

CONSULTANCY SERVICES FOR THE PREPARATION OF DEVELOPMENT PLAN FOR CHENGALPATTU NEW TOWN 2025 - 2045

TERMS OF REFERENCE



Chennai Metropolitan Development Authority

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1. A) Background:

The 15th Finance Commission (FC) of the Government of India in its report for the year 2021 – 2022 to 2025-26 has emphasized the importance of both rejuvenation of old cities as well as the setting up of new cities. In this regard, CMDA is in the process of preparing New Town Development Plans for Thirumazhisai, Minjur, Thiruvallur, Chengalpattu, and Kancheepuram and their respective surrounding areas.

The Hon'ble Minister for Housing and Urban Development Department, GoTN on the floor of the legislative assembly during the discussion on demands for grants has announced that *“To develop urban growth centers such as Thirumazhisai, Minjur, Thiruvallur, Chengalpattu and Kancheepuram and their respective surrounding areas as satellite towns, separate New Town Development Plans for each will be prepared by CMDA.* Subsequently, the New Town Development Plan for Chennai Metropolitan Area (Preparation, Publication, and Sanction) Rules, 2022 was issued in G.O.Ms. 150, H & UD Dept under Section 18 of Tamil Nadu Town and Country Planning Act, 1971. The Proposal and Terms of Reference in connection with the Consultancy services for **“Preparation of Development plan for Chengalpattu New town 2025 - 2045”** in line with the New Town Development Plan rules, 2022 is discussed further. The brief history, geographic features and context summary of Chengalpattu is included in Annex 1.

B) Need for the Chengalpattu New Town:

Being a newly formed District, the administrative capacity building is in progress and hence there is great potential to develop the present node into an Urban Growth center by improving the existing Physical, Social, and Economic Infrastructure. The preparation of a Development Plan for Chengalpattu is also needed in due course owing to the Proposed Extended CMA boundary encompassing a major portion of the Chengalpattu district, thereby attracting population growth and a shift in Economic dynamics. Further, the Development Plan shall aim to create a balance of competing environmental & economic development goals, identify tools to limit urban sprawl, and control haphazard growth based on carrying capacities.

For the Delineation of the Planning Area boundary, the following were considered:

- (i) Growth trends in the past decades
- (ii) Major transit proposals include the Widening of the GST road, Elevated corridor from the Airport to Chengalpattu, Chennai Peripheral Ring Road
- (iii) New infrastructure projects including Chengalpattu District Headquarters, New Bus Terminus, Kovalai Lake Rejuvenation, etc., and
- (iv) Ecologically sensitive areas include the Palar river, Kolavai Lake, Reserve forests, and Hillocks,

The Proposed Chengalpattu New Town Planning area includes 60 villages from Chengalpattu, Thirukazhukundram & Thiruporur Taluk. The extent and population of the delineated area are tabulated in table A below:

| | | | |
|-----------------------|-------------|-------|---------------------------------|
| TOTAL EXTENT | 13625.07 ha | 100% | POPULATION 177638 |
| FOREST AREA | 3052 ha | 22.4% | |
| WATER BODIES | 1020 ha | 7.4% | |
| EXTENT OF LAND | 9553 ha | 70% | |

C) Support under the World Bank-financed Project

The World Bank is providing support to the Government of Tamil Nadu in designing the Urban Mobility and Spatial Development (UMSD) project, which has three components: (i) strengthening integrated planning of infrastructure and service delivery, (ii) enhancing infrastructure and service implementation, and (iii) accelerating sustainable urban mobility through innovative financing.

Under the first component, Subcomponent 1a focuses on Integrated Spatial Planning based on Transit-Oriented Development (TOD) Principles. Specifically, this sub-component will finance spatial planning activities at different scales, spanning a more strategic perspective at the regional level, a concrete master plan at the metropolitan level, and detailed development plans at the neighborhood level, strengthening integration of land-use, mobility, and resilient urban infrastructure development. The preparation of the Chengalpattu New Town Detailed Development Plan will be financed under this subcomponent.

2. Objective of the Consultancy

The purpose of this TOR is to engage a consultant for the Preparation of a Development plan for Chengalpattu New town 2025– 2045, considering the overall vision for Holistic Growth in terms of Physical, Social, Economic, and Environmental aspects by harnessing the existing potential. The New Town Development Plan should be prepared following the “New Town Development Plan for Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022”, thereby

- To Establish a good practice in the preparation of development plans for new urban growth centers at the micro level over a 20-year planning horizon and also become a basis for informed changes in the larger macro level Regional Plan preparation underway.
- To develop Guiding strategies for the integration of contemporary sustainable growth management concepts in the New Town Development Area, including, but not limited to:
 - a. Integrated Land Use, Infrastructure & Transportation
 - b. Economic Development
 - c. Citizen Participation
 - d. Socially Inclusive Growth
 - e. Climate Change
 - f. Disaster Management
 - g. Urban Infrastructure & Services
 - h. Plan Implementation, Monitoring Mechanism & Financing

3. Project Boundary / Area

The contiguous villages around the central core of Chengalpattu town, bounded by the Natural boundary of Palar river on the west, GST Road up to Singaperumal Koil on the North, several non-continuous Hillocks on the east along with the New Administrative Headquarters on the south have been considered for delineation of Planning Area boundary. This amalgamation of potential villages with the core town of Chengalpattu will provide a comprehensive approach to redeveloping the existing haphazard developments within the Town Centre; tap the potentialities of the upcoming new Residential, Commercial, Industrial, and Institutional activities along the GST Corridor, Chengalpattu - Thiruporur Corridor and Chengalpattu - Walajabad Corridor; protect and preserve areas of high environmental and

ecological values, and of cultural value to local communities and regulate the sprawl developments - owing to the limited availability of land filled with several physiological features that are to be conserved.

The list of villages forming part of the Delineated Planning boundary is listed in annexure C enclosed herewith.

4. Scope of Work

The New Town Development Plan shall be following the Government Notification (G.O.Ms.No. 150 H&UD, 8th August 2022) related to New Town Development Plan for Chennai Metropolitan Planning Area.

The broad scope of work for the plan preparation shall include, but not be limited to:

- a) Stakeholder Engagement & Communication Plan
- b) Information Gathering & Compilation
- c) GIS-based Data Gathering & Mapping
- d) Conduct Sectoral Analysis to inform the preparation of the New Town Development Plan (e.g., Economic Development, Land Use & Mobility Integration, Infrastructure demand, Transit Priority Corridors, TOD, Climate Adaptation, flood prone area / unstable / unsafe area, informal settlements, and Slums, ecological important areas, protected areas and key ecosystem services, areas of historical or archeological importance, if any etc.) identifying key priority growth needs, areas requiring upgrades & new development needs.
- e) New Town Development Plan Formulation
 - a. Vision
 - b. Key Strategies & Recommendations for each development sector
 - c. Zoning of land use for residential, commercial, industrial, agricultural, recreational, educational, Agricultural, and other purposes together with Zoning Regulations through land suitability analysis.
 - d. Proposed Land Use Map including layout/ network plan of existing and proposed streets
 - e. Proposed Densities
 - f. Infrastructure/Service demand forecasting which takes into consideration the need for improved access to resilient infrastructure by all groups and genders
 - g. Open Space, Recreation & Public Space

