keeri Tharavankoddai Joint Road - 3rd Cross Road	7	3.5	6
434	CL0431	Keeri Main Road - 5th Cross Street	7	3.5	6
435	CL0432	Keeri Tharavankoddai Joint Road - 2nd Cross Street	7	3.5	6
436	CL0433	Keeri Tharavankoddai Joint Road - 1st Cross Street	7	3.5	6
437	CL0434	Internal Road	7	3.5	6
438	CL0435	Keeri Main Road	7	3.5	6
439	CL0436	Keeri Main Road Anna Road	7	3.5	6
440	CL0437	Keeri Main Road 3rd Cross Street	7	3.5	6
441	CL0438	Keeri Main Road 1st Cross street	7	3.5	6
442	CL0439	Keeri Murukan kovil road 2nd cross	7	3.5	6
443	CL0440	Keeri Murukan kovil road 1st Cross	7	3.5	6
444	CL0441	Keeri - OldKathar Kovil Road	7	3.5	6
445	CL0442	Keeri - Karthar Kovil Road - 1st Cross Street	7	3.5	6
446	CL0443	Keeri Kathar kovil road 2nd cross street	7	3.5	6
447	CL0444	Keeri - Karthar kovil Road - 3rd Cross Street	7	3.5	6
448	CL0445	Keeri - Karthar Kovil Road - 4th Cross Street	7	3.5	6
449	CL0446	Keeri - Karthar Kovil Road 5th Cross Street	7	3.5	6
450	CL0447	Keeri - Karthar Kovil Road 6th Cross Street	7	3.5	6
451	CL0448	Keeri - Karthar Kovil Road 7th Cross Road	7	3.5	6
452	CL0449	Keeri Beach Road	7	3.5	6
453	CL0450		7	3.5	6

454	CL0451	Thamotharam Veethy	7	3.5	6
455	CL0451	Thamotharam Veethy	7	3.5	6
456	CL0452		7	3.5	6
457	CL0453		7	3.5	6
458	CL0494		7	3.5	6
459	CL0495		7	3.5	6
460	CL0495		7	3.5	6
461	CL0496		7	3.5	6
462	CL0497		7	3.5	6
463	CL0498		7	3.5	6
464	CL0499	Internal Road	7	3.5	6
465	CL0500	Thirunavukarasu Road	7	3.5	6
466	CL0501	Thirunavukarasu Road 1st Cross Road	7	3.5	6
467	CL0502	Internal Road	7	3.5	6
468	CL0503	St.Nicholas Road Joint Thirunavukarasu Road	7	3.5	6
469	CL0504	St.Nicholas Road	7	3.5	6
470	CL0505	Saraswathy Road	7	3.5	6
471	CL0506	Internal Road	7	3.5	6
472	CL0507	Pattim Main Road	7	3.5	6
473	CL0508	Pattim St.Xavier Street	7	3.5	6
474	CL0509	Internal Road	7	3.5	6
475	CL0510	Internal Road	7	3.5	6
476	CL0511	Internal Road	7	3.5	6
477	CL0512	Internal Road	7	3.5	6
478	CL0513	Pattim Main Road 2nd Cross Road	7	3.5	6
479	CL0514	Internal Road	7	3.5	6
480	CL0515	Selvanagar Amman Kovil behind Road	7	3.5	6
481	CL0516	Selvanagar Main Road	7	3.5	6
482	CL0517	Selvanagar Aranery School Road	7	3.5	6
483	CL0518	Selvanagar Main Road	7	3.5	6
484	CL0519	Internal Road	7	3.5	6
485	CL0520	Selvanagar Main Road	7	3.5	6
486	CL0521	Selvanagar Main Road 1st Cross Road	7	3.5	6
487	CL0522	Selvanagar Main Road 2nd Cross Road	7	3.5	6
488	CL0523	Selvanagar Main Road 3rd Cross Road	7	3.5	6
489	CL0524	Selvanagar Main Road 4th Cross Road	7	3.5	6

490	CL0525	Selvanagar Main Road 5th Cross Road	7	3.5	6
491	CL0526	Selvanagar Main Road 6th Cross Road	7	3.5	6
492	CL0527	Selvanagar Main Road 7th Cross Road	7	3.5	6
493	CL0528	Selvanagar Main Road 7th Cross Road 1st Lane	7	3.5	6
494	CL0529	Selvanagar Main Road 3rd Cross Road 1st Lane	7	3.5	6
495	CL0530	Selvanagar Eluthoor Joint Road	7	3.5	6
496	CL0531	Thalvupadu Main Road Eluthoor - 5th Lane	7	3.5	6
497	CL0532	Thalvupadu Main Road Eluthoor - 4th Lane	7	3.5	6
498	CL0533	Eluthoor Punitha Adaikala Annai Road	9	4.5	6
499	CL0534	Eluthoor Punitha Adaikala Annai Road 1st Cross	7	3.5	6
500	CL0535	Eluthoor Punitha Adaikala Annai Road	9	4.5	6
501	CL0536	Thalvupadu Main Road Eluthoor - 2nd Lane	9	4.5	6
502	CL0537	Thalvupadu Main Road Eluthoor - 1st Lane	9	4.5	6
503	CL0538	Internal Road	9	4.5	6
504	CL0539	Internal Road	9	4.5	6
505	CL0540	Thalaimannar Road Joint Thalvupadu Main Road 3rd CR 3rd Lane	7	3.5	6
506	CL0541	Thalaimannar rd joint Thalvupadu main rd 3rd cr rd 3rd lane	7	3.5	6
507	CL0542	Thalaimannr rd joint Thalvupadu main rd 5th cr rd	7	3.5	6
508	CL0543	Thalaimannar Road Joint Thalvupadu Main Road 3rd Cross Road	7	3.5	6
509	CL0780	Southbar to Keeri Beach Road	7	3.5	6
510	CL0781		7	3.5	6
511	CL0782	Periyakamam Main road 8th Cross Road	7	3.5	6
512	CL0783	Thalaimannar Road Joint Thalvupadu main rd 3rd cr rd 1st lan	7	3.5	6
513	CR0002	Pallimunai Road	21	10.5	15
514	CR0003		9	4.5	6
515	CR0004	Konthapiddy Main Road	9	4.5	6
516	CR0005		7	3.5	6
517	CR0006		7	3.5	6
518	CR0007		7	3.5	6

519	CR0008		7	3.5	6
520	CR0009	Internal Road	9	4.5	6
521	CR0010	Slaughter house Road	9	4.5	6
522	CR0011	Fisherie's Department Road	9	4.5	6
523	CR0012	Slaughter house road 1st cross Street	9	4.5	6
524	CR0013		9	4.5	6
525	CR0014		9	4.5	6
526	CR0015		7	3.5	6
527	CR0016		7	3.5	6
528	CR0017		7	3.5	6
529	CR0018		7	3.5	6
530	CR0019		7	3.5	6
531	CR0020		9	4.5	6
532	CR0021		7	3.5	6
533	CR0022		7	3.5	6
534	CR0023	49 Housing Scheme Internal 1st cross 1st Lane	9	4.5	6
535	CR0024	Internal Road	7	3.5	6
536	CR0025	Inetrnal Road	7	3.5	6
537	CR0026	Internal Road	7	3.5	6
538	CR0027	Internal Road	7	3.5	6
539	CR0028	Internal Road	7	3.5	6
540	CR0029	Internal Road	7	3.5	6
541	CR0030	Internal Road	7	3.5	6
542	CR0031	49 housing scheme Internal 1st cross street 2nd lane	7	3.5	6
543	CR0032	49 housing scheme Internal 1st cross street 3 <sup>rd</sup> lane	7	3.5	6
544	CR0033	49 housing scheme Internal 1st cross street	7	3.5	6
545	CR0034	Internal Road	7	3.5	6
546	CR0035	Internal Road	7	3.5	6
547	CR0036	Internal Road	7	3.5	6
548	CR0037	Internal Road	7	3.5	6
549	CR0038	49 housing scheme 2 <sup>nd</sup> cross street	7	3.5	6
550	CR0039	Internal Road	7	3.5	6
551	CR0040	Internal Road	7	3.5	6
552	CR0041	49 housing scheme 3 <sup>rd</sup> cross street	7	3.5	6
553	CR0042	50 housing scheme road	7	3.5	6
554	CR0043	Internal Road	7	3.5	6

555	CR0044	Internal Road	7	3.5	6
556	CR0045	41>49 housing scheme join road	7	3.5	6
557	CR0046		7	3.5	6
558	CR0047		7	3.5	6
559	CR0048		7	3.5	6
560	CR0049		7	3.5	6
561	CR0050	50 housing scheme 2nd cross street	7	3.5	6
562	CR0051		7	3.5	6
563	CR0052	50 housing scheme 3rd cross street	7	3.5	6
564	CR0053	Pallimunai seeka raod	7	3.5	6
565	CR0054	Pallimunai play ground road	7	3.5	6
566	CR0055	Internal Road	7	3.5	6
567	CR0056	Internal Road	7	3.5	6
568	CR0057	Internal Road	7	3.5	6
569	CR0058	Internal Road	7	3.5	6
570	CR0059	Pallimunai post office near by road	7	3.5	6
571	CR0060	Internal Road	7	3.5	6
572	CR0061	Pallimunai st.Lucia road	7	3.5	6
573	CR0062	Internal Road	7	3.5	6
574	CR0063	Pallimunai st.Lucia 3rd cross street	7	3.5	6
575	CR0064	Pallimunai st.Lucia 1st cross street	7	3.5	6
576	CR0065	Pallimunai st.Lucia 2nd cross street	7	3.5	6
577	CR0066	Pallimunai Convent Road	7	3.5	6
578	CR0067	Internal Road	7	3.5	6
579	CR0068	Internal Road	7	3.5	6
580	CR0069	Internal Road	7	3.5	6
581	CR0070	Internal Road	7	3.5	6
582	CR0071	Internal Road	7	3.5	6
583	CR0072	Pallimunai Beach Road	7	3.5	6
584	CR0073	Uppukulam Mosque Road	12	6	6
585	CR0074	Casmir street	7	3.5	6
586	CR0075	Casmir street 1st cross	7	3.5	6
587	CR0076	Casmir street 2nd cross	7	3.5	6
588	CR0077	Casmir street 3rd cross	7	3.5	6
589	CR0078	Uppukulam Mosque Road 7th Cross	7	3.5	6
590	CR0079	MOH Office Road	7	3.5	6
591	CR0080	Internal Road	7	3.5	6



592	CR0081	Esplanade Road	12	6	6
593	CR0082	Children Park Road	7	3.5	6
594	CR0083	Internal Road	7	3.5	6
595	CR0084	Uppukulam Mosque road 2nd cross	7	3.5	6
596	CR0085	Uppukulam Mosque Road 2nd cross 2nd Lane	7	3.5	6
597	CR0086	Uppukulam Mosque Road 2nd cross 1st Lane	7	3.5	6
598	CR0087	Uppukulam Matharasa Road	7	3.5	6
599	CR0088	Internal Road	7	3.5	6
600	CR0089	Al-Azhar School behind Road	7	3.5	6
601	CR0090	Al-Azhar School Road	7	3.5	6
602	CR0091	Ayan Theatre Road	9	4.5	6
603	CR0092	Internal Road	7	3.5	6
604	CR0093	Agrariayan dept quarters road	7	3.5	6
605	CR0094	Agrariayan dept Quarters road 1st Cross	7	3.5	6
606	CR0095	Internal Road	7	3.5	6
607	CR0096	Internal Road	7	3.5	6
608	CR0097	Aladi Pillaiyar Kovil Road	7	3.5	6
609	CR0098	Urban Council beside Road	7	3.5	6
610	CR0099	Nallayan Road	7	3.5	6
611	CR0100	Internal Road	7	3.5	6
612	CR0101	Internal Road	7	3.5	6
613	CR0102	Internal Road	7	3.5	6
614	CR0103	Moor street 1st Cross	7	3.5	6
615	CR0105	Internal Road	7	3.5	6
616	CR0106	Uppukulam Amman Kovil Road	7	3.5	6
617	CR0108	Sulaiman Road	7	3.5	6
618	CR0109	Al.Fatha Ground Road	7	3.5	6
619	CR0110		7	3.5	6
620	CR0111	Uppukulam Amman Kovil Road 1st Cross	7	3.5	6
621	CR0112	Sithyvinayagar H.C.Road	9	4.5	6
622	CR0113	NHDA road	9	4.5	6
623	CR0114	Sithyvinayagar H.C.Road 2nd Cross	7	3.5	6
624	CR0115	Sithyvinayagar H.C.Road 1st Cross	7	3.5	6
625	CR0116	Internal Road	7	3.5	6
626	CR0117	Labour department road	7	3.5	6

627	CR0118	Pallimunai St Ludes Road	9	4.5	6
628	CR0119	Pallimunai St.Thomas road	7	3.5	6
629	CR0120	Pallimunai St Ludes Road 1st cross	7	3.5	6
630	CR0121	Internal Road	7	3.5	6
631	CR0122	Internal Road	7	3.5	6
632	CR0123	Internal Road	7	3.5	6
633	CR0124	Internal Road	7	3.5	6
634	CR0125	Internal Road	7	3.5	6
635	CR0126	Pallimunai Pond road	9	4.5	6
636	CR0127	Pallimunai Anthoniyar Kovil road	9	4.5	6
637	CR0128	Pallimunai St Ludes road 2nd Cross	7	3.5	6
638	CR0129	Pallimunai St.Ludes Road 3rd Cross	7	3.5	6
639	CR0130	Pallimunai St Ludes Road 6th Cross	7	3.5	6
640	CR0131	Pallimunai Velankanni road	9	4.5	6
641	CR0132	Pallimunai Velankanni road 1st Cross	7	3.5	6
642	CR0133		7	3.5	6
643	CR0134	New Street	7	3.5	6
644	CR0135	Manokara Kurukkal Road	7	3.5	6
645	CR0136	Uppukulam Mosque Road 6th Cross	7	3.5	6
646	CR0137	Uppukulam Mosque Road 6th Cross	7	3.5	6
647	CR0138		7	3.5	6
648	CR0139	Internal Road	7	3.5	6
649	CR0140	Manokara Kurukkal Road 1st Cross Road	7	3.5	6
650	CR0141	Manokara Kurukkal Road 3rd Cross Road	7	3.5	6
651	CR0142	Manokara Kurukkal Road 2nd Cross Road	7	3.5	6
652	CR0143	Uppukulam Tower Road 4th Cross	7	3.5	6
653	CR0144	Internal Road	7	3.5	6
654	CR0145	Uppukulam Tower Road 6th Cross	7	3.5	6
655	CR0146	Uppukulam Tower Road	7	3.5	6
656	CR0147	Uppukulam Tower Road 5th Cross	7	3.5	6
657	CR0148	Uppukulam Tower Road 3rd Cross	7	3.5	6
658	CR0149	Uppukulam Tower Road 2nd Cross	7	3.5	6
659	CR0150	Uppukulam Tower Road 1st Cross	7	3.5	6
660	CR0151	Manikkavasagar Road	7	3.5	6
661	CR0152	Internal Road	7	3.5	6
662	CR0153	Annai illam Road	7	3.5	6
663	CR0154	Internal Road	7	3.5	6

664	CR0155	NHDA behind road	7	3.5	6
665	CR0156	Internal Road	7	3.5	6
666	CR0157	Annai illam road 1st Cross	7	3.5	6
667	CR0158	Internal Road	7	3.5	6
668	CR0159	Internal Road	7	3.5	6
669	CR0160	Pallimunai St Ludes Road 5th cross	7	3.5	6
670	CR0161	Pallimunai St Ludes Road 5th Cross 2nd Lane	7	3.5	6
671	CR0162	Pallimunai St Ludes Road 5th cross 1st Lane	7	3.5	6
672	CR0163	Internal Road	7	3.5	6
673	CR0164	Internal Road	7	3.5	6
674	CR0165	Thirunavukarasu Road 3rd Cross Road	7	3.5	6
675	CR0166	Thirunavukarasu Road	7	3.5	6
676	CR0167	Thirunavukarasu Road 1st Cross Road	7	3.5	6
677	CR0168	Thirunavukarasu Road 2nd Cross Road	7	3.5	6
678	CR0169	Pallimunai St Ludes Road 9th cross	7	3.5	6
679	CR0170	Pallimunai Toddy Centre Rd 1st cross	7	3.5	6
680	CR0171	Pallimunai Toddy Centre Road	7	3.5	6
681	CR0172	Internal Road	7	3.5	6
682	CR0173	Pallimunai Toddy Centre rd 2nd cross	7	3.5	6
683	CR0174	Internal Road	7	3.5	6
684	CR0175	Internal Road	7	3.5	6
685	CR0176	Internal Road	7	3.5	6
686	CR0177	Internal Road	7	3.5	6
687	CR0178	Pallimunai St Ludes Road 7th cross	7	3.5	6
688	CR0179	Moor street 5th Cross	7	3.5	6
689	CR0179	Pallimunai Velankaani kovil behind road	7	3.5	6
690	CR0180	Moor Street 5th Cross 1st Lane	7	3.5	6
691	CR0181	Internal Road	7	3.5	6
692	CR0182	Internal Road	7	3.5	6
693	CR0183		7	3.5	6
694	CR0184		7	3.5	6
695	CR0185		7	3.5	6
696	CR0186		7	3.5	6
697	CR0187		7	3.5	6
698	CR0188		7	3.5	6
699	CR0189		7	3.5	6

