



## 1 SCOPE OF WORKS

### 1.1 General Scope

The selected party is required to undertake topographic survey and prepare Land Use Plans and for the islands in the packages as per the requirements outlined in this TOR. The party should conduct topographic surveys as per the survey brief in Annex 1. The Plan period for the Land Use Plans is 20 years and must comply with all existing standards, criteria and requirements stated in the “Binaaveshi Plan Kurumaai Hingumuge Gavaaidhu–2008”, which will be available from the Ministry of National Planning, Housing and Infrastructure’s website ([www.planning.gov.mv](http://www.planning.gov.mv))

### 1.2 Specific Scope

The selected party should be familiar with the institutional processes and issues associated with Land Use Planning and topographic surveying in the Maldives. The following tasks are required to be carried out in order to accomplish the services:

- a) Land survey of the existing land use and topography
- b) The selected party should conduct topographic surveys as per the survey brief in Annex 1.
- c) Land Use Plans should be prepared based on surveyed maps approved by Maldives Land and Survey Authority (MLSA), Ministry of National Planning, Housing and Infrastructure, hence, survey maps should be submitted to MLSA for approval.
- d) In consultation with the relevant line ministries, government institutions, Island councils, Atoll councils, NGOs, Island communities, the consultant should draw up a land use strategy for each of the islands in the package or packages. The consultant must identify, assess and address the existing conditions, issues, problems and the development potential for each of the islands in the package or packages in order to finalize the land use strategy.
- e) Once the Land Use Strategy has been finalized the consultant should incorporate this strategy into the development of Land Use Plans.
- f) The Draft Land use plan should address the issues stated out in (d)
- g) The consultant should present the draft plan to the Island Council including the relevant stakeholders and the island community.
- h) Based on the outcome / suggestions of the meeting stated in (g) the consultant should amend the draft plan and finalized the plan.
- i) Along with the final plan, the consultant should submit a Planning report, which details the analysis of existing land use and the justification and rational for the proposed land uses, to LGA for the final approval by the Ministry of National Planning, housing and infrastructure. The report should also include the stakeholder

consultation reports including signed meeting attendance. Sample Planning report is attached in Annex 6

### **Works commissioning**

The Consultants will implement Works commissioning including:

This assignment will generate outputs and deliverables described in the project objective, through Scope of Services and tasks stated out in Assignment described above. These will include:

Topographic survey maps and reports

- The consultant shall supply surveyed maps in AutoCAD DWG format (version 2014 or later), also all the Maps should be combined to one pdf file.
- 2 sets of printed Survey Reports with Maps and completed PSM information forms.
- 2 CD-ROM with Digital AutoCAD.dwg, pdf files and RAW data.

Land Use Plans and Reports.

- The consultant shall supply Land Use Plans in AutoCAD DWG format (version 2014 or later), also all the Maps should be combined to one.pdf file.
- 2 sets of printed Land Use Plans (A3 size).
- 2 sets of soft copies of Land Use Plans in Digital AutoCAD.dwg, and .pdf files
- 2 sets of printed Land Use Plan reports (A4 size).
- 2 sets of soft copies of Land Use Plan reports in MicrosoftWord.docx and. pdf files.

## **1.5 PROJECT TEAM & INDICATIVE STAFFING REQUIREMENTS**

While the actual staffing and composition of the Survey and Land Use Plan teams is up to the Consultants to propose.

Topographic survey and land use plan

### **1.5.1 Land Use Plan Team**

The composition of the team should include but not limited to specialist skills at an appropriate level and experience of urban planning, land-use/management and environmental planning/management. In addition, drafting, layout and presentation of maps, plans and any illustrative material are expected to be provided by the selected party. Thus, Land Use Plan Team should at least consist of;

1. Urban/Land-use planning specialist.
2. Environmental specialist.
3. Social/cultural specialist.

The Urban/Land use specialist can be common to more than one package since maximum number of packages a single consultant will be awarded is three. The Urban/Land Use Planning Specialist will also be the designated Team leader for the Assignment.

#### **1.5.1.1 Urban/Land Use planning specialist**

- Should be a local consultant with a degree from a recognized university or a tertiary level institute in urban planning or land use planning.
- Should have at least 5 years local experience in the field of urban/land use planning in Maldives.

- Should have excellent interpersonal skills and demonstrated ability to work in a team environment, projects and/or related consultancy service to the Government or other organizations.
- Knowledge and experience of both legal (Land Use Planning related) and socioeconomic context of the Maldives and its islands are also desirable for the qualification for the Urban/Land use planning specialist.

#### **1.5.1.2 The Environmental specialist**

- Should also be a local consultant with an internationally recognized degree in Environmental science or related.
- Should have at least 5 years local experience. Topographic survey and land use plan
  - Knowledge and experience in environmental planning in the Maldivian context is also desirable for the qualification.

#### **1.5.1.3 The Social/cultural Specialist**

- Should be a local consultant with an internationally recognized degree in Sociology or related field.
- Should have at least 5 years local experience.
  - Knowledge and experience in social planning assignments in the Maldivian context is also desirable for the qualification.