- h. Housing Schemes, including affordable housing and different housing typology catering the needs of different groups to promote compact, mixed-use and mixed-income urban development
 - i. Land Pooling Area Development Opportunities
 - j. Proposals on Environmental Management & Climate Change Adaptation, including delineation of environmentally/socially sensitive zones and special regulations for such areas
 - k. Infrastructure Upgrades Proposals (Physical & Social)
 - l. Mobility Improvements, including the Grid of Roads, Plan to identify the hierarchy of road network
- f) Urban Design Guidelines
 - g) Implementation & Phasing Strategy
 - h) Capital Improvements Plan (Investment Plan)
 - i) Implementation and Phasing Strategy
 - j) Environmental & Social Impacts, Risks and Mitigation Measures
 - k) Redevelopment of old areas within the study area with special development regulations;
 - l) Form-Based Codes (FBC) for specific areas wherever necessary
 - m) Tourism and waterfront development plan;
 - n) Solid waste management plan;
 - o) Heritage conservation plan;

Detailed description of the assignment and expected tasks with deliverables are as follows:

Task 1 - Baseline Study – Study of available data and regulations

The task will draw a comprehensive geo-referenced picture of the existing demography, socioeconomic, environmental/ ecological conditions – including existing liabilities such as existing landfills- , and physical characteristics -including flood prone zones or other vulnerable areas to natural disasters- both built-up and natural, and assembly, and appraisal all of the data to identify existing development trends and issues. Furthermore, the Consultants shall fully comprehend all existing policies, plans, strategies, and laws that influence the planning practices and execution of the approved plans. The activities to be carried out are as follows:

- I. The Consultant shall undertake a review of the existing acts, policies (Central and State), Development Plans, and Development Regulations applicable to the planning area, such as TNTCP Act 1971 and its amendments, New Town Development Plan for Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022, TNCDBR 2019, schemes, and programs, previous studies conducted by/for CMDA/DTCP/ CMA, other organizations relating to study area and its development. The current ongoing studies (Comprehensive Mobility Plan, Visioning Exercise, TOD Corridor, and other Major studies as and when completed within the Study period) need to be reviewed and the same shall be considered while preparing NTDP.
- II. Study the ongoing projects of ULB, Gram Panchayats, and other government departments in the planning area.
- III. Review of Good International Industry Practices (GIIP) of all policies, regulations, guidelines, standards, strategies, and plans, on regional economic development, industrial policy, State SEZ policy, tourism, and heritage conservation, protection of environmental resources, solid waste, waste water and drinking water management, etc., focusing on those that share similar development challenges as the study area.
- IV. Authority will provide Satellite imagery data in an available format to the consultants for preparation of the GIS base map layers. The data will be available to the consultant in the authorized space within the CMDA campus. The consultant will have to be stationed at CMDA for accessing this data.
- V. Assessment of available data and information, accuracy of this data in terms of quantity, quality, and adequacy for the preparation of the intended New Town Development Plan.
- VI. Review and documentation of policies, strategies, and plans through collection and compilation of data and information which includes village maps, town maps, and cadastral maps, however, necessary support will be provided by the Authority.
- VII. Devise a clear stakeholder engagement and citizen participation strategy as part of a Communication Plan with appropriate meetings, focus groups, Key Informed Interviews, charrettes, surveys, and other methods. The Communication Plan will be pre-approved by the Authority as a basis for processing subsequent works and tasks.
- VIII. Prepare and present an Inception Report outlining the following:
 - a. Detailed Methodology for the overall approach of the NTDP and GIS database creation and management

- b. Project Communication Plan including stakeholder engagement and citizen participation.

Limitations & Assumptions based on data gathering and compilation.

Deliverable 1: Inception Report

Task 2: Preparation of Base Map Layers

1. The Consultant shall prepare base maps conforming to Revenue records/ Ward / Parcel boundaries by updating block sheets, revenue maps, ward maps, road maps, Litho maps, and Survey of India topographical maps.
2. The Revenue / Ward / Block / Parcel Boundary (FMB sketches) will be made available to the Consultant by the Authority in the available format. However, the consultant has to verify the Authenticity, and missing data/maps and submit them to the client by written request summarizing the findings.
3. Conduct a detailed topographic survey of the Planning Area using appropriate survey techniques, necessary field investigations, and surveys including DGPS, Total Station survey, etc. Digitization of Town maps, village maps, cadastral data, Natural features, Transport network (Road, Rail, and Street network), and Building footprint, vulnerable zones, areas with existing social (squatters) or environmental (solid waste disposal) liabilities etc. shall be carried out.
4. Preparation of the base maps should be in the latest available Geospatial platform. GIS layers and base maps shall be prepared following AMRUT standards for GIS-based master plans.
5. Consultants should make sure that attribute data collected is verified with respective data-holding departments and the same should be submitted to the authority.

Task 3 – Preparation of Existing Land Use Map, Survey, and Data Collection

1. The Consultant shall prepare an Existing Land Use Map and make an inventory of all parcels within the study area following Tamil Nadu Town and Country Planning Act (1971), New Town Development Plan for Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022, Urban and Regional Development Plan Formulation and Implementation (URDPFI) Guidelines – 2014, Tamil Nadu Combined Building Development Rules 2019 (TNCBDR) - and Design & Standards for Formulation of GIS Based Master Plan as recommended by MoHUA

2. The Consultant shall record/update the actual land use by checking land use maps and ground truthing wherever required, confining to the parcel boundaries along with its zoning attributes.
3. The following primary and secondary surveys are required to be undertaken by the Consultant:
 - a) Traffic and Transportation Survey to collect and update the traffic data for the present-day scenario. The Surveys include but are not limited to the Road Network Inventory survey, Speed and Delay survey, Traffic volume Count at major intersections (NH junction, SH Junction, Connecting Road to NH and SH, Roads along Bus Terminus, Commercial Establishments, etc.), Outer Cordon Origin-Destination Survey, Intersection Turning Movement Survey, Parking Surveys, Pedestrian Count at important intersections, Terminal Survey, Public Transport Passenger onboard survey, including other necessary surveys required for preparation of New Town Development Plan
 - b) Sample Household Survey to capture the demographic, socio-economic data, Household travel characteristics, and access to basic infrastructure services including power, energy, water, sanitation, and Telecom. The household survey will take a sample from the entire population of the study area, including both formal and informal settlements to analyze the trends, potentialities, and problems for the Planning Area. The sample size and sampling method should be proposed in the Technical Proposal submitted by the consultant and finalized with the client, ensuring sufficient statistical power and confidence level to inform the new town planning.
 - c) The results of the Primary survey are to be compiled and tabulated as a report and matrix with findings and recommendations in a predefined format as discussed and approved by the authority and annexed as part of the report
 - d) Compile all available sector-wise projects – existing and proposed, spatial and attribute data, regarding existing conditions in the Planning Area covering, but not limited to the following areas:
 - Economic growth trends & Urban Sprawl-Socio-economic data including economic base characteristics of various economic sectors (agriculture, animal husbandry, fisheries, Industry, and Tourism), employment, population and demographic characteristics, industrial base, prevalent sectors, and their respective outputs, etc.
 - Environment and Natural Resources including, but not limited to, forests, rivers, lakes, hillocks and other water resources, protected areas, natural drainage

areas, flooding areas, ravines, sanctuaries/biodiversity areas, mining and quarrying, high-value natural scenic sites including the physical and cultural resources including heritage areas and their regional disposition/interlinkages, etc.

- Physiography and geology including climate, winds, topography, geology, natural risk sites, etc.
 - Human settlement hierarchy, function, and distribution: including urban and rural settlements/habitats (including informal settlements).
 - Built-up, Built use environment, and existing land use.
 - Transportation infrastructure includes road-based parking-based, rail-based, non-motorized, waterways, and air transport and networks.
 - Physical infrastructure data including water supply sources and other networks.
 - Electricity supply and network, sewerage system, telecommunication, solid waste management facilities.
 - Social infrastructure data includes the hierarchy of educational, health, banks, markets, localized weekly markets, animal markets, and other community facilities, their spatial distribution, and accessibility in the Geospatial platform.
 - Projects under implementation include the inventory of all infrastructure, tourism, developments, housing, and real estate projects under construction.
- e) Identify the gaps in terms of information needed and the approach and methods to overcome the such deficiency.
- f) Conduct all necessary field studies and surveys to update missing data and information needed for the preparation of the New Town Development Plan.
- g) The Client will facilitate the Consultant in the speedy collection of data with the relevant departments by issuing necessary directions and letters.
- h) The consultant is to submit all maps, and drawings prepared under this stage in the geospatial platform in an editable version.