700	CR0190		7	3.5	6
701	CR0191	New Street 11th Cross	7	3.5	6
702	CR0192	New Street 12th Cross	7	3.5	6
703	CR0193	New street 13th Cross	7	3.5	6
704	CR0194	Moor Street Mosque Road	7	3.5	6
705	CR0195	Moor Street 4th Cross	7	3.5	6
706	CR0196	New Moor Street	7	3.5	6
707	CR0197	New moor street 3rd cross street	7	3.5	6
708	CR0198	New Moor Street 4th Cross Street	7	3.5	6
709	CR0199		7	3.5	6
710	CR0200	Internal Road	7	3.5	6
711	CR0201	Moor Street 5th Cross 4th Lane	7	3.5	6
712	CR0202	Moor Street 5th Cross 5th lane	7	3.5	6
713	CR0203	New Moor Street 3rd Cross Street 2nd Lane	7	3.5	6
714	CR0204		7	3.5	6
715	CR0205		7	3.5	6
716	CR0206		7	3.5	6
717	CR0207		7	3.5	6
718	CR0208		7	3.5	6
719	CR0209	Moor street Matharasa road	7	3.5	6
720	CR0210	New Moor Street 3rd Cross Street 1st Lane	7	3.5	6
721	CR0211	New Moor Street 3rd Cross 5th Lane	7	3.5	6
722	CR0212		7	3.5	6
723	CR0213	Nedunkulam road	9	4.5	6
724	CR0214	Nedunkulam Rd - Thlaimannar Main rd joint rd	7	3.5	6
725	CR0215	Internal Road	7	3.5	6
726	CR0216	Kaddupalli Main road	7	3.5	6
727	CR0217	Kaddupalli rd 3rd cross street	7	3.5	6
728	CR0218	Kaddupalli rd 1st cross street	7	3.5	6
729	CR0219	Nedunkulam rd - 1st Cross rd	7	3.5	6
730	CR0220	Nedunkulam rd 1st cross rd 3rd Lane	7	3.5	6
731	CR0221	Internal Road	7	3.5	6
732	CR0222	Nedunkulam rd 1st cross rd 4th Lane	7	3.5	6
733	CR0223		7	3.5	6
734	CR0224	Kaddupalli road 8th cross Lane	7	3.5	6
735	CR0225	Kaddupalli road 9th cross Lane	7	3.5	6

736	CR0226		7	3.5	6
737	CR0227	Internal Road	7	3.5	6
738	CR0228	Muthamil manra Veethy	7	3.5	6
739	CR0229	Nedunkulam rd 4th cross Lane	7	3.5	6
740	CR0230	Nedunkulam rd 5th cross Lane	7	3.5	6
741	CR0231	Muthamil veethy 1st cross	7	3.5	6
742	CR0232		7	3.5	6
743	CR0233		7	3.5	6
744	CR0234		7	3.5	6
745	CR0235		7	3.5	6
746	CR0236	Internal Road	7	3.5	6
747	CR0237	Nedunkulam rd 6th cross lane	7	3.5	6
748	CR0238	Nedunkulam rd 7th Cross lane	7	3.5	6
749	CR0239	Nedunkulam rd 8th cross Lane	7	3.5	6
750	CR0240	Nedunkulam rd 9th Cross Lane	7	3.5	6
751	CR0241	Nedunkulam rd 10th cross Lane	7	3.5	6
752	CR0242	Internal Road	7	3.5	6
753	CR0243		7	3.5	6
754	CR0244	Metrology dept road	7	3.5	6
755	CR0245	JRS Main road	7	3.5	6
756	CR0246	Nedunkulam rd 12th cross lane	7	3.5	6
757	CR0247	Nedunkulam rd 10th cross 1st Lane	7	3.5	6
758	CR0248	Nedunkulam rd 10th cross 2nd lane	7	3.5	6
759	CR0249	Internal Road	7	3.5	6
760	CR0250	Nedunkulam rd 11th cross Lane	7	3.5	6
761	CR0251	Internal Road	7	3.5	6
762	CR0252	Internal Road	7	3.5	6
763	CR0253	Internal Road	7	3.5	6
764	CR0254	Compost Centre Road 1st Cross Street	7	3.5	6
765	CR0255	Compost Centre Road	7	3.5	6
766	CR0256	JRS Behind Road 1st Cross Lane 1st Lane	7	3.5	6
767	CR0257	JRS Behind Road - 4th Cross Lane	7	3.5	6
768	CR0258	JRS Behind Road	7	3.5	6
769	CR0259	Internal Road	7	3.5	6
770	CR0260	JRS Behind Road - 5th Cross Lane	7	3.5	6
771	CR0261	JRS Behind Road - 1st Cross Lane	7	3.5	6
772	CR0262	JRS Behind Road 2nd Cross Lane	7	3.5	6

773	CR0263	JRS Behind Road 3rd Cross Lane	7	3.5	6
774	CR0264	Internal Road	7	3.5	6
775	CR0265	Internal Road	7	3.5	6
776	CR0266	Internal Road	7	3.5	6
777	CR0267		7	3.5	6
778	CR0268		7	3.5	6
779	CR0269	Garments behind Road	7	3.5	6
780	CR0270	Garments behind road 1st cross street	7	3.5	6
781	CR0271	Internal Road	12	6	6
782	CR0272		12	6	6
783	CR0273		12	6	6
784	CR0274		7	3.5	6
785	CR0275		7	3.5	6
786	CR0276	Nedunkulam rd - 1st Cross rd 2nd Lane	7	3.5	6
787	CR0277	Moor Street 3rd Cross	7	3.5	6
788	CR0278	Uppukulam Mosque Road 4th Cross	7	3.5	6
789	CR0279	Uppukulam Mosque Road 5th Cross	7	3.5	6

Table 23: Proposed Road Width &amp; Building line\_PS

"Serial No"	Road ID	Road_Name	"Proposed Road Width"	"Street line"	"Building line"
1	C0001	Thalaimannar Main Road	15	7.5	15
2	CL0001	Thalvupadu - Mannar Road	9	4.5	6
3	CL0452	Thamotharam Veethy	7	3.5	6
4	CL0454		7	3.5	6
5	CL0456		7	3.5	6
6	CL0459		7	3.5	6
7	CL0460		7	3.5	6
8	CL0461		7	3.5	6
9	CL0464		7	3.5	6
10	CL0467		7	3.5	6
11	CL0468		7	3.5	6
12	CL0469		7	3.5	6
13	CL0470		7	3.5	6
14	CL0472		7	3.5	6
15	CL0476		7	3.5	6

16	CL0479		7	3.5	6
17	CL0480		7	3.5	6
18	CL0481		7	3.5	6
19	CL0482		7	3.5	6
20	CL0483		7	3.5	6
21	CL0484		7	3.5	6
22	CL0485		7	3.5	6
23	CL0486		7	3.5	6
24	CL0487		7	3.5	6
25	CL0488		7	3.5	6
26	CL0489		7	3.5	6
27	CL0490		7	3.5	6
28	CL0491		7	3.5	6
29	CL0492		7	3.5	6
30	CL0493		7	3.5	6
31	CL0494		7	3.5	6
32	CL0495		7	3.5	6
33	CL0495		7	3.5	6
34	CL0544		7	3.5	6
35	CL0545		7	3.5	6
36	CL0546		7	3.5	6
37	CL0547		7	3.5	6
38	CL0548		7	3.5	6
39	CL0549		7	3.5	6
40	CL0550		7	3.5	6
41	CL0552		7	3.5	6
42	CL0553		7	3.5	6
43	CL0554		12	6	6
44	CL0555		7	3.5	6
45	CL0556		7	3.5	6
46	CL0557		7	3.5	6
47	CL0558		7	3.5	6
48	CL0559		7	3.5	6
49	CL0560		7	3.5	6
50	CL0561		7	3.5	6
51	CL0562		7	3.5	6
52	CL0563		7	3.5	6



53	CL0564		7	3.5	6
54	CL0565		7	3.5	6
55	CL0566		7	3.5	6
56	CL0567		7	3.5	6
57	CL0568		7	3.5	6
58	CL0569		7	3.5	6
59	CL0570		7	3.5	6
60	CL0571		7	3.5	6
61	CL0572		7	3.5	6
62	CL0573		7	3.5	6
63	CL0574		7	3.5	6
64	CL0575		7	3.5	6
65	CL0576		7	3.5	6
66	CL0577		7	3.5	6
67	CL0578		7	3.5	6
68	CL0579		7	3.5	6
69	CL0580		7	3.5	6
70	CL0581		7	3.5	6
71	CL0582		7	3.5	6
72	CL0583		7	3.5	6
73	CL0584		7	3.5	6
74	CL0585		9	4.5	6
75	CL0586		7	3.5	6
76	CL0587		7	3.5	6
77	CL0588		7	3.5	6
78	CL0590		7	3.5	6
79	CL0591		7	3.5	6
80	CL0592		7	3.5	6
81	CL0593		7	3.5	6
82	CL0594		7	3.5	6
83	CL0595		7	3.5	6
84	CL0596		7	3.5	6
85	CL0597		7	3.5	6
86	CL0598		12	6	6
87	CL0599		7	3.5	6
88	CL0600		7	3.5	6
89	CL0601		7	3.5	6

90	CL0602		7	3.5	6
91	CL0603		7	3.5	6
92	CL0604		7	3.5	6
93	CL0605		7	3.5	6
94	CL0606		7	3.5	6
95	CL0607		7	3.5	6
96	CL0608		7	3.5	6
97	CL0609		7	3.5	6
98	CL0610		7	3.5	6
99	CL0611		7	3.5	6
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111	CL0624		7	3.5	6
112	CL0625	5 Thennampillai Road	7	3.5	6
113	CL0627		7	3.5	6
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117	CL0631		9	4.5	6
118	CL0632		7	3.5	6
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123	CL0637		7	3.5	6
124	CL0638		7	3.5	6
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126	CL0640		7	3.5	6

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127	CL0641		7	3.5	6
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149	CL0672		7	3.5	6
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152	CL0679		7	3.5	6
153	CL0680		7	3.5	6
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208	CL0740		7	3.5	6
209	CL0741		7	3.5	6
210	CL0742		9	4.5	6
211	CL0743	Kulanthai Jesu Veethy	7	3.5	6
212	CL0744	St.Valanar Veethy	7	3.5	6
213	CL0745	St.Sebamalai Annai Veethy	7	3.5	6
214	CL0746	St.Anthoniyar Veethy	7	3.5	6
215	CL0747	St.Josephvaz nagar	7	3.5	6
216	CL0748	St.Valanar Kovil Veethy	7	3.5	6
217	CL0749	Valan Nagar Cross street	7	3.5	6
218	CL0750		12	6	6
219	CL0751		7	3.5	6
220	CL0752		7	3.5	6
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236	CL0768		7	3.5	6
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242	CL0774		7	3.5	6
243	CL0775		7	3.5	6
244	CL0776		7	3.5	6
245	CL0777		12	6	6
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249	CL0782		7	3.5	6
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255	CL0790		7	3.5	6
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257	CL0792		7	3.5	6
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263	CL0798		7	3.5	6
264	CL0799		7	3.5	6
265	CL0800		7	3.5	6
266	CL0801	Sinna karisal A14 connecting Veethy 2	7	3.5	6
267	CL0802		7	3.5	6
268	CL0803		7	3.5	6
269	CL0804		7	3.5	6
270	CL0805		7	3.5	6
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279	CL0815		7	3.5	6
280	CL0816	Play Ground Veethy	7	3.5	6
281	CL0817		7	3.5	6
282	CL0818		7	3.5	6
283	CL0819	Mohideen Jummah palli Veethy	9	4.5	6
284	CL0820		7	3.5	6
285	CL0821		7	3.5	6
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296	CL0831		9	4.5	6
297	CL0832		9	4.5	6
298	CL0833	Markandu Veethy	7	3.5	6
299	CL0834	Uvayadipannai veethy	7	3.5	6
300	CL0835	Vella Vaithiyan Veethy	7	3.5	6
301	CL0836		7	3.5	6
302	CL0837		7	3.5	6
303	CL0838	Uvari Internal Road	7	3.5	6
304	CL0839		9	4.5	6
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306	CL0841		9	4.5	6
307	CL0842		9	4.5	6
308	CL0843		9	4.5	6
309	CL0844		9	4.5	6
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315	CL0850		7	3.5	6
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326	CL0861		7	3.5	6
327	CL0862		9	4.5	6
328	CL0863		7	3.5	6
329	CL0864		9	4.5	6
330	CL0865		7	3.5	6
331	CL0866		9	4.5	6
332	CL0867		7	3.5	6
333	CL0868		7	3.5	6
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335	CL0870		9	4.5	6
336	CL0871		9	4.5	6
337	CL0872		9	4.5	6
338	CL0873		12	6	6
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340	CL0875		9	4.5	6
341	CL0876		9	4.5	6
342	CL0877		7	3.5	6
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346	CL0882		7	3.5	6
347	CL0883		7	3.5	6
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353	CL0888		7	3.5	6
354	CL0889		7	3.5	6
355	CL0890	Uthayapuram Main Veethy	7	3.5	6
356	CL0891		7	3.5	6
357	CL0895	Dilasalle Veethy	7	3.5	6
358	CL0896		7	3.5	6
359	CL0897	Uthayapuram 4th cross street	7	3.5	6
360	CL0898	Uthayapuram 5th cross street	7	3.5	6
361	CL0899		7	3.5	6
362	CL0900		7	3.5	6
363	CL0901		7	3.5	6
364	CL0903	Uthayapuram 6th cross street	7	3.5	6
365	CL0904		7	3.5	6
366	CL0905		7	3.5	6
367	CL0906		7	3.5	6
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384	CL0923		7	3.5	6
385	CL0924		7	3.5	6

386	CL0925	Kattaspathiri Velankanni kovil veethy	7	3.5	6
387	CL0926		7	3.5	6
388	CL0927		7	3.5	6
389	CL0928		7	3.5	6
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409	CL0949		7	3.5	6
410	CL0950		7	3.5	6
411	CL0951	Pesalai St.Mary's Veethy	7	3.5	6
412	CL0952		7	3.5	6
413	CL0953		7	3.5	6
414	CL0954		7	3.5	6
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424	CL0964		7	3.5	6
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429	CL0968		7	3.5	6
430	CL0969		7	3.5	6
431	CL0970		7	3.5	6
432	CL0971	Pesalai St.Therasa Veethy	7	3.5	6
433	CL0972		7	3.5	6
434	CL0973		7	3.5	6
435	CL0974		7	3.5	6
436	CL0975		7	3.5	6
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458	CL0998		7	3.5	6
459	CL0999		7	3.5	6

460	CL1000		7	3.5	6
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467	CL1007		7	3.5	6
468	CL1008		9	4.5	6
469	CL1009		9	4.5	6
470	CL1010		7	3.5	6
471	CL1011		7	3.5	6
472	CL1012		7	3.5	6
473	CL1013		7	3.5	6
474	CL1014	Aarumuga Navalar Veethy	7	3.5	6
475	CL1015		7	3.5	6
476	CL1017		7	3.5	6
477	CL1018		7	3.5	6
478	CL1020		7	3.5	6
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493	CL1042		7	3.5	6
494	CL1043		7	3.5	6
495	CL1044		7	3.5	6
496	CL1045	Thullukudiyeruppu Street	7	3.5	6

497	CL1046		7	3.5	6
498	CL1047	Nadukkuda Road	9	4.5	6
499	CL1048		7	3.5	6
500	CL1049		12	6	6
501	CL1050		7	3.5	6
502	CL1051		7	3.5	6
503	CL1052		7	3.5	6
504	CL1053		7	3.5	6
505	CL1054	Nadukkuda Internal Road	7	3.5	6
506	CL1055		7	3.5	6
507	CL1056		7	3.5	6
508	CL1057	Nadukkuda 1st Cross Street	7	3.5	6
509	CL1058		7	3.5	6
510	CL1059		7	3.5	6
511	CL1060		7	3.5	6
512	CL1061	Kelayankudeyiruppu Internal Veethy - 2	7	3.5	6
513	CL1062	Kelayankudeyiruppu Internal Veethy -1	7	3.5	6
514	CL1063		7	3.5	6
515	CL1064		9	4.5	6
516	CL1065		12	6	6
517	CL1066	Beach Veethy	9	4.5	6
518	CL1067		7	3.5	6
519	CL1068		7	3.5	6
520	CL1069	Selvapura Veethy	7	3.5	6
521	CL1070		7	3.5	6
522	CL1071		7	3.5	6
523	CL1072		7	3.5	6
524	CL1073		7	3.5	6
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532	CL1080		7	3.5	6

533	CL1081		7	3.5	6
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536	CL1084		7	3.5	6
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538	CL1086	Suvamithodda Veethy	7	3.5	6
539	CL1087		7	3.5	6
540	CL1088	Kaddukarankudeiruppu	7	3.5	6
541	CL1089		7	3.5	6
542	CL1090		7	3.5	6
543	CL1091		7	3.5	6
544	CL1092		7	3.5	6
545	CL1093		7	3.5	6
546	CL1094		7	3.5	6
547	CL1095		7	3.5	6
548	CL1096		7	3.5	6
549	CL1097	Thalaimannar Old bridge Veethy	7	3.5	6
550	CL1098		7	3.5	6
551	CL1099		7	3.5	6
552	CL1100	Thalaimannar Therasa Veethy	7	3.5	6
553	CL1101		7	3.5	6
554	CL1102		7	3.5	6
555	CL1103		7	3.5	6
556	CL1104	Scheme Road	15	7.5	6
557	CL1105		7	3.5	6
558	CL1106		7	3.5	6
559	CL1107		7	3.5	6
560	CL1108		7	3.5	6
561	CL1109		7	3.5	6
562	CL1110	Thalaimannar Station Sub Off Road	7	3.5	6
563	CL1111		7	3.5	6
564	CL1112		7	3.5	6
565	CL1113		7	3.5	6
566	CL1114		7	3.5	6
567	CL1115		7	3.5	6
568	CL1116	Thalaimannar Matha kovil veethy	7	3.5	6
569	CL1117	Kiramam Beach Road	12	6	6



