**National Environment & Planning Agency**

**Masterplan for the SMART Mandeville Local Planning Area (MLPA)**

**Terms of Reference: GIS Technician**

**Prepared by:**

 **National Environment & Planning Agency**

**January 2024**

**Terms of Reference for**

**GIS Technician (Level 6)**

1. **BACKGROUND**

Mandeville Local Planning Area is the largest and busiest business district in Manchester. This growth centre/local planning area is comprised predominantly of business and commerce. The area offers a wide range of commercial/office, transportation, health, education, financial and recreational facilities interspersed with an older type of residential setting in the interior areas.

The growth and development of the local planning area warrants the need for smart, sustainable, resilient and technology driven strategies and concepts to address urban issues such as uncoordinated development, traffic congestion, inadequate parking, inadequate public open space and improper solid waste collection and disposal. The preparation of the masterplan will provide a holistic and sustainable approach to land use planning and management to address matters relating to building densities, heights, economy, physical and social infrastructure and protection of the urban ecosystem. It is therefore imperative that spatial policies be formulated to effectively manage the development process within the study area.

The preparation process related to the Masterplan includes but is not limited to; preparatory work and desk research, reconnaissance and land use surveys, preparation of planning policies, statements and objectives, thematic plans, land use zoning maps, GIS and 3-D modelling and stakeholder consultations.

Guiding Principles

The following guiding principles which are in line with the United Nations Sustainable Development Goals, the Vision 2030 Jamaica –Urban Planning and Regional Development Sector Plan 2009-2030 and the Government of Jamaica Growth Agenda Policy Paper 2015 were proposed and included to guide the preparation of the master plan:

* **Principle #1:** Increase the intensity of land use over present levels and hence the more efficient use of infrastructure
* **Principle #4:** Maintain or enhance the existing pedestrian environment.
* **Principle #5:** Reduce reliance on the automobile and improve opportunities for alternative transportation.
* **Principle #6:** Improve the quality of the natural environment and the creation of a just, safe, resilient city developed along green principles.
* **Principle #8:** Provide for a diverse and compatible mix of land uses that accommodate employment opportunities for local residents and offer more live and work choices.
* **Principle #9: Strategic Investment Projects –** to include tourism in which Jamaica has a comparative advantage and will seek to leverage limited government resources in the provision of certain types and scale of infrastructure by ensuring value for money and determining contingent liabilities that may be adequately managed.
1. **PURPOSE AND SCOPE OF WORK**

The purpose of this Terms of Reference is to engage a Geographic Information Systems (GIS) Technician to undertake GIS and spatial planning activities towards the preparation of the Smart Mandeville Masterplan and amendments to other masterplans.

* 1. The objectives of this project are to:
1. Create a Masterplan to set out the Long-Term Vision, Goal, Objective, and Strategies for the Mandeville LPA
2. Prepare Land Use Plan, 3-D Images & Modelling Plan, Physical Infrastructure Plan, Social, Cultural, Economic, Financial, Institutional Plan and Environment and Risk Sensitive Plans
3. Prepare a Feasibility Plan for implementing the recommendations/findings of the masterplan.
	1. Scope of Work for GIS Technician:

The GIS Technician is being recruited to assist in spatial planning activities towards the preparation of the Smart Mandeville Masterplan and aid in the finalizing of existing masterplans.

The GIS Technician is required to work as part of a team of professionals including the Urban Planners and Architect Planner.

The GIS Technician will be engaged to provide services for a period of two (2) months to assist in the Smart Mandeville Masterplan and aid in the finalizing of existing masterplans.

1. **GIS TECHNICIAN OUTPUTS/DELIVERABLES**
	1. The purpose of this Terms of Reference is to engage a GIS Technician to undertake GIS activities towards the preparation of the Smart Mandeville Masterplan and aid in the finalizing of existing masterplans.