The consultant shall prepare the draft questionnaire and submit it to the authority before undertaking the survey. The survey data will be integrated as a geospatial database in a spatial manner to assist in the NTDP preparation.

Task 4 – Existing Situation Analysis and Assessment

1. Based on the Surveys, the Consultants shall assess the existing situation and identify issues, opportunities, and challenges.

2. This task shall cover the following along with a Strength, Weakness, Opportunity, and Threat (SWOT) analysis for each sector:

- Demographic characteristics
- Existing land use pattern and its characteristics, Climate & vegetation, topography & land features, trends in existing agricultural landuse (classification – dry/wet/seasonal), existing land ownership pattern, distribution of land value
Regional Economic base assessment - Inventory of existing land use, animal husbandry, industry and infrastructure development initiatives in the vicinity of the planning area.
- Economic sectors' assessment - Determine sectors of competitive strengths of the respective regions/planning area such as skilled manpower, resource base, cost advantage, etc.
- Study of Agglomeration Economic and Investments Scenario including the trends in the economy, investment attractiveness, and leading destinations of investments.
- Road & Transportation network, Connectivity to institutional establishment & offices, heritage, religious structures & sacred sites, existing housing, social amenities, workshops, and Industries, pedestrian footpaths, and parking.
- Infrastructure and utilities, Water resources and water management, Water bodies and conservation (solid waste?)
- Housing and poverty – Urban & Rural, Slums,etc., Real Estate Market Survey and Assessment.
- Assessment of existing waterbodies, channels, reserve forests, hillocks, etc., and the issues/concerns affecting them
- Assessment of un-serviced locations and accessibility to Social infrastructure (Location - Allocation Analysis).
- Infrastructure for wastewater/sewage treatment disposal, solid waste management, stormwater drainage, their demand-supply gap (quantity, quality) assessment
- Environmental and social implications (on all environmental components) of landuses, traffic, and transportation, physical and social infrastructure, utilities and services,pollution management measures, and emergency and disaster relief.
- Resource efficiency measures in all sectors

- Existing wholesale and retail markets, street vendors, and allied activities for earmarking market zones, vending zones for street vendors, etc.
 - Review of State policies/strategies concerning all key sectors and the budgetary provisions action plans of the different sectors and agencies.
 - Benchmark the New Town development process with GIIP. Review planning strategies such as transit-oriented development and sustainable neighborhoods. Review legal, regulatory, and institutional frameworks adopted by other cities for effective planning and implementation. Benchmark technology and technology interventions
3. The Consultant should submit a comprehensive Analytical Report on the status, suitability, and sufficiency/efficiency of various infrastructural facilities, utilities, and natural resources available for the area.
 4. The Analytical Report should be supported with suitable thematic maps for each of the sectors.

Deliverable 2 -Situation Analysis Report.

Task 5 – Vision document and Stakeholder Consultations

1. The New Town Development Plan shall adopt a participatory approach by conducting interactive sessions. Therefore, consultants shall conduct stakeholder analysis and mapping, and based on which proceed to develop the most effective and appropriate method of stakeholder engagement that meet the needs of different stakeholders identifies. These stakeholders would include: administrative bodies, civil society of both urban and rural areas, the agriculture community, industrialists, traders, elected representatives, academicians, government, non-governmental organizations, and the general public. Stakeholders of different genders and vulnerable groups should be consulted as part of the process.
2. The entire expenditure on conducting workshops/meetings including the venue shall be borne by the consultant along with the required materials for the meetings/workshops shall be provided by the consultant.
3. The stakeholder consultations shall be carried out in two phases, first-phase consultations shall be convened before strategy formulation and second-phase consultations shall be convened post-submission of the Draft New Town Development Plan which compares alternative scenarios. However, the Consultant shall have any number of such discussions and not limited to two, based on the need and in

consultation with the authority given the importance of the project. The same shall be included as part of the communication plan.

4. Documentation of all stakeholder consultation has to be done with photographs, record Minutes of meetings, media publications (2 National and 2 Regional/ local in consultation with the Authority), etc. along with analysis and findings. The suggestions and recommendations received during the stakeholder consultation meeting should be compiled and the same needs to be documented as a report and matrix (in the format approved by the authority).

Deliverable 3: Summary Report on Visioning Exercise and Stakeholder Consultations

Task 6 – Concept plan and Strategy Formulation

At this stage, the consultants shall do benchmarking with GIIP focusing a few selected case studies where similar challenges are presented and addressed, to review the planning strategies for new town development, and review the legal, regulatory, and institutional frameworks adopted by these case studies.

The horizon year for the for the selected scenario New Town Development Plan shall be 2025-2045 The activities in this stage shall include:

- a) Based on the case studies, detailed analysis, and assessment in the Planning Area, the Consultants shall develop alternative strategies to achieve the objective of developments including prioritizing the identified projects in the Planning Area
- b) Consultants shall carry out a scientific study, analyze and project the population up to 2045 and estimate future demand for housing, key economic activities, industries, and other physical and social infrastructure.
- c) Project the growth of industries and employment opportunities within each sector and estimate the spatial requirement for all key sectors.
- d) The consultant to evolve alternative growth strategies for 2025– 2045 by evaluating at least two alternative scenarios of spatial growth and land use pattern, based on the key elements such as density distribution, transportation model, housing, commercial and retail components, industries, environmental conditions, health and education, and agriculture, etc. The pros and cons of each alternative scenario should be presented and compared with the business-as-usual (BAU) or “No Intervention” scenario, to come up with the recommended plan that is resilient, inclusive, productive and sustainable.
- e) Each of the proposed alternative scenarios (minimum three, including the BAU scenario) shall discuss the key elements as per the New Town Development Plan for

Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022, Town and Country Planning Act (1971), TNCBDR (2016), URDPFI Guidelines, Laws for the differently abled people and other regulations as relevant

- The vision of the spatial structure and the likely scale of development in the context of demographic trends with growth and development patterns.
 - Distribution and impact of population and activities on the land use and environment;
 - The direction of developing growth corridors, trends of agricultural activities
 - Identification of key projects that can be taken by the Client or other government agencies.
 - Regional and Urban Infrastructure viz., transport including, traffic network plan, parking, water supply, power, communication, waste management, flood control, etc.
 - Management of Environment and Natural Resources, climate adaptation and mitigation, carbon footprint.
 - Potential environmental and social risks and impacts
- f) Recommend the most appropriate alternative based on the overall analysis. The Consultant shall take cognizance of various policies of the Government of India and the Government of Tamil Nadu applicable to the respective planning area while evolving the scenarios.