570	CL1118		7	3.5	6
571	CL1119	Thalaimannar Kaaliyamman Kovil Veethy	7	3.5	6
572	CL1120		7	3.5	6
573	CL1121	Thalaimannar Sinna padapiddy	7	3.5	6
574	CL1122	Thalaimannar Play ground Veethy	7	3.5	6
575	CL1123		7	3.5	6
576	CL1124		7	3.5	6
577	CL1125	Thalaimannar JRS Veethy 1	7	3.5	6
578	CL1126		7	3.5	6
579	CL1127	Thalaimannar JRS Veethy 2	7	3.5	6
580	CL1128		7	3.5	6
581	CL1129		7	3.5	6
582	CL1130		7	3.5	6
583	CL1131	Thalaimannar Siluvai Nagar Veethy	7	3.5	6
584	CL1132	Myu Hotel Road	7	3.5	6
585	CL1133	Beach Road	9	4.5	6
586	CL1133	Velankanni Road	9	4.5	6
587	CL1134	Beach Road	7	3.5	6
588	CL1135	Thalaimannar David Shop Veethy	7	3.5	6
589	CL1136		7	3.5	6
590	CL1137	Soosaiyappar Kovil Road	7	3.5	6
591	CL1138	Thalaimannar Fishmen Society Road	7	3.5	6
592	CL1139		7	3.5	6
593	CL1140		7	3.5	6
594	CL1141	Thalaimannar Housing Scheme 1st cross veethy	7	3.5	6
595	CL1142	Thalaimannar Housing Scheme 2nd Cross Veethy	7	3.5	6
596	CL1143	Thalaimannar Housing Scheme 6th Cross Veethy	7	3.5	6
597	CL1144	Thalaimannar Houing Scheme 4th Cross Veethy	7	3.5	6
598	CL1145	Thalaimannar Housing Scheme 5th Cross Veetthy	7	3.5	6
599	CL1146	Thalaimannar Housing Scheme 3rd Cross Veethy	7	3.5	6
600	CL1147	Thalaimannar Dominic Veethy	7	3.5	6
601	CL1148	Soosaiyappar Kovil Road	7	3.5	6

602	CL1149	Mariyal Road	7	3.5	6
603	CL1150	Thalaimannar St.Joseph Road	7	3.5	6
604	CL1151	Thalaimannar Therasa Veethy	7	3.5	6
605	CL1152	Kurusu Vaddaku Veethy	7	3.5	6
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607	CL1154		7	3.5	6
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609	CL1156		7	3.5	6
610	CL1157		7	3.5	6
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619	CL1166		7	3.5	6
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627	CL1174		7	3.5	6
628	CL1175		7	3.5	6
629	CL1176		7	3.5	6
630	CL1177		7	3.5	6
631	CL1178		7	3.5	6
632	CL880		7	3.5	6
633	CR0276		7	3.5	6
634	CR0277		7	3.5	6
635	CR0278		7	3.5	6
636	CR0279		7	3.5	6
637	CR0280		7	3.5	6
638	CR0281	Erukampiddy road	7	3.5	6

639	CR0282		7	3.5	6
640	CR0283		9	4.5	6
641	CR0284		7	3.5	6
642	CR0285	Main Veethy	7	3.5	6
643	CR0286	Erukalampitty 2nd cross Veethy	7	3.5	6
644	CR0287		7	3.5	6
645	CR0288	Erukalampitty 3rd Cross Veethy	7	3.5	6
646	CR0289	Erukalampitty 4th Cross Veethy	7	3.5	6
647	CR0290	Erukalampity 7th Cross Veethy	7	3.5	6
648	CR0291		7	3.5	6
649	CR0292	Erukalampitty 5th cross Veethy	7	3.5	6
650	CR0293	Erukalampitty 6th Cross Veethy	7	3.5	6
651	CR0294		7	3.5	6
652	CR0295		7	3.5	6
653	CR0296		7	3.5	6
654	CR0297		7	3.5	6
655	CR0298		7	3.5	6
656	CR0299		7	3.5	6
657	CR0300		7	3.5	6
658	CR0301		7	3.5	6
659	CR0302		7	3.5	6
660	CR0303		7	3.5	6
661	CR0305	Erukalampitty kalladi Veethy	7	3.5	6
662	CR0306		7	3.5	6
663	CR0307		7	3.5	6
664	CR0308		7	3.5	6
665	CR0309		7	3.5	6
666	CR0310		7	3.5	6
667	CR0311	Erukalampitty kalladi veethy 2nd lane	7	3.5	6
668	CR0312		7	3.5	6
669	CR0313		7	3.5	6
670	CR0314		7	3.5	6
671	CR0315		7	3.5	6
672	CR0316		7	3.5	6
673	CR0317		7	3.5	6
674	CR0318		7	3.5	6

675	CR0319	Aamaipadukkai Veethy	7	3.5	6
676	CR0320		7	3.5	6
677	CR0321	Keues Veethy	7	3.5	6
678	CR0322		7	3.5	6
679	CR0323		7	3.5	6
680	CR0323		7	3.5	6
681	CR0324		7	3.5	6
682	CR0326		7	3.5	6
683	CR0327		7	3.5	6
684	CR0328		7	3.5	6
685	CR0329	Sinna aamaipadukkai Veethy	7	3.5	6
686	CR0330		7	3.5	6
687	CR0331	5th Mile Post 2nd cross veethy	7	3.5	6
688	CR0332		7	3.5	6
689	CR0333		7	3.5	6
690	CR0334		7	3.5	6
691	CR0335		7	3.5	6
692	CR0336		7	3.5	6
693	CR0339		7	3.5	6
694	CR0340		7	3.5	6
695	CR0341		7	3.5	6
696	CR0342		7	3.5	6
697	CR0343		7	3.5	6
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699	CR0345		7	3.5	6
700	CR0346		7	3.5	6
701	CR0347		7	3.5	6
702	CR0348		7	3.5	6
703	CR0349		7	3.5	6
704	CR0350		7	3.5	6
705	CR0351		7	3.5	6
706	CR0352		7	3.5	6
707	CR0353		7	3.5	6
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710	CR0356		7	3.5	6
711	CR0357		7	3.5	6

712	CR0358		7	3.5	6
713	CR0359		7	3.5	6
714	CR0360	Tharsin Nagar Veethy	7	3.5	6
715	CR0361		7	3.5	6
716	CR0362		7	3.5	6
717	CR0363		7	3.5	6
718	CR0364		7	3.5	6
719	CR0365		7	3.5	6
720	CR0366		7	3.5	6
721	CR0367		7	3.5	6
722	CR0368		7	3.5	6
723	CR0369		7	3.5	6
724	CR0370		7	3.5	6
725	CR0371		7	3.5	6
726	CR0372		7	3.5	6
727	CR0373		7	3.5	6
728	CR0374		7	3.5	6
729	CR0375		7	3.5	6
730	CR0376		7	3.5	6
731	CR0377		7	3.5	6
732	CR0378		7	3.5	6
733	CR0379		7	3.5	6
734	CR0380	Light house road	7	3.5	6
735	CR0381		7	3.5	6
736	CR0382		7	3.5	6
737	CR0383		7	3.5	6
738	CR0384		7	3.5	6
739	CR0385		7	3.5	6
740	CR0386		7	3.5	6
741	CR0387		7	3.5	6
742	CR0388		7	3.5	6
743	CR0389		9	4.5	6
744	CR0390		9	4.5	6
745	CR0391		7	3.5	6
746	CR0392		7	3.5	6
747	CR0393		7	3.5	6
748	CR0394		7	3.5	6

749	CR0395		7	3.5	6
750	CR0396		7	3.5	6
751	CR0398		7	3.5	6
752	CR0399		7	3.5	6
753	CR0400		7	3.5	6
754	CR0401		7	3.5	6
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757	CR0404		7	3.5	6
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770	CR0417		7	3.5	6
771	CR0418		7	3.5	6
772	CR0419		7	3.5	6
773	CR0420	Srithoppu Anthoniyar Veethy	7	3.5	6
774	CR0421		7	3.5	6
775	CR0422		7	3.5	6
776	CR0423		7	3.5	6
777	CR0424		7	3.5	6
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780	CR0427		7	3.5	6
781	CR0428		7	3.5	6
782	CR0429		7	3.5	6
783	CR0429		7	3.5	6
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785	CR0431		7	3.5	6

786	CR0432		7	3.5	6
787	CR0433		7	3.5	6
788	CR0434		7	3.5	6
789	CR0435		7	3.5	6
790	CR0436		7	3.5	6
791	CR0437		7	3.5	6
792	CR0438	Pesalai St.Lusiya Veethy	7	3.5	6
793	CR0439		7	3.5	6
794	CR0440		7	3.5	6
795	CR0441	Pesalai Sami nathar veethy	7	3.5	6
796	CR0442		7	3.5	6
797	CR0443		7	3.5	6
798	CR0444		7	3.5	6
799	CR0445		7	3.5	6
800	CR0446		7	3.5	6
801	CR0447		7	3.5	6
802	CR0448		7	3.5	6
803	CR0449		7	3.5	6
804	CR0450		7	3.5	6
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842	CR0488		7	3.5	6
843	CR0489		7	3.5	6
844	CR0490		7	3.5	6
845	CR0491		7	3.5	6
846	CR0492		7	3.5	6
847	CR0493		7	3.5	6
848	CR0494		7	3.5	6
849	CR0495		7	3.5	6
850	CR0496		7	3.5	6
851	CR0497		7	3.5	6
852	CR0498		7	3.5	6
853	CR0499		7	3.5	6

854	CR0500		7	3.5	6
855	CR0501		7	3.5	6
856	CR0502		7	3.5	6
857	CR0503		7	3.5	6
858	CR0504		7	3.5	6
859	CR0505		7	3.5	6
860	CR0506		7	3.5	6
861	CR0507	1st Cross Street	12	6	6
862	CR0508	Pier Road	12	6	6
863	CR0509	Hijra School Road	7	3.5	6
864	CR0510	2nd Cross Street	7	3.5	6
865	CR0511	3rd Cross Street	7	3.5	6
866	CR0512	4th Cross Street	7	3.5	6
867	CR0513		7	3.5	6
868	CR0514	6th Cross Street	7	3.5	6
869	CR0515		7	3.5	6
870	CR0516		7	3.5	6
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872	CR0518		7	3.5	6
873	CR0519		7	3.5	6
874	CR0520		7	3.5	6
875	CR0521		7	3.5	6
876	CR0522		7	3.5	6
877	CR0523		7	3.5	6
878	CR0524		7	3.5	6
879	CR0525		7	3.5	6
880	CR0526		7	3.5	6
881	CR0527		7	3.5	6
882	CR0528		7	3.5	6
883	CR0529	Thalaimannar pier Light House Veethy	7	3.5	6
884	CR0530	Evacuation Road	7	3.5	6
885	CR0531		7	3.5	6
886	CR0532		7	3.5	6
887	CR0533		7	3.5	6
888	CR0534		7	3.5	6
889	CR0535		7	3.5	6
890	CR0536	Thalaimannar Pallivasal Veethy	7	3.5	6



891	CR0537		7	3.5	6
892	CR0538		7	3.5	6
893	CR0539	Parethhipannai Veethy	7	3.5	6
894	CR0540		7	3.5	6
895	CR0541		7	3.5	6
896	CR0542	Parethhipannai Internal Veethy	7	3.5	6
897	CR0543	Kelayankudeyiruppu Veethy	7	3.5	6
898	CR0544	Pavelupattankatikudeyiruppu Kulanthai Jesu Veethy	7	3.5	6
899	CR0545		7	3.5	6
900	CR0546		7	3.5	6
901	CR0547		7	3.5	6
902	CR0548	Naddukuda 2nd Cross Street	7	3.5	6
903	CR0549	Pavelupattankatikudeyiruppu Veethy - 2	7	3.5	6
904	CR0550		9	4.5	6
905	CR0551		7	3.5	6
906	CR0552		7	3.5	6
907	CR0553		7	3.5	6
908	CR0554	Thullukudeyeruppu Kovil Veethy	7	3.5	6
909	CR0555		7	3.5	6
910	CR0556	Thullukudiyeruppu Convent Veethy	7	3.5	6
911	CR0557	Thullukudiyeruppu 100 Housing Scheme	7	3.5	6
912	CR0558		7	3.5	6
913	CR0559		7	3.5	6
914	CR0560	Thalaimannar Railway Station Veethy	7	3.5	6
915	CR0561		7	3.5	6

Source: Prepared by UDA (NP)

\* Authority can be decide the bulding line of the Private road

## **PART- III**

# **Annextures**



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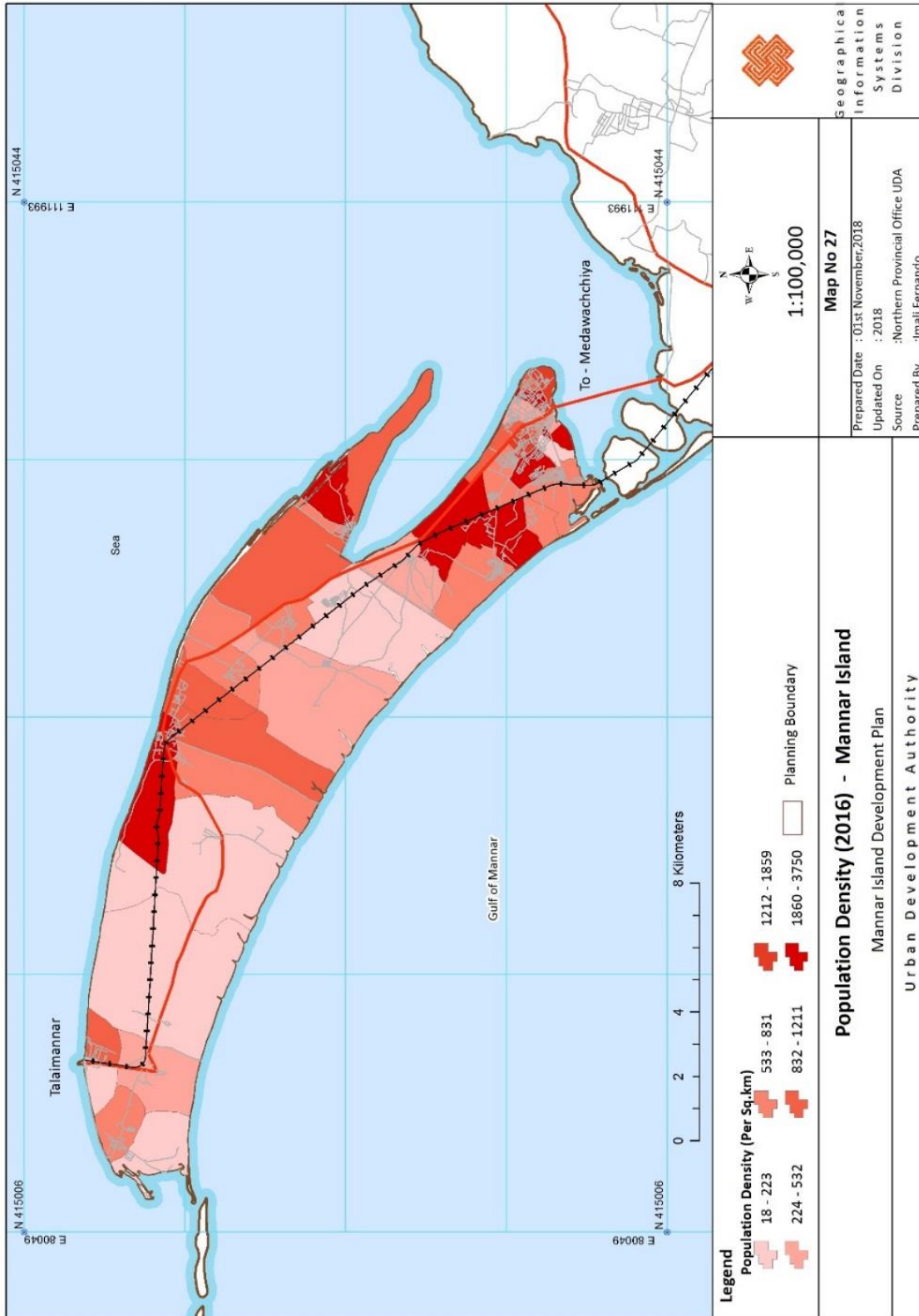
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# Annexure

## Annexure 1: Population Density (2016)

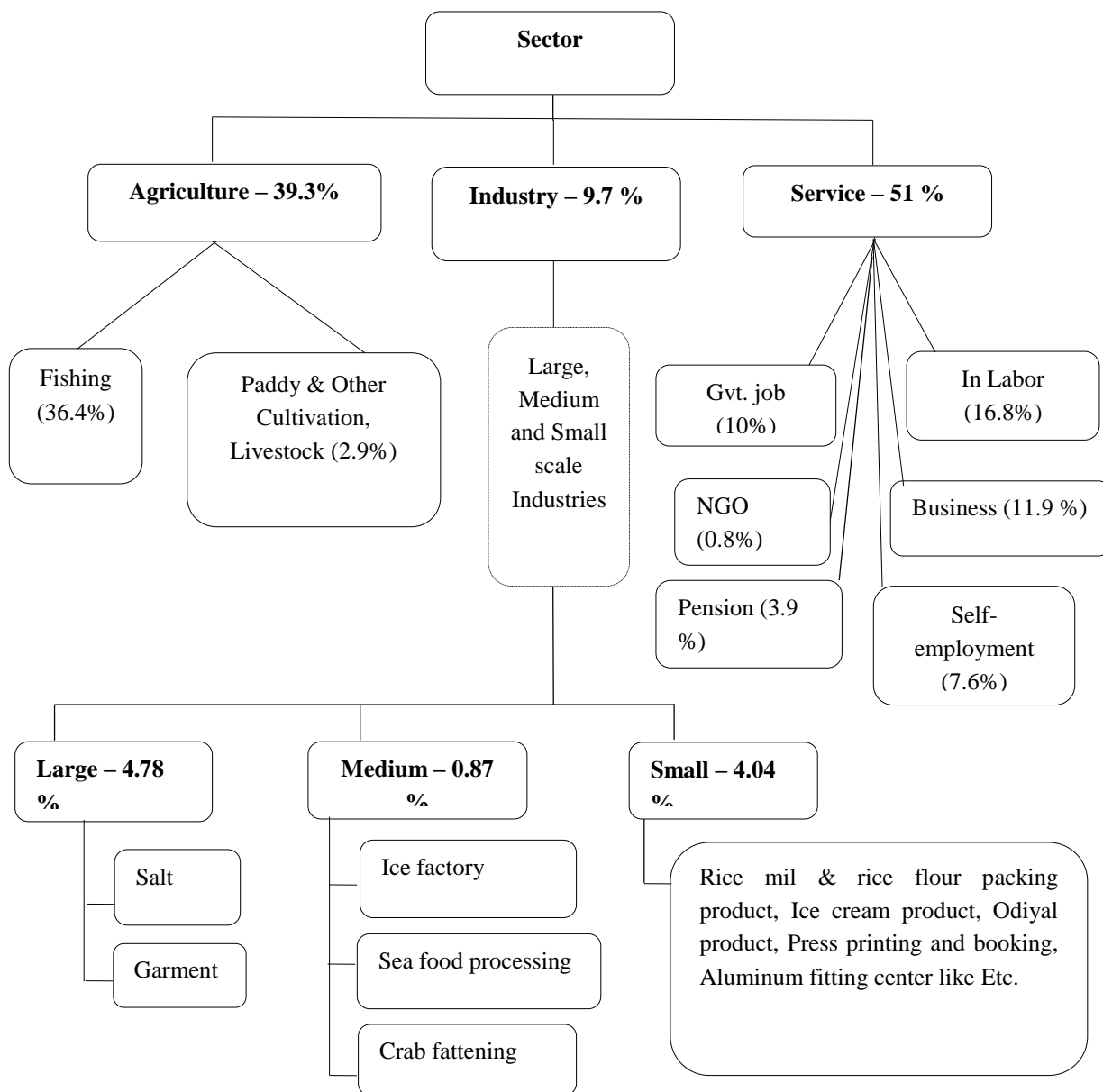


**Annexure 2: Arrivals of Commuters (2016)**

<b>Type of Population</b>	<b>Total Size</b>
Trade & Commerce	2600
Education (schooling/tuition students & staff)	1600
Health (patients/staffs)	2000
Administrative	500
Industry	2000
Tourist	800
<b>Total</b>	<b>9500</b>