The GIS Technician will therefore be required to assist in undertaking/ or to participate in the following activities amongst others:

1. Create and convert 2D GIS and CAD format to 3D modelled representation and design/implement a GIS Database Management Information System;
2. Provide advanced mapping, spatial analysis, and support for use and application of GIS related data;
3. Read and interpret maps, manipulate and understand digital land data, [manage GIS](https://www.qwikresume.com/resume-samples/gis-technician/) database, use range of [GIS tools](https://www.qwikresume.com/resume-samples/gis-analyst/), create and maintain structure needed for GIS data storage(file geodatabase), analyze and present geographical information; and create data reports.
4. Assist in the mapping, surveying, drafting, digitization, map production, plotting, collecting, data entry;
5. Interact with remotely sensed images by using software to select image displays, define image set categories, or choose processing routines;
6. Conduct and or coordinate training and assist the Project Team to develop a methodology for data collection;
7. Create and maintain metadata for all GIS data collected in accordance to the Agency’s metadata standards;
8. Submit all compiled raw data, modifications thereof, created and collected data, particularly spatial data used for mapping and analyses by the GIS Technician;
9. Write and maintain reports; programs database reports, forms and queries;
10. Research, collect, encode, update and integrate information and data from various spatial and non-spatial, digital and analogue sources. Performs quality checks on encoded data values for accuracy before committing to the database or data repository;
11. Obtain information from various Ministries, Departments and Agencies;
12. Provide prompt and courteous service for all internal and external entities, public or private, for GIS information requests;
13. Participate in stakeholder consultations and deliver presentations as required;
14. Additional duties and administrative functions as required.

**All work will require close coordination with the NEPA team.**

1. **RESPONSIBILITIES AND APPROVALS**

**4.1 Responsibilities of NEPA**

The NEPA through the Spatial Planning Division will be responsible for the following:

* Call inception meeting to clarify the Terms of Reference.
* Provide documentation available within the Agency to assist the GIS Technician
* Provide the GIS Technician with relevant maps, planning policies and guidelines, designs schematics, frame of reference for activities and a letter of introduction for entities to be engaged.
* Conduct periodic review meetings.
* Elevate issues as necessary for resolution.
* Manage the process of the master plan preparation.

**4.2 Responsibilities of the GIS Technician**

The GIS Technician will work under the coordination and in cooperation with NEPA, through the Spatial Planning Division (SPD) to complete the activities.

The GIS Technician will liaise with NEPA in order to execute the scope of work. Working within the framework of the terms of engagement, the GIS Technician shall:

* + 1. Work closely to network with the project team as necessary and have regular update meetings seeking clarification and resolution of issues;
		2. Elevate any issues and request, in writing, meetings with the Project Coordinators and the Agency’s GIS Coordinator of the National Spatial Strategy Branch (NSSB) to resolve any issues as soon as they arise; and
		3. Submit all deliverables on time and within budget to the Manager of the Local Area Planning Branch (MLAPB).

**4.3 Approval of deliverables:**

Deliverables must be approved and be found satisfactory by the Manager of the Local Area Planning Branch and Project Coordinators before payment is made.

1. **GIS Technician DELIVERY SCHEDULE**

The GIS Technician will have direct responsibility for the following deliverables:

* + Monthly Progress Reports shall be submitted to include but not limited to
		- The update, accomplishment of the activities, problems encountered with the preparation of the master plan and solutions provided.
* Review/Amend/Finalize assigned tasks towards the Smart Mandeville Masterplan by March 2025.
* Assist in the finalization of other masterplans by March 2025 as the need arise.
1. **CHARACTERISTICS OF ENGAGEMENT**

**Language of delivery**: English

**Type of Engagement:** Project Staff

**Duration of Engagement:** 2 Months

**Dates of Engagement**: 3 February 2025 – 31 March 2025

**Work Logistics:** The GIS Technician is expected to operate as a Project Staff.

1. **QUALIFICATIONS AND EXPERIENCE**
2. **Education**
3. BSc Degree in GIS, Geomatics, Geography / Earth Science, Urban and Regional Planning, Surveying or CAD related area, with a minimum of one years (1) GIS experience.
4. **Work Experience and Related Knowledge**
5. Professional working experience and training in GIS, cartography and geospatial engineering
6. Knowledge of GIS technology and GIS administration software for collection, storage, retrieval, manipulation and presentation of spatial and tabular data.
7. Proficiency in ArcGIS Desktop 10.x, Spatial Analyst extension, 3D Analyst extensions, ArcScene, ArcGIS Urban, Architectural Drawing and/or Building Information Modelling software’s such as, Esri CityEngine, ArchiCAD, Navisworks, BIMx among others.
8. Ability to work alone and as part of a team.
9. Excellent oral and written communication skills.
10. **MANAGEMENT RESPONSIBILITY AND STANDARDS**

The GIS Technician will report to the Manager of the Local Area Planning Branch, Project Coordinators and the Senior Planner responsible and relevant Branches/Divisions of NEPA and relevant Government Agencies where needed.