

Form-I

Detailed Project Report with EMP Report for

Proposed Doctor's Beach Project of Residential Plots
at Marakkanam North Village, Marakkanam Taluk,
Villupuram District



July 2019

Project Proponent

DS Propertiei

AP:2261, H-Block,
10th Street, Kathiravan Colony,
Anna Nagar West, Chennai- 600 040

EIA Consultant

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Form I & Environmental Management Plan

FORM I- FOR SEEKING CLEARANCE FOR PROJECT ATTRACTING CRZ NOTIFICATION

(I) BASIC INFORMATION

(a) Name of the Project: Proposed Development of Doctor's Beach Project of Residential Plots in Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District.

Location or Site alternatives under consideration:

S.No	Latitude	Longitude
A	12°14'3.23"N	79°59'7.68"E
B	12°14'0.49"N	79°59'10.43"E
C	12°14'3.06"N	79°59'12.61"E
D	12°13'51.83"N	79°59'30.14"E
E	12°13'51.07"N	79°59'29.69"E
F	12°13'49.24"N	79°59'33.36"E
G	12°13'43.75"N	79°59'29.70"E
H	12°13'55.23"N	79°59'10.41"E
I	12°13'57.40"N	79°59'11.67"E
J	12°14'1.50"N	79°59'6.40"E

No alternatives are considered

(b) Size of the Project (In terms of total area):

Total Land CRZ Area : 1,09,143.72Sq.m

Total Built Up Area : ----

(c) CRZ Classification of the area : CRZ II

(d) Expected cost of the project : Rs.2.5 Crores

(e) Contact Details:

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(II) ACTIVITY**1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, and the like)**

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	No	There will be only Temporary change in land use, as it the development of residential plots only.
1.2	Details of CRZ classification as per the approved Coastal Zone Management Plan?	Yes	The project site comes under CRZ II area as per CRZ Notification and demarcation map of HTL/LTL is enclosed as Annexure III .
1.3	Whether located in CRZ-I area?	No	Project site is not located in CRZ I area
1.4	The distance from the CRZ-I areas.	No	Not Applicable
1.5	Whether located within the hazard zone as mapped by Ministry of Environment and Forests/National Disaster Management Authority?	No	Not Applicable
1.6	Whether the area is prone to cyclone, tsunami, tidal surge, subduction, earthquake etc.?	Yes	The project site is likely to experience cyclones and tsunami that strike the coast.
1.7	Whether the area is prone for saltwater ingress?	Yes	Project location is part of CRZ-II. Prone for saltwater ingress due to Bay of Bengal
1.8	Clearance of existing land, vegetation and buildings?	No	Since the existing land is vacant, no major clearance activities will take place. Only minor clearance activities will be carried out to remove the shrubs and weeds.
1.9	Creation of new land uses?	No	No creation of new land use as the site is vacant land & only basic infrastructure & utilities will be constructed.
1.10	Pre-construction investigations e.g. borehole, soil testing?	No	As the project is development of residential plots only
1.11	Construction works?	Yes	Construction of basic infrastructure facilities and the utilities only.
1.12	Demolition works?	No	No demolition works will be carried out as the land is vacant.
1.13	Temporary sites used for construction works or housing of construction workers?	Yes	Inside the proposed site, a small area will be utilized temporarily for construction of sheds for the migrated workers and materials. But most of the workers will be deployed from local area only.
1.14	Above ground buildings, structures or earthworks including linear	Yes	Excavation works will be carried out for foundation of the structures. Later on, the

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
	structures, cut and fill or excavations		site will be leveled. Thus the cut and fill process will be required.
1.15	Underground works including mining or tunneling?	No	No underground works will be required as the proposed project is the construction of tenements.
1.16	Reclamation works?	No	Not envisaged.
1.17	Dredging/reclamation/Land filling/disposal of dredged material etc.?	No	Not envisaged.
1.18	Offshore structures?	No	Not envisaged.
1.19	Production and manufacturing processes?	No	Not applicable as the project is development of residential plots
1.20	Facilities for storage of goods or materials?	Yes	Temporary sheds will be constructed for the storage of cement and other materials during developmental phase.
1.21	Facilities for treatment or disposal of solid waste or liquid effluents?	No	Total Sewage generation will be 319KLD (including the plots in non CRZ area) in which will be treated in STP (320 KLD). The treated water from the STP will be reused for flushing and greenbelt development. Biodegradable waste will be treated in Organic Waste Converter (OWC).
1.22	Facilities for long term housing of operational workers?	No	No operational phase workers involved in this project.
1.23	New road, rail or sea traffic during construction or operation?	No	The existing road network is sufficient for connectivity of the site. The site is well connected with existing Thazhangadu Road from East Coast Road (ECR) and 15 feet road connecting Vasavankuppam and Muttukadu. The existing road in the revenue map showing the existing connectivity road for the project site is enclosed as Annexure IV.
1.24	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	There will be no change to the existing transport infrastructure.
1.25	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	As construction works will be within a specified area, there is no need for closure or diversion of existing transport routes.
1.26	New or diverted transmission lines or pipelines?	No	No new or diversion transmission lines & pipelines are required for this project.
1.27	Impoundment, damming,	No	There will not be any alteration in the

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
	culverting, realignment or other changes to the hydrology of watercourses or aquifers?		hydrology of the watercourses or aquifers due to the proposed project.
1.28	Stream and river crossings?	No	There is no stream crossing in the project site.
1.29	Abstraction or transfers of water from ground or surface waters?	Yes	The water required for the residence will be supplied by Marakkanam Town Panchayat. The Commitment letter for supply of fresh water from Marakkanam Town Panchayat is enclosed Annexure V
1.30	Changes in water bodies or the land surface affecting drainage or run-off?	No	There is no change in the water bodies or land surface which affects the drainage or runoff.
1.31	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Transportation of personnel & construction materials during development phase will be through existing roads only.
1.32	Long-term dismantling or decommissioning or restoration works?	No	As part of this project, no long-term dismantling or decommissioning or restoration works would be involved.
1.33	Ongoing activity during decommissioning which could have an impact on the environment?	No	There will not be any decommissioning works.
1.34	Influx of people to an area in either temporarily or permanently?	Yes	During construction period few workers will be stationed temporarily and others will be deployed locally.
1.35	Introduction of alien species?	No	No introduction of alien species
1.36	Loss of native species or genetic diversity?	No	No loss at the site is plain and there is no significant species.
1.37	Any other actions?	No	Only eco-friendly activities like tree plantation will be undertaken.

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	Yes	The proposed project will be developed in area of 1,70,939 Sq.mand in that about 1,09,143.72 Sq.marea are under CRZ Zone
2.2	Water (expected source & competing users) unit: KLD	Yes	Fresh water Requirement - -370KLD Source: Marakkanam Town Panchayat
2.3	Minerals (MT)	No	No usage of mineral is envisaged

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.4	Construction material – stone, aggregates, sand/soil (expected source – MT)	Yes	The construction material like cement, steel, concrete, sand, etc. will be used for the developmental activities
2.5	Forests and timber (source – MT)	No	Forests and timbers will not be used in this project.
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	As the proposed project is development of residential plots & individual meter will be installed by the residence. The source of Power Supply will be from TANGEDCO
2.7	Any other natural resources (use appropriate standard units)	No	There is no need for other natural resources.

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	No hazardous material will be utilized during the development phase
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	There will not be any occurrence of diseases as activities are confined to construction.
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	Local people will get preference in the employment during development phase.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	There is no vulnerable group of people who could be affected by the project.
3.5	Any other causes, that would affect local communities, fisher folk, their livelihood, dwelling units of traditional local communities etc.	No	Nil

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	There will not be any spoil, overburden or mine waste.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	During developed phase, the quantity of municipal solid waste generated from the proposed project will be 1370 kg/day
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	No	No hazardous waste generation in the proposed project as the project is only development of residential plots only.
4.4	Other industrial process wastes	No	Not envisaged
4.5	Surplus product	No	Not applicable since this is a development of residential plots.
4.6	Sewage sludge or other sludge from effluent treatment	No	Sludge of 38kg/day will be used as manure for greenbelt development.
4.7	Construction or demolition wastes	No	The project is only development of plots and there will not be any major construction activity.
4.8	Redundant machinery or equipment	No	Most of the equipments used during developmental phase will be hired.
4.9	Contaminated soils or other materials	No	There is no source for contamination of soils or other materials.
4.10	Agricultural wastes	No	Does not arise
4.11	Other solid wastes	No	No other waste generation expected.

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	No	Temporary gaseous emissions are expected from transport of construction material vehicles during development activity. This will be minimized by controlling the speed of vehicles, hiring well maintained vehicles, planting trees and spraying water periodically etc.
5.2	Emissions from production processes	No	Does not arise since the proposed project is a residential plot development.
5.3	Emissions from materials handling including storage or transport	Yes	Emissions like dust will arise during the transportation of materials and the dust will be controlled by slow movement of vehicles, covering the materials properly and water spraying.

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
5.4	Emissions from construction activities including plant and equipment	Yes	Marginal quantity of emission is expected from construction activities which will be controlled by suitable control measures like water spraying.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Dust emission will be arrested by water spraying and covering the stored materials with tarpaulin cover.
5.6	Emissions from incineration of waste	No	There are no incineration activities.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	No such activities will be carried out.
5.8	Emissions from any other sources	No	No emissions from any other sources.

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	No	Minor construction activity will be there for the development of the residential layout
6.2	From industrial or similar processes	No	Not Applicable
6.3	From construction or demolition	No	Minor construction activity will be there for the development of the residential layout. Noise levels in the range of 75-85 dB(A) will be generated occasionally during the construction activities. Workers in the noisy areas will be provided with earmuffs and earplugs
6.4	From blasting or piling	No	Not applicable
6.5	From construction or operational traffic	No	Minor construction activity will be there for the development of the residential layout
6.6	From lighting or cooling systems	No	Adequate enclosures, tree plantations will be provided
6.7	From any other sources	No	Not Applicable

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S. No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	No hazardous materials will be stored
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Total Sewage generation will be 317 KLD which shall be treated through STP of capacity 320 KLD
7.3	By deposition of pollutants emitted to air into the land or into water	No	There will minimal emission of pollutants from the project site.
7.4	From any other sources	No	No other polluting sources exist.
7.5	Is there a risk of long term buildup of pollutants in the environment from these sources?	No	There will not be any long term buildup of pollutants in the environment from these sources.

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	Yes	As the hazardous materials will be stored in isolated place required safety measures are in place during entire period of construction, no significant risk is envisaged. However adequate safety measures to mitigate all risks anticipated out of fire in diesel will be taken care off by installing suitable fire-fighting system.
8.2	From any other causes	No	No risks from any other sources.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g., floods, earthquakes, landslides, cloudburst etc)?	No	The area under study falls in Zone-III according to the Indian Standard Seismic Zoning Map. The structure was designed to be earthquake resistant. The proposed project will not be affected by natural disasters causing environmental damage.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

S.No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
9.1	Lead to development of supporting utilities, ancillary development or	No	Proposed infrastructure like roads, power supply, etc. will not create any

	development stimulated by the project which could have impact on the environment e.g.: Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) housing development extractive industries supply industries other Housing development Extractive industry Supply industry	Yes No No	impact on the environment. Development of residential plots No Extraction Nil
9.2	Lead to after-use of the site, which could have an impact on the environment	No	No impact will be seen due to proposed the activity
9.3	Set a precedent for later developments	No	No impact is seen due to the proposed activity
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Not applicable

(III) ENVIRONMENTAL SENSITIVITY

S. No	Areas	Name/ Identity	Aerial distance (Within 15km.)
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value.	Nil	No such areas within 15 Km radius
2	Areas which are important for or sensitive Ecological reasons - Wetlands, water sources or other water bodies, coastal zone, biospheres, mountains, forests	<ul style="list-style-type: none"> • YedayantittuKalivelli • Odyur Lake 	<ul style="list-style-type: none"> • 1 Km from the project site • 9.8 Km from the project site
3	Area used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Nil	No such areas within 15 Km radius
4	Inland, coastal, marine or underground waters		
5	State, National boundaries	No	No such areas within 15 Km radius
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	No such areas within 15 Km radius
7	Defense installations	No	No such areas within 15 Km radius
8	Densely populated or built-up area		
9	Area occupied by sensitive man-	Yes	Available within the project area

	made land uses Hospitals, schools, places of worship, community facilities)		
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	No	No such areas within 15 Km radius
11	Areas already subjected to pollution environmental damage. (those where existing legal environmental standards are exceeded)	No	No such areas within 15 Km radius
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, flooding erosion, or extreme or adverse climatic conditions)	No	The area under study falls in Zone-III, according to the Indian Standard Seismic Zoning Map

"I hereby given undertaking that data and information given in the application and enclosures are true to the best of the knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost."

Date:04.07.2019

Place: Chennai

SIGNATURE OF THE APPLICANT

For DS PROPRTIEI

Name and Signature of the applicant:

Date: Partner

Name : D.Harish Kumar
 Designation : Partner
 Address : D S Propertiei,
 AP:2261, H-Block, 10th Street,
 Kathiravan Colony, Anna Nagar
 West, Chennai- 600 040

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1. INTRODUCTION

1.1. PREAMBLE

DS Propertiei is Proposed to develop Doctor's Beach Project of Residential Plots in S.Nounder CRZ area:108/1, 108/2A(P), 108/2B, 108/2C1(P), 108/2C2, 109/1, 109/2, 109/3(P), 109/4, 110/1(P), 110/2(P), 110/3, 110/4, 110/5 at Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District.

1.2. DESCRIPTION OF THE PROJECT

The proposed project is the development of the residential plots. The location details are given below and location map is represented in **Figure 1.1** and the Google map showing the project location is given in **Figure 1.2**

Plot/survey/ Khasra. No : **S.No: under CRZ area:**108/1, 108/2A(P), 108/2B, 108/2C1(P), 108/2C2, 109/1, 109/2, 109/3(P), 109/4, 110/1(P), 110/2(P), 110/3, 110/4, 110/5- **Area Under CRZ:**1,01,625 Sq.m

Village : Marakkanam North(Thalangadu Village)

Tehsil : Marakkanam Taluk

District : Villupuram District

State : Tamil Nadu

Figure 1-1 - Map Showing the Project Location

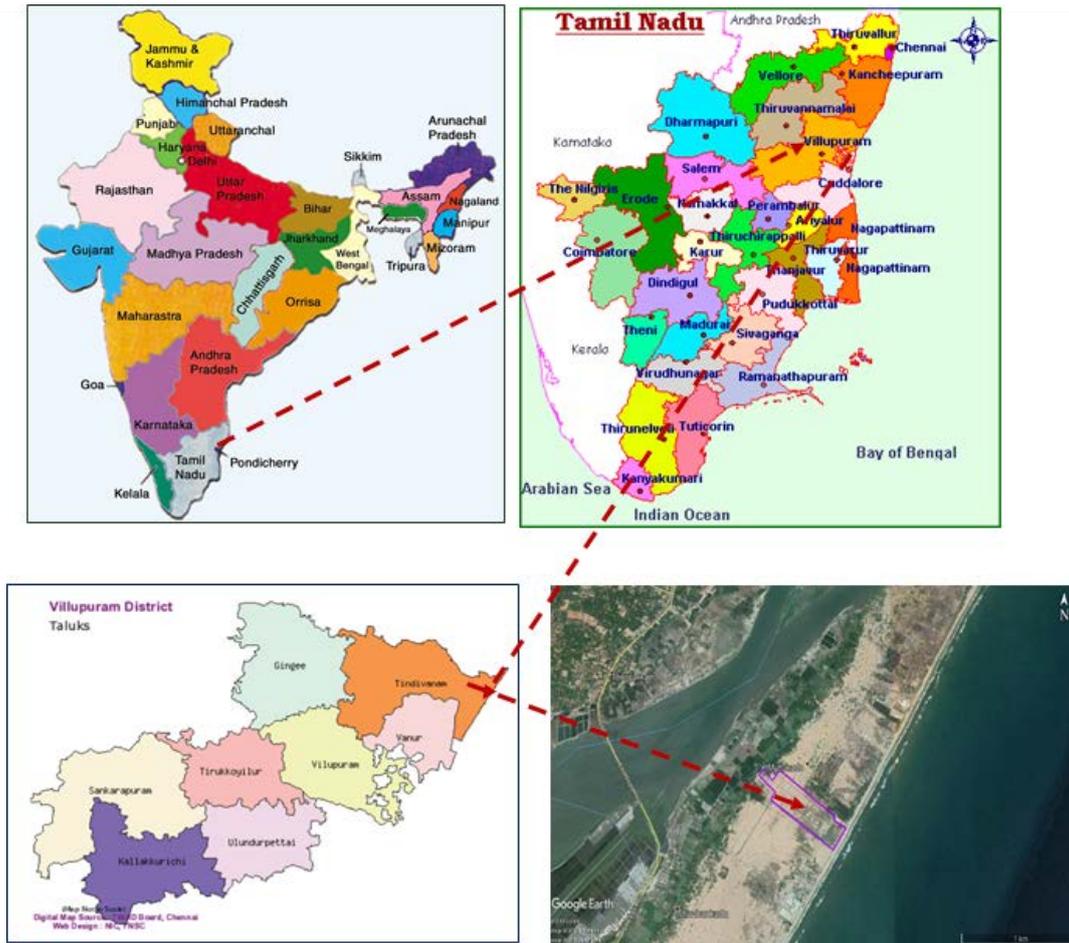
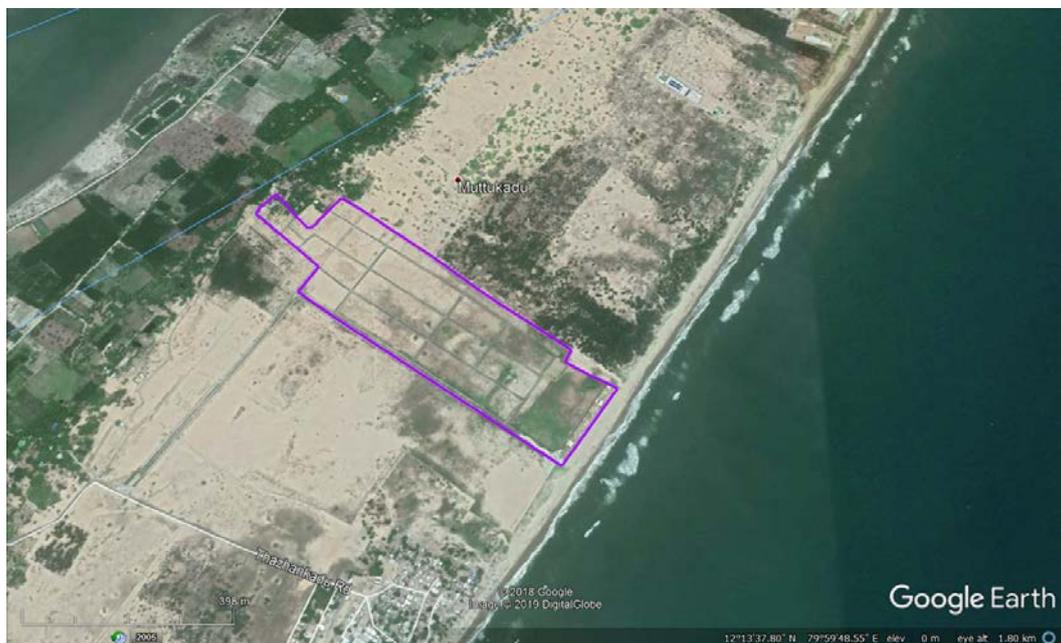
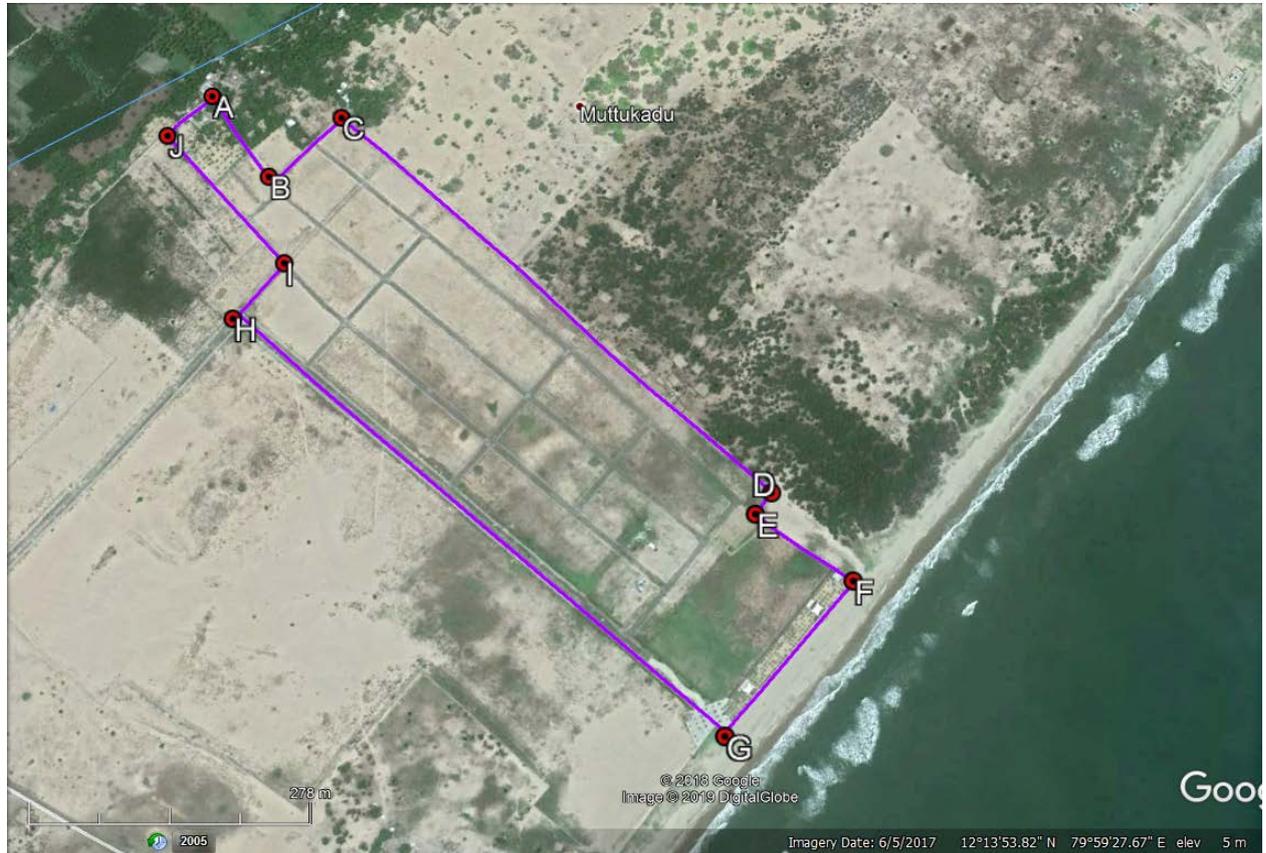


Figure 1-2 Satellite Imagery of the Project Site



The proposed project site is located at the intersection of latitude 12°13'54.45"N and longitude 79°59'19.63"E and the Google Earth Image of the Project Boundary and the Co-ordinates is given in **Figure 1.3**.