Deliverable 4 –Concept Plan and Strategy Formulation Report

Task 7 –Preparation of Draft New Town Development Plan

The Consultants shall formulate the draft New Town Development Plan comprising of a Comprehensive Report and the proposed Land Use Map based on the discussion and strategy approved by the Authority as per the guidelines as prescribed by MoHUA “**FORMULATION OF GIS BASED MASTER PLANS FOR AMRUT CITIES**” for GIS Based Masterplan (template/ format for GIS-based land-use map as given in the annexure):

1. The draft New Town Development Plan report shall include the following:
 - City Profile
 - Socio-economic conditions and trends - Employment Projections based on current trends – Direct and Indirect employment, Clustering of areas concerning Agglomeration Economics

- Review of existing Comprehensive land-use Plan, Spatial growth, direction, and development of the town
Proposed development strategy of the New Town Development Plan in the regional context
- Formulate Urban Design Strategies and built-form guidelines based on the context of the area's development character;
- Identify strategies for ensuring climate resiliency is embedded into environmental management and physical infrastructure projects such as stormwater management, energy efficiency, watershed management, and other critical systems
- Alternative Energy utilization (Renewable and Non-Renewable), Plan for power supply leveraging on green power sources
- Environment Management (including liabilities) strategies/ projects/ schemes with proposals for environmental improvements, such as up-gradation / development plan, renewal, and rehabilitation proposals. Development of passive & active open spaces, plantation, and Forest Development Areas of towns.
- Identification and plan for the redevelopment of old areas within the Local Planning Area with relevant special development regulations. The proposed plan should be in line with the New Redevelopment Policy as recommended and in discussion with the Authority
- Slum Development and other social liabilities Plan (thinking of other encroachers in solid waste dumpsite etc) with focus on affordable housing encompassing PMAY guidelines & Housing Policy of Tamil Nadu.
- Informal sector (street vendors) plan with its location & mechanism of functioning and implementation including vegetable markets and wholesale godowns.
- Overall mobility plan for passengers and freight including the identification and plan for 'Transit Oriented Development (TOD) along major transport corridors integrating features such as pedestrianization and cycling to reduce carbon footprint;
- Plan for heritage conservation
- Gender inclusive plans that consider safe access to services and public places; safe and affordable mobility; safety from violence and perceived gender-based

violence; health and hygiene; security of tenure to affordable housing; employment opportunity and climate resilience plan that takes cognizance of the needs of differently-abled people and complies with the laws for differently abled people

Environment – Water Bodies Conservation, Eco-sensitive areas, and natural preserves, Pollution levels, Urban Heat Island effects

2. Consultant to suggest Land Pooling Area Development Scheme (LPADS) with special development regulations for the identified projects with detailed strategy and mechanism with a roadmap for various projects as recommended in the new town development plan
3. Regulatory and Implementation Framework: Propose a legal and regulatory framework and broad management structure for the development, implementation, regulatory/operation, and maintenance functions of the study area. The proposed institutional framework should be aligned with the GoI-approved institutional and financial structure for New Town Development Plan.
4. Broad Project Structuring and Block-Cost Estimates for Capital and O&M costs
 - a. Suggest a suitable institutional and holding structure and funding plan for the New Town Development Plan
 - b. Prepare block cost estimates for capital, operation, and maintenance costs for the selected alternative for phase-wise implementation of various project components, physical and social infrastructure, external linkages, etc. of the New Town Development Plan.
 - c. Capital Investment Plan and Resource Mobilization Strategies (Business Plan)
5. Prepare an exclusive document on the "Working Plan" to facilitate the Authority, in the implementation of short, medium- and long-term projects, that are translated from the New Town Development Plan. The consultant shall also provide the merits and demerits of the plan along with the short-term, medium-term, and long-term projects in a matrix form. The Working Plan shall help the Authority for accessing funding for various infrastructure projects.

6. Develop an appropriate analytical basis for clearly explaining the proposed plan. This means defining all background metrics and suggesting implementation mechanisms - including monitoring processes such as design review and plan implementation thresholds and necessary change mechanisms if required and ensuring that every suggestion made has a clear path to implementation or a conceptual guideline that will aid the development of such mechanisms.
7. The proposed New Town Development Plan shall be in accordance with and synchronization with other ongoing and upcoming Third Master Plan, Regional Plan, Vision plan for CMA, TOD plan, etc., and other plans in discussion with the Authority. Necessary interventions are to be proposed in discussion with the Authority and plan to prepare agencies, etc.
8. The proposed Land Use Map shall be prepared in a detailed manner in accordance with Tamil Nadu Town and Country Planning Act, 1971, New Town Development Plan for Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022, and as per the URDPFI guidelines, 2014. The land use map shall be in accordance with the rules and guidelines for the preparation of a GIS-based master plan as recommended by the Ministry of Housing and Urban Affairs (MoUHA), Formulation of GIS-based Master Plan for AMRUT cities, etc. in discussion and approval from Authority.

The proposed Land Use Plan shall provide for:

- Comprehensive land use map for residential, commercial, industrial, agricultural, educational, and institutional, open spaces, parks and playgrounds, water bodies, and other uses in accordance with New Town Development Plan for Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022. The plan should justify considering the needs of growth dynamics without compromising environmental sensitivity, green belts, and/or suggested buffers and in discussion with the authority.
- Areas for future development and expansion and areas for new and affordable housing;
- Areas required for various amenities, services, and utilities, green/open spaces for the projected population.

- Areas reserved for public buildings and institutions (Health and Education) and new civic developments.
 - Areas reserved for the formation of new roads, widening of roads, parking lots, public transport and terminal facilities, etc.,—Complete sidewalk, road, and street pattern and traffic circulation pattern present and future requirements including bus priority lanes where appropriate and parking;
 - The proposed land use map shall also accommodate all the interventions and projects proposed based on the strategy and findings with respect to earlier tasks.
 - The Planning Authority will publish the Draft New Town Development Plan inviting objections, if any, from the public as per the provisions of the Tamil Nadu Town and Country Planning Act, 1971, New Town Development Plan for Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022, etc.
 - The changes required, if any, by the Client and the Planning Authority in the draft New Town Development Plan, during different stages of its adoption, shall be incorporated by the Consultant and the final New Town Development Plan comprising the Report and Land Use Maps shall be submitted to the Authority and respective Planning Authority
9. The Draft New Town Development Plan should be concluded with the suggestions and modifications received through Stakeholder consultations as described in Task 5.

Deliverable 5 -Draft New Town Development Plan Report

Task 9 –Final New Town Development Plan and Supporting Authority in the approval process as per New Town Development Plan for Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022 – including delineation of regions for preparation of Detailed Development Plan

- The consultant has to Prepare a New Town Development Plan incorporating the objections, suggestions, and modifications recommended by the authority and other Stakeholders.
- The consultant has to delineate regions with respect to characteristics and defined criteria in discussion with authority for the preparation of a Detailed Development Plan. Identify key development areas that could be prioritized to make DDPs.

Deliverable 6 - Final New Town Development Plan.

Deliverable 6 Annex: Summary Assessment of Environmental and Social Risks and Impacts and Contribution to Climate Mitigation and Adaptation:

The New Town Development Plan is expected to promote compact, mixed-use, mixed-income urban development using TOD and integrated infrastructure and land use planning principles, so as to guide resilient, inclusive and productive urban growth. The Plan will contribute to climate mitigation and adaptation by reducing carbon footprint of the urban settlements compared to no-intervention or BAU scenario, improving access to resilient urban infrastructure and services to reduce the vulnerability of the inhabitants, and protect them from flood prone areas or other high climate risk zones etc. This urban planning activity is considered fully aligned with Paris Agreement on both mitigation and adaptation, consistent with the high-level climate strategies of India and Tamil Nadu, leading to less carbon-intensive urban growth patterns and smaller built-up footprint of the metropolitan area.

The consultant shall ensure that the entire planning process (all Tasks) includes adequate assessment of environmental and social implications, and incorporation of measures to mitigate & manage them in line with ESF. Environmental and Social Assessment of plan preparation shall be undertaken by the consultant for the New Town Development plan to assess the risks and impacts. The assessment shall be in a participatory manner, and its findings shall inform the urban development policy, as well as the environmental and social strategy for urban planning and infrastructure development and environmental and social sustainability measures.