### **1.5.2 Survey Team**

Accurate and reliable base maps are mandatory to develop land use plan hence it necessary to ensure the team behind this important work is carried out by qualified professionals. The composition of the team should include but not limited to specialist skills at an appropriate level and experience of surveying. The survey team should at least consist of; A survey team should consist of at least a

1. Chief Surveyor,
2. Surveyor and,
3. Two assistant surveyors.

The Chief Surveyor can be common to more than one package since maximum number of packages a single consultant will be awarded is two. Chief Surveyor will also be the designated Team leader for the Assignment.

#### **1.5.2.1 Chief Surveyor**

- Should have a degree in Surveying accredited by the Maldives Qualification Authority (MQA). Geomatic or Spatial Sciences Degrees will be accepted if more than half of the total number of modules of the course is considered as surveying modules.
- Should be registered as a surveying practitioner at Maldives Land and Survey Authority (MLSA), Ministry of National Planning, Housing & Infrastructure.
- Minimum 5 year experience in surveying works both in field and office works. Topographic survey and land use plan
- Must be in a position to travel to the job site on demand.
- Should have excellent interpersonal skills
- Demonstrate ability to work in a team environment, projects and/or related consultancy service to the Government of Maldives or other organizations
- Knowledge and experience of both legal (Land Use Planning related) and socioeconomic context of the Maldives and its islands are also desirable

#### **1.5.2.2 Surveyor**

- Should be registered as a surveying practitioner at Maldives Land and Survey Authority (MLSA), Ministry of National Planning, Housing & Infrastructure.
- Minimum 2 years work experience after registration.
- Must be able to work on the field for the extent of the field works of the project.

### **1.5.2.3 Assistant Surveyor**

- A/Level (English, Mathematics and Physics) with 1 year work experience under the supervision of a registered surveyor or;
- O/Level (English, Mathematics) with 2 years' work experience under the supervision of a registered surveyor and;
- Fair understanding of surveying technology and AutoCAD programs.
- Must be able to work on the field for the extent of the field works of the project.

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### **1.6 EXPERIENCE OF THE FIRM**

To be eligible for this assignment, the Consultant must have successfully/substantially completed at least 02 Survey projects in the last 10 Years.

### **1.7 EQUIPMENT, LOGISTICS AND FACILITIES**

The Consultants shall establish and maintain a site office at project site(s) and ensure that the staffs are adequately supported and equipped in order to carry out their obligations under the contract. The Consultant shall meet the full costs for the supply of the teams including all travels, remuneration, insurance, emergency medical aid, facilities and all else necessary for the competent operation of their teams.

The survey team shall use safety equipment such as appropriate clothing and procedures to personal to undertake the work safe and safety for others.

The Survey team and the Land Use Plan team shall adopt appropriate quality management procedures to ensure that the information and material produced and supplied shall comply with the specifications and fitness for the purpose in the quality, completeness, standard of presentation and timely delivery.

### **1.7 THE PROPOSAL**

Interested parties are invited to submit Technical Proposal and a Financial Proposal, to provide the services as per the Terms of Reference. The LGA reserves the right to accept or reject any proposal and to terminate the tendering process without awarding a contract. The parties should be aware that it is unlikely that the LGA will be in a position to go forward with any proposals that fails to meet the statutory and essential requirements set out in these terms of reference. The proposals must remain valid up to 90 days after the submission date. The proposal shall indicate the Parties' understanding of the Project. All proposals in response to Terms of Reference should include the following components:

#### **Organization and Staffing (Experience with respect to specific aspects of the assignment)**

A signed CV of the proposed members should be submitted together with the proposal. Composition of the work team, the Team Leader and experience of each team member on similar projects should be included in the proposal. An organization chart with the names of key expert responsible and the proposed technical and

support staff, who will be assigned to the project should also be presented in the proposal.

The team members as identified in the proposal shall be fully available to the project for its duration. The LGA reserves the right to terminate the contract if the Party's core team (Urban/Land use planning specialist, Environmental specialist, Social/cultural Specialist, Chief Surveyor, Surveyor and Assistant Surveyors) requires removal or substitution at a later stage, except under unforeseen circumstances, which also will require LGA's written approval before the change.

In the event of a joint venture, partnership, or contract with other firms, provide a contractual agreement signed between the parties, briefly outlining of the responsibilities of the parties involved.

### **Technical Approach, Methodology and Work plan**

In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the outputs required, and the degree of detail of such output. You should highlight the problems being addressed and their importance and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach. Documents validating work experience of staff should be signed by the relevant.

Projected schedule or work plan for completing the Scope of Work, including an outline of the process that will be used for;

- a. Reviewing the current situation, relevant documents and information gathering with regard to topographic surveying and land use planning
- b. Consultation with relevant government and local authorities and other relevant institutions in addition to local council and the Ministry of National Planning, Housing and Infrastructure. Topographic survey and land use plan
- c. Formulation of the Planning Strategies and Land Use Plans with the consultation of all relevant agencies and stakeholders.

The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate into a feasible working plan.