Figure 1-3 Google Earth Image of the Project Boundary and the Co-ordinates



S.No	Latitude	Longitude
A	12°14'3.23"N	79°59'7.68"E
B	12°14'0.49"N	79°59'10.43"E
C	12°14'3.06"N	79°59'12.61"E
D	12°13'51.83"N	79°59'30.14"E
E	12°13'51.07"N	79°59'29.69"E
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G	12°13'43.75"N	79°59'29.70"E
H	12°13'55.23"N	79°59'10.41"E
I	12°13'57.40"N	79°59'11.67"E
J	12°14'1.50"N	79°59'6.40"E

1.3. STUDY APPRAOCH

In order to assure that development projects are planned, designed and implemented in an environmentally sustainable manner, it is important that Environmental Management Plan is undertaken during the project planning stage. In this regard, **DS Propertiei, Chennai** has

appointed **ABC Techno Labs India Private Limited**, Chennai as Environmental Consultants who are accredited by National Accreditation Board for Education and Training (NABET)-Quality Council of India (QCI), New Delhi.

The report has been prepared in line with the Coastal Zone Regulation (CRZ) Notification, 2011, Government of India, Ministry of Environment and Forests and Climate Change (MoEF&CC) and internationally accepted practices so as to ensure necessary safeguards to protect against.

1.4. OBJECTIVE OF THE STUDY

The main objective of the study is to obtain Coastal Regulation Zone (CRZ) Clearance under CRZ Notification, 2011 notified by MoEF&CC, Government of India. The proposed residential plots falls under CRZ Zone-II area and CRZ clearance need to be obtained under CRZ Notification, 2011. In order to obtain CRZ clearance, Form I & EMP Report shall be undertaken for the activities that are proposed which are permissible under CRZ area.

1.5. NEED FOR CRZ CLEARANCE

As per CRZ Notification 2011, the proposed project site is near coastal zone which is influenced by sea water during high tide. The Institute of Remote Sensing, Anna University has carried our field survey and the proposed project site is falls under CRZ-II as per the approved CZMP as per CRZ Notification, 2011. The project has been consider in the District Coastal Zone Management Authority on 21st February 2019 and recommended the proposal to Tamil Nadu State Level Coastal Zone Management Authority. The proposal was considered in 104th TNSCZMA meeting held on 27.02.2019 and raised the query and the proposal was reconsidered in the 105th TNSCZMA meeting held on 21.05.2019 and the authority resolved the request the request to apply for the clearance, if required, in respect to the plots which are falling in CRZ-II area (i.e., 0 to 500mts from the HTL of sea) separately. The copy of the DCZMA recommendation and the minute of 105th meeting of the TNSCZMA is enclosed as **Annexure I**.

1.6. REGULATORY CONTEXT

The environmental laws and regulations of India relevant to the proposed project at are listed and commented upon below.

1.6.1. Legislation and Regulations

Environmental protection and improvement were explicitly incorporated into the Constitution of India by the 42 Amendment Act (1976) which added Article 48 A to the directive principles of State policy and declares that “the State shall endeavor to protect and improve the environment and to safeguard the forests and wild life for the country”. Article 51 A (g) on “Fundamental Duties” imposed a similar responsibility on every citizen to protect and improve natural environment. The Directive Principles of State Policy, an integral and significant element of India's democratic set-up, also contains a specific provision enunciating the State's commitment for protecting the environment. Article 253 of the Constitution empowers Parliament to make laws implementing international obligations of the country. The constitutional provisions have provided for local management of resources and are implemented through environmental protection laws of the Country.

The Ministry of Environment and Forests & Climate Change (MoEF&CC) constituted in 1985 is the nodal agency at the Central level of planning, promoting and coordinating the environmental programmes, apart from policy formulation. A number of enforcement agencies assist the MoEF in executing the assigned responsibilities. The responsibilities for industrial pollution prevention and control are primarily executed by the Central Pollution Control Board (CPCB) at the Central level, which is a statutory authority, attached to the MoEF. The State Departments of Environment and State Pollution Control Boards (SPCBs) are the designated agencies to perform these functions at the State level.

The constitutional provisions are backed by a number of laws – acts, rules, and notifications. The legislative framework is broadly contained in the umbrella Environment Protection Act, 1986; the Water (Prevention and Control of Pollution) Act, 1974; the Water Cess Act, 1977; and the Air (Prevention and Control of Pollution) Act, 1981. The law in respect of management of forests and biodiversity is contained in the Indian Forest Act, 1927; the Forest (Conservation) Act, 1980; the Wild Life (Protection) Act, 1972; and the Biodiversity Act, 2002. There are several other enactments, which complement the provisions of these basic enactments.

1.6.1.1. Environmental (Protection) Act, 1986

The Environment (Protection) Act, 1986 was introduced as an umbrella legislation that provides a holistic framework for the protection and improvement to the environment. In

terms of responsibilities, the Act and the associated Rules requires for obtaining environmental clearances for specific types of new / expansion projects (addressed under Environmental Impact Assessment Notification, 1994) and for submission of an environmental statement to the State Pollution Control Board annually.

Environmental Impact Assessment is undertaken for this residential plots project as a standard management procedure as laid down in The Environment (Protection) Act, 1986 and also ambient air quality, water quality, soil and noise levels are tested for permissible standards as prescribed by national laws and international regulations.

1.6.1.2. Coastal Regulation Zone (CRZ) Notification, 2011

In exercise of powers also conferred by clause (d) and sub rule (3) of rule 5 of Environment(Protection) Act, 1986 and in supersession of the notification of the Government of India in the Ministry of Environment and Forests, number S.O.114(E), dated the 19thFebruary, 1991 except as respects things done or omitted to be done before such supersession, the Central Government hereby declares the following areas as CRZ and imposes with effect from the date of the notification the following restrictions on the setting up and expansion of industries, operations or processes and the like in the CRZ,-

- i The land area from High Tide Line (hereinafter referred to as the HTL) to 500 meters on the landward side along the sea front.
- ii CRZ shall apply to the land area between HTL to 100 mts or width of the creek whichever is less on the landward side along the tidal influenced water bodies that are connected to the sea and the distance upto which development along such tidal influenced water bodies is to be regulated shall be governed by the distance upto which the tidal effects are experienced which shall be determined based on salinity concentration of 5 parts per thousand (ppt) measured during the driest period of the year and distance upto which tidal effects are experienced shall be clearly identified and demarcated accordingly in the Coastal Zone Management Plans (hereinafter referred to as the CZMPs).

Classification of the CRZ – For the purpose of conserving and protecting the coastal areas and marine waters, the CRZ area shall be classified as follows, namely

A. CRZ-I- The areas that are ecologically sensitive and the geomorphological features which play role in the maintaining the integrity of the coast

B. The area between Low Tide Line and High Tide Line:

CRZ-II- The areas that have been developed up to or close to the shoreline.

Explanation.- For the purposes of the expression "developed area" is referred to as that area within the existing municipal limits or in other existing legally designated urban areas which are substantially built-up and has been provided with drainage and approach roads and other infrastructural facilities, such as water supply and sewerage mains;

2. PROJECT DESCRIPTION

2.1. PROJECT DETAILS

DS Propertiei is Proposed Doctor's Beach Project of development of Residential Plots in S.No: under CRZ area:108/1, 108/2A(P), 108/2B, 108/2C1(P), 108/2C2, 109/1, 109/2, 109/3(P), 109/4, 110/1(P), 110/2(P), 110/3, 110/4, 110/5at Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District. The Total plot area of the project is 1,70,939Sq.m and in that about 1,09,143.72Sq.m area are under CRZ Zone. The break up area details is given in **Table 2.1**. The project layout and land document is enclosed as **Annexure II**. The basic infrastructural facilities and utilities will be developed for the whole residential development of 548 plots. The utility areas like STP, Solid waste management facilities are proposed for the overall development of the 548 residential plots.

Table 2-1 Project area Breakup

S.No	Description	Area in Sq.m
1	Total Site area	1,70,939
2	Area under CRZ Zone II	1,09,143.72
3	Area under non CRZ Zone	61,795
4	Vacant Plot area	71,854
5	Utility Area	460
6	OSR Area	7,185
7	Total Nos. of Plots in CRZ area	317 Nos.

2.2. ENVIRONMENTAL SETTING OF THE SITE

Environmental setting of the site is given below in **Table 2.2**. The project site is falls under the Survey of India Topo sheets, D44T15, DD44T16 & D44U3 and the Toposheet map showing 10 Km and 5 Km radius is given in **Figure 2.1**. Google map of the project site covering 10 km radius is given in **Figure 2.2**.

Table 2-2 Environmental Setting of the Site

S.No	Particulars	Details
1.	Site Latitude	12°13'54.45"N
2.	Site Longitude	79°59'19.63"E
3.	Present Land use	Residential Plots
4.	Nearest Roadways	East Coast Road- 1.3 Km, SouthWest
5.	Nearest railway station	Tindivanam Railway Station- 36 Km, West
6.	Nearest airport	Chennai International Airport - 85 km, North
7	Nearest Village	Vasavankuppam- 0.5Km, South
7.	Nearest town/ city	Tindivanam- 36 Km, West

S.No	Particulars	Details
8.	Hills/ valleys	Nil within 10 km radius
9.	Topography	Plain
10.	National parks/Wildlife Sanctuaries	Nil within 10 km radius
12.	Reservoir/Lake/River/Sea	<ul style="list-style-type: none"> • YedayantittuKalivelli- 1 Km, West • Odyur Lake- 9.8 Km, North
13.	Reserved/ Protected Forests	Nil within 10 km radius
14.	Archaeological Important Places	Nil within 10 km radius
15.	Seismicity	Seismic Zone III (Moderate) as per Seismic Zone Map of India
16.	Defense Installations	Nil within 10 km radius

Figure 2-1 Toposheet Map showing the 10 Km radius

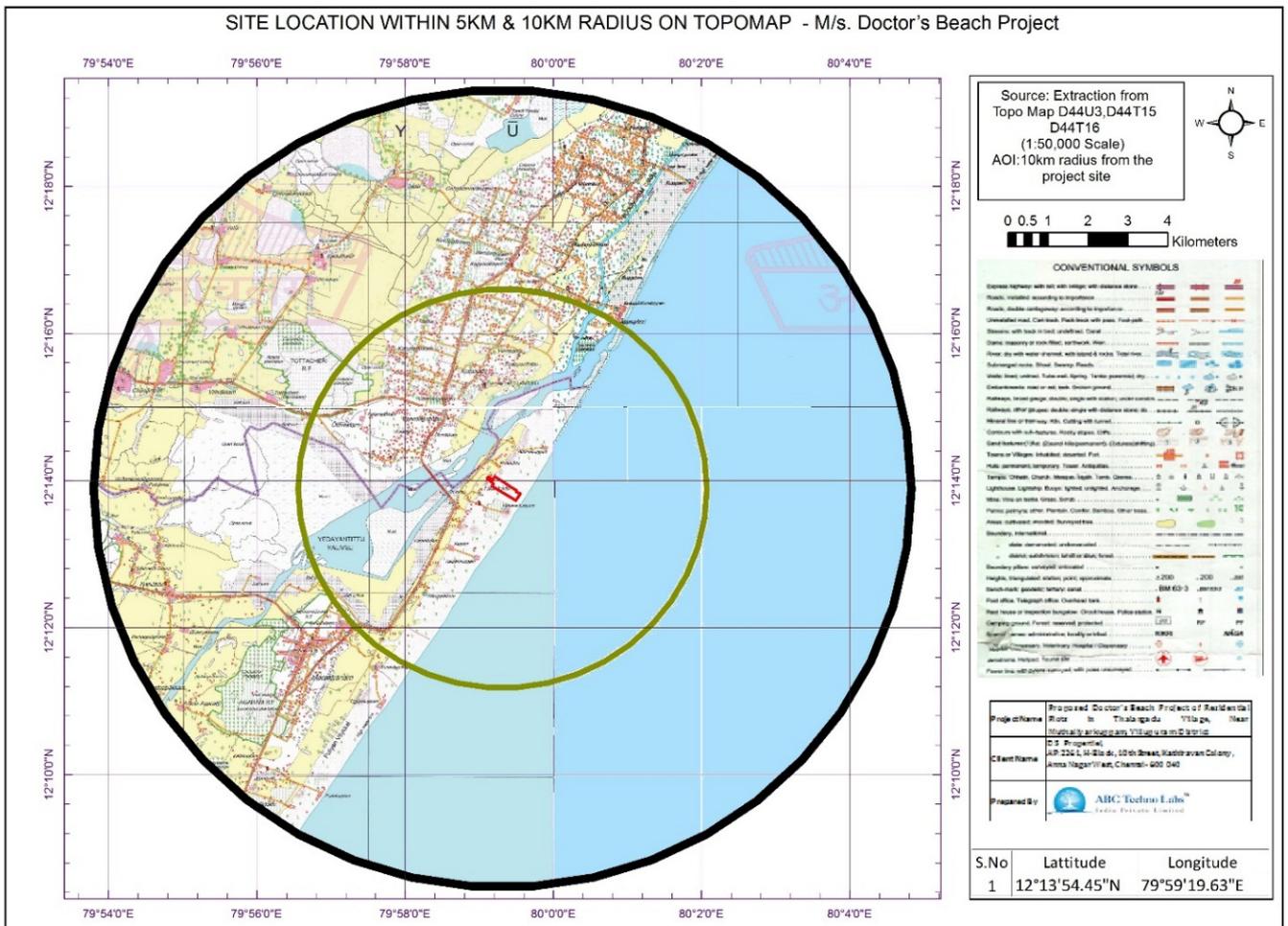


Figure 2-2 Google Map showing the 10 Km radius



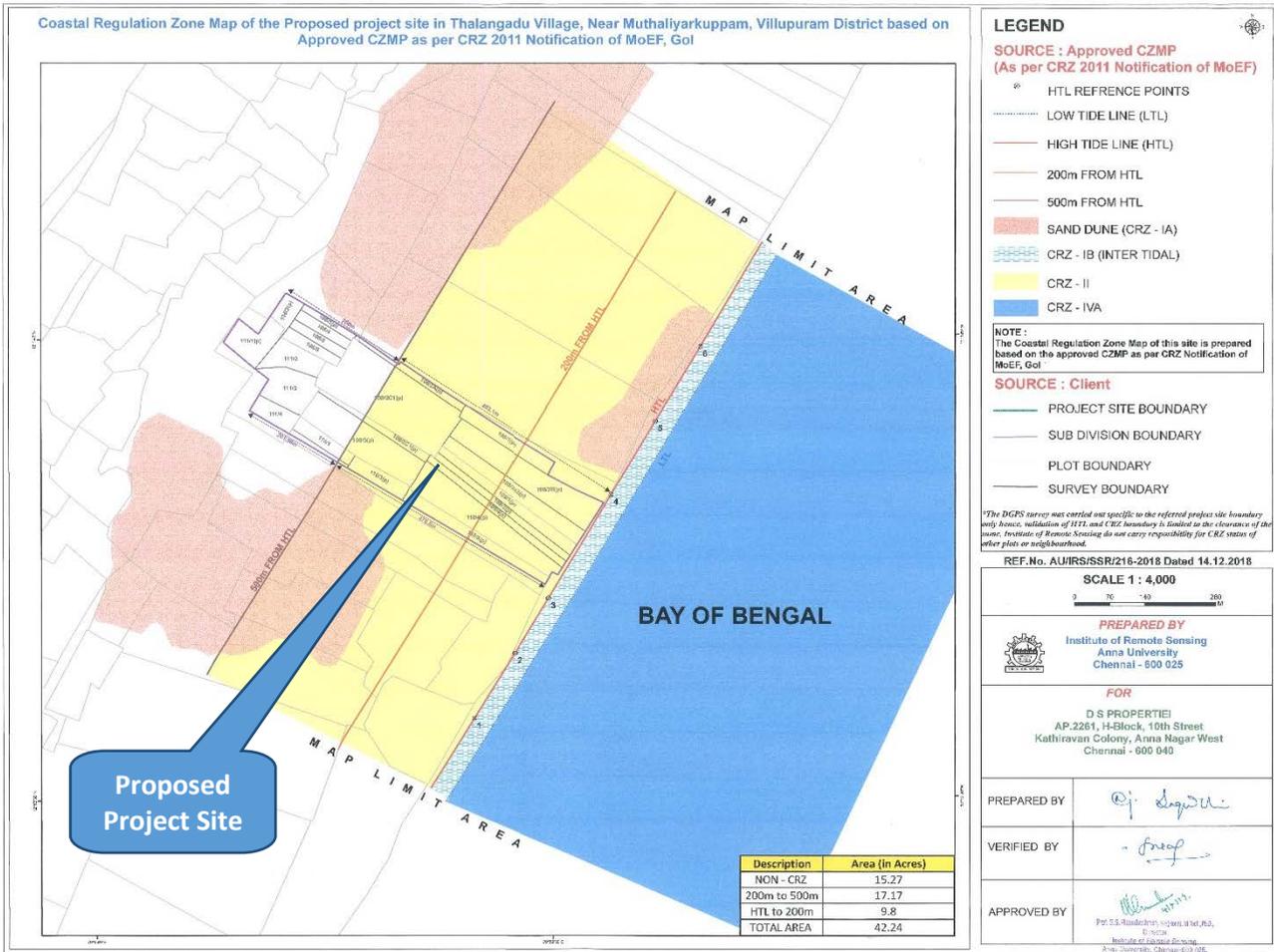
2.3. DEMARCATION OF HIGH TIDE LINE & LOW TIDE LINE

The site falls under the Coastal Regulation Notification, 2011. Institute of Remote Sensing, Anna University, Chennai-25 an authorized agency by MoEF&CC to prepare demarcation of High Tide Line (HTL) maps and reports, conducted field investigations and cadastral maps of 1:4000 scale pertaining to the project site were plotted and it is inferred from the study that the proposed project site falls under the classification **CRZ-II**.

The CRZ map showing the high tide and low tide (HTL/LTL) Lines of the project site is given in the **Figure 2.3**. The CRZ status report is enclosed as **Annexure III**.

Since the project site falls in the CRZ II zone, housing plots will complies the following norms of CRZ notification, 2011. The site is well connected with existing Thazhangadu Road from East Coast Road (ECR) and 15 feet road connecting Vasavankuppam and Muttukadu. The existing road in therevenue map showing the existing connectivity road for the project site is enclosed as **Annexure IV**.

Figure 2-3CRZ map showing the High Tide Line and Low Tide Line (HTL/LTL) of the Project Site



2.4. PROJECT COST

The project cost for the proposed project for CRZ area is estimated to be around **Rs. 2.5Crores**. About 1,09,143.72Sq.m of project area will come under CRZ zone & the project cost is estimated based on the government guidelines value.