The activities A1 – A4 here will be integral part of Tasks 1 – 4. Activity A5 will be part of Tasks 5 -7. This will ensure that environmental and social aspects are well covered during all stages of the Planning process.

A 1: Situational Analysis and Environmental and Social Screening

This task shall review the current status of urban development planning and urban development in Tamil Nadu vis-à-vis the proposed planning exercise, expected project investments, challenges, and opportunities.

Following this, an environmental and Social screening of the delineated planning region will be undertaken using the screening checklist in the ESMF. The Consultant shall identify sensitive environmental and social components and land uses and key risks and impacts. This shall also mark the hot spots (including crime), areas under potential

environmental stress, and valued environmental components (VECs) and establish the baseline for environmental and social monitoring. The consultant shall provide maps (GIS-based to be transported to Google Earth) and graphs as necessary to illustrate locations and physical context. This will be part of Tasks 1 - 4 above.

A2: Overview of Environmental and Social Issues/Risks and Opportunities

From the situational analysis above and through the application of appropriate analytical tools, this step aims at identifying environmental and social risks and impacts associated with the proposed development. Under this task, a review of physical and environmental diversity and social-economic diversity of the region shall be carried out and identify the environmental and social issues and risks that may arise during various project stages. This shall also corroborate the ESSs that will be applicable and the requirements of these shall be complied with. This task shall be conducted using relevant methods/tools including spatial analysis, case studies, stakeholder consultations, and participatory appraisals. This shall help in identifying critical issues and specific geographic areas with environmental and social risks and impacts. This will be part of Task 5 above.

A3: Identification of Gaps in Environmental and Social Sustainability Framework

The consultant shall analyze critical national institutional, legal, regulatory, policy, and capacity gaps underlying the key environmental and social sustainability aspects outlined in ESSs of the ESF, and formulate alternatives/recommendations and guidelines to assess and address these issues and weaknesses in institutional and governance aspects at various levels. Under this task, a review of available guidelines (manuals, available technical papers, guidance, standards) for environmental management and sustainability of the proposed plan and gaps shall also be undertaken. This will be part of Task 6 above.

A4: Consultations on environmental and social priorities with respect to the proposed NTDP

Consultations shall be undertaken with all relevant stakeholders to identify environmental and social priorities with respect to the proposed TA. Consultations shall span across baseline assessment, discussion on alternatives, and after disclosure of the Draft development plan. This will be part of Task 5 above.

A5: Recommendations and Way forward

Potential direct and indirect impacts of plan development and proposed investments will be compiled under this task, with recommendations on how to address these. Proposed alternatives shall be assessed against the environmental and social impacts and risks that they may present during their implementation and operations/maintenance. Recommendations

shall be impact-centric; exploring potential synergies and opportunities for mainstreaming environmental and social considerations and ESSs into the plan and investments. This shall also suggest alternative options and directions for institutional / policy aspects for environmental and social management including preparation of guidelines to ensure environmental and social sustainability of interventions and institutional structure at various tiers to manage environmental and social aspects. Protocol for monitoring/auditing, continual review, and improvement shall also be suggested. This will be part of Task 6 above and the recommendations will be integrated into the Draft Development Plan, which will be finalized under Task 8. It also includes a budget, institutional responsibilities for implementing and supervising the recommendations, and monitoring and evaluation plan giving indicators to track the implementation of the recommendations.

The activities A1 – A4 here will be integral part of Task 1 – 4. Activity A5 will be part of Tasks 5 -7. The outputs of E&S assessment will be highlighted in the deliverable of each Task. Finally, along with NTDP - the deliverable of Task 7, an **ENVIRONMENTAL AND SOCIAL SUMMARY STATEMENT** shall be included as an Annex to Deliverable 6.

Deliverable 7-Assisting Authority in obtaining approval of New Town Development Plan from the Govt. and supporting in the entire approval process as outlined in Tamil Nadu Town and Country Planning Act, 1971, New Town Development Plan for Chennai Metropolitan Planning Area (Preparation, Publication, and Sanction) Rules, 2022, etc.

5. Review of Reports & Review Committee:

This TOR, including expectations and possible constraints, has to be implemented based on a discussion with the Review Committee. The outcome of these discussions shall form the basis for the preparation of the New Town Development Plan. A work plan shall be prepared by the consultants that shall be reviewed and endorsed by the Committee before its implementation. Any changes to the agreed work plan shall be supported by valid arguments and shall require prior approval of the Review Committee.

- 1) Member Secretary, or, in case of delegation by MS, the Chief Planner (MPU), CMDA, Committee Chair
- 2) Senior Planner (NT- Chengalpattu), CMDA

- 3) Senior Officials -DTCP
- 4) Senior Official -CUMTA
- 5) The Commissioner, Tamil Nadu Industries Department
- 6) Other representatives and Special Invitees nominated by CMDA (must including Environmental and Social experts)

It is also suggested that the consultants meet the concerned District collector at various times as required to take their views in preparation for each task/ deliverable. After the review meeting of each deliverable, the consultant has to submit the revised report by incorporating the suggestions and modifications recommended by the authority within 7 working days.

The Consultant shall submit each of the deliverables (8 copies) in the form of hard copy printed in duplex mode along with necessary maps and drawings in a geospatial platform in Pendrive (editable) as per the schedule mentioned deliverables. This will be followed by a presentation to the Committee, wherein, the review committee members shall give their comments and suggestions in the form of feedback. Subsequently, the Consultant will incorporate all such comments and suggestions and submit the revised report accordingly. Upon the approval of the deliverable by the World Bank and the technical committee, the payment will be made to the consultant.

Other Conditions

- The details about the methodology, data outputs, and personnel-months in respect of consultancy should be worked out in the bid offered by the consulting firm
- All data collected by the Consultant shall be made available to the Authority in a properly organized format and this data shall remain the property of the Authority.
- The data collected and the research results of the Consultancy shall not be divulged to other agencies without the explicit approval of the Authority.
- All reports should be submitted in hard and soft copy. Reports should be in Microsoft Word format/ Excel format. Maps and drawings should be in the compatible format of GIS facilities available with the Authority.
- Consultants should be available to attend the Progress Review Meeting as and when required by the Authority and should submit monthly Progress Reports to the Authority on various activities completed/ planned to review the progress of the Study.

6. Project Team:

| Sl. No. | Key Professionals | Educational Qualification & Work Expertise Criteria |
|----------------|---|---|
| 1 | Team Leader | <ul style="list-style-type: none"> ● Master's degree in urban/regional/urban–regional planning or equivalent ● 15 years of working experience after a Master's degree in the fields of Physical Development plan/ Land Pooling/ Regional Development Plan ● Should have relevant (minimum 3 projects) experience as Team Leader/Project Director in the formulation of Master Plans/ Development plans in India or abroad. |
| 2 | Deputy Team Leader-cum-Land/Housing Expert | <ul style="list-style-type: none"> ● Master's degree in Land UsePlanning, Housing Studies, Community Development, Public Policy, or a related field ● Minimum 12 years of experience ● He / She should have worked as a core team member for the preparation of a minimum of 2 Master plans/Development Plans/Planning Studies. |
| 3 | Urban Planner and Project Coordinator | <ul style="list-style-type: none"> ● Post-graduation in Urban Planning / Regional Planning / or equivalent from a recognized institution ● Minimum 5 years ● Shall have experience working in the formulation of Master Plans/New Town Development Plans |
| 4 | Transportation Planner | <ul style="list-style-type: none"> ● Master's Degree in Transport Planning with graduation in civil engineering or any equivalent ● Minimum 10 years of relevant experience. ● He/she should have relevant experience (minimum 3 projects) in transport planning assignments in Metropolitan cities/regions of similar magnitude, size, and nature in India or abroad. ● Should have extensive knowledge and experience in the transport sector focusing on rail and roads. |
| 5 | Urban Designer | <ul style="list-style-type: none"> ● Post-graduation in Urban Design / or equivalent from a recognized institution ● Minimum 10 years ● Shall have experience working on urban design-related |