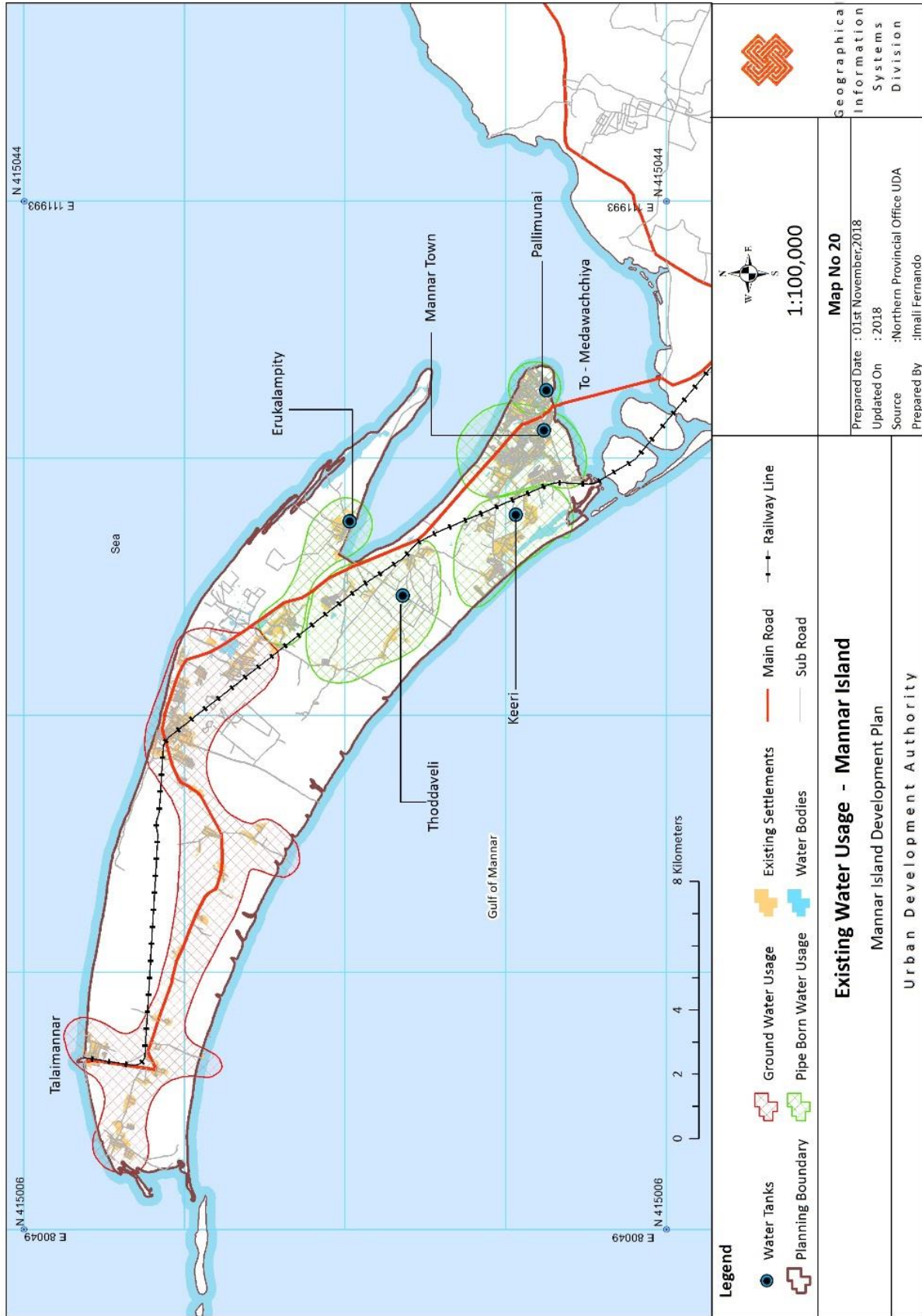
Source: Field Observation, 2016

**Annexure 3: Sectoral Composition (2016)**



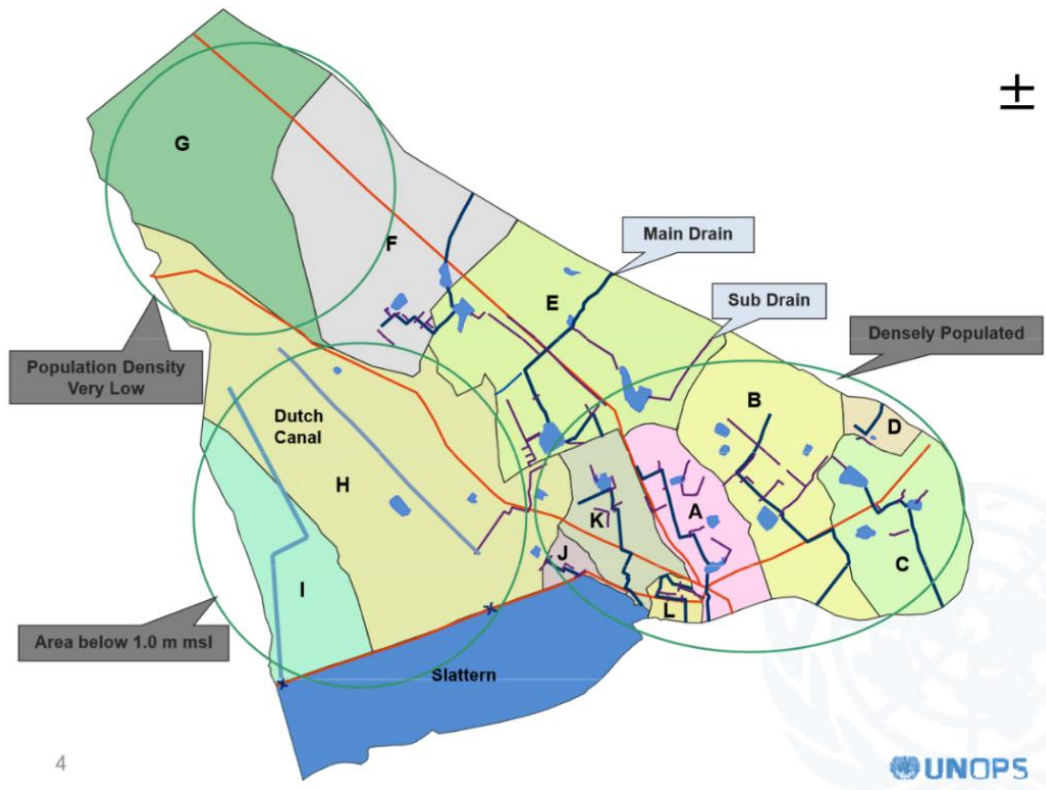
Source: Statistical handbook 2016, Mannar Island

**Annexure 4: Existing Water Usage\_ Mannar Island (2030)**



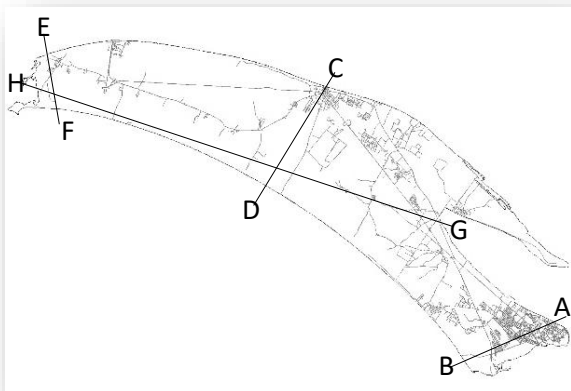


**Annexure 5: Catchment Details EU – Drainage project**



Source: UNOPS\_ Drainage Project, 2012

**Annexure 6: Cross Section**



- |           |                             |
|-----------|-----------------------------|
| 01. A – B | : Foreshore Area            |
| 02. C – D | : Pesalai Area              |
| 03. E – F | : Thalaimannar Area         |
| 04. G – H | : Mannar to<br>Thalaimannar |

01. at foreshore Area



02. at Pesalai



03. Erukkalampitty Area



## 04. at Thalaimannar Area



Source: Prepared by UDA (NP)

**Annexure 7: Basic Details for Hospital in Mannar Island need to be facilitate in future**

No	Hospital	Location	Type	No of Doctors	No of Staff	Bed	Number of Patients visiting per day
1	District General Hospital	Chavatkadu	DGH	48	38S staffs	331	436
2	Divisional Hospital Thalaimannar	Thalaimannar Pier East	DH-B	2	24 staffs	60	70
3	Divisional Hospital Pesalai	Pesalai South	DH-B	2	28 staffs	50	107
4	Divisional Hospital Erukkalampitty	Erukkalampitty central	DH-C	2	18 staffs	19	72
5	Primary Medical Care Unit, Tharapuram	Tharapuram West	PMCU	2	9 staffs	-	34
6	MOH Mannar	Uppukulam South	MOH	1 MOH	44 staffs	-	Clinic (2 time for week)
7	GHC Erukkalampitty	Erukkalampitty East	GHC	1 MOH	5 staffs	-	Clinic (1 time for month)
8	GHC Sinakaraisal	Sinakaraisal	GHC	1 MOH	5 staffs	-	Clinic (1 time for month)
9	GHC Thalaimannar	Thalaimannar Pier	GHC	1 MOH	5 staffs	-	Clinic (1 time for month)
10	GHC Tharapuram	Tharapuram	GHC	1 MOH	5 staffs	-	Clinic (1 time for month)
11	GHC Pallimunai	Pallimunai	GHC	1 MOH	5 staffs	-	Clinic (1 time for month)

Source: Statistical handbook, Manna Island (2016)

**Annexure 8: Existing Schools with Classification\_ Mannar Island**

AB		1C		Type 2		Type 3	
Name of the school	No. of Students	Name of the school	No. of Students	Name of the school	No. of Students	Name of the school	No. of Students
Mn/Sithyvinayakar Hindu College	1574	MN/Punitha Valanar R.C.T.M.S	478	Mn.Eluthoor R.C.T.M.S	223	Mn/Kaddukkarankudigiruppu R.C.T.M..S	45
Mn/St.Xavier Boy's M.M.V	1716	Mn/St. Lucia M.V	548	Mn/Olaithoduvai R.C.T.M.S	64	Mn/St. Mary's Girls'Vid	600
Mn/St.Xavier Girls College	1567	Mn/Al-Mina.M.V	430	Mn.St.Lawrance R.C.T.M.S	252	Mn/Erukkalampiddy East G.M.M.S	117
Mn/Fatima M.M.V.	927	Mn/Erukkalampiddy Mahalir MV	333	Mn/Thullukudiyiruppu RCTMS	228	Mn/Siruthoppu.R.C.T. M.S	106
Mn/Talaimannar pier GTMS	165	Mn/Thoddaveli G.T.M.S	82	Mn/Karisal R.C.T.M.S	220	Mn/Santhipuram G.T.M.S	318
Mn/Al-Azhar MV	643			Mn/ Talaimannar pier GMMS	213	Mn/Talaimannar pier RCTMS	165
Mn/Erukkalampiddy Muslim MMV	453						

Source: Statistical handbook, Mannar Island (2016)

**Annexure 9: Physical Need of schools\_ Mannar Island**

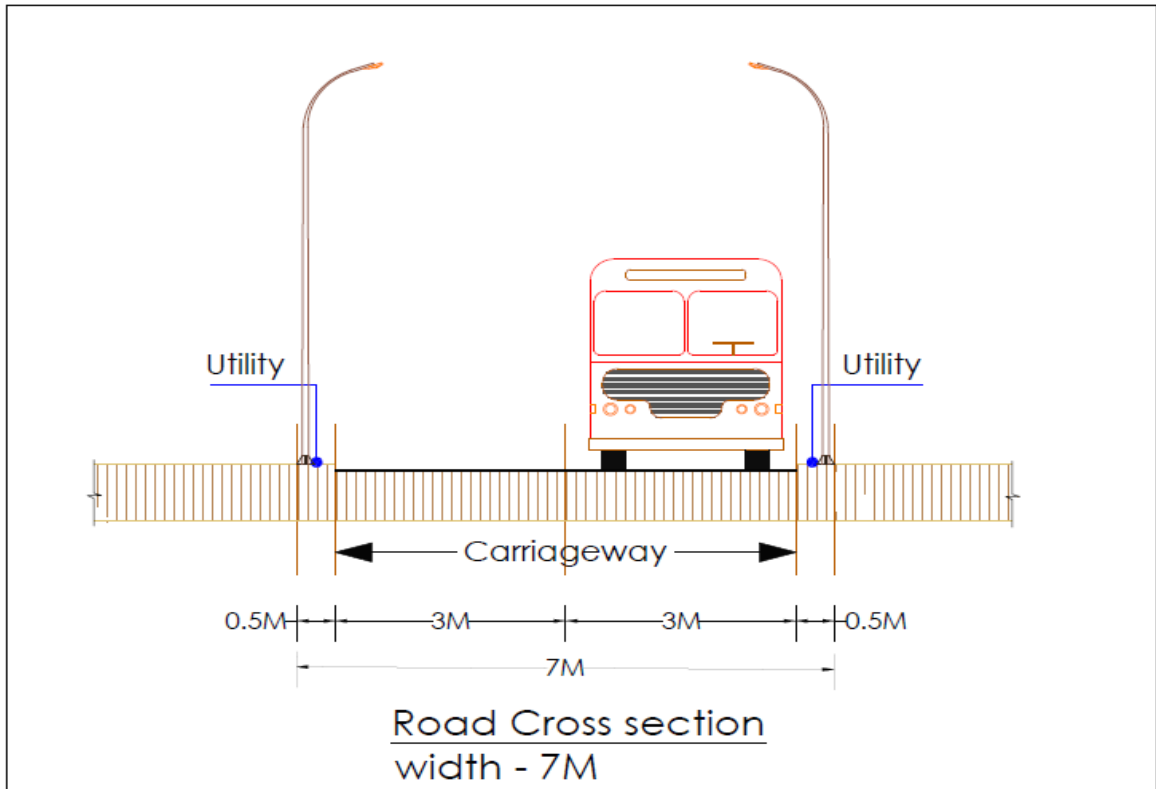
No	Name of School	Type	Required Facilities
1	Mn/St.Xavier Boy's M.M.V	1AB	Library
2	Mn/Erukkalampiddy Muslim MMV	1AB	Playground
3	MN/Punitha Valanar R.C.T.M.S	1C	Playground
4	Mn/St. Lucia M.V	1C	Playground
5	Mn/Thullukudiyiruppu RCTMS	Type ii	Playground
6	Mn/Siruthoppu.R.C.T.M.S	Type iii	Playground
7	Mn/Talaimannar pier RCTMS	Type iii	Playground

Source: Zonal Director of Education, Mannar

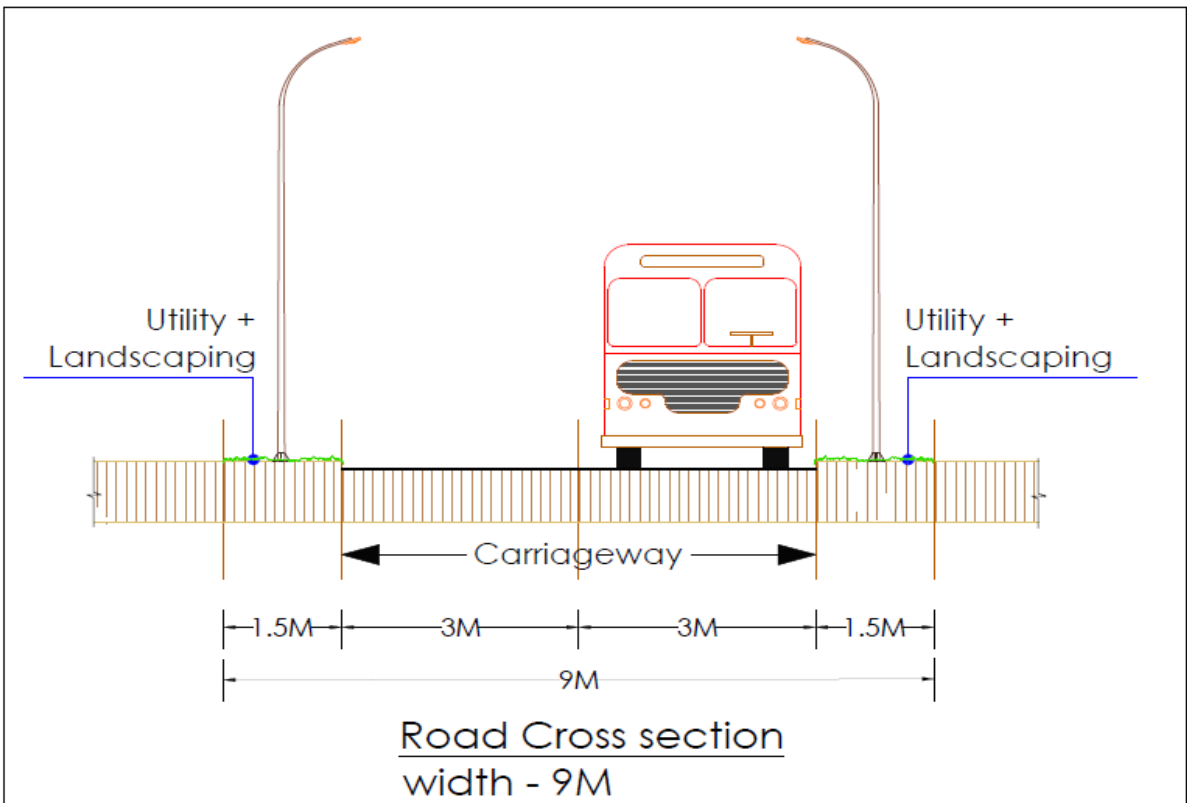
\* Sanitary facilities like toilets and drinking water requirements need to be facilitate in all schools in future.