2.5. OCCUPANCY DETAILS

The number of workers deployed during plot development phase will be about ~10 (in average) per day. The total number of plots proposed to develop will be 548 nos and the occupants for the proposed area will be about 2740(548*5) persons. The total number of plots in the CRZ zone is 317 nos and the occupants for the proposed area will be about 1585 (317*5) persons.

2.6. WATER REQUIREMENT

Source of water supply to the proposed project during development phase will be supplied by the nearby water suppliers through tanker lorries. During developed phase, there is no abstraction of ground water. The water required for the residence will be supplied by Marakkanam Town Panchayat. The Commitment letter for supply of fresh water from Marakkanam Town Panchayat is enclosed **Annexure V**. The details on water consumption for the proposed project during the operation phase are given below,

**The Total water requirement for has been calculated for the 548 plots.*

A. DOMESTIC WATER REQUIREMENT*

$$\begin{aligned} 1. \quad \text{Residential} &= \text{Number of Plots} * \text{No of person per home} * 90 \\ &= (548 * 5 * 90) / 1000 \\ &= 247 \text{KLD} \end{aligned}$$

TOTAL DOMESTIC WATER REQUIREMENT = 247KLD

B. TOILET FLUSHING WATER REQUIREMENT

$$\begin{aligned} 1. \quad \text{Residential} &= \text{Number of Plots} * \text{No of person per home} * 45 \\ &= (548 * 5 * 45) / 1000 \\ &= 123 \text{ KLD} \end{aligned}$$

TOTAL FLUSHING WATER REQUIREMENT = 123 KLD

C. TOTAL WATER REQUIREMENT*

$$\begin{aligned} \text{Total Water Requirement} &= \text{Domestic Water Requirement} + \text{Flushing Water Requirement} \\ &= 247 \text{ KLD} + 123 \text{ KLD} \\ &= 370 \text{ KLD} \end{aligned}$$

TOTAL WATER REQUIREMENT = 370 KLD

Hence total fresh water requirement for the project will be **370 KLD**

2.7. SEWAGE GENERATION

Quantity of the sewage generated during the developmental phase will be very minimal due to the limited workers. Quantity of sewage generated during Operational phase will be about 319 KLD which shall be treated through STP of capacity 320 KLD. The treated water from the STP will be reused for flushing and greenbelt development.

The 320 KLD STP is designed to treat sewage generated from the proposed development during the operational phase and the treated sewage will be reused for flushing and gardening purposes.

Sewage from the individual residence (both from CRZ & Non-CRZ areas) will be connected to STP through the pipeline and treated sewage from Sewage Treatment Plant will be conveyed to Treated Sewage Tank through pipelines. All the joints from piping system will be checked periodically and carrying treated wastewater pipes will be laid in conduits wherever road crossings are expected.

Garland drains will be constructed all around the Residential Complex for intercepting water from outside and inside. Thus no leaching of treated sewage into nearby water courses shall take place. Supervisors will be employed for overall operation & maintenance of water supply, waste water treatment and other utility services.

Sewage Treatment Plant (320 KLD):

Process Description:

Bar Screen- The screen will be provided at the inlet of STP to remove the debris such as paper, plastics & other floating debris.



Oil skimmer -Water from the bar screen flows through the oil skimmer chamber where belt type oil skimmer is fixed to remove the freely floating oil and grease present in sewage.

Equalization Tank- The sewage will then be passed to the equalization sump. Equalization Tank will be provided with air grid for the proper mixing of the sewage and to keep it under homogenous condition.

Aeration System- Sewage transfer pumps transfers the raw sewage to the aeration system where the aeration system works on a Moving Bed Bio Reactor Aerobic Process. The biological reaction is sustained by maintaining a required level of MLSS in the aeration tank. The generation of biomass reduces the incoming BOD



and COD to greater than 90%. Oxygen transfer is achieved by means of fine bubble diffusers placed at the bottom of the tank to transfer atmospheric oxygen from air. Suitable air blowers are provided to maintain an adequate flow of air through the aeration tank.

The aerated water from the aeration tank flows by gravity to a clarifier tank where the bio mass is allowed to settle at the bottom. Sludge recirculation pump re-circulates the settled sludge from the settling tank to aeration tank for maintaining the MLSS and the digested sludge will be sent to sludge drying bed.

The clear supernatant overflows to the Clarified Water tank where Hypo will be dosed for disinfection. Filter Feed pumps transfer the clarified water to the downstream Pressure Media filter and Activated Carbon filter for removal of suspended solids and any traces of organics.

Filtration System- The treated water from the tube settler will pass into the filtration system

Pressure Sand Filter- The system is provided with a Gravels, Pebbles Sand Media Filter. The main purpose of the filter is to remove the Suspended Solids & reduce Turbidity. The Filter is provided with Inlet Distributor, Bottom Collector & various Filtration Media like pebbles, gravels, sand to achieve effective filtration. Externally, the filter has Mesh of Valve to assist in various service requirements like Filtration, Backwash & Rinse.



Activated Carbon Filter- The system is provided with Activated Carbon Filter. The main purpose of the filter is to remove free Chlorine, balance organics, color etc. The Filter is provided with Inlet Distributor, Bottom Collector & filtration media like fine silex and activated Carbon. Externally, the filter has Mesh of Valve to assist in various service requirements like Filtration, Backwash & Rinse.

Ultra Filtration System: The filtered water will be passed through a downstream 50 micron bag filter/basket strainer to remove any carry over suspended solids and turbidity. The filtered feed then passes through an Ultra filtration system for removal of fine and colloidal particles and makes the sewage suitable for recycle.

The permeate water will be stored in the UF permeate storage tank. A suitable organic cleaner disinfectant dosing system will

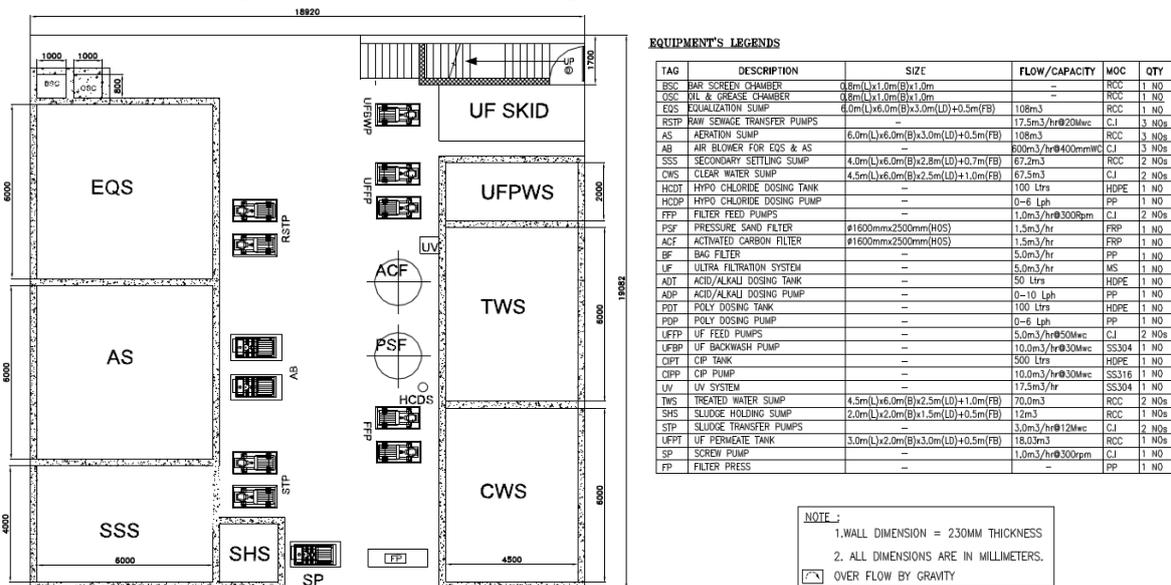


be provided to dose chemicals as required during backwashing of the Ultra filtration membranes. All chemical dosing will be done by means air operated dosing pumps to ensure accurate and optimum dosing.

UF Automation- The operation of the Ultra filtration unit will be completely auto, the service and backwash sequence will be controlled by means of a PLC located in the control panel. The PLC will perform a programmed set of operations consisting of service, backwash and forward flush of the membranes at a preset sequence. It will also initiate the addition of chemicals during backwash to enhance the cleaning efficiency during backwashing. The Ultra filtration unit will be provided with required safety features. All fault or abnormal conditions will be indicated by an audiovisual alarm in the control panel.

The final STP treated water can be used for gardening/toilet flushing.

Figure 2-4 Layout for Sewage Treatment Plan of 320 KLD



Sewage Treatment plant is designed to treat the sewage from whole residential development of 548 plots. The treatment scheme is designed to deliver the treated water quality norms stipulated by Tamil Nadu Pollution Control Board (TNPCB). The STPs are designed to ensure that treated sewage parameters are well below/within the permissible limits, even under varying quantity and quality conditions and the designed system will also be capable of withstanding shock loads. The STP details are given below.

2.8. MUNICIPAL SOLID WASTE GENERATION, COLLECTION, TRANSPORT AND DISPOSAL

The estimated total quantity of Municipal Solid Waste (MSW) generated during developed Phase from the total 548 plots will be 1363* kg/day. Breakup of the solid waste generation is given below.

Description	Occupancies	Per capita Waste Generation (kg/day)	Total Waste Generation (kg/day)	
			Biodegradable (kg/day)	Non-Biodegradable(kg/day)
Residential Plots	2740	0.5	822 (0.6 kg of total waste).	548(0.4 kg of total waste)
Total Waste			1370* kg/day.	

* The estimation of solid waste generation for Residential is taken as 0.5 kg/person/day.

Collection and Disposal & Treatment of Solid Waste:

- Arrangements shall be made to store the wastes in utility storage areas in a segregated manner.
- Segregated Garbage organic and inorganic waste at residence shall be collected in three types of bins.
 - Bin-1: This will be for collecting organic/Biodegradable solid waste.
 - Bin-2: This will be for Inorganic-1 type waste like paper, board, cartons, thermocol packing, etc., moderately combustible once.,
 - Bin-3: This will be for Inorganic-2 type waste like plastic, glass & metal etc, which has less combustible property.
- These bins shall be stored in Garbage room. The other non-municipal solid waste will be disposed to authorized recyclers.
- Biodegradable waste will be treated in the Organic Waste Converter (OWC) Organic Waste Converter (OWC) is a composting machine that converts wet organic waste into odour-free, nutrient-rich compost. The end product is organic manure which can be used instead of chemical fertilizer for gardening and landscaping purposes. The wastes such as food waste, bio-sludge from Sewage Treatment Plant, garden litter, Waste Papers shall be processed and converted into manure with appropriate bio-culture and organic media.

2.9. POWER DETAILS

As the proposed project is development of residential plots& individual meter will be installed by the residence.The source of Power Supply is Tamil Nadu Electricity Board (TNEB).

3. ENVIRONMENTAL MANAGEMENT PLAN

3.1. OBJECTIVES

Environmental Management Plan (EMP) is required to manage environmental impacts from the proposed project. It is a site specific plan developed to ensure that all necessary measures are identified and implemented in order to protect the environment. Site specific EMP is formulated to mitigate significant adverse environmental impacts that are identified and quantified in the process of baseline and impact assessment. An EMP also ensures that the resources are utilized to maximum extent, waste generation is minimized, residuals treated adequately and by-products are recycled to the extent possible.

3.2. ENVIRONMENTAL MANAGEMENT PLAN

Environmental Management Plan (EMP) during, development Phase is given in **Table 3.1**.

Table 3-1 Environmental Management Plan

S.No.	PotentialImpacts	Environmental Management
A	Development Phase	
1	Clearances	All clearance including CRZ clearance required for development will be ensured and made available before start of work. Permissions will be obtained from the concerned authority
2	Storage of materials	The contractor will identify location for temporary use of coastal land for storage of materials for construction of roads etc., without affecting the marine zone
3	Prevention of Top Soil	<ul style="list-style-type: none"> • Top Soil from borrow area should be stored in stock piles • Stock piles should be covered with gunny bags • Stock piled soil will be spread on the disturbed area
4	Baseline conditions	Adequate measures will be taken and checked to control the Baseline parameters of Air, Water and Noise & Marine environment.
5	Using of modern machineries	Using of modern machineries such as JCBs, backhoes etc, will be used to minimize the construction during development period impacts to the nearby residents
6	Temporary flooding due to excavation.	Proper drainage arrangements to be made in consultation with the Engineer in charge, to avoid the overflowing of existing drains due to excavation during developmental Phase.
7	Protection of residential sensitive receptors	<ul style="list-style-type: none"> • Noisy construction operation during development phase in residential area and sensitive areas will be done only between 6.00AM to 6.00PM • Preventive maintenance of construction equipment and

S.No.	PotentialImpacts	Environmental Management
		vehicles to meet emission standards and to keep them in low noise <ul style="list-style-type: none"> • Adequate barricading/other measures to protect dust pollution surrounding marine environment
8	Disposal of solid waste in marine environment	<ul style="list-style-type: none"> • Working front should be left at the end of the day without debris(Stones) • Provide proper dust bin for food waste and other domestic solid waste generated by one-site shell shall be disposal by authorities
9	Marine Ecological Environment	The proposed project does not involve any construction activity near the coastal area and in CRZ sensitive zone and hence no impact on any marine ecological environment.
B	Operation Phase	
1	Increase in dust (PM) and gaseous pollutants and noise levels dueto Vehicular traffic inside the residential area	<ul style="list-style-type: none"> • Paved Motorable roads in the residential area will be maintained to reduce dust emission • Restricting the speed of the vehicles inside the residential area • Water sprinkling will be done using treated sewage during the heat period • Roadside tree plantation to be restored and maintained
2	Affect land and groundwater if sewage generated isnot properly disposed.	Sewage from the various residence will be collected through pipeline and conveyed to the proposedsewage treatment plant. The sewage treatment plant comprises of theaerobic treatment system and filters for effective treatment. The treatedwater from sewage treatment plant will be reused for green beltdevelopment and for toilet flushing.
3	Affect land and ground water if solid waste is notproperly disposed	<ul style="list-style-type: none"> • Proper segregation and collection of wastes will be practiced • Collection of wastes from residence and stored in the dedicated storage area and biodegradable waste will be converted to manure by using Organic Waste converter and the converted waste will be used as manure for greenbelt area • The non-biodegradable solid wastes will be disposed to authorized vendors

4. DISASTER MANAGEMENT PLAN

4.1. INTRODUCTION

Disaster is an unexpected event due to sudden failure of the system, external threats, internal disturbances, earthquakes, fire and accidents. Disaster causes massive loss of life and property, disrupts normal life, requires external aid and affects a large number of people. A common principle of disaster management involves recognition of four basic elements of disaster cycle.

These include:

- Mitigation
- Preparedness
- Response
- Recovery

4.2. OBJECTIVE

The objective of DMP is to describe the emergency preparedness, the resource availability and response actions applicable to deal with various types of emergencies that could occur in shortest time possible during the emergency. In order to achieve effectively the objectives of emergency planning, the critical elements that form the backbone of Disaster Management Plan (DMP) are:

- Reliable and early detection of an emergency and immediate careful planning
- The command, co-ordination and response organization structure along with availability of efficient trained personnel
- The availability of resources for handling emergencies
- Appropriate emergency response action
- Effective notification and communication facilities
- Regular review and updating of DMP
- Protect training of the concerned personnel

Hazard, Vulnerability Analysis

Tamil Nadu has witnessed havoc caused by cyclones and storm surge in the coastal regions, earthquakes, monsoon floods, landslides and Tsunami. Increase in urban population coupled

with the construction of man-made structures often poorly built and maintained subject cities to greater levels of risk to life and property in the event of earthquakes, flood and other natural hazard.

4.3. EARTHQUAKE PRONE AREAS

All natural hazards, earthquakes seem the most terrifying. They can inflict tremendous damage within seconds and without warning at any time of day, on any day of the year. Ground shaking and surface faulting are often just the forerunners of secondary damage, such as fires, floods (caused by dam bursts), landslides, quick soil and Tsunami (seismic sea waves).

The project area falls under Zone III of Seismic zones of India as per the Map of India.

According to GSHAP data, the state of Tamil Nadu falls in a region of moderate damage risk zone. Historically, parts of this region have experienced seismic activity in the M5.0-6.0 range. The Seismic zone map of India and Tamil Nadu is shown in **Figure 4.1** and **Figure 4.2** respectively.

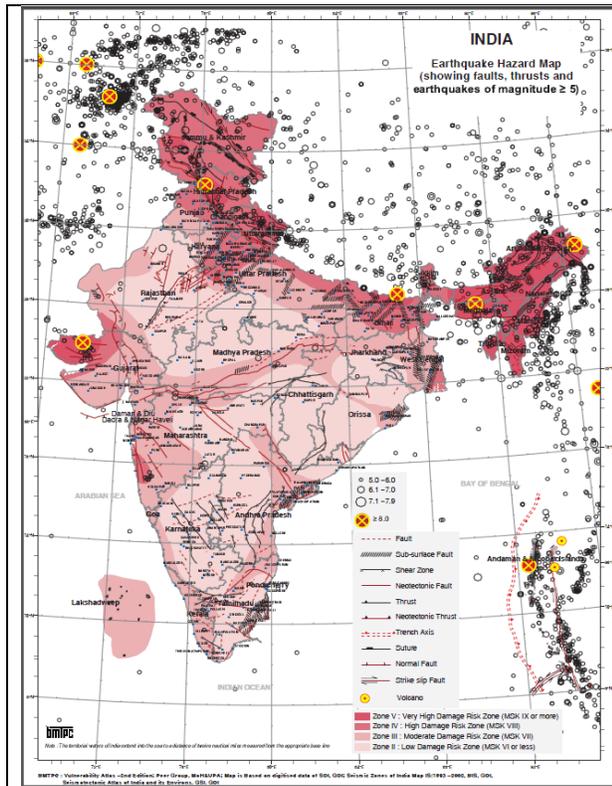


Figure 4-1 Earthquake Hazard map of India
(Source: <http://www.bmtpc.org>)

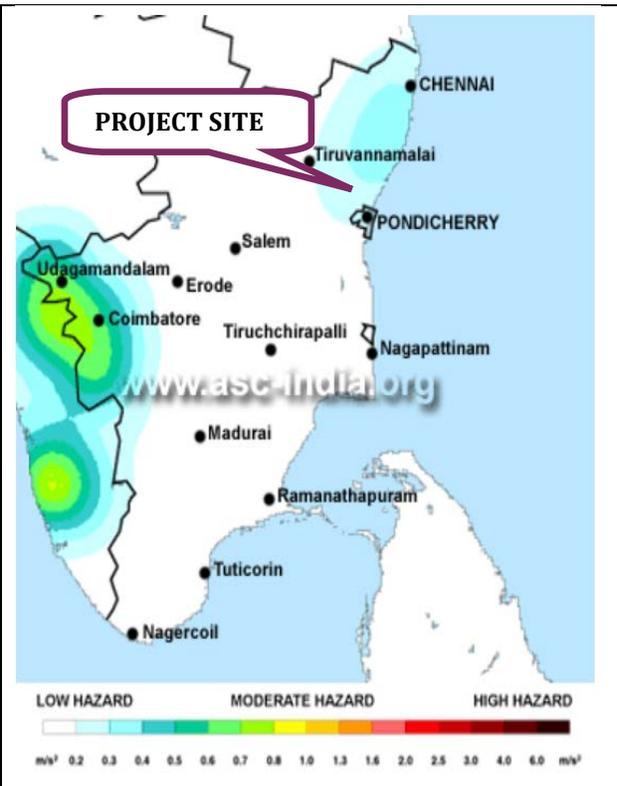


Figure 4-2 GAHAP Data for Tamil Nadu
(Source: <http://asc-india.org>)

4.4. CYCLONE PRONE AREAS

In Villupuram District, it extends to a distance of 40.7 km from the coast. In these areas, the risk is due to (a) cyclonic wind velocities combined with heavy storm (b) flooding by seawater due to high waves and (c) flooding due to heavy storm

4.4.1. Prevention and Mitigation Measure

Prevention consists of action that reduces risk from natural and manmade disaster incidents. Protection reduces or eliminates a threat to people, property and the environment. Protection includes actions or measures taken to cover or shield assets from exposure, injury or destruction. Protective actions may occur before, during or after an incident and prevent, minimize or contain the impact of an incident. Once the likelihood of a disaster is suspected, action has to be initiated to prevent a failure. The project in-charge, responsible for preventive action will identify sources of repair equipments, materials, labor and expertise for use during emergency. The project in-charge will notify the officer for the following information:

- Exit points for the public
- Safety areas
- Nearest medical facilities

Mitigation means the measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and on environment. Mitigation with its focus on the impact of a hazard encompasses the structural and non-structural approaches taken to eliminate or limit a hazard's exposure; impact on people, property and the environment. Besides flood proofing, river desiltation, change in land use patterns and shelter belt plantation, examples of mitigation activities also include:

- Planning, adopting and enforcing stringent building codes, flood-proofing requirements, seismic design standards and cyclone wind bracing requirements for new construction or repairing existing buildings
- Planning and adopting zoning ordinances that steer development away from areas subject to flooding, storm surge or coastal erosion

- Incorporate Development Control Rules with reference to zone, location, height, number of floors, size of buildings, setback spaces to be left around, and the use of the building and land
- Building rules under the Local Bodies Acts provide for regulation of location of buildings, foundations, plinths, superstructures walls, floors and rooms, licensing of surveyors and inspection of municipal engineers at various stages of constructions, regulation on dead and superimposed loads, wind load/ pressure, reinforced cement concrete and framed structures, construction materials
- Manual fire alarm call points shall be provided at all floors
- Fire service inlets fitted with NRV at ground level shall be provided
- No of exit, location and their width should conform to requirements of Building code of India
- In areas prone to cyclones, critical infrastructure, school and other community buildings to be built at elevated places. Keep trees and shrubs trimmed. Remove damaged and decayed parts of trees to make them resist wind and reduce the potential for damage. Removal of hoardings before specified period of cyclone

Responsibility to handle the emergency situation is vested to the Safety and Health Engineer.