| Sl. No. | Key Professionals | Educational Qualification & Work Expertise Criteria |
|---------|--------------------------------------|---|
| | | projects in cities / medium and small size towns |
| 6 | Urban Economist | <ul style="list-style-type: none"> ● Master in Economics ● 10 years of work experience in urban economic modelling to ensure integrated land use development or transport planning, measuring impacts and multipliers. |
| 7 | GIS Expert | <ul style="list-style-type: none"> ● Master's Degree in Urban Planning/ Geoinformatics/GIS/Remote Sensing or equivalent ● 8 years of work experience in preparing the base map, developing and managing large and diverse databases after Master's degree |
| 8 | Infrastructure Planner | <ul style="list-style-type: none"> ● Masters Infrastructure Planning or equivalent ● 10 years of work experience in integrated infrastructure planning (e.g. roads, drainage, water, wastewater, solid waste management, power, and telecommunication) including Smart Infrastructure applications |
| 9 | Environmental Planner | <ul style="list-style-type: none"> ● Master's Degree in Environmental Planning, with graduation in Civil Engineering, Chemical Engineering, or Architecture ● 10 years of work experience in related fields after a Master's degree. |
| 10 | Social Development Specialist | <ul style="list-style-type: none"> ● Master's Degree in Social Sciences, Social Work or allied subjects. ● 10 years of work experience in related fields after a Master's degree. ● Work experience in related fields of stakeholder engagement, public consultations with citizens and community groups, with experience in gender-informed planning. |
| 11 | Communication Expert | <ul style="list-style-type: none"> ● Bachelor's Degree or higher in Communications or allied subjects. ● 10 years of work experience in related fields ● Work experience in related fields of public communications, communication strategy development and implementation. |

The consultants shall include necessary support staff for fulfilling the objectives and requirements of this project.

- i. Field survey staff: Sufficient field survey staff to be allocated for the survey of the road network and other details.
- ii. The above team should be supported by adequate relevant support staff/experts/specialists to ensure that the objectives of the project are achieved within the timelines.
- iii. The proposed Team leader shall be assigned full-time for this project and shall not be associated with any other full-time ongoing assignment with the same/any other client. The Team Leader shall be a full-time professional to be stationed in Chennai till the completion of the Study.

7. Duration and Location

The assignment is expected to take 53 weeks. In addition, the consultant shall provide handhold support to CMDA for a duration of 24 weeks to assist in the approval of the final New Town Development Plan by the Government. The services shall be delivered in Chengalpattu and Chennai, Tamil Nadu, and the core members of the consultant's team is expected to stay in Chengalpattu and Chennai for at least 80% of the time. The client (CMDA) will provide facilitation support to help with access to other stakeholders and relevant government institutions, and organize workshops when needed.

- iv. The services shall be delivered in Chengalpattu, Tamil Nadu, and the core members of the consultant's team are expected to stay in Chennai Metropolitan Area for at least 60% of the time to ensure of sufficient time for field work, stakeholder engagements, and project reporting and communications with the client.

8. Timelines, Deliverables, and Payment Schedule

| SI No | Milestones/Deliverable | Copies to be submitted | Completion /Submission Time from the issue of LOA | Payment (% of the Total Consultancy Fee) |
|-------|---|------------------------|---|--|
| 1 | Submission and Approval of Inception Report (Deliverable 1) | | T+1 month | 10% |

| SI No | Milestones/Deliverable | Copies to be submitted | Completion /Submission Time from the issue of LOA | Payment (% of the Total Consultancy Fee) |
|--------------|---|-------------------------------|--|---|
| | | 5 Copies | | |
| 2 | Submission and Approval of Situation Analysis Report (Deliverable 2) | 5 Copies | T+ 3 months | 15% |
| 3 | Submission and Approval of <i>Vision Document (Deliverable 3)</i> | 5 Copies | T+5 months | 15% |
| 4 | C Submission and Approval of Concept Plan and Strategy Formulation Report (Deliverable 4) | 5 Copies | T+6 months | 10% |
| 5 | Submission and Approval of Draft New Town Development Plan and Report (Deliverable 5) | 5 Copies | T+8 months | 10% |
| 6 | Submission and Approval of Environment and Social Summary Statement (Deliverable 6 Annex) | 5 Copies | T + 9 months | 10% |
| 7 | Submission and Approval of Final New Town Development Plan and Report (Deliverable 6) | 5 Copies | T+10 months | 15% |
| 8 | Supporting Authority in various approval processes (Deliverable 7) | 5 Copies (Post Approval) | T+12 months | 15% |

Annexure I: The Basic context of Chengalpattu and the proposed Chengalpattu

New town Area

a) History of Chengalpattu:

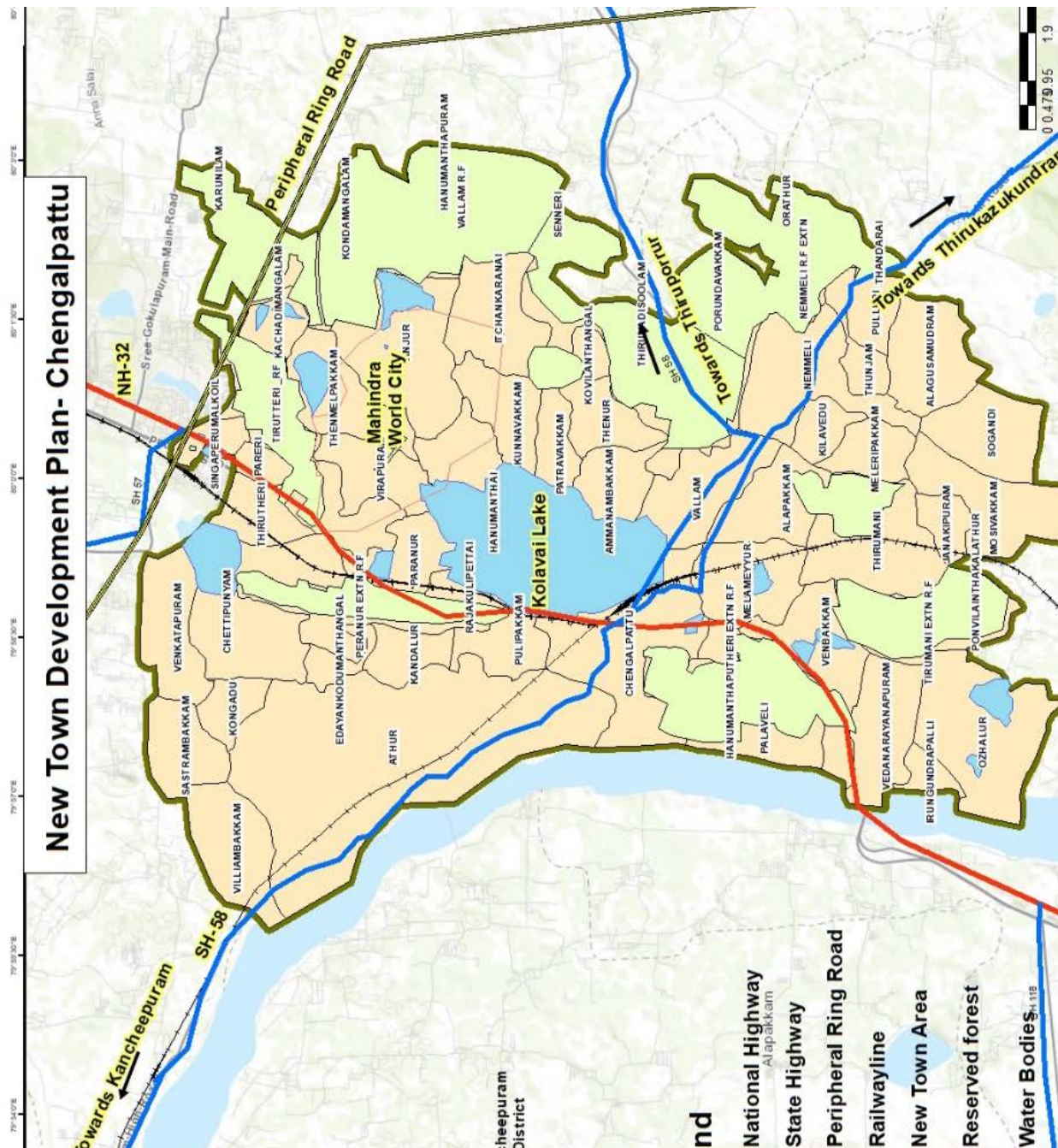
The Chengalpattu region was ruled by the Pallava Dynasty from 600 AD to 900 AD, during which it attained the maximum height of prosperity and cultural glory. The temple architecture, as illustrated by the rock-cut temple of Mamallapuram along the east coast, was at its excellence during the Pallava Rule.