**Annexure 10: Proposed Road Section**

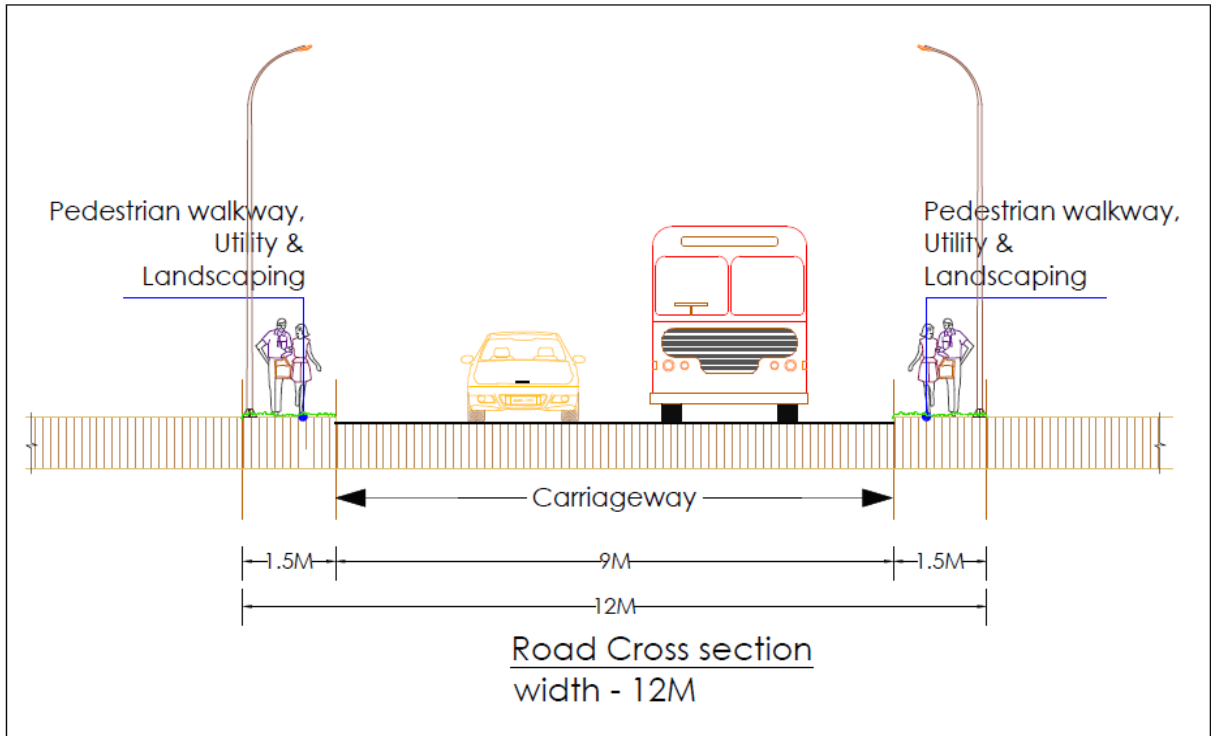
**7m Road**



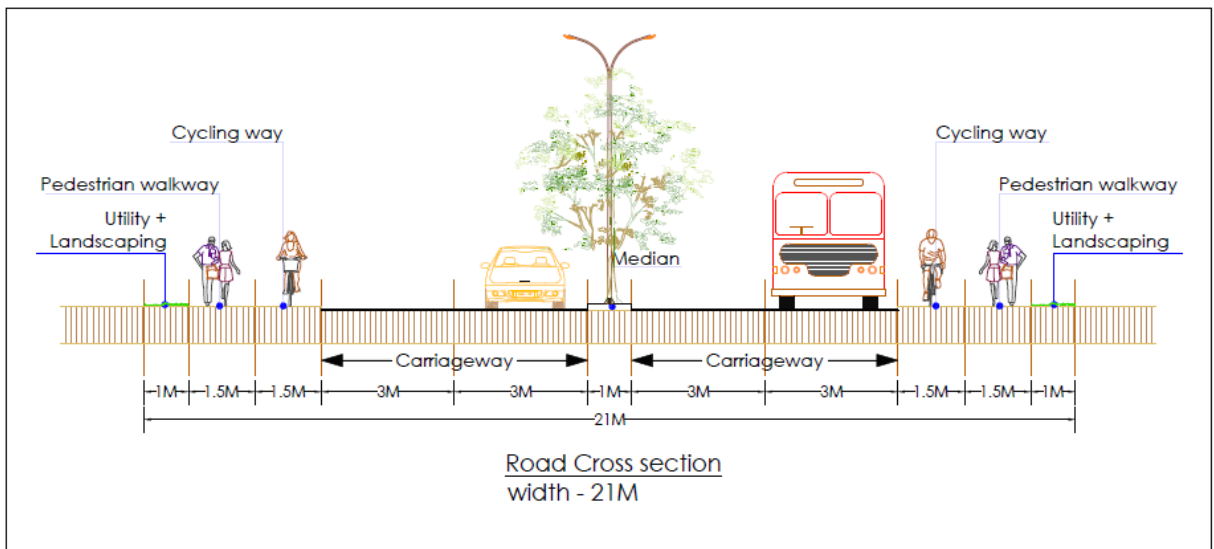
**9m Road**



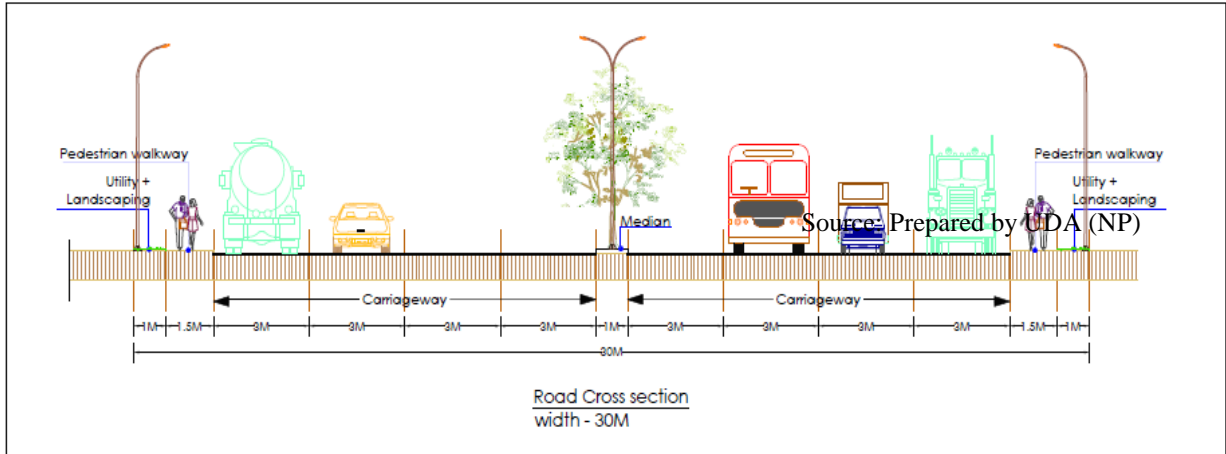
12m Road



21m Road



30m Road



**Annexure 11: Water Demand\_ Mannar Island (2021 - 2030)**

<b>Water Demand for Mannar Island (2021-2030)</b>				
		<b>2020</b>	<b>2025</b>	<b>2030</b>
Population		70,142	75,563	81,403
Commuters		7,000	15,000	30,000
		<b>m3/day</b>		
Residence		8,417	9,068	9,768
Education		253	272	293
Health		421	453	488
Commercial		842	907	977
Industrial		1,683	1,814	1,954
Institution		421	453	488
Other(religious and security & etc..)	84	91		98
<b>Total Demand</b>		<b>12,121</b>	<b>13,057</b>	<b>14,066</b>

Source: Prepared by UDA (NP)

**Annexure 12: Industrial Categorization**

<b>Size Sector</b>	<b>Criteria</b>	<b>Large scale Industries</b>	<b>Medium scale Industries</b>	<b>Small scale Industries</b>	<b>Micro scale Industries</b>
Manufacturing sector	Annual Turnover (Rs. Mn)	>751	251-750	16-250	< 15
	No. of Employees	>301	51-300	11-50	< 10
Service Sector	Annual Turnover (Rs. Mn)	>751	251-750	16-250	< 15
	No. of Employees	>201	51-200	11-50	< 10

Source: Industrial Development Board



**Annexure 13: Zoning boundaries with coordinates of Foreshore Zone**

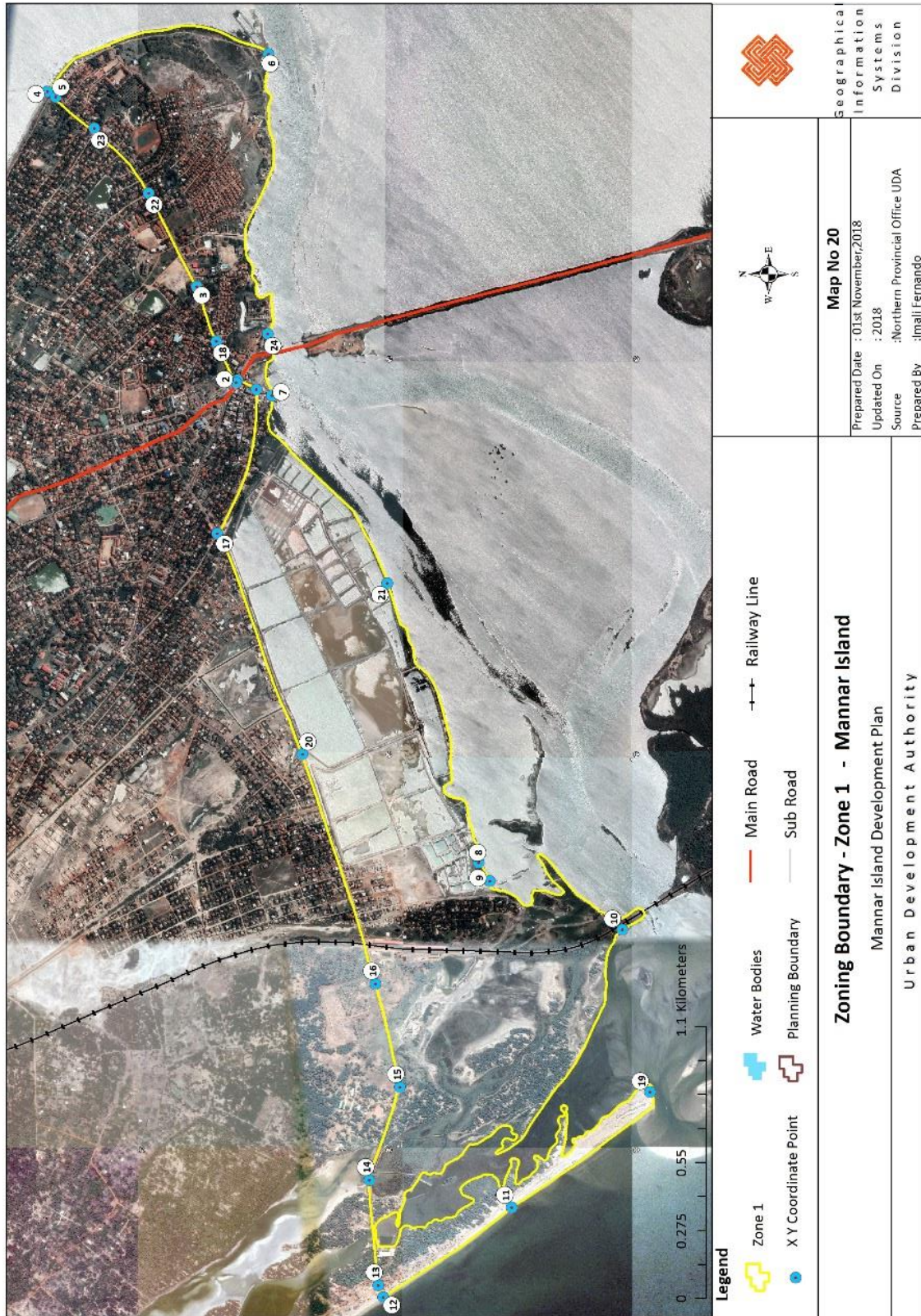
Zone is defined on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on TMSRILANKA95 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.

**Points of X and Y Coordinates**

<b>FID</b>	<b>Shape *</b>	<b>X</b>	<b>Y</b>
0	Point	105.479069	418.536395
1	Point	105.517359	418.612439
2	Point	105.50784	418.61858
3	Point	105.895796	418.777759
4	Point	106.684402	419.381351
5	Point	106.663655	419.347963
6	Point	106.8364	418.486499
7	Point	105.455393	418.473011
8	Point	103.563883	417.63697
9	Point	103.4898	417.591991
10	Point	103.293346	417.054886
11	Point	102.168554	417.501729
12	Point	101.805656	418.023278
13	Point	101.853586	418.042479
14	Point	102.279361	418.078488
15	Point	102.655117	417.955008
16	Point	103.073524	418.053722
17	Point	104.896923	418.694639
18	Point	105.674533	418.697784
19	Point	102.635489	416.943234
20	Point	104.003066	418.349344
21	Point	104.695578	418.005641
22	Point	106.27435	418.97243
23	Point	106.535495	419.191506
24	Point	105.704025	418.490424

The boundary coordinates points are indicated by map number 20

Map: 20 zoning boundary for Foreshore Zone



**Annexure 14: Zoning boundaries with coordinates of Commercial Zone**

Zone is defined on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on TMSRILANKA95 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.

**Points of X and Y Coordinates**

<b>FID</b>	<b>Shape</b>	<b>x</b>	<b>Y</b>
0	Point	105.08235	419.376269
1	Point	105.094156	419.35095
2	Point	105.249616	419.356362
3	Point	105.317167	419.345496
4	Point	105.39034	419.32
5	Point	105.731571	418.948713
6	Point	105.739587	418.930961
7	Point	105.674533	418.697784
8	Point	105.50784	418.61858
9	Point	105.517359	418.612439
10	Point	105.479069	418.536395
11	Point	105.135776	418.579059
12	Point	104.89229	418.696969
13	Point	104.733192	418.788568
14	Point	104.412285	419.087944
15	Point	104.435679	419.110049
16	Point	104.540628	419.182785
17	Point	105.074528	419.39717
18	Point	105.07909	419.38477
9	<b>Point</b>	<b>105.517359</b>	<b>418.612439</b>
10	Point	105.479069	418.536395
11	Point	105.135776	418.579059
12	Point	104.89229	418.696969
13	Point	104.733192	418.788568
14	Point	104.412285	419.087944
15	Point	104.435679	419.110049
16	Point	104.540628	419.182785
17	Point	105.074528	419.39717
18	Point	105.07909	419.38477



The boundary coordinates points are indicated by map number 21

Map: 21 zoning boundary for Commercial Zone



### Annexure 15: Zoning boundaries with coordinates of Mixed Development Zone

Zone is defined on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on TMSRILANKA95 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.