4.4.2. Preparedness Measures

In a disaster management cycle, preparedness shall be the first step, instead of waiting for a disaster to occur and then to manage it. Planning is one of the key elements in the Preparedness cycle. When undertaking disaster management planning assessments local residents are likely to be the first emergency responders to such incidents. Measures for preparedness include Sensitizing program, training and capacity building. It is a proven fact that human beings, when faced with adverse situations, tend to react in the way for which they have trained and practiced. Preparedness measures include:

- Each building contact and emergency preparedness coordinator will have regular meetings with people in their building to be certain everyone knows what to do and what to expect, as much as possible
- These meetings will be held often enough to keep everyone properly informed

- Training sessions will be coordinated through the Environmental Management Cell
- Any change in building contacts and emergency preparedness coordinators will be immediately reported to both the Environmental Management cell and the Environmental Safety Officer
- A volunteer force for every ward/village should be raised and they should be given all encouragement to take up disaster preparedness and mitigation activities
- Disaster management teams at wards/Panchayats level from out of the volunteer force may be created and they may be trained in specific areas like early warning, immediate rescue, first – aid, food management, shelter management, water supply and sanitation, damage assessment etc.,

4.4.3. Response Plan

Response plan for responding effectively and promptly to any threatening disaster situation or disaster. The information listed below provides basic emergency information to help individuals respond thoughtfully in an emergency event

- In the event of an emergency, all occupants are to vacate the buildings immediately. When notification occurs, all building occupants must evacuate from the nearest marked exit and alert others within close proximity to do the same. Assist mobility to impaired persons to the closest “area of rescue assistance”
- In case of fire raise the fire alarm and communicate the same with the emergency services
- Use stairwells to exit the buildings. Do not use elevator in the event of a fire, earthquake, or other emergencies where you could become confined inside. Proceed outside to the nearest Emergency Assembly Point

4.4.4. Communication System

An efficient communication system is absolutely essential for the success of any disaster management plan. This has to be worked out in consultation with local authorities involving police and fire department, hospital department considering the following points.

- Identify the relevant officials and institutions to be involved for the first, second and third level of information
- Preparation of the telephone directory of these officials and making available to all concerned
- Allotment of toll free number to a central communication center
- Provide wireless communication tools to safety and security and communication officers
- Empowering central communication center with latest communication equipment and tools.

4.5. REVIEW OF DMP

Evaluating the effectiveness of plans involves a combination of training events, exercises etc., to determine whether the goals, objectives, decisions, actions and timing outlined in the plan will result in an effective response. Indicative guidelines for monitoring and evaluation of the plan are as given below:

- Check the efficacy of the plan after any major disaster/emergency in the district and see what did work and what did not work and make amendments to the plan accordingly
- As per subsection (4) of section 31 of Disaster Management Act, 2005, the plan would be reviewed and updated annually and the year in which the plan has been reviewed would be clearly mentioned in shape of header in each page of the plan
- Update coordinates of responsible personnel and their roles/responsibility every six months or whenever a change happens. Name and contact details of the officers/officials who are the nodal officers or the in-charge of resources to be updated on regular basis
- Plan should be circulated to all stakeholder departments, agencies and organizations so that they know their role and responsibilities and also prepare their own plans
- Regular drills/exercises should be conducted to test the efficacy of the plan and check the level of preparedness of various departments and other stakeholders. It would ensure that all parties understand their roles and responsibilities clearly and understand the population size and needs of vulnerable groups

- Regular training and orientation of the officers/officials responsible to implement the plan should be done so that it becomes useful document to the district administration

4.5.1. Emergency Action Committee

To ensure coordinates action, an emergency action committee should be constituted. Emergency Action Committee will prepare the evacuation plan and procedures for implementation based on local needs and facilities available. The plan should include:

- Demarcation of the areas to be evacuated with priorities
- Safe area and shelters
- Security of property left behind in the evacuated areas
- Functions and responsibilities of various members, and
- Setting up of joint control action

All personnel involved in the Emergency Action Plan should be thoroughly familiar with all the elements of the project area and their responsibilities. The staff at the site should be trained for problem detection, evaluation and emergency remedial measures. Individual responsibility to handle the segments in emergency plan must be allotted. Success of an emergency plan depends on public participation, their response to warning notification and timely action. Public has to be educated on the hazards and key role in disaster mitigation by helping in the rescue operations. It is essential to communicate by whom and how a declared emergency will be terminated. There should be proper notification to the public on de- alert signals regarding termination of the emergency. The notification should be clear so that the evacuees know precisely what to do when re-entering or approaching the affected areas.

5. PROJECT BENEFITS

DS Propertiei is Proposed Doctor's Beach Project of Residential Plots in S.No: under CRZ area:108/1, 108/2A(P), 108/2B, 108/2C1(P), 108/2C2, 109/1, 109/2, 109/3(P), 109/4, 110/1(P), 110/2(P), 110/3, 110/4, 110/5 at Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District. The Total plot area of the project is 1,70,939 Sq.m and in that about 1,09,143.72 Sq.m area are under CRZ Zone. The benefits of this project include:

- Construction works provide short term employment opportunities for the local population.
- During operation phase, the maintenance workers will be employed which benefits people in the area.
- Socio - economic status of the people living in this area will be increased.

6. CONCLUSION

The EMP has assessed the potential environmental impacts associated with the development phase and operation of the proposed project. Based on the findings from the assessment necessary control measures have been formulated and required budget has been allocated for EMP. From the present study the following conclusions are made,

- This project will have beneficial effects in terms of growth and development of the area
- This project is also generated direct and indirect employment to a considerable number of families

Thus, it can be concluded that with the judicious and proper implementation of the pollution control and mitigation measures, the proposed project can proceed without any significant negative impact on the marine environment.

7. DISCLOSURE OF CONSULTANT

This chapter presents the details of the environmental consultants engaged, their background and the brief description of the key personnel involved in the project

7.1. INTRODUCTION

ABC Techno Labs India Private Limited is an ISO 9001, ISO 14001 & OHSAS 18001 Certified Company & leading Environmental Engineering & Consultancy Company. ABC is the first firm to be accredited by NABET (National Accreditation Board for Education and Training), Quality Council of India, as an EIA Consultant. ABC is equipped with in-house, spacious laboratory, accredited by NABL (National Accreditation Board for Testing & Calibration Laboratories), Department of Science & Technology, Government of India. Copy of the NABET accreditation is given in the last page.

Since establishment our focus is on sustainable development of Industry and Environment based on sound engineering practices, innovation, quality, R&D and most important is satisfying customers need. The company has successfully completed more than 100's projects of variety of industries, in the field of pollution control. We are also dealing in the projects of waste minimization and cleaner production technology. Our team of technocrats and scientists are well experienced to deal with the Designing, Manufacturing, Fabrication, Installation and Commissioning of Effluent/Wastewater Treatment Plants, Sewage Treatment Plants, Combined Treatment Plants.

We are having a well experienced team of Scientists & Engineers who are looking after our well-equipped analytical laboratory with a facility including analysis of physical, chemical and biological parameters as per the requirements of the State Pollution Control Board and our clients.

7.2. QUALITY POLICY

- Providing high quality consultancy services
- Time bound completion of projects and submission of reports
- Employing competent engineers and scientists
- Implementing the best available technology

- Maintaining a good quality products and public relation practice
- Continually improving the effectiveness of Quality Management

7.3. SERVICES OFFERED

A. Environmental Services

- Environmental Impact Assessment (EIA)
- Environmental Management Plan (EMP)
- Social Impact Assessment (SIA)
- Environmental Baseline data collection for Air, Meteorology, Noise, Water, Soil, Ecology, Socio-Economic and Demography etc;
- Environmental Monitoring
- Socio Economic Studies
- Resettlement & Rehabilitation Plan
- Ecological & Human Health Risk Assessment Studies
- Ecological Impact Assessment
- Environmental Management Framework
- Solid Waste Management
- Hazardous Waste Management
- Internship & Training

B. Multi-lab Division

- Chemical Testing
- Environmental Testing
- Microbiological Testing
- Food Testing
- Metallurgical Testing
- Mechanical Test
- Chemical Testing

C. Turnkey Projects

- Water Treatment Plants
- Sewage Treatment Plant
- Recycling & Water Conservation Systems

- Zero Discharge System
- Operation & Maintenance of Water & Waste Water Plants
- Water & Waste Water Treatment Chemicals
- Pilot Plant studies
- Feasibility studies & preparation of budgetary estimates

Sectors We Serve

- Mining of Minerals including Opencast/Underground mining
- Thermal Power Plants
- Mineral Beneficiation including Pelletisation
- Metallurgical Industries (Ferrous & Non Ferrous)
- Chloralkali Industry
- Textile- cotton & Man-made fibre
- Coke Oven Plants/ Waste Heat Recovery
- Synthetic Organic Chemical Industries
- Sugar, Distilleries and Cogeneration
- Integrated Paint Industries
- Common Municipal Solid waste Management facility
- Industrial Estates/ Parks/Complexes/Special Economic Zones
- Common Effluent Treatment Plants
- Building & Construction Projects,
- Townships & Area Development Projects

7.4. STUDY TEAM

The multidisciplinary team included expertise in Environmental Impact Assessment, Air pollution & Control measures, Noise Control measures, Ecology and bio-diversity, Land use, Geology, Environmental Chemistry and Socio-Economic planner.

S.No	Name	Role
1.	Dr. R. K. Jayaseelan	EIA Coordinator &FAE - Land Use and Hydrology, ground water & water conservation
2	Mrs.Sathya.S	EIA Coordinator& FAE - Overall coordination of Project, report preparation, review and validation

S.No	Name	Role
3	Dr. N. Sukumaran	FAE - Ecology & Biodiversity, Soil & Conservation
4.	Dr.GeethaShreeneevasakam	FAE - Socio-Economic
5.	Mr. Vignesh	Jr.Project Engineer- Report Analysis and Documentation

ANNEXURE I

*DCZMA Recommendations & TNSCZMA
Minutes*



TAMILNADU POLLUTION CONTROL BOARD

From,

Er.R.Umayyakunjaram.,M.Tech.,
District Environmental Engineer &
Convener DCZMA,
Tamil Nadu Pollution Control Board,
District Collectorate Master Plan
Complex, Backside to Taluk office,
Villupuram- 605 602.

To,

The Director of Environment,
Ground Floor, Panagal Building,
Saidapet,
Chennai-600 015.

Letter No.DEE/TNPCB/VPM/F-0270/CRZ/2019 Dated:26.02.2019

Sir,

Sub: TNPC Board – Villupuram District- District Coastal Regulation Zone Management Authority - Proposed Doctor's Beach Project of Residential Plots in S.F.No. 106/2,106/3,106/4,106/5,106/6,108/1,108/2A(p), 108/2B,108/2C1(p),108/2C2,109/1,109/2,109/3(p),109/4,110/1(p),110/2(p),110/3,110/4,110 5, 111/1,111/2,111/3 and 111/4 of Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District- Minutes of the meeting – Submitted –Reg.

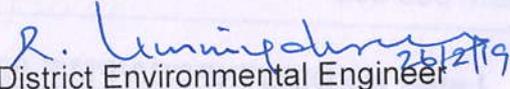
Ref: 1.M/s.DS Propertiei,AP:2261,H-Block,10th Street, Kathiravan Colony, Anna Nagar West,Chennai-600040 Letter Dated.15.02.2019,received this office on 18.02.2019..
2. Minutes of the DCZMA for Villupuram District held on 21.02.2019.

Thiru.D.Harish Kumar,M/s.DS Propertiei,AP:2261,H-Block,10th Street, Kathiravan Colony, Anna Nagar West,Chennai-600040 has applied for CRZ Clearance for the Proposed Doctor's Beach Project of Residential Plots in S.F.No. 108/1,108/2A(p) 108/2B, 108/2C1(p), 108/2C2, 109/1, 109/2, 109/3(p), 109/4, 110/1(p), 110/2(p), 110/3, 110/4 & 110/5 of Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District vide reference 1st cited. Total Plot area-164759 Sq.m. at an estimated project cost of Rs. 2.50 Crores

The above said project Survey Numbers falls in CRZ-II areas.Hence, District Coastal Regulation Zone Authority meeting was held on 21.02.2019 under the Chairmanship of District Collector, Villupuram.

The District Coastal Regulation Zone Management Authority has decided and recommended the proposal to State Level Coastal Management Regulation Zone Authority for issue of CRZ Clearance.

The minutes of the meeting and applications are hereby submitted for the Proposed Doctor's Beach Project of Residential Plots in S.F.No. 108/1,108/2A(p) 108/2B, 108/2C1(p), 108/2C2, 109/1, 109/2, 109/3(p), 109/4, 110/1(p), 110/2(p), 110/3, 110/4 & 110/5 of Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District for favour of kind information and necessary action please.


District Environmental Engineer
Tamilnadu Pollution Control Board
Villupuram
26/2/19
E
2012

Encl: 1. as stated above

Copy submitted to:

1. The Member Secretary,
TamilNadu Pollution Control Board,
Chennai-600 032 -with a copy of minutes of the meeting for kind information please.
2. The District Collector
Villupuram – For kind information please.

Copy to :

1.M/s.DS Propertiei,AP:2261,H-Block,10th Street, Kathiravan Colony, Anna Nagar West,Chennai-600040.

Minutes of the District Coastal Zone Management Authority meeting, Villupuram District conducted at Collectorate, Villupuram.

Date : 21.02.2019 Time : 01.00 PM

Subject : Proposed Doctor's Beach Project of Residential Plots in S.F.No. 106/2,106/3,106/4,106/5,106/6,108/1,108/2A(p),108/2B,108/2C1(p),108/2C2,109/1,109/2,109/3(p),109/4,110/1(p),110/2(p),110/3,110/4,110/5,111/1,111/2,111/3 and 111/4 of Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District.

The District Coastal Zone Management Authority meeting was conducted on 21.02.2019 by the District Collector/Chairman of the District Coastal Zone Management Authority, Villupuram District.

The following members/representatives and special invitees participated in the meeting:

1.	Regional Director of Municipal Administration, Vellore.	Vice-Chairman
2.	District Environmental Engineer Tamilnadu Pollution Control Board, Villupuram.	Convener
3.	Assistant Director of Town and Country Planning, Villupuram.	Member
4.	District Forest Officer, Villupuram.	Member
5.	Assistant Director of Town Panchayat, Cuddalore.	Member
6.	Assistant Director of Fisheries, Villupuram.	Member
7.	The General Manager, District Industries Centre, Villupuram.	Member
8.	The Tasildhar, Marakkanam.	Special Invitee
9.	The Commissioner, Marakkanam Panchayat Union, Marakkanam	Special Invitee
10.	The Executive Officer, Marakkanam Town Panchayat, Marakkanam	Special Invitee
11.	M/s.DS Propertiei	Project Proponent
12.	M/s.ABC Techno Labs India Private Limited, Chennai	Environmental Consultant

The District Environmental Engineer, Tamil Nadu Pollution Control Board, Villupuram has welcomed the Chairman, DCZMA/District Collector, Villupuram, members/representatives, special invitees and the project proponents.

At the outset the District Environmental Engineer, Tamil Nadu Pollution Control Board, Villupuram has explained in brief about the Coastal Regulation Zone Notification and about the following project for which CRZ clearance is sought.

Project Details :

Thiru.D.Harish Kumar, M/s.DS Propertiei,AP:2261,H-Block,10th Street, Kathiravan Colony, Anna Nagar West,Chennai-600040 has applied for obtaining Coastal Regulation Zone Clearance for the Proposed Doctor's Beach Project of Residential Plots in S.F.No. 106/2, 106/3, 106/4, 106/5,106/6,108/1,108/2A(p),108/2B,108/2C1(p),108/2C2,109/1,109/2,109/3 p),109/4,110/1(p),110/2(p),110/3,110/4, 110/5, 111/1, 111/2,111/3 and 111/4 of Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District.Total Plot area-164759 Sq.m.and cost of the Project Rs.2.50 Crores.

The details of CRZ location of the Project area is as follows.

The project location of S.F.No.108/1,108/2A(p) 108/2B, 108/2C1(p), 108/2C2, 109/1, 109/2, 109/3(p), 109/4, 110/1(p), 110/2(p), 110/3, 110/4 & 110/5 of Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram District falls under CRZ-II area as per the report prepared by Institute of Remote Sensing, Anna University,Chennai.Total Plot area falls under CRZ-II - 101625Sq.m.

To obtain the clearance of the State Coastal Zone Management Authority, the project is to be placed in the District Coastal Zone Regulation Authority meeting for which the District Collector of the concerned District is the Chairman.

The Environmental Consultant,M/s.ABC Techno Labs India Private Limited,Chennai has explained the object and need of the project and the location details of the above said projects with power point presentation. He

explained the activity carried out and to be carried out in that location. Further, he stated that the topography of the project site was plain terrain and proposed to develop 545 nos of housing plots for construction of buildings for residential purposes. He also stated that an existing earthen burial ground road was available for public use, connecting the vasavankuppam village and burial ground of vasavankuppam village. The above said road was located on the seaward side of the project area and was in use for a long period of time. The vasavankuppam village is located in the south-eastern side of M/s.DS Propertiei and the burial ground of the above village is located in the north-eastern corner of M/s.DS Propertiei. A mud road which is in use for long time by the villagers of vasavankuppam village connecting the village & burial ground in the seaward side abutting to M/s.DS Propertiei.

After detailed presentation and discussion the District Collector invited the views of the members.

The Tasildhar, Marakkanam and the Executive Officer, Marakkanam Town Panchayat, Marakkanam has informed that an existing mud road connecting the vasavankuppam village and burial ground of vasavankuppam village running in the seaward side of the M/s.DS Propertiei.

The District Environmental Engineer, Tamil Nadu Pollution Control Board, Villupuram has stated that the above said project survey numbers fall in the CRZ-II areas as per the report furnished by Institute of Remote Sensing, Anna University, Chennai and the activity of developing Residential plots for construction of buildings for residential purposes is permissible under section 5.2(ii) & 5.2(iii) of the Coastal Regulation Zone Notification, 2019.

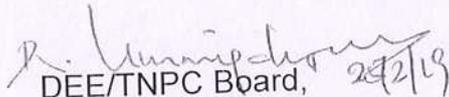
After detailed discussion, following decisions have been arrived at.

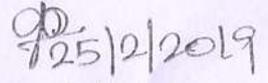
The committee has decided to recommend the proposed project to the State Level Coastal Zone Management Authority for issue of clearance under Coastal Regulation Zone Notification, 2019 subject to the following condition.

1. The project proponent shall obtain Layout Plan approval from DTCP after getting CRZ clearance from State Level Environmental Impact Assessment Authority, Chennai

2. The unit shall provide adequate common sewage treatment plant along with conveyance arrangements to transport sewage from residence to sewage treatment plant for the treatment and disposal of sewage generated from the residential houses and the treated sewage is utilised for gardening purposes.
3. The unit shall provide solid waste management disposal facility for the collection, transportation, treatment and disposal of Municipal solid waste generated from the Residential Houses in scientific manner.
4. The unit shall ensure that there shall not be any discharge of treated/untreated sewage and municipal solid waste into outside of the premises and nearby sea.

The meeting came to an end.


DEE/TNPC Board, 24/2/19
Convener/DCRZMA
Villupuram.


90
7/25/2/2019
District Collector
Chairman/DCRZMA
Villupuram

To,

The Members of DCZMA, Villupuram District.