Following the decline of the Pallava Empire, the Chengalpattu region came under the Imperial Cholas from 900 AD to 1300 AD. Another important phase in the history of Chengalpattu district is the one when the region was reigned by the Vijayanagara Empire from 1336 AD to 1675 AD. The town of Chengalpattu was formerly the capital of the kings of Vijayanagar after they were defeated by the Deccan sultanate in the battle of Talikota in 1565. The fortress at Chengalpattu, built by the Vijayanagara kings in the 16th century was of much strategic importance owing to the swamp surrounding it and the lake situated beside it. Chengalpattu was taken over by the French in 1751 and was retaken in 1752 by British Governor Robert Clive. The Chengalpattu fortress proved to be of great strategic advantage to the British. During the wars of the British with Hyder Ali of Mysore, the fortress withstood the latter's assault and afforded refuge to the nearby residents. By 1900, the town was noted for its manufacture of pottery and was a local market center, especially for rice trade. The district was home to cotton and silk weaving, indigo dyeing, and tanneries. Extensive salt manufacturing also took place along the coast. During the post-independence era, the town of Chengalpattu served as the headquarters of the combined Kancheepuram district until the year 1969, after which the District headquarters was shifted to Kancheepuram town. The Chengalpattu district came into existence on 29.11.2019 after being carved out of the Kancheepuram district.

b) Geographical features of Chengalpattu District:

Chengalpattu district is situated at coordinates: 12.6939 North Latitude and 79.9756 East Longitude on the northeast coast of Tamil Nadu with a total geographical area of 2945 Sq.kms. The district is bounded on the north by the Chennai district, West by the Kancheepuram district and Tiruvannamalai districts, and on the south by the Villupuram district. With a coastal length of 57 Km, the district is bounded in the east by the Bay of

Bengal. The district features a tropical wet and dry climate. The fact that the district is close to the thermal equator and is also coastal prevents extreme variations in the seasonal temperature. The month of January with a 25°C average temperature is the coldest month of the year. The average annual rainfall of the district is about 1400 mm. The district gets most of its annual seasonal rainfall from the northeast monsoon winds during October and November.



The river Palar is one of the major rivers in the state of Tamil Nadu traversing through the Chengalpattu district for a length of 54 Km. The river Palar enters the district at Palur village and conflues with the Bay of Bengal between Vayalur and Kadalur village.

Moreover, the district is bounded by the river Adyar in the north and the Ongur river in the south. Besides the aforesaid rivers, Neenjal Maduvu, Pukkadurai Odai, and Kiliyar are other minor rivers flowing through the Chengalpattu district. The district is home to 528 major irrigation tanks having ayacut of more than 100 Acres (or) 40 Hectares each. Agriculture is the main occupation of the majority of the population in this district.

c) Demography:

The Chengalpattu town forms part of the Chengalpattu district which was carved out of the erstwhile Kancheepuram District in 2019. Chengalpattu Town is located at a distance of 56km from Chennai in South West direction along the major GST Road. The main town of about 16sqkm houses a population of 62579 with an average density of 3900 persons per sq. km. as per the 2011 Census. The Chengalpattu district encompasses an area of 2945 sq. km with a population of 25,56,244 as per the 2011 Census.

d) Growth trend in the last 10 years:

Being one of the 38 districts in Tamil Nadu, Chengalpattu is the base for the prime railway junctions of the Southern Railway and is an important railway node. Chengalpattu town flourished significantly when it emerged as a preferred location for Mahindra Group's first world city in India catering to IT/ITES and Manufacturing Industries during the late 2000s. With Office and Residential markets expanding toward South and Southwest of Chennai, the residential micro-markets along GST Corridor – Guduvanchey, Urapakkam, Perungalathur, Singaperumal Koil, Maraimalainagar and Chengalpattu have witnessed significant interest from buyers and investors. Besides, the developers procured land at lower rates when readily available, which changed the landscape of the corridor, laying a foundation for imminent development subsequently.

Despite the absence of a strategic development plan, Chengalpattu town had an organic growth-induced sprawl due to the radical rail connectivity from Chennai city and thereby increasing pressure on urban infrastructure within the Municipal limits.

e) Connectivity:

Road: The Grand Southern Trunk (GST) Road where Chengalpattu is located on one of South India's most bustling National Highways. Extending across 472 km, the GST Road heightened in real estate activity due to strong connectivity and transport infrastructure,

leading to several micro markets along the corridor. The upcoming Kilambakkam Bus terminus, located 25 kms from Chengalpattu town is also expected to create a major shift in transport dynamics in southern Chennai.

Rail: The Chengalpattu Railway station is located in the heart of the town on SH- 58 near the existing Mofussil Bus Terminus. This station holds prime importance in the South and South West lines of the Chennai Suburban Railway. There is also a proposed Tambaram – Chengalpattu additional Suburban railway line

Air: The Chennai International Airport is approximately 41 km from Chengalpattu and is well connected by rail and road. A metro rail corridor is proposed to connect the Airport and Kilambakkam Bus terminus

In addition, there are new transit proposals including the Widening of the GST road, an Elevated corridor from the Airport to Chengalpattu town, and the Chennai Peripheral Ring Road.

f) Economic Context:

Chengalpattu's economy consists of two key pillars – Manufacturing Industry and the IT/ ITES sector along the transit corridors and Agricultural activity. Chengalpattu houses the top Auto and Auto ancillary plants like Ford, Nissan, Mahindra, etc. Maraimalai Nagar is known as the Detroit of Chengalpattu and Mahindra World City is the largest private industrial park in Chennai. In Spotlight of road and rail infrastructure projects boosting the regional economy, Chennai as a whole has several infrastructure projects under construction. The rapid urbanization and industrialization of the suburbs of South Chennai have promoted Chengalpattu being looked up as the next reality investment destination.