#### Points of X and Y Coordinates

FID	Shape	x	Y
0	Point	87.005169	432.073445
1	Point	86.815304	431.417398
2	Point	86.494798	430.820705
3	Point	87.543735	430.446596
4	Point	88.367945	430.241296
5	Point	89.17708	429.900488
6	Point	89.339539	430.192132
7	Point	89.41794	430.344604
8	Point	89.427465	430.466313
9	Point	89.45604	430.554155
10	Point	89.431839	430.667256
11	Point	89.514398	430.804244
12	Point	89.682255	430.973619
13	Point	89.790244	431.376429
14	Point	92.783011	431.859173
15	Point	95.587089	430.858309
16	Point	97.733475	430.222143
17	Point	101.069762	428.13134
18	Point	102.366832	427.016343
19	Point	102.988234	426.505084
20	Point	103.159155	426.211396
21	Point	103.152062	426.121318
22	Point	103.785018	425.55959
23	Point	104.177802	425.198717
24	Point	104.99899	423.920516
25	Point	106.874347	422.426094
26	Point	106.876728	422.249087
27	Point	104.892048	423.275891
28	Point	103.980287	423.86662
29	Point	102.132458	424.591188
30	Point	101.059703	425.106156
31	Point	101.041844	425.100865
32	Point	100.777189	424.700088
33	Point	101.146912	423.976319

34	Point	101.588436	423.209039
35	Point	102.288922	422.426003
36	Point	104.040727	420.798799
37	Point	104.103769	420.879127
38	Point	104.369676	420.707809
39	Point	104.328489	420.61076
40	Point	105.52626	419.972186
41	Point	106.680557	419.384129
42	Point	106.387581	419.049993
43	Point	105.892621	418.782204
44	Point	105.664076	418.697428
45	Point	105.708706	418.841192
46	Point	105.738595	418.924431
47	Point	105.739391	418.93435
48	Point	105.73595	418.942335
49	Point	105.402331	419.314199
50	Point	105.321119	419.344703
51	Point	105.251452	419.353188
52	Point	105.094156	419.35095
53	Point	105.084055	419.376571
54	Point	105.076944	419.400555
55	Point	104.865131	419.331719
56	Point	104.542221	419.187055
57	Point	104.430656	419.111479
58	Point	104.405948	419.084304
59	Point	104.732001	418.783409
60	Point	104.888718	418.692207
61	Point	104.070999	418.380708
62	Point	103.55963	418.20496
63	Point	103.09522	418.065258
64	Point	102.657964	417.960012
65	Point	102.288619	418.081302
66	Point	101.855233	418.0454
67	Point	101.804568	418.025025
68	Point	96.197599	423.706447

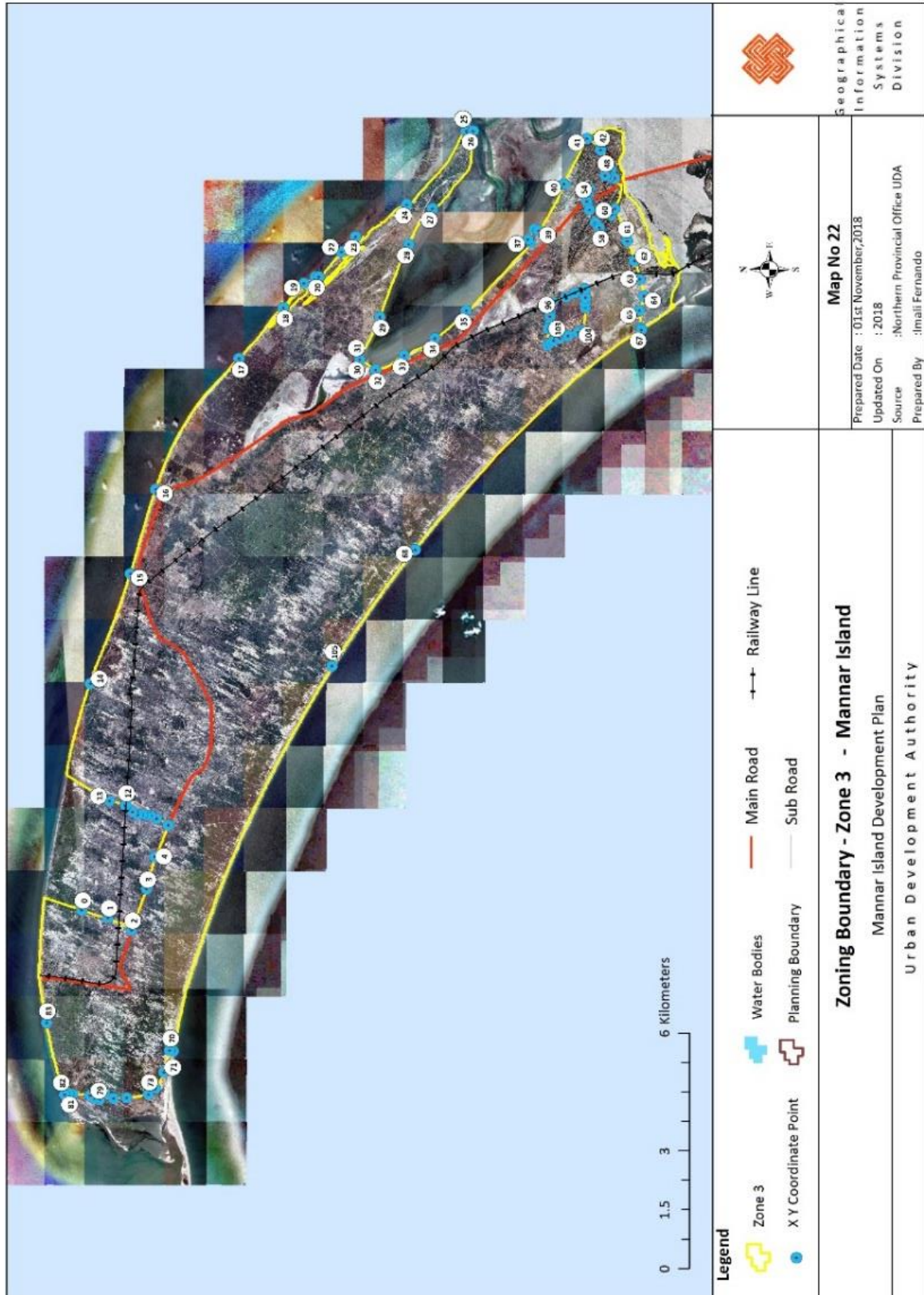
69	Point	83.412223	429.781656
70	Point	83.432292	429.868647
71	Point	82.874378	430.014661
72	Point	82.458236	430.226102
73	Point	82.313187	430.405065
74	Point	82.215559	430.946476
75	Point	82.210043	431.277565
76	Point	82.366565	431.501045
77	Point	82.166068	431.632095
78	Point	82.210809	431.752177
79	Point	82.282065	431.865689
80	Point	82.31443	432.30735
81	Point	82.333679	432.411011
82	Point	82.303435	432.506748
83	Point	84.134029	432.960298
84	Point	101.754508	419.562188
85	Point	102.402199	419.427152
86	Point	102.498356	419.426016

87	Point	102.635579	419.432833
88	Point	102.855024	419.438279
89	Point	102.740885	419.700922
90	Point	102.64019	419.930346
91	Point	102.500151	420.260176
92	Point	102.459873	420.277006
93	Point	102.382846	420.300301
94	Point	102.323761	420.325354
95	Point	102.262038	420.326238
96	Point	102.159313	420.32036
97	Point	101.951556	420.330525
98	Point	101.829424	420.368718
99	Point	101.411404	420.388827
100	Point	101.398012	420.280727
101	Point	101.472684	420.26701
102	Point	101.559907	420.072392
103	Point	101.637081	419.898206
104	Point	101.737735	419.608873
105	Point	93.233656	425.791899



The boundary coordinates points are indicated by map number 22

Map: 22 Zoning boundary for Mixed Development Zone



**Annexure 16: Zoning boundaries with coordinates of Conservation Zone**

Zone is defined on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on TMSRILANKA95 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.

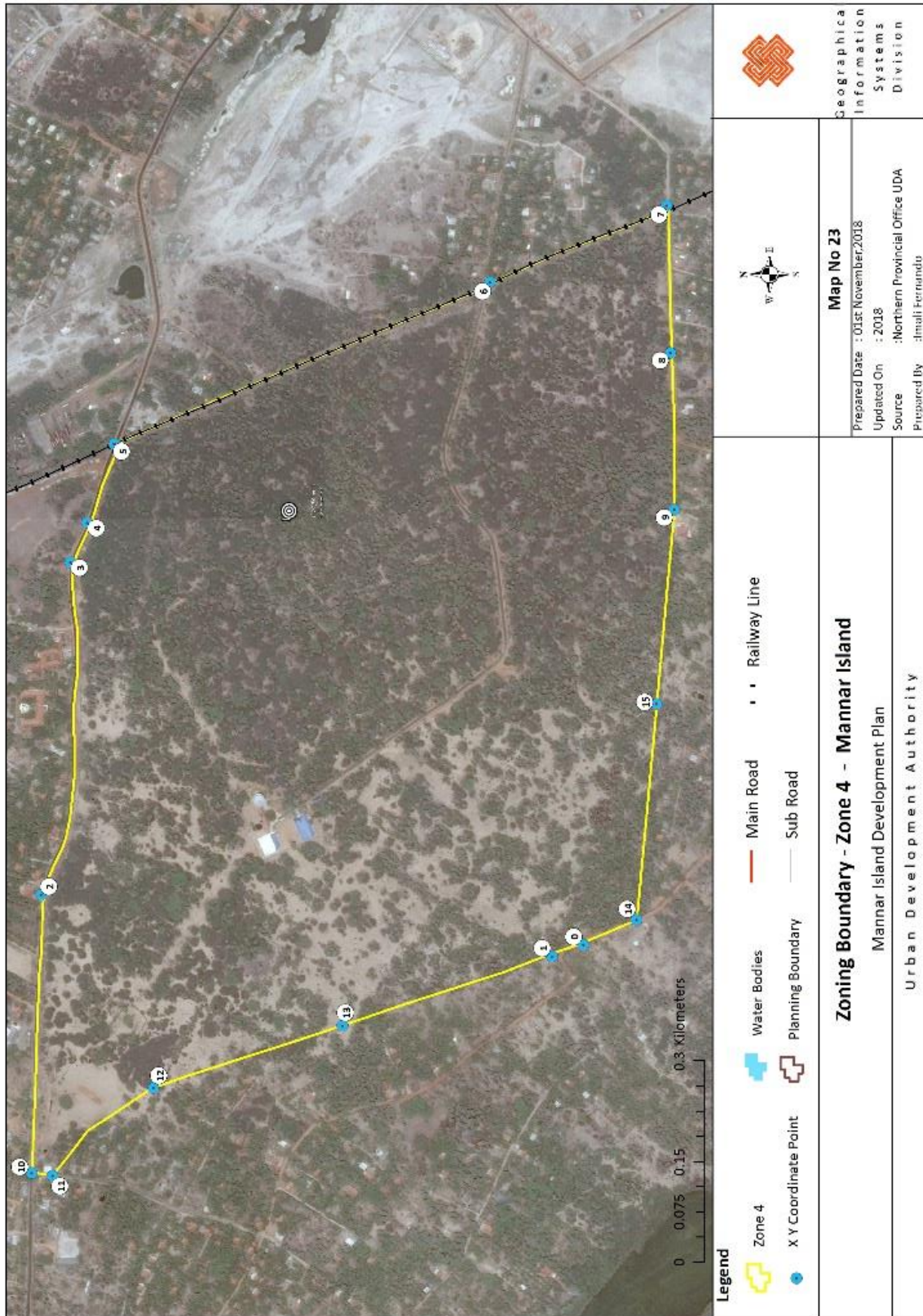
**Points of X and Y Coordinates**

<b>FID</b>	<b>Shape</b>	<b>x</b>	<b>Y</b>
0	Point	101.754508	419.562188
1	Point	101.737735	419.608873
2	Point	101.829424	420.368718
3	Point	102.323761	420.325354
4	Point	102.382846	420.300301
5	Point	102.500151	420.260176
6	Point	102.740885	419.700922
7	Point	102.855024	419.438279
8	Point	102.635579	419.432833
9	Point	102.402199	419.427152
10	Point	101.4151	420.382733
11	Point	101.410769	420.352004
12	Point	101.541567	420.201687
13	Point	101.634068	419.920133
14	Point	101.791437	419.482665
15	Point	102.113168	419.453249



The boundary coordinates points are indicated by map number 23

Map: 23 Zoning boundary for Conservation Zone



### Annexure 17: Zoning boundaries with coordinates of Industrial Zone

Zone is defined on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on TMSRILANKA95 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.

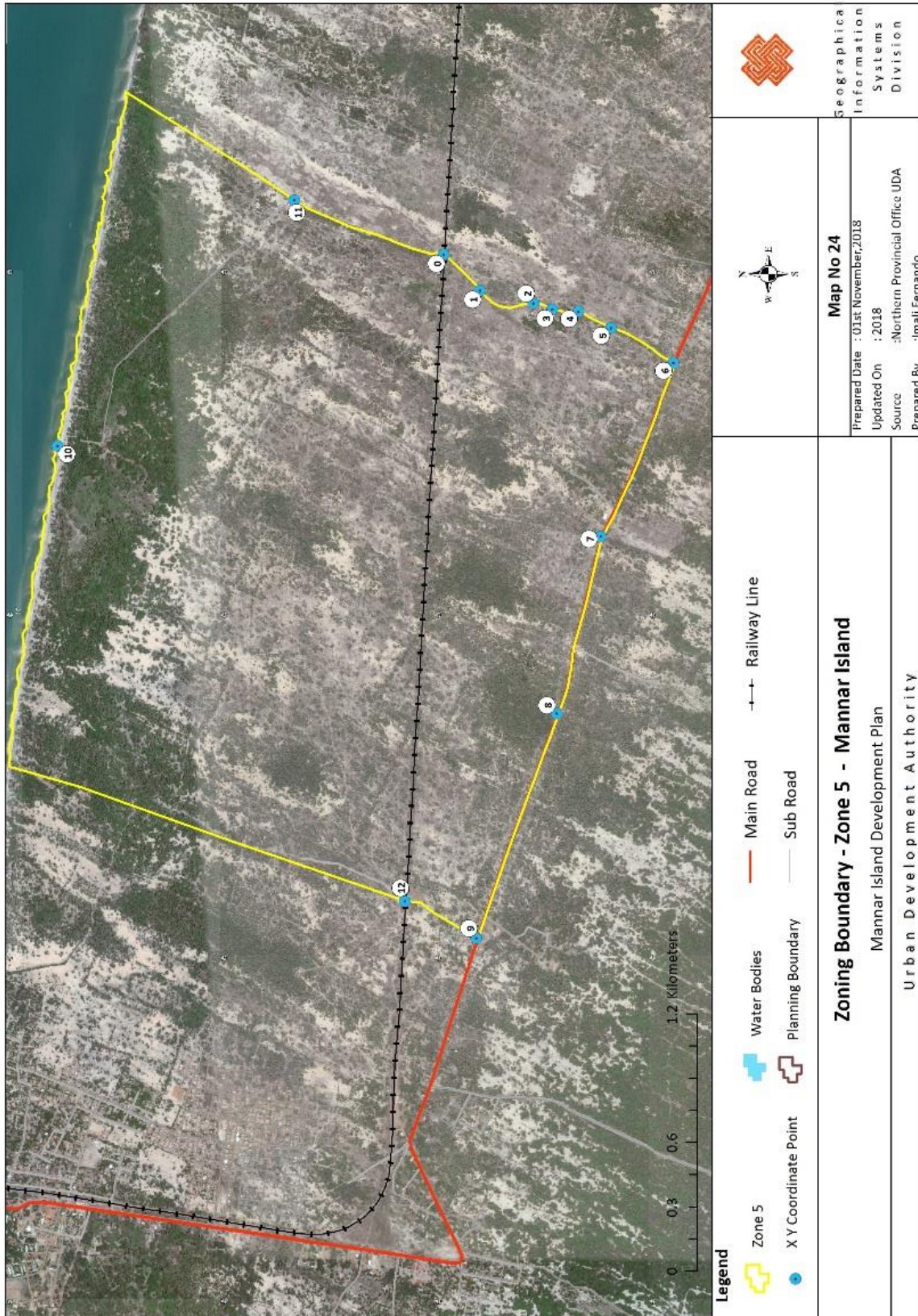
#### Points of X and Y Coordinates

FID	Shape *	x	Y
0	Point	89.682255	430.973619
1	Point	89.514398	430.804244
2	Point	89.45604	430.554155
3	Point	89.427465	430.466313
4	Point	89.41794	430.344604
5	Point	89.339539	430.192132
6	Point	89.17708	429.900488
7	Point	88.367945	430.241296
8	Point	87.543735	430.446596
9	Point	86.494798	430.820705
10	Point	88.791502	432.775738
11	Point	89.937179	431.670966
12	Point	86.667408	431.154823



The boundary coordinates points are indicated by map number 24

Map: 24 Zoning boundary for Industrial Zone



**Annexure 18: Zoning boundaries with coordinates of Environmental & Tourism Zone**

Zone is defined on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on TMSRILANKA95 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.

**Points of X and Y Coordinates**

<b>FID</b>	<b>Shape *</b>	<b>zone</b>	<b>x</b>	<b>Y</b>
0	Point	zone 6	81.762185	430.485149
1	Point	zone 6	81.637081	431.153444
2	Point	zone 6	81.652162	431.388791
3	Point	zone 6	81.503995	431.283751
4	Point	zone 6	81.448042	431.375257
5	Point	zone 6	81.224376	431.203364
6	Point	zone 6	81.186623	431.078039
7	Point	zone 6	81.085359	431.078502
8	Point	zone 6	81.455649	431.46646
9	Point	zone 6	81.693044	431.846334
10	Point	zone 6	81.798164	432.121611
11	Point	zone 6	81.683982	431.962102
12	Point	zone 6	81.561744	431.845421
13	Point	zone 6	81.630669	432.20499
14	Point	zone 6	81.766929	432.349188
15	Point	zone 6	82.078477	432.445762
16	Point	zone 6	82.303435	432.506748
17	Point	zone 6	82.31443	432.30735
18	Point	zone 6	82.282065	431.865689
19	Point	zone 6	82.166068	431.632095
20	Point	zone 6	82.366565	431.501045
21	Point	zone 6	82.218485	431.202787
22	Point	zone 6	82.313187	430.405065
23	Point	zone 6	82.458236	430.226102
24	Point	zone 6	82.874378	430.014661