DEPARTMENT OF ENVIRONMENT

From
Dr. Jayanthi. M., I.F.S.,
Member Secretary, TNSCZMA &
Director of Environment,
Ground Floor, Panagal Building,
Saidapet, Chennai 600 015

To
M/s. D S Propertiei,
AP.2261, H-Block,
10th Street, Kathiravan Colony,
Anna Nagar West, Chennai - 600 040

R.C No. P1 / 466 / 2019 dated 03.06.2019

Sir,

Sub.: CRZ - Proposed Doctor's Beach Project of Residential Plots in S.F.Nos. at S.No. 106/2, 106/3, 106/4, 106/5, 106/6, 108/1, 108/2A(p), 108/2B, 108/2C1(p), 108/2C2, 109/1, 109/2, 109/3(p), 109/4, 110/1(p), 110/2(p), 110/3, 110/4, 110/5, 111/1, 111/2, 111/3 and 111/4 at Marakkanam North Village (Thalangadu Village), Marakkanam Taluk, Villupuram district by M/s. DS Propertiei, Chennai.40 - Clearance requested under CRZ Notification, 2011 - Regarding.

Ref.: 1) Minutes of the 104th Tamil Nadu State Coastal Zone Management Authority meeting held on 27.02.2019
2) Your letter No. Nil dated 14.03.2019
3) Minutes of the 105th TNSCZMA meeting held on 21.05.2019

In continuation of your letter reference 2nd cited, the proposal referred in the subject was placed again before the 105th meeting of the Tamil Nadu State Coastal Zone Management Authority held on 21.05.2019 and the Authority resolved to request the applicant to furnish the details of plots falling in the CRZ-II areas (i.e, from 0 to 500 mts from the HTL of sea) and Outside CRZ areas duly superimposing in the HTL demarcation map. The Authority further resolved to issue NOC in respect of the plots, which are falling in Non-CRZ areas, the DTCP shall issue approval duly following the Town and Country Planning rules and regulations. The Authority has also resolved to request the applicant to apply for the Clearance, if required, in respect to the plots, which are falling in CRZ-II area (i.e., 0 to 500mts from the HTL of sea) separately, along with the ownership land documents of the said plots.

.2.

2) Hence, it is requested to furnish the details of plots falling in the CRZ-II areas (i.e, from 0 to 500 mts from the HTL of sea) and Outside CRZ areas duly superimposing in the HTL demarcation map, so as to take further action.

3) It is also requested to apply for the Clearance, if required, in respect to the plots, which are falling in CRZ-II area (i.e., 0 to 500mts from the HTL of sea) separately, along with the ownership land documents of the said plots.

Yours faithfully,
Sd./- Jayanthi. M.,
Member Secretary,
Tamil Nadu State Coastal Zone Management Authority
& Director of Environment

/ Forwarded by order /

S. Pandian
03/06/2019
For Director of Environment

31/6/19

ANNEXURE II

Project Master Layout & Land Document



Directorate of Town and Country Planning

REGULARISATION OF UNAPPROVED PLOTS & LAYOUTS

REGISTRATION SLIP

Registration No. : **DTCP/L/0581970/2017**
 Date : 01-11-2018
 Name of the Applicant : Harish Kumar
 Communication Address : ap 2261, H Block ,,
 Anna Nagar West,
 Chennai,
 CHENNAI - 600040.
 Application for Regularisation of : LAYOUT
 Competent Authority : VILLPURAM REGIONAL OFFICE

Plot Details

Sl. No.	Plot No.	Type of Survey No.	Survey No.	Sub division No.	Land Classification	Extent in sq.m	Sold Status
1	9A	S No	108	1	Dry Land	92.00	Unsold
2	9B	S No	108	1	Dry Land	85.00	Unsold
3	9C	S No	108	1	Dry Land	85.00	Unsold
4	9D	S No	108	1	Dry Land	90.00	Unsold
5	11A	S No	108	1	Dry Land	108.00	Unsold
6	11B	S No	108	1	Dry Land	111.00	Unsold
7	11C	S No	108	1	Dry Land	126.00	Unsold
8	11D	S No	108	1	Dry Land	155.00	Unsold
9	12A	S No	108	1	Dry Land	151.00	Unsold
10	12B	S No	108	1	Dry Land	133.00	Unsold
11	13A	S No	108	1	Dry Land	139.00	Unsold
12	13B	S No	108	1	Dry Land	134.00	Unsold
13	14A	S No	108	1	Dry Land	129.00	Unsold
14	14B	S No	108	1	Dry Land	139.00	Unsold
15	14C	S No	108	1	Dry Land	109.00	Unsold
16	14D	S No	108	1	Dry Land	149.00	Unsold
17	15A	S No	108	1	Dry Land	144.00	Unsold
18	15B	S No	108	1	Dry Land	140.00	Unsold
19	15C	S No	108	1	Dry Land	117.00	Unsold
20	16A	S No	108	1	Dry Land	132.00	Unsold
21	16B	S No	108	1	Dry Land	154.00	Unsold
22	17A	S No	108	1	Dry Land	126.00	Unsold
23	17B	S No	108	1	Dry Land	123.00	Unsold
24	18A	S No	108	1	Dry Land	120.00	Unsold
25	18B	S No	108	1	Dry Land	117.00	Unsold
26	18C	S No	108	1	Dry Land	171.00	Unsold
27	19A	S No	108	1	Dry Land	136.00	Unsold

28	19B	S No	108	1/2A/2C	Dry Land	134.00	Unsold
29	19C	S No	108	1/2A	Dry Land	103.00	Unsold
30	20A	S No	108	2A/2C	Dry Land	131.00	Unsold
31	20B	S No	108	1/2A	Dry Land	110.00	Unsold
32	21A	S No	108	2A/2C	Dry Land	117.00	Unsold
33	21B	S No	108	2A/2C	Dry Land	115.00	Unsold
34	21C	S No	108	2A	Dry Land	118.00	Unsold
35	22A	S No	108	2A/2C	Dry Land	113.00	Unsold
36	22B	S No	108	2A/2C	Dry Land	111.00	Unsold
37	22C	S No	108	2A	Dry Land	128.00	Unsold
38	23A	S No	108	2A/2C	Dry Land	124.00	Unsold
39	23B	S No	108	2A/2C	Dry Land	125.00	Unsold
40	23C	S No	108	2A	Dry Land	118.00	Unsold
41	24A	S No	108	2A/2C	Dry Land	125.00	Unsold
42	24B	S No	108	2A/2C	Dry Land	125.00	Unsold
43	24C	S No	108	2A	Dry Land	132.00	Unsold
44	25A	S No	108	2A/2C	Dry Land	107.00	Unsold
45	25B	S No	108	2A	Dry Land	93.00	Unsold
46	25C	S No	108	2A	Dry Land	100.00	Unsold
47	26A	S No	108	2A/2C	Dry Land	107.00	Unsold
48	26B	S No	108	2A/2C	Dry Land	107.00	Unsold
49	27A	S No	108	2A/2C	Dry Land	107.00	Unsold
50	27B	S No	108	2A/2C	Dry Land	93.00	Unsold
51	27C	S No	108	2A	Dry Land	114.00	Unsold
52	28A	S No	108	2A/2C	Dry Land	116.00	Unsold
53	28B	S No	108	2A/2C	Dry Land	116.00	Unsold
54	28C	S No	108	2A/2C	Dry Land	110.00	Unsold
55	28D	S No	108	2A	Dry Land	136.00	Unsold
56	29A	S No	108	2C	Dry Land	116.00	Unsold
57	29B	S No	108	2C	Dry Land	116.00	Unsold
58	29C	S No	108	2A/2C	Dry Land	132.00	Unsold
59	30A	S No	108	2C	Dry Land	124.00	Unsold
60	30B	S No	108	2A/2C	Dry Land	121.00	Unsold
61	31A	S No	108	2C	Dry Land	124.00	Unsold
62	31B	S No	108	2C	Dry Land	124.00	Unsold
63	32A	S No	108	2C	Dry Land	124.00	Unsold
64	32B	S No	108	2A/2C	Dry Land	137.00	Unsold
65	33A	S No	108	2C	Dry Land	95.00	Unsold
66	33B	S No	108	2C	Dry Land	85.00	Unsold
67	33C	S No	108	2A/2C	Dry Land	110.00	Unsold
68	33D	S No	108	2A/2C	Dry Land	119.00	Unsold
69	35A	S No	108	2C	Dry Land	134.00	Unsold
70	35B	S No	106/108	4/2C	Dry Land	122.00	Unsold
71	35C	S No	106/108	3/4/2A/2C	Dry Land	122.00	Unsold

72	35D	S No	106/108	3/2A	Dry Land	116.00	Unsold
73	36A	S No	106	4	Dry Land	102.00	Unsold
74	36B	S No	106	4	Dry Land	107.00	Unsold
75	36C	S No	106	3/4	Dry Land	100.00	Unsold
76	36D	S No	106	3	Dry Land	104.00	Unsold
77	37A	S No	106	4	Dry Land	125.00	Unsold
78	37B	S No	106	4	Dry Land	125.00	Unsold
79	37C	S No	106	3/4	Dry Land	116.00	Unsold
80	37D	S No	106	3/4	Dry Land	117.00	Unsold
81	38A	S No	106	4	Dry Land	125.00	Unsold
82	38B	S No	106	4	Dry Land	125.00	Unsold
83	38C	S No	106	3/4	Dry Land	116.00	Unsold
84	38D	S No	106	3	Dry Land	119.00	Unsold
85	39A	S No	106	4	Dry Land	128.00	Unsold
86	39B	S No	106	3/4	Dry Land	117.00	Unsold
87	39C	S No	106	3	Dry Land	118.00	Unsold
88	40A	S No	106	4	Dry Land	127.00	Unsold
89	40B	S No	106	4	Dry Land	127.00	Unsold
90	41A	S No	106	4	Dry Land	127.00	Unsold
91	41B	S No	106	3/4	Dry Land	116.00	Unsold
92	41C	S No	106	3	Dry Land	119.00	Unsold
93	41D	S No	106	3	Dry Land	115.00	Unsold
94	41E	S No	106	3/4	Dry Land	116.00	Unsold
95	41F	S No	106	4	Dry Land	129.00	Unsold
96	42A	S No	106	4	Dry Land	129.00	Unsold
97	42B	S No	106	4	Dry Land	129.00	Unsold
98	42C	S No	106	2/4	Dry Land	129.00	Unsold
99	42D	S No	106	2/3/4	Dry Land	116.00	Unsold
100	42E	S No	106	2/3	Dry Land	116.00	Unsold
101	43A	S No	106	2	Dry Land	93.00	Unsold
102	43B	S No	106	2	Dry Land	93.00	Unsold
103	43C	S No	106	2	Dry Land	129.00	Unsold
104	43D	S No	106	2	Dry Land	129.00	Unsold
105	43E	S No	106	2	Dry Land	160.00	Unsold
106	43F	S No	106	2	Dry Land	91.00	Unsold
107	43G	S No	106	2	Dry Land	88.00	Unsold
108	45A	S No	106	5/6	Dry Land	130.00	Unsold
109	45B	S No	106	5/6	Dry Land	130.00	Unsold
110	45C	S No	106	6	Dry Land	112.00	Unsold
111	45D	S No	106	6	Dry Land	119.00	Unsold
112	46A	S No	106	5/6	Dry Land	130.00	Unsold
113	46B	S No	106	5/6	Dry Land	130.00	Unsold
114	46C	S No	106	6	Dry Land	116.00	Unsold
115	46D	S No	106	6	Dry Land	116.00	Unsold

116	47A	S No	106	5/6	Dry Land	130.00	Unsold
117	47B	S No	106	5/6	Dry Land	130.00	Unsold
118	47C	S No	106	6	Dry Land	116.00	Unsold
119	47D	S No	106	6	Dry Land	116.00	Unsold
120	48A	S No	106	5/6	Dry Land	131.00	Unsold
121	48B	S No	106	6	Dry Land	116.00	Unsold
122	48C	S No	106	6	Dry Land	116.00	Unsold
123	49A	S No	106	5/6	Dry Land	130.00	Unsold
124	49B	S No	106	5/6	Dry Land	130.00	Unsold
125	50A	S No	106/111	2/5/6/1	Dry Land	130.00	Unsold
126	50B	S No	106/111	6/1	Dry Land	116.00	Unsold
127	51A	S No	111	1	Dry Land	100.00	Unsold
128	51B	S No	111	1	Dry Land	100.00	Unsold
129	51C	S No	106/111	2/1	Dry Land	148.00	Unsold
130	51D	S No	106/111	2/1	Dry Land	148.00	Unsold
131	51E	S No	106/111	2/1	Dry Land	144.00	Unsold
132	51F	S No	111	1	Dry Land	100.00	Unsold
133	51G	S No	111	1	Dry Land	103.00	Unsold
134	52A	S No	111	1	Dry Land	100.00	Unsold
135	52B	S No	111	1	Dry Land	155.00	Unsold
136	52C	S No	111	1	Dry Land	155.00	Unsold
137	52D	S No	111	1	Dry Land	154.00	Unsold
138	52E	S No	111	1	Dry Land	105.00	Unsold
139	53A	S No	111	2	Dry Land	130.00	Unsold
140	53B	S No	111/106	1/2/6	Dry Land	116.00	Unsold
141	53C	S No	111/106	1/6	Dry Land	116.00	Unsold
142	54A	S No	111	2	Dry Land	130.00	Unsold
143	54B	S No	111	2	Dry Land	130.00	Unsold
144	55A	S No	111	2	Dry Land	130.00	Unsold
145	55B	S No	106/111	6/2	Dry Land	116.00	Unsold
146	56A	S No	111	2	Dry Land	130.00	Unsold
147	56B	S No	111	2	Dry Land	130.00	Unsold
148	56C	S No	106/111	6/2	Dry Land	116.00	Unsold
149	57A	S No	111	2	Dry Land	130.00	Unsold
150	57B	S No	111	2	Dry Land	130.00	Unsold
151	57C	S No	106/111	6/2	Dry Land	116.00	Unsold
152	58A	S No	111	2	Dry Land	130.00	Unsold
153	58B	S No	111	2	Dry Land	130.00	Unsold
154	58C	S No	106/111	6/2	Dry Land	116.00	Unsold
155	60A	S No	106	6	Dry Land	95.00	Unsold
156	60B	S No	106/108	6/2C	Dry Land	94.00	Unsold
157	60C	S No	106/108/111	6/2C/2	Dry Land	103.00	Unsold
158	60D	S No	106/111	6/2	Dry Land	104.00	Unsold
159	63A	S No	108	2C	Dry Land	135.00	Unsold

160	63B	S No	108	2C	Dry Land	129.00	Unsold
161	63C	S No	108	2C	Dry Land	118.00	Unsold
162	63D	S No	108	2C	Dry Land	118.00	Unsold
163	64A	S No	108	2C	Dry Land	125.00	Unsold
164	64B	S No	108	2C	Dry Land	125.00	Unsold
165	64C	S No	108	2C	Dry Land	110.00	Unsold
166	64D	S No	108	2C	Dry Land	110.00	Unsold
167	65A	S No	108	2C	Dry Land	125.00	Unsold
168	65B	S No	108	2C	Dry Land	125.00	Unsold
169	65C	S No	108	2C	Dry Land	110.00	Unsold
170	65D	S No	108	2C	Dry Land	110.00	Unsold
171	66A	S No	108	2C	Dry Land	132.00	Unsold
172	66B	S No	108	2C	Dry Land	116.00	Unsold
173	66C	S No	108	2C	Dry Land	116.00	Unsold
174	67A	S No	108	2C	Dry Land	132.00	Unsold
175	67B	S No	108	2C	Dry Land	132.00	Unsold
176	68A	S No	108	2C	Dry Land	132.00	Unsold
177	68B	S No	108	2C	Dry Land	116.00	Unsold
178	68C	S No	108	2C	Dry Land	116.00	Unsold
179	69A	S No	108	2C	Dry Land	132.00	Unsold
180	69B	S No	108	2C	Dry Land	132.00	Unsold
181	69C	S No	108	2C	Dry Land	132.00	Unsold
182	69D	S No	108	2C	Dry Land	116.00	Unsold
183	69E	S No	108	2C	Dry Land	116.00	Unsold
184	70A	S No	108	2C	Dry Land	132.00	Unsold
185	70B	S No	108	2C	Dry Land	116.00	Unsold
186	70C	S No	108	2C	Dry Land	116.00	Unsold
187	71A	S No	108	2C	Dry Land	132.00	Unsold
188	71B	S No	108	2C	Dry Land	132.00	Unsold
189	71C	S No	108	2C	Dry Land	116.00	Unsold
190	71D	S No	108	2C	Dry Land	116.00	Unsold
191	72A	S No	108	2C	Dry Land	110.00	Unsold
192	72B	S No	108	2C	Dry Land	110.00	Unsold
193	72C	S No	108	2C	Dry Land	107.00	Unsold
194	72D	S No	108	2C	Dry Land	107.00	Unsold
195	73A	S No	108	2C	Dry Land	118.00	Unsold
196	73B	S No	108	2C	Dry Land	115.00	Unsold
197	73C	S No	108	2C	Dry Land	126.00	Unsold
198	73D	S No	108	2C	Dry Land	126.00	Unsold
199	74A	S No	108	2C	Dry Land	134.00	Unsold
200	74B	S No	108	2C	Dry Land	100.00	Unsold
201	74C	S No	108	2C	Dry Land	100.00	Unsold
202	75A	S No	108	2C1	Dry Land	111.00	Unsold
203	75B	S No	108	2C1	Dry Land	109.00	Unsold

204	75C	S No	108	2B/2C1	Dry Land	100.00	Unsold
205	75D	S No	108	2B	Dry Land	100.00	Unsold
206	76A	S No	108	2B	Dry Land	106.00	Unsold
207	76B	S No	108	2B/2C	Dry Land	107.00	Unsold
208	76C	S No	108	2B	Dry Land	100.00	Unsold
209	76D	S No	108	2B	Dry Land	100.00	Unsold
210	77A	S No	108	2B	Dry Land	102.00	Unsold
211	77B	S No	108	2B	Dry Land	100.00	Unsold
212	77C	S No	108	2B	Dry Land	100.00	Unsold
213	79A	S No	108	2B	Dry Land	82.00	Unsold
214	79B	S No	108	2B	Dry Land	82.00	Unsold
215	79C	S No	108	2B	Dry Land	82.00	Unsold
216	79D	S No	108	2B	Dry Land	81.00	Unsold
217	80A	S No	108	2B	Dry Land	106.00	Unsold
218	80B	S No	108	2B	Dry Land	103.00	Unsold
219	80C	S No	108	2B	Dry Land	101.00	Unsold
220	80D	S No	108	2B	Dry Land	101.00	Unsold
221	81A	S No	108	2B	Dry Land	142.00	Unsold
222	81B	S No	108	2B	Dry Land	101.00	Unsold
223	82A	S No	108	2B	Dry Land	130.00	Unsold
224	82B	S No	108	2B	Dry Land	126.00	Unsold
225	82C	S No	108	2B	Dry Land	118.00	Unsold
226	83A	S No	108	2B	Dry Land	123.00	Unsold
227	83B	S No	108	2B	Dry Land	122.00	Unsold
228	83C	S No	108	2B	Dry Land	121.00	Unsold
229	84A	S No	108	2B	Dry Land	114.00	Unsold
230	84B	S No	108	2B	Dry Land	102.00	Unsold
231	89A	S No	108	2B	Dry Land	102.00	Unsold
232	89B	S No	108	2B	Dry Land	102.00	Unsold
233	89C	S No	108	2B/2C1	Dry Land	102.00	Unsold
234	92A	S No	108	2C1	Dry Land	101.00	Unsold
235	92B	S No	108	2B/2C1	Dry Land	101.00	Unsold
236	92C	S No	108	2B	Dry Land	101.00	Unsold
237	96A	S No	108	2C1	Dry Land	100.00	Unsold
238	96B	S No	108	2C1/2C2	Dry Land	100.00	Unsold
239	96C	S No	108	2B/2C1	Dry Land	100.00	Unsold
240	97A	S No	108	2C	Dry Land	100.00	Unsold
241	97B	S No	108	2C/2C1/2C2	Dry Land	100.00	Unsold
242	97C	S No	108	2B/2C/2C1	Dry Land	100.00	Unsold
243	98A	S No	108	2C	Dry Land	100.00	Unsold
244	98B	S No	108	2C	Dry Land	100.00	Unsold
245	98C	S No	108	2C	Dry Land	100.00	Unsold
246	98D	S No	108	2C	Dry Land	100.00	Unsold
247	101A	S No	108	2C	Dry Land	128.00	Unsold