Annexure II- The list of villages forming part of the Delineated Planning boundary

| S.No | Name Of Village | Area (Ha) | Name Of Taluk |
|------|----------------------------|-----------|---------------|
| 1 | Villiambakkam | 247.81 | Chengalpattu |
| 2 | Chettipunyam | 433.44 | Chengalpattu |
| 3 | Kachadimangalam | 93.71 | Chengalpattu |
| 4 | Kondamangalam | 39.55 | Chengalpattu |
| 5 | Thenmelpakkam | 253.99 | Chengalpattu |
| 6 | Kongadu | 92.62 | Chengalpattu |
| 7 | Kovilanthangal | 45.29 | Chengalpattu |
| 8 | Anjur | 436.60 | Chengalpattu |
| 9 | Edayankodumanthangal | 61.05 | Chengalpattu |
| 10 | Patravakkam | 191.85 | Chengalpattu |
| 11 | Kandalur | 108.46 | Chengalpattu |
| 12 | Hanumanthai | 372.29 | Chengalpattu |
| 13 | Karunilam | 41.09 | Chengalpattu |
| 14 | Melameyyur | 234.42 | Chengalpattu |
| 15 | Senneri | 15.67 | Chengalpattu |
| 16 | Vallam | 284.09 | Chengalpattu |
| 17 | Pulipakkam | 171.35 | Chengalpattu |
| 18 | Virapuram | 181.29 | Chengalpattu |
| 19 | Kunnavakkam | 219.16 | Chengalpattu |
| 20 | Irungundrapalli | 50.16 | Chengalpattu |
| 21 | Vedanarayanapuram | 237.12 | Chengalpattu |
| 22 | Hanumanthaputheri Extn R.F | 213.45 | Chengalpattu |
| 23 | Singaperumalkoil | 62.30 | Chengalpattu |

Preparation of Development Plan for Chengalpattu New Town

| | | | |
|----|------------------|---------|------------------|
| 24 | Venbakkam | 272.67 | Chengalpattu |
| 25 | Chengalpattu | 78.50 | Chengalpattu |
| 26 | Porundavakkam | 116.75 | Chengalpattu |
| 27 | Hanumanthapuram | 34.00 | Chengalpattu |
| 28 | Vallam R.F | 1568.02 | Chengalpattu |
| 29 | Rajakulipettai | 83.21 | Chengalpattu |
| 30 | Pareri | 52.47 | Chengalpattu |
| 31 | Sastrambakkam | 170.80 | Chengalpattu |
| 32 | Ammanambakkam | 285.90 | Chengalpattu |
| 33 | Itchankaranai | 210.81 | Chengalpattu |
| 34 | Thiruvadisoolam | 318.98 | Chengalpattu |
| 35 | Tirutteri _Rf | 372.15 | Chengalpattu |
| 36 | Alapakkam | 215.47 | Chengalpattu |
| 37 | Thirutheri | 127.14 | Chengalpattu |
| 38 | Paranur | 199.92 | Chengalpattu |
| 39 | Thenur | 146.96 | Chengalpattu |
| 40 | Perunthandalam | 8.31 | Chengalpattu |
| 41 | Palaveli | 230.61 | Chengalpattu |
| 42 | Ozhalur | 452.18 | Chengalpattu |
| 43 | Athur | 1429.75 | Chengalpattu |
| 44 | Peranur Extn R.F | 259.91 | Chengalpattu |
| 45 | Venkatapuram | 249.28 | Chengalpattu |
| 46 | Sogandi | 229.41 | Thirukalukundram |
| 47 | Kilavedu | 83.29 | Thirukalukundram |
| 48 | Mosivakkam | 275.60 | Thirukalukundram |

| | | | |
|-----------------------|----------------------|-----------------|------------------|
| 49 | Alagusamudram | 242.54 | Thirukalukundram |
| 50 | Janakipuram | 78.25 | Thirukalukundram |
| 51 | Tirumani Extn R.F | 285.90 | Thirukalukundram |
| 52 | Pulleri | 98.26 | Thirukalukundram |
| 53 | Thunjam | 94.82 | Thirukalukundram |
| 54 | Ponvilainthakalathur | 13.06 | Thirukalukundram |
| 55 | Thirumani | 402.92 | Thirukalukundram |
| 56 | Nemmeli R.F Extn | 313.26 | Thirukalukundram |
| 57 | Meleripakkam | 119.37 | Thirukalukundram |
| 58 | Thandarai | 24.10 | Thirukalukundram |
| 59 | Nemmeli | 339.52 | Thirukalukundram |
| 60 | Orathur | 53.91 | Thiruporur |
| Total Extent | | 13624.75 | |
| Forest Area | | 3052 | |
| Water Bodies | | 1020 | |
| Extent Of Land | | 9552.75 | |

Annexure-III:List of layers to be submitted by the consultant

Base Layers

- Road (with footpaths and conditions)
- Rail
- Bridges and Flyovers
- Water Bodies

Utilities

- Water supply and sewerage network
- Storm Water Drainage Network
- High Tension lines
- Power network
- Manholes, soak pits, drainage lines, culvert and cross drainage

Boundaries

- Administrative Boundaries
- Planning Boundaries
- Municipal Boundaries
- Village Boundaries
- Plot Boundaries (Survey Boundary and Subdivision Boundary)
- Building Footprints

Land Use and Building Use

- Urban Land Use and Land Cover – including industrial, and formal / informal commercial and residential uses including slums
- Existing land use on each plot and uses in existing buildings
- Ground Control Points
- Heritage Buildings/ Sites
- Cultural Sites
- Various land uses
- Building height and no. of floors

Topography and Environment Features:

- Digital Elevation Model (DEM)
- Contour (at 50 m intervals or as appropriate depending on the topography)
- Hazard-prone areas
- Current landfills / disposal area / potential environmental liabilities
- Ecological Habitat
- Wet Land
- Drains, Canals & Water Bodies
- Coastal Regulation Zones
- Flood Prone areas

Transport Network

- Road Network
- Rail Network

- Pedestrian Paths
- Public transport network
- Street network

Infrastructure and Green & Open Spaces

- Recreational
- Parks & Open Spaces
- Schools and Colleges
- Health facilities

Location of Industrial developments

- Informal Activities-Vendor Cluster Locations

Annexure IV: Data Provided by the Client:

- Facilitate in collecting the revenue records and maps
- Provide satellite imagery for preparation of base map (with terms and conditions)
- Provide relevant studies/plan available if any

Annexure-V: Maps to be submitted by the consultant but not limited to the following:

- Base map of Planning Area / Corporation Area showing contours, roads, natural features (*)
- Map overlaying existing ward boundaries and revised planning area boundaries
- Existing land use map for the Planning Area (*)
- Set of detailed existing land use maps for the Planning Area (#)
- Existing built-use map for the Planning Area (#)
- Physiographic Map of Planning Area showing physical features
- Map showing presence of protected and ecologically sensitive areas including habitats of endangered species in Planning Area
- Hazard maps of Planning Area showing key vulnerable areas with regard to different hazards (via overlays)
- Map representing land values across different locations in Planning Area
- Geological Map of Planning Area
- Map showing historical and heritage sites present in Planning Area
- Map showing overall, gross residential and net residential densities across different locations in Planning Area

- Map showing housing typology across Planning Area
- Map showing location and extent of slums across Planning Area
- Map showing existing circulation pattern in Planning Area
- Map representing existing mobility patterns in Planning Area
- Map showing existing storm water drainage network in Planning Area
- Map showing existing sewerage network and allied utilities in Planning Area
- Map showing existing water supply network and allied utilities in Planning Area
- Map showing proposed land use map for the Planning Area (*)
- Set of detailed proposed land use maps for planning area (#)
- Map showing proposals for slums and informal settlements across the planning area
- Map showing proposed circulation pattern in Planning Area
- Map showing proposed mobility patterns in the planning area
- Map showing the proposed stormwater drainage network in the Planning area
- Map showing the proposed water supply network and allied utilities in Planning area
- Map showing proposed sewerage network and allied utilities in Planning area
- Map showing existing and proposed solid waste landfill sites in Planning area
- Map showing proposed ecologically sensitive and protected areas in Planning area
- Map showing existing and proposed power and energy services in Planning area
- (*) hard copies to be submitted in 1:20000 scale (#) hard copies to be submitted in 1:4000 scale