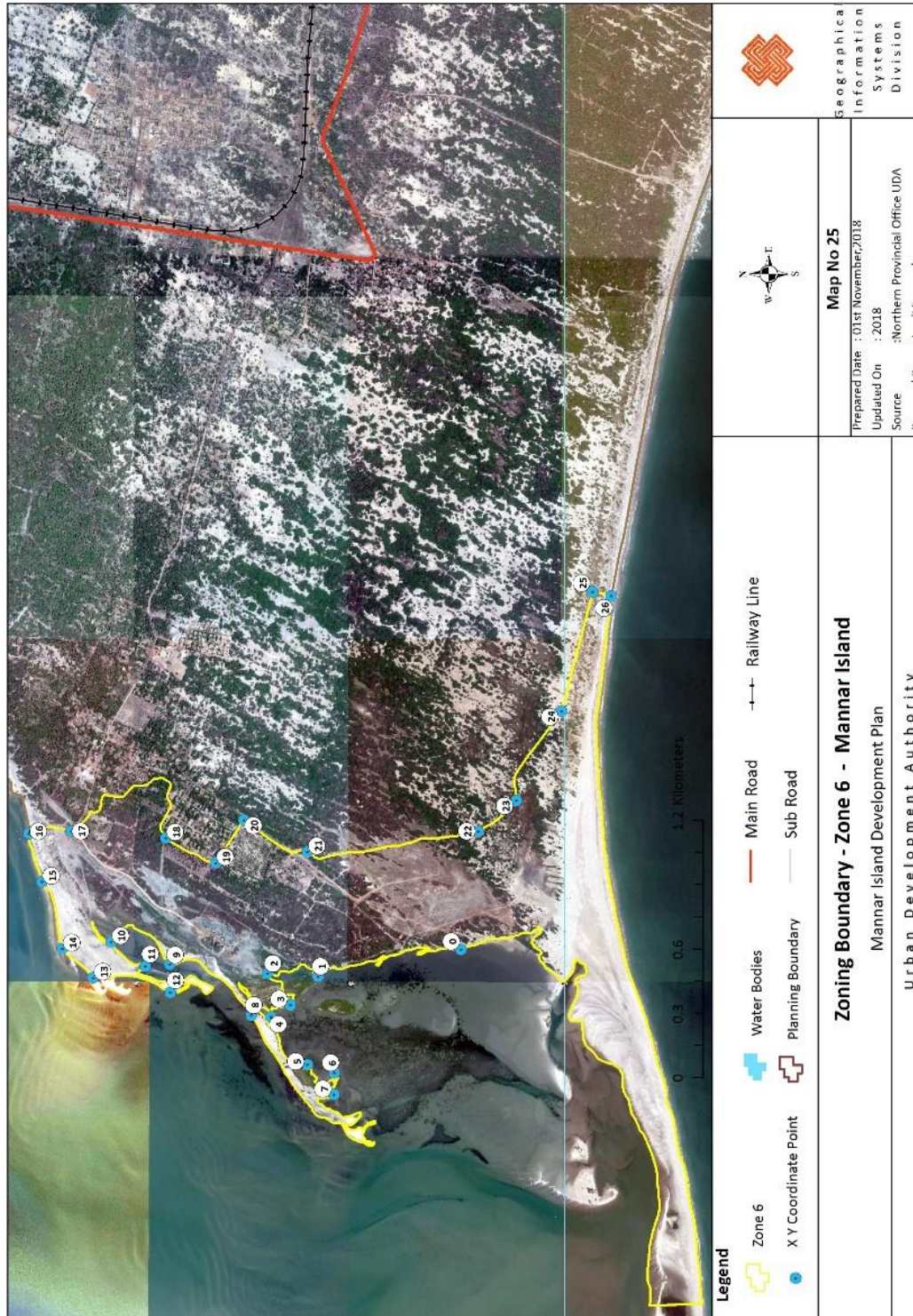


25	Point	zone 6	83.432292	429.868647
26	Point	zone 6	83.412223	429.781656

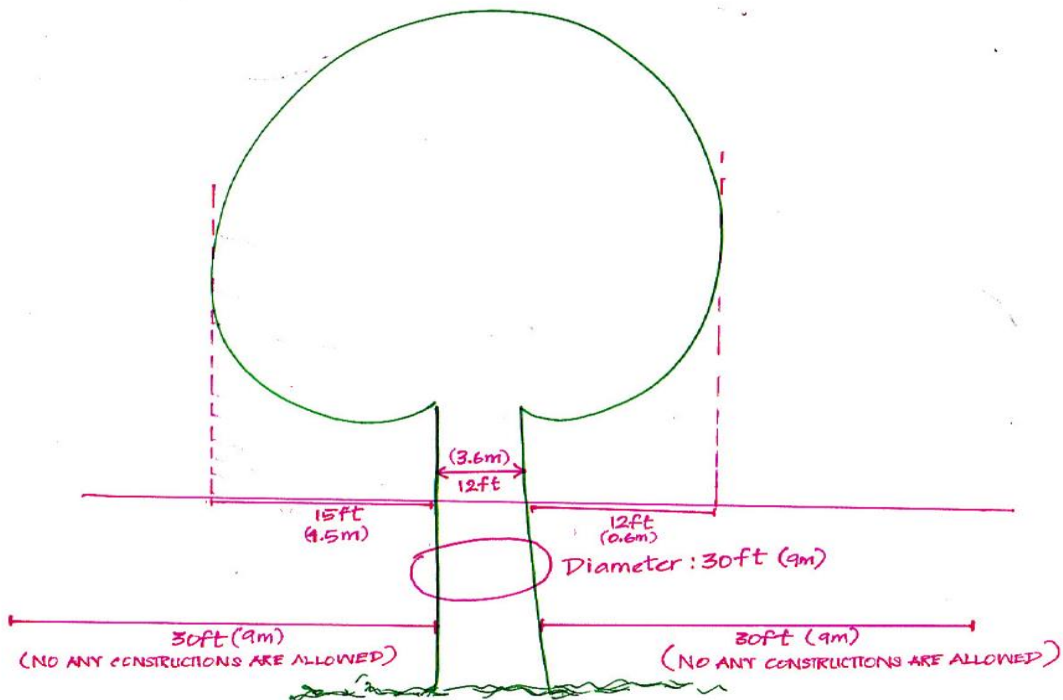
The

boundary coordinates points are indicated by map number 25

Map: 25 Zoning boundary for Environmental & Tourism Zone

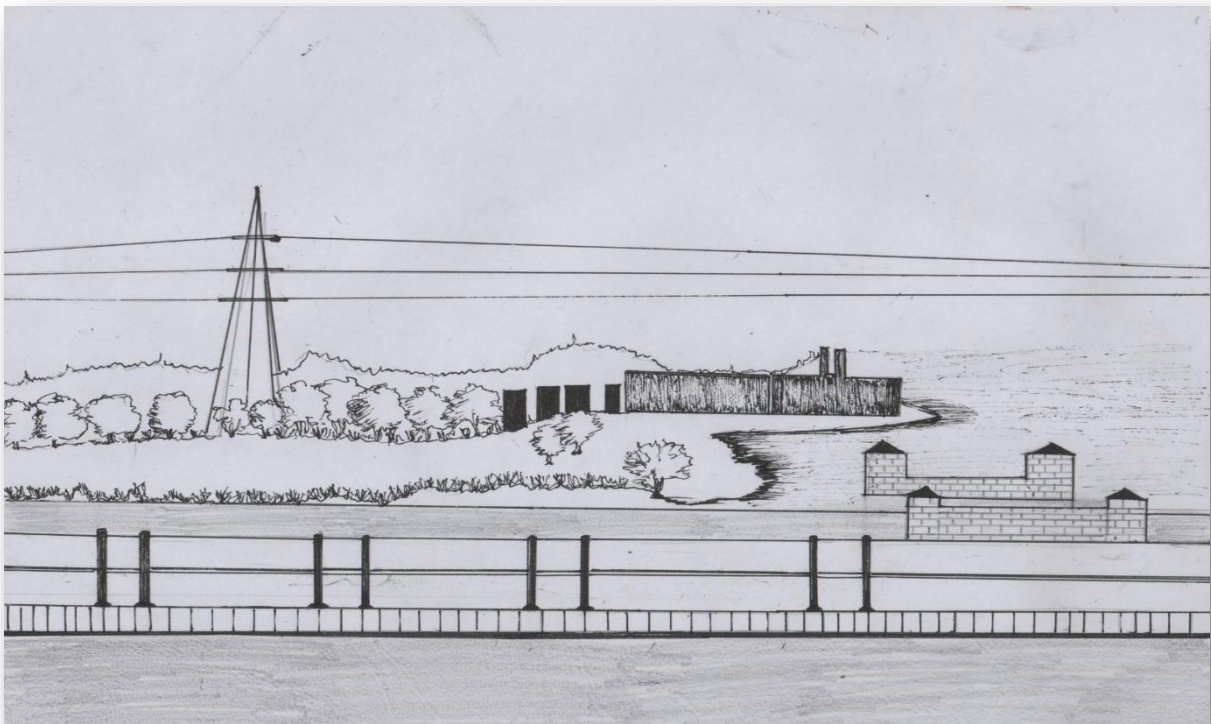


**Annexure 19: Baobab tree sketch**



Source: Sketched by UDA

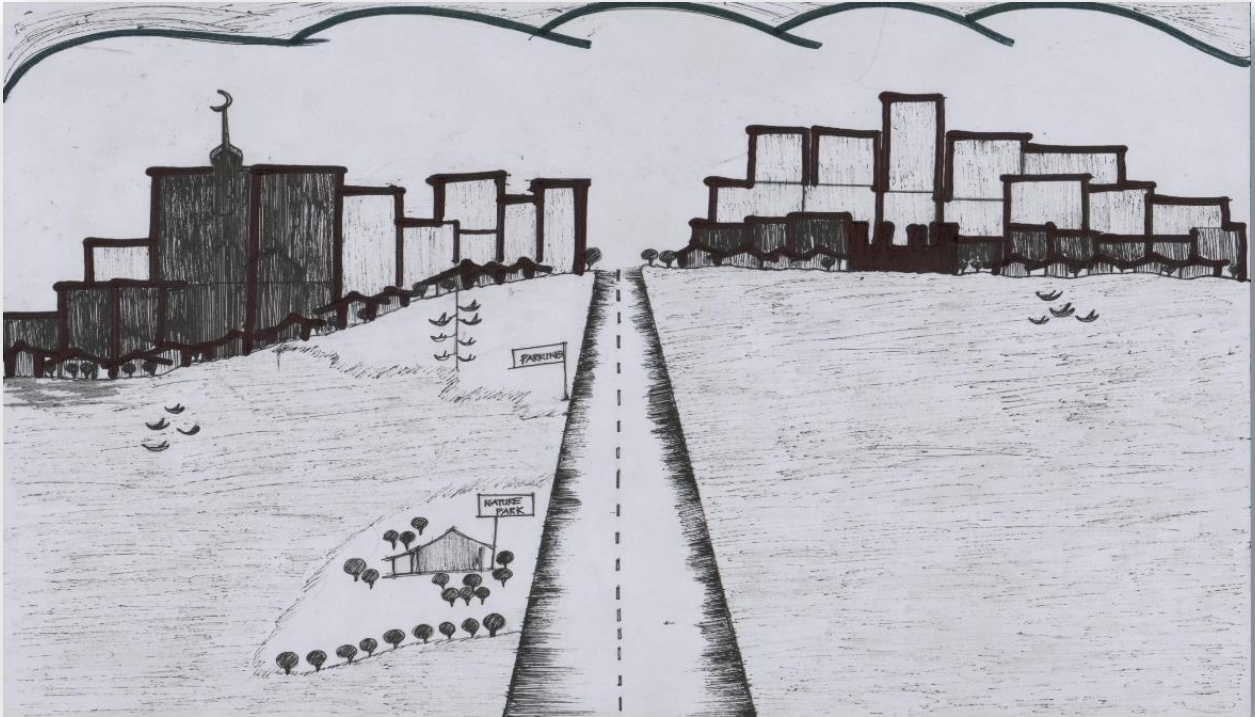
**Annexure 20: View from Nature Park**



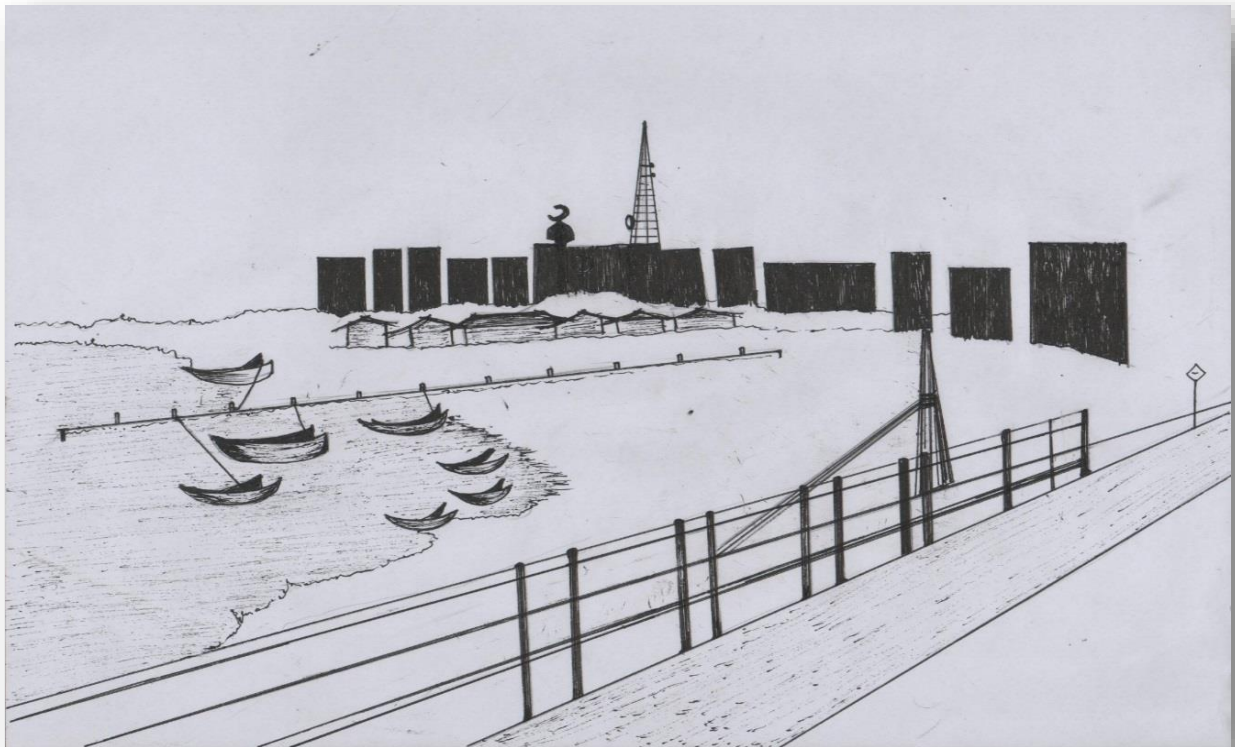
Source: Sketched by UDA



View of left side of the Mannar Island Entrance

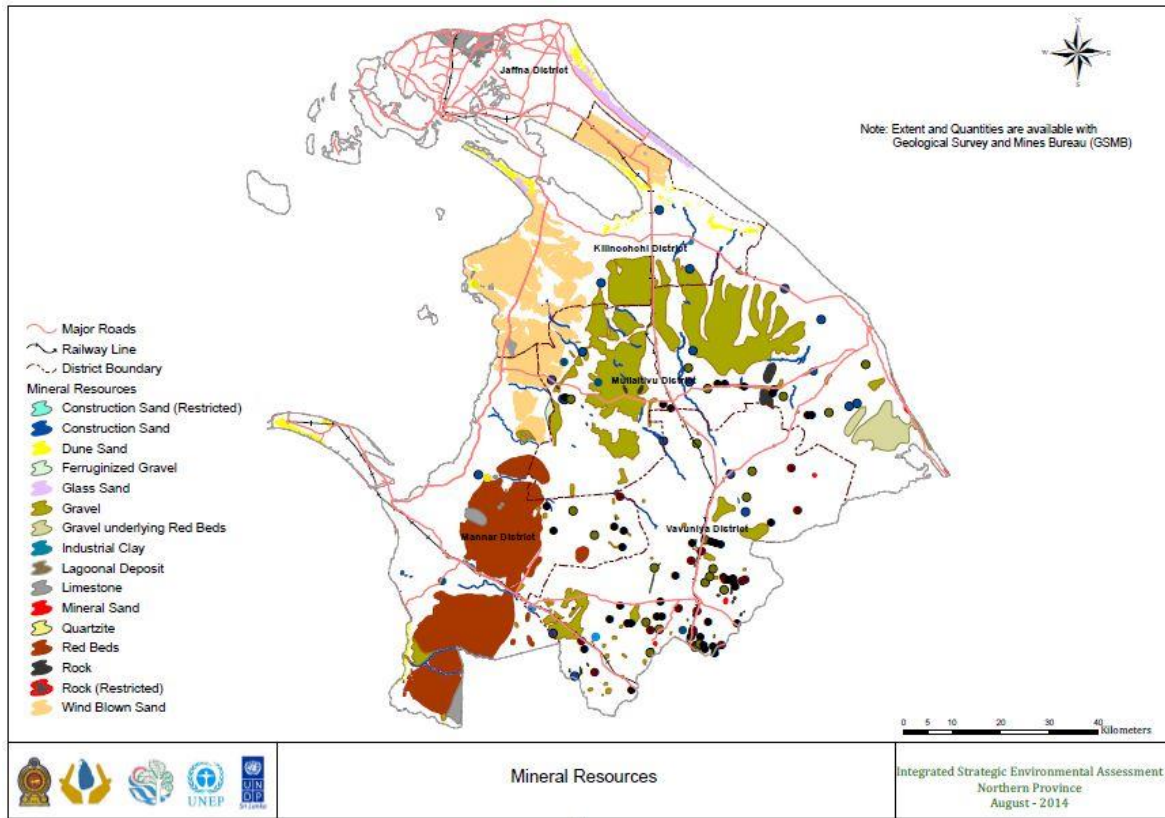


View of Right side of the Mannar Island (Dutch fort Area)