248	101B	S No	108	2C	Dry Land	128.00	Unsold
249	101C	S No	108	2C	Dry Land	116.00	Unsold
250	102A	S No	108	2C	Dry Land	128.00	Unsold
251	103A	S No	108	2C	Dry Land	128.00	Unsold
252	103B	S No	108	2C	Dry Land	128.00	Unsold
253	104A	S No	108	2C	Dry Land	128.00	Unsold
254	104B	S No	108	2C	Dry Land	116.00	Unsold
255	104C	S No	108	2C	Dry Land	116.00	Unsold
256	104D	S No	108	2C	Dry Land	128.00	Unsold
257	105A	S No	108	2C	Dry Land	128.00	Unsold
258	105B	S No	108	2C	Dry Land	128.00	Unsold
259	106A	S No	108	2C	Dry Land	128.00	Unsold
260	106B	S No	108	2C	Dry Land	116.00	Unsold
261	106C	S No	108	2C	Dry Land	110.00	Unsold
262	107A	S No	108	2C	Dry Land	121.00	Unsold
263	107B	S No	108	2C	Dry Land	121.00	Unsold
264	107C	S No	108	2C	Dry Land	121.00	Unsold
265	108A	S No	108	2C	Dry Land	121.00	Unsold
266	108B	S No	108	2C	Dry Land	110.00	Unsold
267	102B	S No	108	2C	Dry Land	116.00	Unsold
268	109A	S No	108	2C	Dry Land	134.00	Unsold
269	109B	S No	108	2C	Dry Land	130.00	Unsold
270	110A	S No	108	2C	Dry Land	115.00	Unsold
271	110B	S No	108	2C	Dry Land	104.00	Unsold
272	110C	S No	108	2C	Dry Land	104.00	Unsold
273	112A	S No	111	1	Dry Land	116.00	Unsold
274	112B	S No	111	1	Dry Land	102.00	Unsold
275	112C	S No	111	1	Dry Land	140.00	Unsold
276	112E	S No	111	1	Dry Land	128.00	Unsold
277	112F	S No	111	1	Dry Land	106.00	Unsold
278	113A	S No	111	1	Dry Land	132.00	Unsold
279	113B	S No	111	1	Dry Land	116.00	Unsold
280	113C	S No	111	1	Dry Land	116.00	Unsold
281	114A	S No	111	1	Dry Land	126.00	Unsold
282	114B	S No	111	1	Dry Land	112.00	Unsold
283	115A	S No	111	1/2	Dry Land	128.00	Unsold
284	115B	S No	111	1	Dry Land	124.00	Unsold
285	115C	S No	111	1/2	Dry Land	114.00	Unsold
286	116A	S No	111	2	Dry Land	128.00	Unsold
287	116B	S No	111	2	Dry Land	128.00	Unsold
288	116C	S No	111	2	Dry Land	128.00	Unsold
289	117A	S No	111	2	Dry Land	128.00	Unsold
290	117B	S No	111	2	Dry Land	128.00	Unsold
291	117C	S No	111	2/3	Dry Land	128.00	Unsold

292	118A	S No	111	2/3	Dry Land	128.00	Unsold
293	118B	S No	111	2/3	Dry Land	141.00	Unsold
294	119A	S No	111	2/3	Dry Land	128.00	Unsold
295	119B	S No	111	2/3	Dry Land	128.00	Unsold
296	120A	S No	111	2/3	Dry Land	128.00	Unsold
297	120B	S No	111	3	Dry Land	141.00	Unsold
298	121A	S No	111	2/3	Dry Land	116.00	Unsold
299	121B	S No	108/111	2C/2/3	Dry Land	116.00	Unsold
300	121C	S No	108/111	2C/3	Dry Land	116.00	Unsold
301	121D	S No	108/111	2C/3	Dry Land	116.00	Unsold
302	125A	S No	108	2C	Dry Land	127.00	Unsold
303	125B	S No	108	2C	Dry Land	91.00	Unsold
304	125C	S No	108/109	2C/3	Dry Land	91.00	Unsold
305	126A	S No	108	2C	Dry Land	127.00	Unsold
306	126B	S No	108	2C	Dry Land	127.00	Unsold
307	126C	S No	108	2C	Dry Land	91.00	Unsold
308	126D	S No	108/109	2C/3	Dry Land	91.00	Unsold
309	127A	S No	108	2C	Dry Land	109.00	Unsold
310	127B	S No	108	2C	Dry Land	91.00	Unsold
311	127C	S No	108	2C	Dry Land	91.00	Unsold
312	127D	S No	108/109	2C/3	Dry Land	91.00	Unsold
313	128A	S No	108	2C	Dry Land	108.00	Unsold
314	128B	S No	108	2C	Dry Land	108.00	Unsold
315	128C	S No	108	2C	Dry Land	108.00	Unsold
316	129A	S No	108	2C	Dry Land	109.00	Unsold
317	129B	S No	108	2C	Dry Land	91.00	Unsold
318	129C	S No	108	2C	Dry Land	91.00	Unsold
319	129D	S No	108	2C	Dry Land	91.00	Unsold
320	130A	S No	108	2C	Dry Land	133.00	Unsold
321	130B	S No	108	2C	Dry Land	133.00	Unsold
322	130C	S No	108	2C	Dry Land	91.00	Unsold
323	130D	S No	108	2C	Dry Land	91.00	Unsold
324	131A	S No	108	2C	Dry Land	134.00	Unsold
325	131B	S No	108	2C	Dry Land	91.00	Unsold
326	132A	S No	108	2C	Dry Land	128.00	Unsold
327	132B	S No	108	2C	Dry Land	128.00	Unsold
328	132C	S No	108	2C	Dry Land	92.00	Unsold
329	132D	S No	108	2C	Dry Land	92.00	Unsold
330	133A	S No	108	2C	Dry Land	131.00	Unsold
331	133B	S No	108	2C	Dry Land	94.00	Unsold
332	133C	S No	108	2C	Dry Land	94.00	Unsold
333	137A	S No	108/109	2C/2C2/1	Dry Land	123.00	Unsold
334	137B	S No	108/109	2C/1/2	Dry Land	116.00	Unsold
335	137C	S No	108/109	2C/1/2	Dry Land	116.00	Unsold

336	138A	S No	108/109	2C2/1	Dry Land	123.00	Unsold
337	138B	S No	108/109	2C2/1	Dry Land	123.00	Unsold
338	138C	S No	109	1/2	Dry Land	123.00	Unsold
339	138D	S No	109	1/2	Dry Land	116.00	Unsold
340	138E	S No	109	1/2	Dry Land	116.00	Unsold
341	139A	S No	108/109	2C2/1	Dry Land	128.00	Unsold
342	139B	S No	109	1	Dry Land	116.00	Unsold
343	139C	S No	109	1/2	Dry Land	116.00	Unsold
344	140A	S No	108/109	2C2/1	Dry Land	151.00	Unsold
345	140B	S No	108/109	2C2/1	Dry Land	133.00	Unsold
346	140C	S No	108/109	2C2/1	Dry Land	128.00	Unsold
347	141A	S No	108/109	2C2/1	Dry Land	129.00	Unsold
348	141B	S No	109	1/2	Dry Land	129.00	Unsold
349	141C	S No	109	2	Dry Land	129.00	Unsold
350	156A	S No	109	2/4	Dry Land	137.00	Unsold
351	156B	S No	109	2/4	Dry Land	121.00	Unsold
352	156C	S No	109	2/4	Dry Land	116.00	Unsold
353	157A	S No	109	2/4	Dry Land	121.00	Unsold
354	157B	S No	109	2/4	Dry Land	121.00	Unsold
355	157C	S No	109	2	Dry Land	116.00	Unsold
356	157D	S No	109	2/4	Dry Land	116.00	Unsold
357	158A	S No	109	4	Dry Land	121.00	Unsold
358	158B	S No	109	4	Dry Land	121.00	Unsold
359	159A	S No	108/109	2C/3/4	Dry Land	121.00	Unsold
360	159B	S No	108/109	2C/2/4	Dry Land	116.00	Unsold
361	160A	S No	109	3	Dry Land	126.00	Unsold
362	160B	S No	109	3	Dry Land	126.00	Unsold
363	160C	S No	108/109	2C/3	Dry Land	111.00	Unsold
364	160D	S No	108	2C	Dry Land	111.00	Unsold
365	165A	S No	109	3	Dry Land	121.00	Unsold
366	165B	S No	108/109	2C/3	Dry Land	91.00	Unsold
367	165C	S No	108	2C	Dry Land	91.00	Unsold
368	166A	S No	109	3	Dry Land	122.00	Unsold
369	166B	S No	109	3	Dry Land	121.00	Unsold
370	166C	S No	108/109	2C/3	Dry Land	91.00	Unsold
371	167A	S No	109	3	Dry Land	91.00	Unsold
372	167B	S No	109	3	Dry Land	91.00	Unsold
373	167C	S No	108/109	2C/3	Dry Land	91.00	Unsold
374	169A	S No	109	3	Dry Land	91.00	Unsold
375	169B	S No	109	3	Dry Land	91.00	Unsold
376	169C	S No	109	3	Dry Land	91.00	Unsold
377	170A	S No	109	3	Dry Land	126.00	Unsold
378	170B	S No	109	3	Dry Land	126.00	Unsold
379	170C	S No	109	3	Dry Land	91.00	Unsold

380	171A	S No	109	3	Dry Land	126.00	Unsold
381	171B	S No	109	3	Dry Land	91.00	Unsold
382	172A	S No	109	3	Dry Land	102.00	Unsold
383	172B	S No	109	3	Dry Land	100.00	Unsold
384	172C	S No	109	3	Dry Land	127.00	Unsold
385	172D	S No	108/109	2C/3	Dry Land	127.00	Unsold
386	175A	S No	111	3	Dry Land	122.00	Unsold
387	175B	S No	111	3	Dry Land	126.00	Unsold
388	175C	S No	111	3	Dry Land	116.00	Unsold
389	176A	S No	111	3	Dry Land	172.00	Unsold
390	176B	S No	111	3	Dry Land	163.00	Unsold
391	177A	S No	111	3	Dry Land	155.00	Unsold
392	177B	S No	111	3	Dry Land	163.00	Unsold
393	178A	S No	111	3	Dry Land	147.00	Unsold
394	178B	S No	111	3	Dry Land	141.00	Unsold
395	179A	S No	111	3	Dry Land	144.00	Unsold
396	179B	S No	111	3	Dry Land	135.00	Unsold
397	179C	S No	111	2/3	Dry Land	128.00	Unsold
398	180A	S No	111	2/3	Dry Land	118.00	Unsold
399	180B	S No	111	2/3	Dry Land	127.00	Unsold
400	180C	S No	111	2/3	Dry Land	128.00	Unsold
401	181A	S No	111	2	Dry Land	104.00	Unsold
402	181B	S No	111	1/2	Dry Land	113.00	Unsold
403	181C	S No	111	1/2	Dry Land	121.00	Unsold
404	183A	S No	111	1	Dry Land	119.00	Unsold
405	183B	S No	111	1	Dry Land	120.00	Unsold
406	183C	S No	111	1	Dry Land	116.00	Unsold
407	183D	S No	111	1	Dry Land	116.00	Unsold
408	184A	S No	111	1	Dry Land	106.00	Unsold
409	184B	S No	111	1	Dry Land	92.00	Unsold
410	184C	S No	111	1	Dry Land	114.00	Unsold
411	184D	S No	111	1	Dry Land	116.00	Unsold
412	185A	S No	111	3	Dry Land	152.00	Unsold
413	185B	S No	111	3	Dry Land	135.00	Unsold
414	186A	S No	111	3	Dry Land	128.00	Unsold
415	186B	S No	111	3	Dry Land	215.00	Unsold
416	186C	S No	111	3/4	Dry Land	215.00	Unsold
417	187A	S No	111	3	Dry Land	135.00	Unsold
418	187B	S No	111	3	Dry Land	125.00	Unsold
419	187C	S No	111	3	Dry Land	100.00	Unsold
420	187D	S No	111	3/4	Dry Land	100.00	Unsold
421	188A	S No	111	3	Dry Land	115.00	Unsold
422	188B	S No	111	3	Dry Land	100.00	Unsold
423	188C	S No	111	3/4	Dry Land	100.00	Unsold

424	189A	S No	111	3	Dry Land	100.00	Unsold
425	189B	S No	111	3	Dry Land	116.00	Unsold
426	189C	S No	111	3/4	Dry Land	116.00	Unsold
427	190A	S No	111	3	Dry Land	97.00	Unsold
428	190B	S No	111	3	Dry Land	97.00	Unsold
429	190C	S No	109/111	3/3	Dry Land	114.00	Unsold
430	190D	S No	109/111	3/3	Dry Land	126.00	Unsold
431	191A	S No	109/110/111	3/1/3/4	Dry Land	126.00	Unsold
432	191B	S No	110/111	1/4	Dry Land	126.00	Unsold
433	197A	S No	109	3	Dry Land	100.00	Unsold
434	197B	S No	109	3	Dry Land	97.00	Unsold
435	197C	S No	109	3	Dry Land	97.00	Unsold
436	199A	S No	109	3	Dry Land	92.00	Unsold
437	199B	S No	109	3	Dry Land	81.00	Unsold
438	199C	S No	109	3	Dry Land	87.00	Unsold
439	199D	S No	109	3	Dry Land	87.00	Unsold
440	200A	S No	109	3	Dry Land	89.00	Unsold
441	200B	S No	109	3	Dry Land	98.00	Unsold
442	200C	S No	109	3	Dry Land	95.00	Unsold
443	200D	S No	109	3	Dry Land	95.00	Unsold
444	210A	S No	110	1	Dry Land	97.00	Unsold
445	210B	S No	110	1	Dry Land	97.00	Unsold
446	210C	S No	109/110	3/1	Dry Land	97.00	Unsold
447	217A	S No	111	4	Dry Land	122.00	Unsold
448	217B	S No	111	4	Dry Land	116.00	Unsold
449	220A	S No	111	4	Dry Land	120.00	Unsold
450	220B	S No	111	4	Dry Land	215.00	Unsold
451	221A	S No	111	4	Dry Land	117.00	Unsold
452	221B	S No	111	4	Dry Land	120.00	Unsold
453	222	S No	109	4	Dry Land	98.00	Unsold
454	223	S No	109	4	Dry Land	99.00	Unsold
455	224	S No	109	4	Dry Land	98.00	Unsold
456	225	S No	109	4	Dry Land	98.00	Unsold
457	226	S No	109	4	Dry Land	98.00	Unsold
458	227	S No	109/110	4/4	Dry Land	100.00	Unsold
459	228	S No	109/110	4/4	Dry Land	99.00	Unsold
460	229	S No	109/110	4/4	Dry Land	116.00	Unsold
461	230	S No	109/110	4/4	Dry Land	116.00	Unsold
462	231	S No	109/110	4/4	Dry Land	116.00	Unsold
463	232	S No	109	4	Dry Land	116.00	Unsold
464	233	S No	109	4	Dry Land	116.00	Unsold
465	234	S No	109	4	Dry Land	116.00	Unsold
466	235	S No	109	4	Dry Land	118.00	Unsold
467	236	S No	109	4	Dry Land	118.00	Unsold

468	237	S No	109	4	Dry Land	118.00	Unsold
469	238	S No	109	4	Dry Land	118.00	Unsold
470	239	S No	109	4	Dry Land	116.00	Unsold
471	240	S No	109	4	Dry Land	116.00	Unsold
472	241	S No	109	4	Dry Land	116.00	Unsold
473	242	S No	109/110	4/4	Dry Land	116.00	Unsold
474	243	S No	109	4	Dry Land	118.00	Unsold
475	244	S No	109	4	Dry Land	118.00	Unsold
476	245	S No	109	4	Dry Land	118.00	Unsold
477	246	S No	109	4	Dry Land	116.00	Unsold
478	247	S No	109	4	Dry Land	116.00	Unsold
479	248	S No	109	4	Dry Land	116.00	Unsold
480	249	S No	109	4	Dry Land	116.00	Unsold
481	250	S No	109	4	Dry Land	116.00	Unsold
482	251	S No	109	4	Dry Land	116.00	Unsold
483	252	S No	109	4	Dry Land	116.00	Unsold
484	253	S No	109	4	Dry Land	116.00	Unsold
485	254	S No	109	4	Dry Land	116.00	Unsold
486	255	S No	109	4	Dry Land	116.00	Unsold
487	256	S No	109	4	Dry Land	118.00	Unsold
488	257	S No	109	4	Dry Land	118.00	Unsold
489	258	S No	109	4	Dry Land	118.00	Unsold
490	259	S No	109	4	Dry Land	118.00	Unsold
491	260	S No	109	4	Dry Land	116.00	Unsold
492	261	S No	109	4	Dry Land	116.00	Unsold
493	262	S No	109	4	Dry Land	116.00	Unsold
494	263	S No	109	4	Dry Land	116.00	Unsold
495	264	S No	109	4	Dry Land	116.00	Unsold
496	265	S No	109	4	Dry Land	116.00	Unsold
497	266	S No	109	4	Dry Land	116.00	Unsold
498	267	S No	109	4	Dry Land	116.00	Unsold
499	268	S No	109	4	Dry Land	116.00	Unsold
500	269	S No	109	4	Dry Land	116.00	Unsold
501	270	S No	109	4	Dry Land	118.00	Unsold
502	271	S No	109	4	Dry Land	107.00	Unsold
503	272	S No	109	4	Dry Land	107.00	Unsold
504	273	S No	109	4	Dry Land	107.00	Unsold
505	274	S No	109	4	Dry Land	107.00	Unsold
506	275	S No	109	4	Dry Land	107.00	Unsold
507	276	S No	109	4	Dry Land	96.00	Unsold
508	277	S No	109	4	Dry Land	97.00	Unsold
509	278	S No	109	4	Dry Land	97.00	Unsold
510	279	S No	109	4	Dry Land	97.00	Unsold
511	280	S No	109	4	Dry Land	97.00	Unsold

512	281	S No	109	4	Dry Land	97.00	Unsold
513	282	S No	109	4	Dry Land	97.00	Unsold
514	283	S No	109	4	Dry Land	97.00	Unsold
515	284	S No	109	4	Dry Land	97.00	Unsold
516	285	S No	109	4	Dry Land	97.00	Unsold
517	286	S No	109	2/4	Dry Land	116.00	Unsold
518	287	S No	109	2	Dry Land	116.00	Unsold
519	288	S No	109	1/2	Dry Land	116.00	Unsold
520	289	S No	109	1	Dry Land	116.00	Unsold
521	290	S No	108/109	2C2/1	Dry Land	116.00	Unsold
522	291	S No	108	2C2	Dry Land	116.00	Unsold
523	292	S No	108	2C2	Dry Land	116.00	Unsold
524	293	S No	108	2C1/2C2	Dry Land	116.00	Unsold
525	294	S No	108	2C1	Dry Land	116.00	Unsold
526	295	S No	108	2C1	Dry Land	116.00	Unsold
527	296	S No	108	2B/2C1	Dry Land	116.00	Unsold
528	297	S No	108	2B/2C1	Dry Land	116.00	Unsold
529	298	S No	108	2B	Dry Land	116.00	Unsold
530	299	S No	108	2B	Dry Land	139.00	Unsold
531	300	S No	108	2B	Dry Land	139.00	Unsold
532	301	S No	108	2B	Dry Land	115.00	Unsold
533	302	S No	108	2B	Dry Land	395.00	Unsold
534	303	S No	108	2B	Dry Land	415.00	Unsold
535	304	S No	108	2B/2C1	Dry Land	434.00	Unsold
536	305	S No	108	2C1	Dry Land	395.00	Unsold
537	306	S No	108	2C1/2C2	Dry Land	395.00	Unsold
538	307	S No	108	2C2	Dry Land	395.00	Unsold
539	308	S No	108/109	2C2/1/2	Dry Land	395.00	Unsold
540	309	S No	109	1/2/4	Dry Land	395.00	Unsold
541	310	S No	109	2/4	Dry Land	395.00	Unsold
542	311	S No	109	4	Dry Land	395.00	Unsold
543	312	S No	109	4	Dry Land	395.00	Unsold

Total Extent of plot (Sq. m) : 66486.00

Payment Details

Amount paid in Rs. : 271500.00

Transaction Number : PIC16850509465

Note :

1. This REGISTRATION SLIP along with the hard copies of ownership documents and plan showing the LAYOUT as prescribed in the G.O.(MS).No.78, Housing and Urban Development [UD4(3)] Department Dated 04.05.2017 shall be submitted to the Villpuram Regional Office within 30 days from the date of registration.
2. This is only an acknowledgment for submission of application for regularisation of LAYOUT. In-principle approval for layout framework will be issued by the DTCP after examining the documents and plan as per the G.O.(MS).No.78, Housing and Urban Development[UD4(3)] Department Dated 04.05.2017 and after compliance of the conditions specified in the Government Order.
3. Mobile number and E-mail Id which you have provided should be active/live for at least 1 year for