### **Key professional staff qualification and competence**

Proposed teams (Survey and Land Use Plan) should include the key professional staff mentioned in Section 7. The failure to include these staff will eventuate in disqualification of the proposal. Proof of professional qualification (attested and accredited certificates by the Maldives Qualifications Authority) and signed CVs should be included in the proposal. Documents verifying work experiences of staff should be signed by relevant and appropriate personnel and must embody the official stamp/seal of the institution.

## **1.8 PAYMENT**

Payments will be in accordance with the schedule specified below;

15% On signing the Contract

30% On submitting the Planning Strategies for the selected package/packages

30% On presenting the Draft Land Use plans for the selected package/packages

25% On submission of the Final Land Use plans and Planning Report The interested Party is expected to include in the proposal a lump sum fee for carrying out the Assignments for each package separately, along with a financial proposal containing breakdowns of the lump sum fee. The interested Party should identify all the costs which will be incurred in carrying out assignment. If the interested Party feels the need to carry out the work in separate stages, the key stages involved and the timeline related to key stages needs to be defined. The price or prices proposed should be stated both in writing and in figure, and any proposal not so stated may be rejected.

## **1.9 REPORTING REQUIREMENTS**

Topographic survey and land use plan The consultants shall complete the following deliverables and submit the following reports;

# Deliverable Submission Deadline  
1 Weekly progress reports At the end of every week, after the contractor is mobilized on site  
2 Monthly Progress reports 10th of the following Month  
3 Quarterly inspection Report At the end of each quarter of the Defects Liability Period.  
4 Testing and Commissioning Report At the end of testing and commissioning of the respective project  
5 Final Project Completion Report At the end of Defects Liability Period.

## **1.10 DURATION OF THE ASSIGNMENT**

It is expected that a period of 2-3 months will be required to complete a single package.

Annex 1

### **OBJECTIVE**

The objective of the Topographic surveys is to prepare topographic maps for the preparation of Land use plans for the selected islands in the Maldives.

### **SPECIFIC RESPONSIBILITIES**

The surveyors must survey and map the following:

- a. The limits of the island (i.e. the High water line)
  - if reclamation has been carried out, the survey should identify the old island boundary (old High water line) and new island boundary (new High water line)
  - erosion line any area prone to erosion
- b. Limits of vegetation line (Heylhi fah)

- c. Limits of forest (va'a), including coconut groves, isolated trees of significance etc
- d. Limits of island waters, including inland lakes, ponds, mangrove, and swampy ground etc
- e. Limits of agricultural land within the island and if divided into individual areas should identify boundaries of each area
- f. Limits of open space, including parks, sports grounds, reclaimed areas, cemeteries etc
- g. The boundaries of all the plots, with specific use should be identified:
  - any residential plots (block level demarcation is sufficient)
  - any public buildings (e.g. schools, island office, mosques etc)
  - any utilities and municipal land uses (e.g. powerhouses, cemeteries, water plants etc)
  - any commercial and industrial buildings
- h. Roads, harbours, jetties, and all coastal defenses such as seawalls, etc
- i. All other permanent structures
- j. The lagoon and inner reef line

Existing maps are very likely to be non-georeferenced and many of the islands that have the existing maps may not have PSM installed. The surveyor should ensure all islands have PSM's established as per the control survey guideline of MLSA, which will be available on [www.mlsa.gov.mv](http://www.mlsa.gov.mv) website's download section. All features of the maps whether existing or new must be referenced to the PSM.

## **EQUIPMENT**

The survey should be carried out using calibrated and well-maintained equipment only. The validity of the calibration certificate of the equipment should last until the end of survey period.

## **ACCURACY OF TOPOGRAPHIC SURVEY**

The relative accuracy of natural features shall not exceed  $\pm 0.5\text{m}$  The relative accuracy of man-made structures shall not exceed  $\pm 0.030\text{m}$  .

## **OUTPUTS**

**Digital Data** The Surveyor shall supply surveyed maps in AutoCAD DWG format (version 2014 or less), also all the Maps should be combined to one .pdf file. The digital raw files from the survey also should be submitted for the review. Final processed data in .csv file format (Point ID, Easting, Northing, and Description).

The results of any analyses, tests and audits carried out shall be supplied as part of the survey report.

All the Maps shall include

- Grid Information (grid intervals at 50m)
- Survey date and time and shorelines surveyed date
- Administrative information (as in [www.onemap.mv](http://www.onemap.mv)): Atoll, island code, island name
- Name of the chief surveyor, surveyor registration number.
- All the Maps should be in A3 or larger paper size.

- Control Network Map shall include bearing and distance to each control station.
- An Index Map (This map should fit in one A3 paper)
- Survey Maps in 1:1000 scale with Grid lines and if tiled with joint lines.
- CAD Layer naming as per CAD standards provided by MLSA.

### **Deliverables**

The Surveyor shall supply following information, data and deliverables after undertaking the survey for approval.

- 2 sets of printed Survey Reports with Maps and completed PSM information forms.
- 2 CD-ROM with Digital AutoCAD .dwg, .pdf files and RAW data