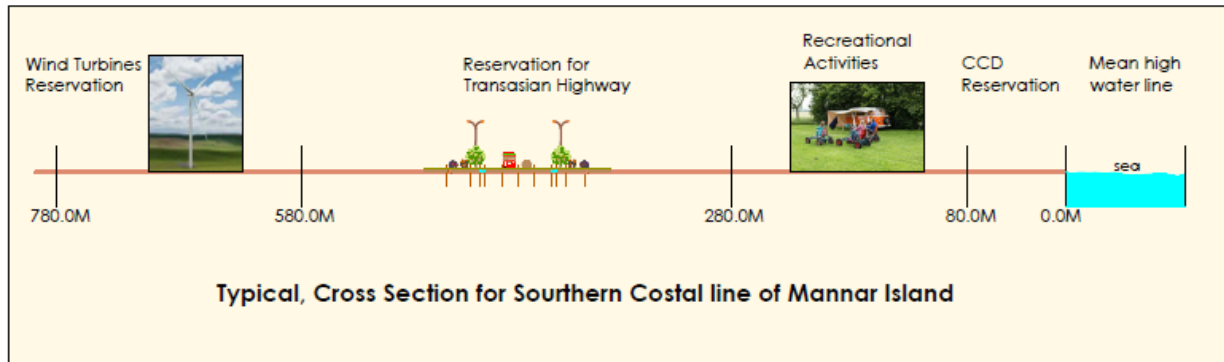




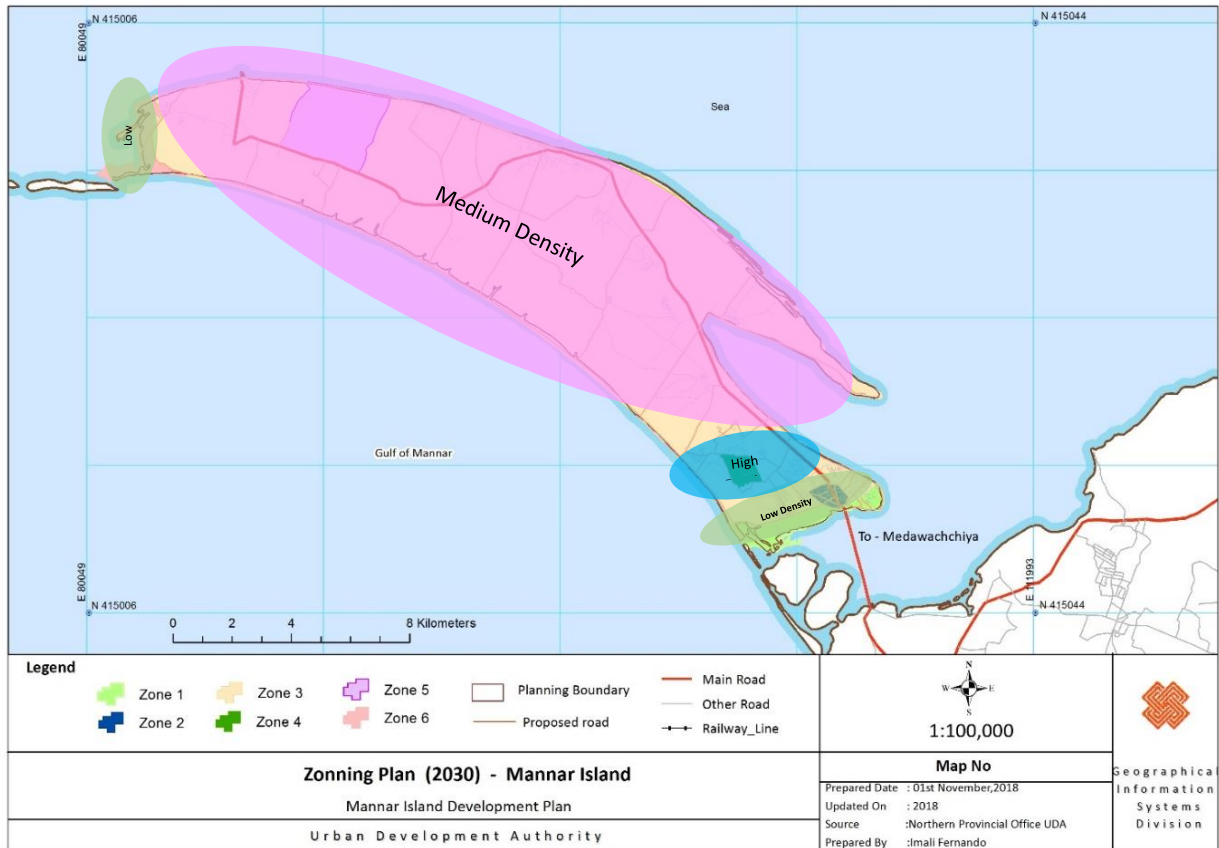
### Annexure 21: Sand dune Area Map



### Cross section for Southern Costal line of Mannar Island



**Annexure 22: Density Based Zoning Map**



**Annexure 23: Zone Metrix**

Sector	Uses	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Residential	Single unit house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Apartments		<input type="checkbox"/>	<input type="checkbox"/>			
	Cluster housing	<input type="checkbox"/>		<input type="checkbox"/>			
	Attach single unit house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	District General Hospital		<input type="checkbox"/>	<input type="checkbox"/>			
Health	Base hospital			<input type="checkbox"/>			
	Divisional Hospital			<input type="checkbox"/>			
	Ayurvedic hospital			<input type="checkbox"/>			
	Private hospital		<input type="checkbox"/>	<input type="checkbox"/>			
	Primary medical care unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Laboratory		<input type="checkbox"/>	<input type="checkbox"/>			
	Pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Dispensary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Education	University			<input type="checkbox"/>			
	Open university			<input type="checkbox"/>			

	Technical college			<input type="checkbox"/>			
	Government Schools	<input type="checkbox"/>		<input type="checkbox"/>			
	International school			<input type="checkbox"/>			
	Vocational training center			<input type="checkbox"/>			
	Montessori	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Research institute			<input type="checkbox"/>			<input type="checkbox"/>
	Tuitions center	<input type="checkbox"/>	<input type="checkbox"/> < 25 sq.m	<input type="checkbox"/>			
<b>Institutions</b>	Government institutions /office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Water Source related		
	Bank	<input type="checkbox"/> only ATM	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/> only ATM
	Insurance		<input type="checkbox"/>	<input type="checkbox"/>			
	Leasing companies		<input type="checkbox"/>	<input type="checkbox"/>			
	Quarters			<input type="checkbox"/>		<input type="checkbox"/>	
	Judicial		<input type="checkbox"/>	<input type="checkbox"/>			
	Security	<input type="checkbox"/> < 25 sq.m	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> < 25 sq.m
<b>Social service</b>	Stadium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Open air Theatre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Cultural hall		<input type="checkbox"/>	<input type="checkbox"/>			
	Playground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	Library		<input type="checkbox"/>	<input type="checkbox"/>			
	Day care center		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
	Elders home			<input type="checkbox"/>			<input type="checkbox"/>
	Beauty parlour		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Spa centre		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Community centers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Cemetery/Crematorium/Burial ground			<input type="checkbox"/>			
	Gymnasiums		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Sport club	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Theatre		<input type="checkbox"/>	<input type="checkbox"/>			
<b>Commercial</b>	Retail shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
	MPCS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Supermarket		<input type="checkbox"/>	<input type="checkbox"/>			
	Whole sale shop		<input type="checkbox"/>	<input type="checkbox"/>			
	Fish/meal market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Vegetable market		<input type="checkbox"/>	<input type="checkbox"/>			
	wine shop & Bar		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Stores		<input type="checkbox"/> < 100 sq.m	<input type="checkbox"/>		<input type="checkbox"/> > 100 sq.m	

	Fuel station		<input type="checkbox"/>	<input type="checkbox"/>			
	Service station		<input type="checkbox"/>	<input type="checkbox"/>			
	Specialized shop		<input type="checkbox"/>	<input type="checkbox"/>			
	Shows room		<input type="checkbox"/>	<input type="checkbox"/>			
	Ornamental shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Gift center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Art gallery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
<b>Tourism</b>	Rest house		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Hotels	<input type="checkbox"/> < 10 rooms	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Circuit bungalow			<input type="checkbox"/>			<input type="checkbox"/>
	Restaurants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Cabanas	<input type="checkbox"/>		<input type="checkbox"/>			<input type="checkbox"/>
	Tourist Information Centre		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
<b>Industry</b>	Micro scale Industries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
	Small scale Industries			<input type="checkbox"/>			
	Medium scale Industries			<input type="checkbox"/>		<input type="checkbox"/>	
	Large scale industries					<input type="checkbox"/>	
	Ware House			<input type="checkbox"/>		<input type="checkbox"/>	

#### Annexure 24: Development Guide plan Area\_ Summary

Name of the Zone	Permissible use	Max. Height (m)	Guidelines
<b>Sub Zone 01</b> <b>C0001 - A14 Road</b> <b>C0023 - Pallimunai road</b> <b>C0018 -</b> <b>C0015 - Esplanade road</b>	<ul style="list-style-type: none"> <li>• CTB and Private Bus stand</li> <li>• Shopping Mall/ Commercial Complex</li> <li>• Public Parking area</li> <li>•</li> </ul>	12 -15m	<ul style="list-style-type: none"> <li>• Minimum Plot size- 80p</li> <li>• Plot Coverage- 60%</li> <li>• Green Space including utility provision - 40%</li> <li>• Boundary wall not allowed – boundary shall be demarcated with soft landscape</li> <li>• Parking - Required parking shall be provided within the premises (refer the general Guidelines)</li> <li>• Vehicle circulation should be shown</li> <li>• Advertisement board except name of the building are not allowed</li> </ul>

			<ul style="list-style-type: none"> <li>• Green belt should be maintained along the 1m reservation of the canal for both side</li> <li>• Building line (Refer the Annexure:1)</li> </ul>
<b>Sub Zone 02</b>  <b>C0018 -</b> <b>C0019 -</b> <b>C0015 - Esplanade road</b>	Commercial Children Park	6-9m	<ul style="list-style-type: none"> <li>▪ Minimum Plot size- 6p</li> <li>▪ Plot Coverage- 80%</li> <li>▪ Boundary wall not allowed – boundary shall be demarcated with soft landscape for commercial</li> <li>▪ Masonry boundary wall not allowed for children park</li> <li>▪ Street line and building line (Refer the Annexure:1)</li> <li>▪ Parking – 50% of required parking should be provided within the premises</li> <li>▪ Advertisement board – Prior approval should be obtained from the UDA before display</li> </ul>
<b>Sub Zone 03</b>  <b>C0020 -</b> <b>C0016 - Post office road</b>  <b>C0022 -</b> <b>C0017 - Thalvupadhu road</b>  <b>C0001 - A14 Road</b>  <b>C0021 -</b>	Administrative Complex Financial Institution Professional Office	12 -15m	<ul style="list-style-type: none"> <li>▪ Minimum Plot size- 20p</li> <li>▪ Plot Coverage- 60%</li> <li>▪ Green Space including utility provision - 40%</li> <li>▪ Boundary wall – See through boundary walls are recommended and 1/3 of the boundary wall height shall be masonry wall.</li> <li>▪ Existing historical building should be preserved.</li> <li>▪ New residential development should not be allowed.</li> <li>▪ Street line and building line (Refer the Annexure:1)</li> <li>▪ Required parking should be provided within the premises</li> <li>▪ Green building certification should be obtained</li> </ul>
<b>Sub Zone 04</b>  <b>C0002 - Fish market Road</b> <b>C0005 - Access road (Vegetable market)</b>	Commercial Complex Market Complex	12 -15m	<ul style="list-style-type: none"> <li>▪ Sub division not allowed</li> <li>▪ Plot Coverage- 80%</li> <li>▪ Green Space including utility provision - 20%</li> <li>▪ Boundary wall not allowed</li> <li>▪ Street line and building line (Refer the Annexure:1)</li> </ul>

			<ul style="list-style-type: none"> <li>▪ Required parking should be provided within the Building line</li> <li>▪ Green building certification should be obtained</li> </ul>
<b>Sub Zone 05</b>  <b>C0007 - 2nd Bazar street</b>  <b>C0010 - Internal Access road (Jewelry shop lane)</b>  <b>C0003 - Walking path</b>	Commercial Financial Institution	12 m	<ul style="list-style-type: none"> <li>▪ Minimum Plot Size – 6P</li> <li>▪ Plot Coverage- 80%</li> <li>▪ Green Space including utility provision - 20% with green land scape</li> <li>▪ Boundary wall not allowed</li> <li>▪ Street line and building line (Refer the Annexure:1)</li> <li>▪ Required 50% parking should be provided within the Building line. (Service charges to be paid for local Authority vehicle for required 50% parking).</li> </ul>
<b>Sub Zone 06</b>  <b>C0011 - Lane (Mosque back)</b> <b>C0009 - Walking path (Mosque front)</b>  <b>C0007 - 2nd Bazar street</b> <b>C0003 - Walking path</b>	Commercial Financial Institution	17m	<ul style="list-style-type: none"> <li>▪ Minimum Plot Size – 6P</li> <li>▪ Plot Coverage- 80%</li> <li>▪ Green Space including utility provision - 20% with green land scape</li> <li>▪ Boundary wall not allowed</li> <li>▪ Street line and building line (Refer the Annexure:1)</li> <li>▪ Required parking shall be accommodate in public parking in Zone 1 and required service charges to be paid for local Authority.</li> </ul> <p>Roof mounted advertisements/ signs are prohibited except name of the building.</p>
<b>Sub Zone 07</b>  <b>C0014 - Walking Path</b> <b>C0008 - Periyakdai Mosque lane</b>  <b>C0005 - Access road (Vegetable market)</b>	Commercial Hotels and restaurants	12m	<ul style="list-style-type: none"> <li>▪ Plot size: 6P</li> <li>▪ Colors of the external wall should blend with the Zone 1 Character</li> <li>▪ Plot Coverage- 80%</li> <li>▪ Green Space including utility provision - 20%</li> <li>▪ Street line and building line (Refer the Annexure:1)</li> <li>▪ Required parking should be provided within the Premises</li> <li>▪ New residential development should not be allowed.</li> </ul>

			<ul style="list-style-type: none"> <li>▪ Boundary wall – See through boundary walls are recommended and 1/3 of the boundary wall height shall be masonry wall.</li> </ul>
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### Annexure 25: Project prioritization for identified action projects

Project prioritization for identified action projects					
S.No	Action projects	Weightage Criteria			Total weightage
		To achieve the Vision	Social benefits	Inter dependency	
1	Development of fishery harbor at Pesalai	59	60	0	119
2	Development of Modern commercial complex at Mannar town	52	59	0	111
3	Establishment of Marine Village at foreshore	60	50	0	110
4	Installation of Wind Turbines	56	52	0	108
5	Create access road of harbour development	58	48	1	107
6	Land Development for Industrial Zone	60	47	0	107
7	Nature park development near the causeway (Vankalai facilitation center)	57	49	0	106
8	Development of Al fathah ground at Uppukulam	59	46	0	105
9	Administrative Complex development	46	57	0	103
10	Redevelopment of Fish market at UC	48	52	0	100
11	Redevelopment of Bus Stand (CTB and Private) at UC	54	43	0	97
12	Improve the existing drainage & develop the drainage linkage	48	49	0	97
13	Development of Modern market at Pesalai	44	51	0	95
14	Renovation of the Dutch fort	53	42	0	95
15	Development of South coastal road	38	51	6	95
16	Development of parking area at Causeway (in front of MPCs Building)	47	45	0	92
17	Pesalai beach beautification project	43	47	0	90
18	Redevelopment of vegetable market with commercial complex at UC	39	51	0	90
19	Improvement and extension of roads – Inner circular road	44	45	0	89
20	Development of bus terminal at Thalaimannar	43	46	0	89
21	Thottavali beautification project	41	48	0	89
22	Improvement and extension of roads – service road	41	48	0	89
23	Preservation of baobab trees at Pallimunai and Eluthoor	42	46	0	88



24	Redevelopment of Public Stadium at hospital road	35	50	0	85
25	Improvement of A 14 road	48	37	0	85
26	Establishment of Jetty at Erukalampity	37	47	0	84
27	Development of fish Market at Thalaimannar	30	51	0	81
28	Redevelopment of Salt Pan	31	49	0	80
29	Main junction beautification project at UC	43	36	0	79
30	Redevelopment of Pallimunai Road	42	33	0	75
31	Keeri beautification projects	38	36	0	74
32	Local Park Development at Pattithodam, Tharapuram, Thoddavali & Pesalai North	31	43	0	74
33	Development of solar park	42	31	0	73
34	Establishment of Jetty at Pallimunai	34	39	0	73
35	Community Park Development at Pattithodam & Thoddavali	32	40	0	72
36	Establishment of Jetty at Thalvupadu	34	38	0	72
37	Development of North coastal road (Phase 1)	37	33	0	70
38	Establishment of observation Tower at Urumalai	31	38	0	69
39	Eluthur junction beautification project	26	42	0	68
40	Establishment of Green belt selected locations	26	42	0	68
41	Redevelopment of South bar Road	38	28	0	66
42	Mini park Development at Savatkadu, Southbar, Eluthur, Uppukulam South, Siruthoppu, Thallaimannar & Erukalampitty	24	41	0	65
43	Development of North coastal road (Phase 2)	45	19	0	64
44	Establishment of Jetty at Konthaipitty	32	31	0	63
45	Establishment of research center related to marine bio diversity	36	26	0	62
46	Pocket park Development at Moor Street, Savvatkadu & Thallaimannar	22	40	0	62
47	Olaithoduvai beach Beautyfication	19	40	0	59
48	Urumalai beautification project	23	35	1	59
49	Development of Dumping yard at Pesalai	24	35	0	59
50	Improvements of other roads (Refer transport plan)	22	36	0	58
51	Establishment of vocational training center at South bar	21	35	0	56
52	Hospital junction beautification project	26	29	0	55
53	Development of bus terminal at Pesalai	7	45	0	52
54	Town Pond development project behind the Bus stand	16	33	0	49
55	Thalladi junction beautification project	18	30	0	48
56	Development of facilitation center at Tharapuram	6	39	0	45

57	Replanting Project (Refer Guide plan)	8	36	0	44
58	Establishment of Jetty at Thalaimannar	13	29	0	42
59	Development of children park at Tharapuram	8	28	0	36
60	Establishment of Jetty at Panankaddikoddu	7	27	0	34
61	Town Park Development at Elunthoor	4	29	0	33
62	Improvement of road behind the Bus stand	16	15	0	31
63	Redevelopment of existing canal behind the Bus stand	15	12	1	28

Source: Prepared by UDA

### Acronyms

UDA	-	Urban Development Authority
UC	-	Urban Council
PS	-	Pradeshiya Sabha
NWSDB	-	National Water Supply & Drainage Board
WHO	-	World Health Organization
RDA	-	Road Development Authority
UC	-	Urban Council
PA	-	Predeshiya Shabha
GIS	-	Geographic Information System
SWOT	-	Strengths, Weakness, Opportunities, Threats
GND	-	Girama Niladhari Division
MT	-	Metriect Ton
NGO	-	Non Government Organization
CEA	-	Central Environment Authority
CBD	-	Central BD
SEA	-	Sustainable Enegy Authority
ADB	-	Asian Development Authority
LA	-	Local Authority
CCD	-	Coastal Conservation Department
FAR	-	Floor Area Ratio
CEB	-	Ceylon Electricity Board