தமிழக அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : விழுப்புரம்

வட்டம் : மரக்காணம்

வருவாய் கிராமம் : மரக்காணம் வடக்கு

பட்டா எண் : 2337

உரிமையாளர்கள் பெயர்

1. தேசபந்து தந்தை டி. எஸ் பிராப்பரட்டி பார்ட்னர் ஹரிஷ்குமார்

புல எண்	உட்பிரிவு	நன்செய்		புன்செய்		மற்றவை	
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை
109	4B	--	--	0 - 0.50	0.10	--	--
111	2	--	--	0 - 55.50	1.11	--	--
113	2	--	--	0 - 76.00	1.52	--	--
113	3	--	--	1 - 88.00	3.76	--	--
114	114	--	--	2 - 73.00	5.46	--	--
115	1A	--	--	0 - 55.39	1.11	--	--
115	2A	--	--	0 - 20.00	0.40	--	--
115	3A	--	--	0 - 40.50	0.81	--	--
115	4A	--	--	0 - 30.68	0.61	--	--
118	1	--	--	1 - 35.00	2.70	--	--
118	2	--	--	0 - 91.00	1.82	--	--
118	3	--	--	0 - 31.00	0.62	--	--
118	4	--	--	0 - 90.00	1.80	--	--
118	5	--	--	0 - 32.00	0.64	--	--
119	119	--	--	3 - 52.00	7.04	--	--
120	1	--	--	0 - 31.50	0.63	--	--
120	2	--	--	0 - 53.00	1.06	--	--
120	3	--	--	0 - 47.00	0.94	--	--
120	5	--	--	1 - 78.50	3.57	--	--
122	3	--	--	0 - 27.00	0.54	--	--
122	4	--	--	0 - 32.00	0.64	--	--
				18 - 39.57	36.88		

குறிப்பு2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <http://eservices.tn.gov.in> என்ற இணைய தளத்தில் 07/11/210/02337/90085 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 04-02-2019 அன்று 08:22:09 PM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழக அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : விழுப்புரம்

வட்டம் : மரக்காணம்

வருவாய் கிராமம் : மரக்காணம் வடக்கு

பட்டா எண் : 2338

உரிமையாளர்கள் பெயர்

1. தேசபந்து தந்தை டி எஸ்.பிராப்பரட்டி பாட்னர்.ஹரிஷ்குமார்

		நன்செய்		புன்செய்		மற்றவை	
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை
புல எண்	உட்பிரிவு	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை
106	2C	--	--	0 - 16.80	0.34	--	--
106	3B	--	--	0 - 16.61	0.33	--	--
108	1A	--	--	0 - 39.99	0.80	--	--
108	1C1	--	--	0 - 12.31	0.25	--	--
108	2A1	--	--	0 - 34.07	0.68	--	--
109	4A1A1	--	--	2 - 3.58	4.07	--	--
111	1A3	--	--	0 - 61.56	1.23	--	--
111	3B1B	--	--	0 - 22.32	0.45	--	--
111	3C2	--	--	0 - 21.64	0.43	--	--
111	4A1	--	--	0 - 32.94	0.66	--	--
117	1B1	--	--	1 - 90.08	3.80	--	--
122	2B	--	--	0 - 62.52	1.25	--	--
				7 - 14.42	14.29		

குறிப்பு 2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <http://eservices.tn.gov.in> என்ற இணைய தளத்தில் 07/11/210/02338/90096 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 04-02-2019 அன்று 08:22:46 PM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழக அரசு
வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : விழுப்புரம்

வட்டம் : மரக்காணம்

வருவாய் கிராமம் : மரக்காணம் வடக்கு

பட்டா எண் : 900

உரிமையாளர்கள் பெயர்

1. தேசபந்து தந்தை டி.எஸ்.பிராப்பரட்டி பார்ட்னர் ஹரீஷ்குமார்

புல எண்	உட்பிரிவு	நன்செய்		புன்செய்		மற்றவை	
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை
106	4	--	--	0 - 25.00	0.50	--	--
106	5	--	--	0 - 24.00	0.48	--	--
106	6	--	--	0 - 27.00	0.54	--	--
108	2B1A1A	--	--	1 - 64.32	3.29	--	--
108	2C1A1A1A	--	--	3 - 58.11	7.16	--	--
108	2C1J1	--	--	0 - 39.19	0.78	--	--
108	2C2A	--	--	0 - 14.00	0.28	--	--
108	2C2F1	--	--	0 - 29.23	0.58	--	--
109	1A1	--	--	0 - 15.50	0.31	--	--
109	1A2	--	--	0 - 2.00	0.04	--	--
109	1A5A	--	--	0 - 3.50	0.07	--	--
109	1A5C1	--	--	0 - 9.53	0.19	--	--
109	1B1	--	--	0 - 5.02	0.10	--	--
109	2A1	--	--	0 - 10.00	0.20	--	--
109	2A2	--	--	0 - 1.00	0.02	--	--
109	2A5A3	--	--	0 - 0.39	0.01	--	--
109	2A5C	--	--	0 - 0.50	0.01	--	--
109	2B1A	--	--	0 - 9.50	0.19	--	--
109	2B1C1	--	--	0 - 20.15	0.40	--	--
109	3A1	--	--	0 - 24.50	0.49	--	--
109	3B1A	--	--	0 - 51.66	1.03	--	--
109	3C1A	--	--	0 - 46.88	0.94	--	--
109	3C6	--	--	0 - 3.50	0.07	--	--
109	3D	--	--	0 - 7.00	0.15	--	--
110	1A	--	--	0 - 17.50	0.35	--	--
110	1G	--	--	0 - 14.00	0.28	--	--
110	2A	--	--	0 - 40.00	0.80	--	--
110	3A	--	--	0 - 48.00	0.96	--	--
110	3B	--	--	0 - 1.00	0.02	--	--
110	4	--	--	0 - 61.00	1.22	--	--
110	5	--	--	0 - 69.00	1.38	--	--
				11 - 41.98	22.84		

குறிப்பு 2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <http://eservices.tn.gov.in> என்ற இணைய தளத்தில் 07/11/210/00900/160019 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.

2. இத் தகவல்கள் 04-02-2019 அன்று 08:20:54 PM நேரத்தில் அச்சடிக்கப்பட்டது.

3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



GOVERNMENT OF TAMILNADU
REGISTRATION DEPARTMENT

தமிழ்நாடு அரசு
பதிவுத்துறை

Certificate of Encumbrance on Property
சொத்து தொடர்பான வில்லங்கச் சான்று

S.R.O /சா.ப.அ: Marakkanam

Date / நாள்: 04-Feb-2019

Document No.& Year/ஆவண எண் மற்றும் ஆண்டு: 2704/2013

Sr. No./வ. எண்	Document No.& Year/ ஆவண எண் மற்றும் ஆண்டு	Date of Execution & Date of Presentation & Date of Registration/எழுதிக் கொடுத்த நாள் & தாக்கல் நாள் & பதிவு நாள்	Nature/தன்மை	Name of Executant(s)/ எழுதிக் கொடுத்தவர் பெயர்(கள்):	Name of Claimant(s)/ எழுதி வாங்கியவர் பெயர்(கள்)	Vol.No & Page. No/ தொகுதி எண் மற்றும் பக்க எண்
1	2704/2013	16-Aug-2013 16-Aug-2013 04-Sep-2013	Conveyance Non Metro/UA	1. ASOKAN 2. JAYANTHI ASOKAN	1. D.S.PROPERTIEI (HARISH KUMAR)	
Consideration Value/கைமாற்றுத் தொகை: ரூ. 34,42,000/-		Market Value/சந்தை மதிப்பு: ரூ. 34,42,000/-		PR Number/முந்தைய ஆவண எண்: 1019/ 2012, 1163/ 7, 1164/ 7, 2766/ 11, 63/ 13, 64/ 13, 94/ 1		
47(A) Details/47 (அ) நடவடிக்கை விவரங்கள்: Document Remarks/ ஆவணக் குறிப்புகள் :		மதிப்புக்குறைவு காரணத்திற்காக அசல் ஆவணம் இந்திய முத்திரைச் சட்டம் பிரிவு 47(1)-ன் கீழ் நடவடிக்கையில் உள்ளது. Sale deed Rs 34, 42, 000/- Pre Do No :1163/07, 1164/07, 63/13, 1019/2012, 64/13, 2766/11, 94/13				
Schedule A Details: Property Type/சொத்தின் வகைப்பாடு: Agricultural Land		Property Extent/சொத்தின் விஸ்தீர்ணம்: 3.442 Acres				
Village & Street/கிராமம் மற்றும் தெரு: Marakkanam North , Marakkanam (V)		Survey No./புல எண் : 108/2B, 108/2C1, 108/2C2, 109/1, 109/2, 109/3, 109/4				
Schedule Remarks/சொத்து விவரம் தொடர்பான குறிப்புரை: 1. Survey number 108/2B-0.480						

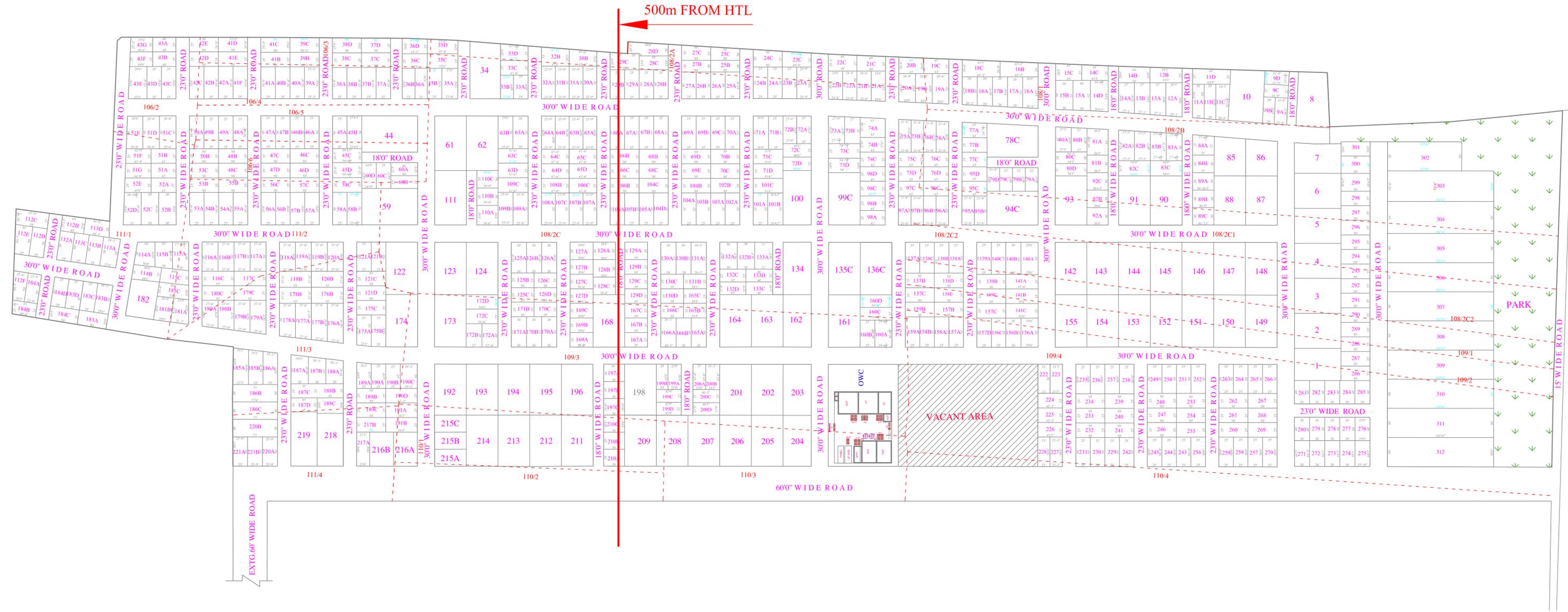
Acres. 2) Survey number 108/2C1-1.950 Acres, 3) Survey number 108/2C2-0.030 4) Survey number 109/1 part 0.180 Acres. 5) Survey number 109/2 part 0.190 Acres. 6) Survey number 109/3 part 0.305 Acres. 7) Survey number 109/4 part 0.307 Acres. Total 3.442 acres.

Number of Entries/பதிவுகளின் எண்ணிக்கை: 1

Disclaimer: The details of the above property have been provided with due care and with reference to the Acts and Rules. However in case of any error or omission, the Department cannot be held responsible. The above details are of informative in nature.

குறிப்புரை: சட்டம் மற்றும் விதிகளுக்குட்பட்டு மிகுந்த கவனத்துடன் சொத்து தொடர்பான மேற்கண்ட விவரங்கள் அளிக்கப்பட்டுள்ளது எனினும் இதில் ஏதேனும் தவறுகளோ விடல்களோ இருப்பின், அதற்கு இத்துறை பொறுப்பேற்க இயலாது. மேற்கண்ட விவரங்கள் தகவலுக்காக அளிக்கப்பட்டுள்ளன

DOCTOR'S BEACH PROJECT



PLAN SHOWING THE PROPOSED REGULARISATION OF LAYOUT FOR RESIDENTIAL PURPOSE PLOTS IN S.No:106/2,106/3,106/4,106/5,106/6,108/1,108/2A,108/2B, 108/2C,108/2 C1,108/2C2,109/1,109/2,109/3,109/4,110/1, 110/2,110/3,110/4,110/5,111/1,111/2,111/3&111/4 AT THALANGADU VILLAGE, THINDIVANAM TALUK(MARAKKANAM NORTH), VILLUPURAM DISTRICT.

REFERENCE	
OSR AREA	=
PLOT BOUNDARY	=
VACANT PLOT	=

AREA STATEMENT	AREA IN Sq.ft	AREA IN Sq.M
TOTAL SITE AREA	= 18,39,972.08	170939
VACANT PLOT AREA	= 7,73,430.02	71854
C.R.Z AREA	= 11,74,813.22	109143.72
NON C.R.Z AREA	= 6,65,155.84	61795
TOTAL O S R AREA	= 77,338.7	7185
UTILITY AREA	= 4951.4	460
TOTAL No.OF PLOTS	= 548 Nos	

OWNER / APPLICANT

LICENSED SURVEYOR

ANNEXURE III

CRZ Map

**COASTAL REGULATION ZONE MAP OF THE PROPOSED
PROEJCT SITE IN THALANGADU VILLAGE, NEAR MUTHALIYAR
KUPPAM, VILLUPURAM DISTRICT BASED ON APPROVED CZMP
AS PER CRZ 2011 NOTIFICATION OF MoEF, GoI**

Sponsored By

**D S PROPERTIEI
AP: 2261, H-BLOCK, 10th street,
Kathiravan Colony, Anna Nagar West
CHENNAI - 600 040**



**INSTITUTE OF REMOTE SENSING
ANNAUNIVERSITY, CHENNAI-25**

February, 2019

COASTAL REGULATION ZONE MAP OF THE PROPOSED PROEJCT SITE IN THALANGADU VILLAGE, NEAR MUTHALIYAR KUPPAM, VILLUPURAM DISTRICT BASED ON APPROVED CZMP AS PER CRZ 2011 NOTIFICATION OF MoEF, GoI

ABSTRACT

D S Propertiei, Chennai has approached Institute of Remote Sensing (IRS) Anna University, Chennai for carryout the GPS survey for the proposed project site in Thalangadu village, near Muthaliyar Kuppam, Villupuram district with reference to approved Coastal Zone Management Plan(CZMP) as per CRZ 2011 notification of Tamil Nadu. The cadastral map of the area was used as the Base Map. The project boundary shown by the client on the field was measured using GPS survey and superimposed on existing CZMP of Tamil Nadu.

The spherical co-ordinates of the High Tide Line in WGS84 system are listed out in the *Annexure - I*. The photographs taken during the field survey are provided in *Annexure II*. A CRZ map of 1:4000 scale is part of this report.

COASTAL REGULATION ZONE MAP OF THE PROPOSED PROEJCT SITE IN THALANGADU VILLAGE, NEAR MUTHALIYAR KUPPAM, VILLUPURAM DISTRICT BASED ON APPROVED CZMP AS PER CRZ 2011 NOTIFICATION OF MoEF, GoI

1. INTRODUCTION

The coastal zone is the area of interaction between land and sea. The Coastal Zone of Tamil Nadu has a very high concentration of population along with ecologically sensitive areas like mangroves. There is a spurt of developmental activities arising from huge residential colonies, new industries and tourism centre along the coast and in coastal zone. There is a need to protect the coastal environment while ensuring continuing production and development. This zone is extremely vulnerable and has to be managed judiciously striking a balance between ecological and developmental needs.

Government of India has issued a notification during February 1991 for regulating the developments along the coastal stretches of seas, bays, estuaries, creeks, rivers and backwaters which are influenced by tidal action. The land between 500 meters from the High Tide Line (HTL) and the Low Tide Line (LTL) is identified as Coastal Regulation Zone (CRZ). The coastal stretches within CRZ are classified into four categories, namely, Category I (CRZ-I), Category II (CRZ-II), Category III (CRZ-III) and Category IV (CRZ-IV). The notification has also laid down regulations to regulate the various activities in the coastal zone. The Ministry of Environment and Forests, Government of

India, has approved a set of CRZ maps on 1:25,000 scale prepared from SPOT satellite imagery. On these maps, zones are demarcated as CRZ I, CRZ II and CRZ III, by NCZMA.

The Ministry of Environment and Forest in the CRZ Notification, 2011 declared the following areas as CRZ and imposed with effect from the date of the notification the restrictions on the setting up and expansion of industries, operations or processes and the like in the CRZ. The areas that are defined as CRZ as per CRZ Notification, 2011 are

(i) The land area from High Tide Line (HTL) to 500mts on the landward side along the sea front.

(ii) CRZ shall apply to the land area between HTL to 100 meters or width of the creek whichever is less on the landward side along the tidal influenced water bodies that are connected to the sea and the distance up to which development along such tidal influenced water bodies is to be regulated shall be governed by the distance up to which the tidal effects are experienced which shall be determined based on salinity concentration of 5 parts per thousand (ppt) measured during the driest period of the year and distance up to which tidal effects are experienced shall be clearly identified and demarcated accordingly in the Coastal Zone Management Plans.

(iii) The land area falling between the hazard line and 500mts from HTL on the landward side, in case of seafront and between the hazard line and 100mts line in case of tidal influenced water body the word 'hazard

line' denotes the line demarcated by Ministry of Environment and through the Survey of India taking into account tides, waves, sea level rise and shoreline changes.

(iv) Land area between HTL and Low Tide Line (LTL) which will be termed as the intertidal zone.

(v) The water and the bed area between the LTL to the territorial water limit (12 Nm) in case of sea and the water and the bed area between LTL at the bank to the LTL on the opposite side of the bank, of tidal influenced water bodies. The Classification of the CRZ is also modified for the purpose of conserving and protecting the coastal areas and marine waters as CRZ – I, CRZ – II, CRZ – III and CRZ – IV. The CRZ – I include the areas that are ecologically sensitive and the geomorphological features which play a role in the maintaining the integrity of the coast like (a) Mangroves (b) Corals and coral reefs and associated biodiversity (c) Sand Dunes (d) Mudflats which are biologically active (e) National parks, marine parks, sanctuaries, reserve forests, wildlife habitats and other protected areas (f) Salt Marshes (g) Turtle nesting grounds (h) Horse shoe crabs habitats (i) Sea grass beds (j) Nesting grounds of birds (k) Areas or structures of archaeological importance and heritage sites and the area between Low Tide Line and High Tide Line. The CRZ-II includes areas that have been developed up to or close to the shoreline. The CRZ-III includes areas that are relatively undisturbed and those do not belong to either CRZ-I or II, which include coastal zone in the rural areas

(developed and undeveloped) and also areas within municipal limits or in other legally designated urban areas, which are not substantially built up. The CRZ-IV includes the water area from the Low Tide Line to twelve nautical miles on the seaward side and the water area of the tidal influenced water body from the mouth of the water body at the sea up to the influence of tide which is measured as five parts per thousand during the driest season of the year.

The Ministry of Environment and Forest has also provided guidelines for demarcation of High Tide Line in the CRZ Notification, 2011. As per the guidelines, Cadastral (village) maps in 1:3960 or the nearest scale shall be used as the base maps. HTL and LTL will be demarcated in the cadastral map based on detailed physical verification using coastal geomorphological signatures or features in accordance with the CZMP Maps approved by the Central Government. 500metre and 200metre lines shall be demarcated with respect to the HTL.

In order to facilitate the classification of Coastal Regulation Zones, Government of India has approved few agencies/institutions across the country that holds Lr. No. J17011/8/92-1A III, dated 10.05.1999 of Ministry of Environment and Forests. Institute of Remote Sensing, Anna University being one of them, has been carrying out HTL and LTL mapping following the guidelines issued by Ministry of Environment and Forests, Government of India.

2. BACKGROUND OF THE STUDY

D S Propertiei, Chennai requested IRS to demarcate the boundary of HTL and CRZ of approved CZMP and the boundary the proposed project site. The client has requested the Institute of Remote Sensing, Anna University to superimpose project boundary over CZMP of Tamil Nadu. The project site is near coastal zone which is influenced by sea water during high tide. Hence this study was carried out to demarcate the HTL and setback lines for the project site.

3. STUDY AREA AND EXTENT

The afore said project site is located by covering the sub division boundary of 106/2 (p), 106/3 (p), 106/4, 106/5, 106/6, 108/1, 108/2A, 108/2B, 108/2C1(p), 108/2C2(p), 109/1(p), 109/2 (p), 109/3 (p), 109/4 (p), 110/1, 110/2, 110/3 (p), 110/4 (p), 110/5 (p), 111/1 (p), 111/2, 111/3 and 111/4 in Thalangadu village, near Muthaliyar Kuppam, Villupuram district. The study area has flat topography.

4. NEED FOR THE STUDY

Institute of Remote Sensing, Anna University under took the project with following agreed scope of work:

- Demarcating the boundary of the project site using DGPS survey.
- Superimposing project boundary on approved CZMP of Tamil Nadu.

5. GPS SURVEYING

The Trimble 5700 and 4000 SSE (Geodetic Surveyor Series) GPS receivers were used to conduct the surveying at the project site. The survey involves three components namely,

1. Establishing Base Station,
2. Control Survey for Village Maps and
3. Real Time Kinematic Survey for HTL Demarcation.

4.1 Establishing Base Station

The survey involves establishing one base station for Static Survey. The base stations were identified on stable locations with clear view of sky for uninterrupted access to GPS satellite signals. The control point with known elevation was used as initial reference station. The base station for the project site was established on firm ground and observed with static GPS survey from the known coordinates of the control point. The observations times were fixed based on the length of base lines to obtain highest possible accuracies.

4.2 Static Survey

The conduct of Static Survey using GPS requires two GPS receivers, one to be setup over the control point (with known co-ordinate) and another one over a reference station whose coordinates and distance from the control point are to be determined. Both these receivers must record data simultaneously. These known co-ordinates of the control point were fed and

fixed for processing of the logged data to accurately determine the coordinates of the base stations.

4.3 Control Survey for Geo-referencing Village Maps

The cadastral map pertaining to the project site was provided by the client. The hard copy cadastral map was scanned and geo-referenced with the help of GPS coordinates of boundary points provided by the client and used for the preparation of local level HTL Maps.

4.4 Real Kinematic Survey for demarcating the boundary

Kinematic Surveying enables a very rapid survey of a number of base lines in areas where there is good satellite visibility. At least, two GPS receivers are required to perform a kinematic survey. One receiver is designated as the reference receiver and is set up over the Base Station. All baselines are measured relative to this station. The other receivers, called rovers, are moved in succession to trace the land parcel.

5.0 Output

The observed baselines were processed using TGO software. The same were plotted at large scale using the ArcGIS 9.3 software and the sewage treatment plant (project II) boundary was superimposed on the approved CZMP of Tamil Nadu. The superimposition of the approved CZMP is subjected to scale and generalization error.

6.0 Conclusion

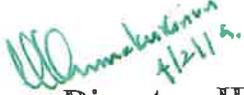
The survey team of Institute of Remote Sensing, Anna University has visited site on 10.11.2017 and carried out field survey using DGPS survey to overlay the proposed project site boundary. After super imposition of above DGPS survey out puts in the approved CZMP, the proposed project site falls under CRZ – II as per the approved CZMP as per CRZ 2011 notification.

COASTAL REGULATION ZONE MAP OF THE PROPOSED PROEJCT SITE IN
THALANGADU VILLAGE, NEAR MUTHALIYAR KUPPAM, VILLUPURAM
DISTRICT BASED ON APPROVED CZMP AS PER CRZ 2011 NOTIFICATION OF
MoEF, GoI

Annexure - I

COORDINATES OF HTL REFERENCE POINTS

Point id	Longitude	Latitude
1	79° 59' 24.721" E	12° 13' 35.234" N
2	79° 59' 27.415" E	12° 13' 39.439" N
3	79° 59' 29.657" E	12° 13' 43.017" N
4	79° 59' 33.807" E	12° 13' 49.727" N
5	79° 59' 36.747" E	12° 13' 54.480" N
6	79° 59' 39.728" E	12° 13' 59.301" N

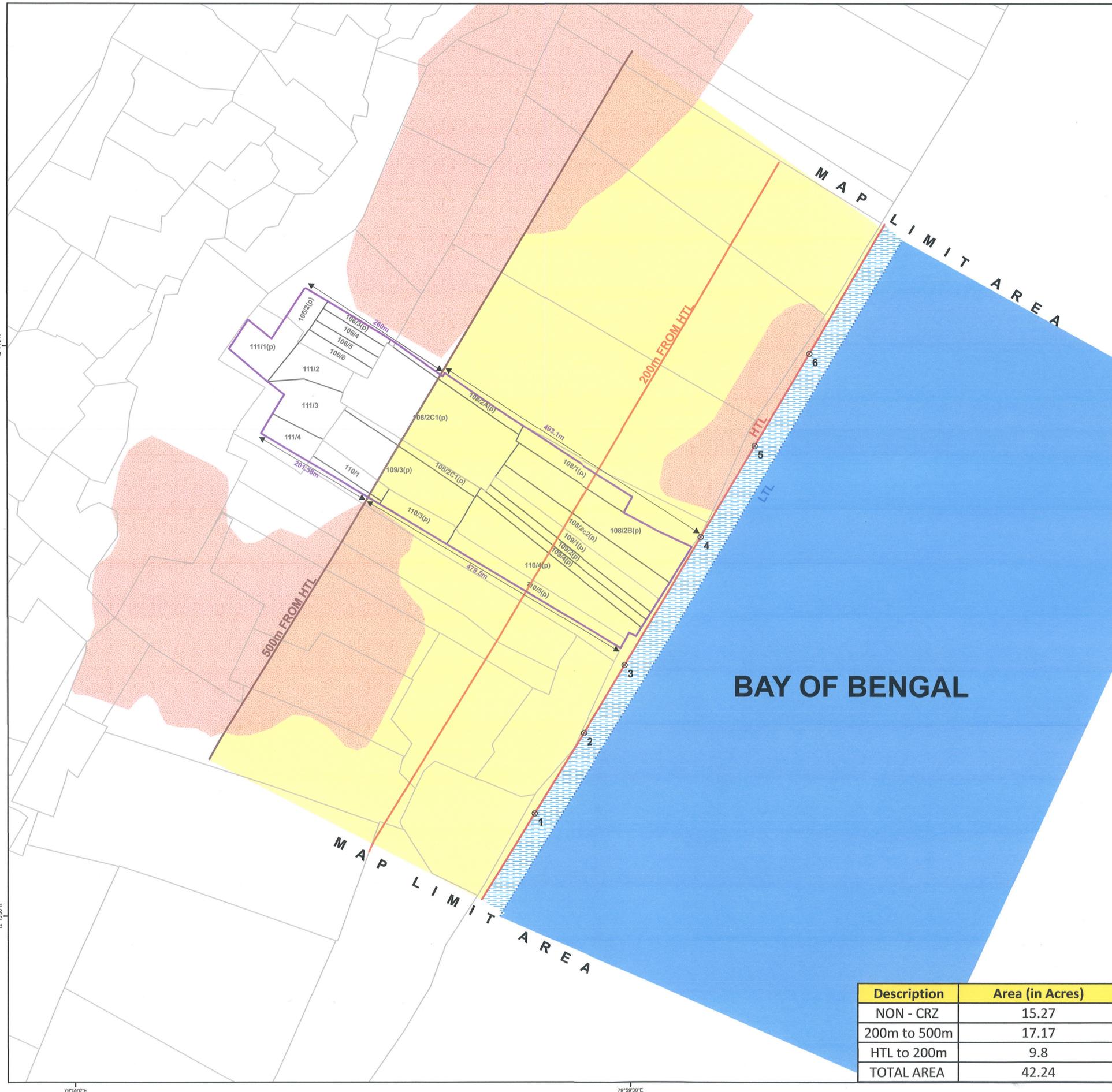

Director, IRS
Director
Institute of Remote Sensing
Anna University,
Chennai - 600 025

Annexure - II

FIELD PHOTOS



Coastal Regulation Zone Map of the Proposed project site in Thalangadu Village, Near Muthaliyarkuppam, Villupuram District based on Approved CZMP as per CRZ 2011 Notification of MoEF, GoI



LEGEND

SOURCE : Approved CZMP (As per CRZ 2011 Notification of MoEF)

- ⊗ HTL REFERENCE POINTS
- LOW TIDE LINE (LTL)
- HIGH TIDE LINE (HTL)
- 200m FROM HTL
- 500m FROM HTL
- SAND DUNE (CRZ - IA)
- CRZ - IB (INTER TIDAL)
- CRZ - II
- CRZ - IVA

NOTE :
The Coastal Regulation Zone Map of this site is prepared based on the approved CZMP as per CRZ Notification of MoEF, GoI

SOURCE : Client

- PROJECT SITE BOUNDARY
- SUB DIVISION BOUNDARY
- PLOT BOUNDARY
- SURVEY BOUNDARY

*The DGPS survey was carried out specific to the referred project site boundary only hence, validation of HTL and CRZ boundary is limited to the clearance of the same. Institute of Remote Sensing do not carry responsibility for CRZ status of other plots or neighbourhood.

REF.No. AU/IRS/SSR/216-2018 Dated 14.12.2018

SCALE 1 : 4,000



PREPARED BY
Institute of Remote Sensing
Anna University
Chennai - 600 025

FOR

D S PROPRTIEI
AP.2261, H-Block, 10th Street
Kathiravan Colony, Anna Nagar West
Chennai - 600 040

PREPARED BY

[Signature]

VERIFIED BY

[Signature]

APPROVED BY

[Signature]
Prof. S.S. Ramakrishnan, B.E(Hons), M.Tech., Ph.D.,
Director
Institute of Remote Sensing,
Anna University, Chennai-600 025.

Description	Area (in Acres)
NON - CRZ	15.27
200m to 500m	17.17
HTL to 200m	9.8
TOTAL AREA	42.24

ANNEXURE IV

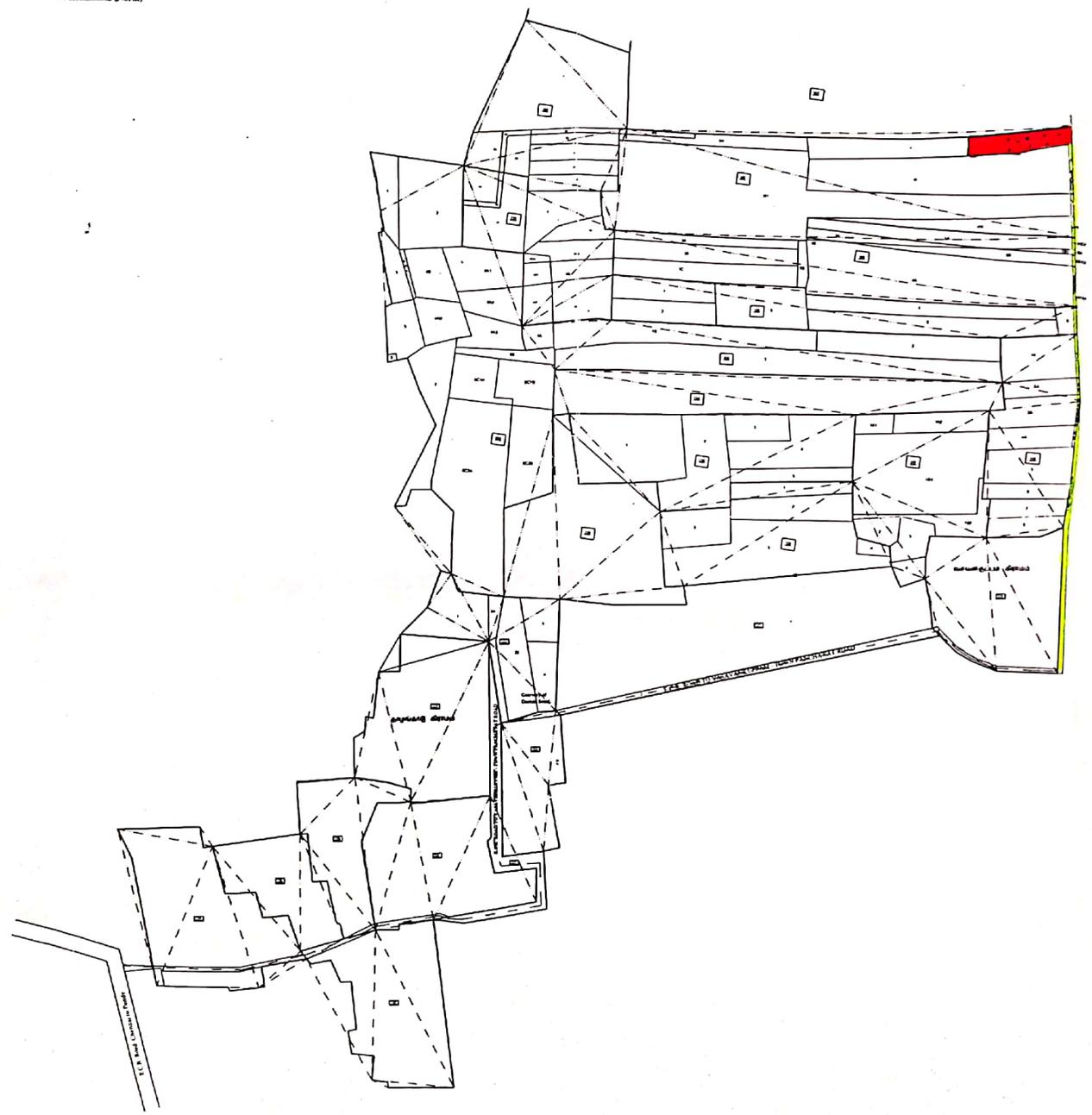
Existing Facilities & Revenue Road Map

Road Map

Plan Showing the Existing Road And Survey No: 154/9, 156, 18B, 157/2, 158, 1, 7A, 201, 121, 2, 116, 108, 8, 9, 10, 109, 1A5C4, 1B2, 2B1C4, 4A1A4, 115/1B, 2B, 3B, 4B.

District : Villupuram
Taluk : Marakkanam

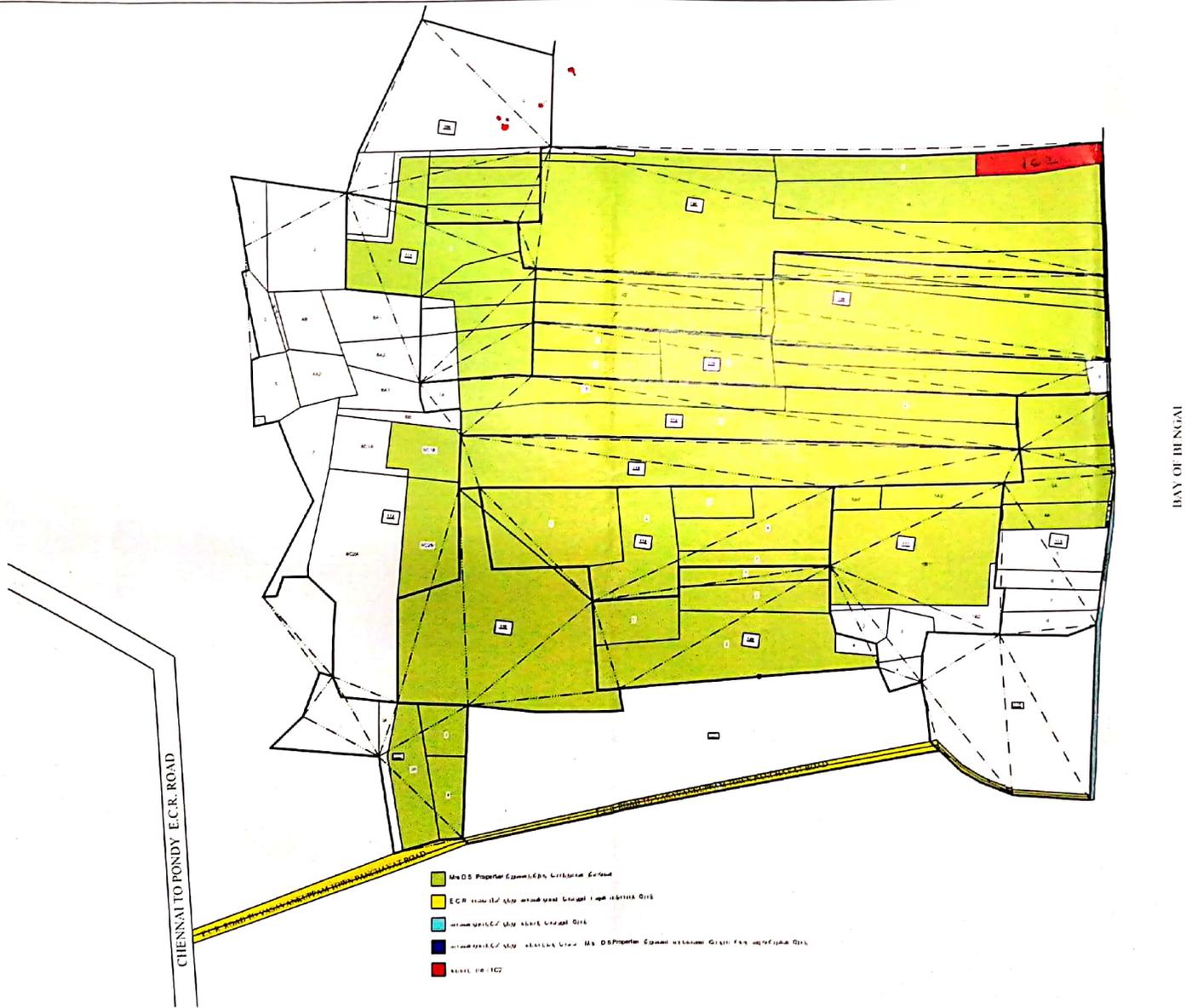
No : 42
Village :
Name : Marakkanam (North)



DAY OF BENGAL

Handwritten signature and text in blue and purple ink.

Combined Sketch Showing the Properties of Ms D.S. Proertier at Marakkanam (North) Village and the Town Panchayat Road from E.C.R. to Vasavankuppam and Approaced Road to Burial Ground



01/09/19
 22/02/19
 வயத்துணை ஆய்வாளர்
 'வட்டாட்சியர் அலுவலகம்'
 மர்க்காணம்

ANNEXURE V

Commitment Letter for Water Supply

ந.க.எண். அ1/62/ 2019

நாள்.14.02.2019

கடிதக்குறிப்பு

பொருள்: குடிநீர் இணைப்பு - விழுப்புரம் மாவட்டம் - மரக்காணம் பேரூராட்சி - தாழங்காடு கிராமம் (புல எண்.106/2,3,4,5,6 108/1,2ஏ,2பி,2சி1,2சி2, 109/1,2,3,4 110/1,2,3,4,5, 111/1,2,3,4,11,12,13,14) குட்பட்ட மனைப்பிரிவில் அமைந்துள்ள டாக்டர்ஸ் பீச் - மனைப்பிரிவில் உள்ள மனைகளுக்கு குடிநீர் இணைப்பு வழங்க கோரியது - தொடர்பாக.

பார்வை: 1. திரு.டி.ஹரீஷ்குமார், டி.எஸ். ப்ரொபேர்டிஸ் நிறுவனம், தாழங்காடு கிராமம், மரக்காணம் வட்டம், விழுப்புரம் மாவட்டம் என்பவரின் விண்ணப்பம் நாள்.14.02.2019.
2. தொடர்புடைய ஆவணங்கள்.

பார்வை 1ல் காணும் திரு.டி.ஹரீஷ்குமார், டி.எஸ். ப்ரொபேர்டிஸ் நிறுவனம் என்பவரின் விண்ணப்பத்தில் தாழங்காடு கிராமம் (புல எண்.106/2,3,4,5,6 108/1,2ஏ,2பி,2சி1,2சி2, 109/1,2,3,4 110/1,2,3,4,5, 111/1,2,3,4,11,12,13,14) குட்பட்ட மனைப்பிரிவில் அமைந்துள்ள டாக்டர்ஸ் பீச் என்ற பெயரில் அமைக்கப்பட்டுள்ள அங்கீகரிக்கப்படாத மனைப்பிரிவில் அமைக்கப்பட்டுள்ள மனைகளுக்கு குடிநீர் வசதி வழங்க கோரி விண்ணப்பித்துள்ளீர்கள். நகராட்சி நிர்வாகம் மற்றும் குடிநீர் வழங்கல் துறை அரசு விதிமுறைகளின் படி பேரூராட்சியால் அங்கீகரிக்கப்பட்ட மனைப்பிரிவில் உள்ள மனைகளில் பேரூராட்சி நிர்வாகத்தால் கட்டிட உரிம அனுமதி பெற்று கட்டி முடிக்கப்பட்ட கட்டிடங்களுக்கு சொத்து வரி விதிக்கப்பட்ட பின்னரே கட்டிட உரிமையாளருக்கு குடிநீர் வசதி வழங்க இயலும் என இதன் மூலம் தெரிவித்துக்கொள்ளப்படுகிறது.


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