

## **Terms of Reference**

**Program/Project Title:** Preparation of Tshongdue-Core Local Area Plan (LAP), Paro

**Date:** December 09, 2024

### **1. Background:**

#### **Need for Tshongdue-Core LAP (Tshongdue)**

Paro is about 55 km away from the capital city of Thimphu and is one of the most picturesque places in the western region of Bhutan. It is one of the widest valleys at an altitude of 2250 m above sea level. It is bordered by Thimphu in the east, Haa in the west, and Chukha Dzongkhag in the south. The Dzongkhag has 10 Gewogs and 50 Chiwogs with an area of 1293 square kilometers.

It is covered by fertile rice fields, complimented by many religious sites and elegant, traditional buildings that dot the valley and surrounding hills. The country's first and only international airport is also located in Paro.

Apart from being one of the most beautiful valleys in the country, Paro is also rich in agricultural produce. It has the highest yield of paddy production in Bhutan, with an average yield of 2147 kg/acre in a cultivated area of 3950 acres (Agriculture Statistics, 2012 and 2013). Consequently, agriculture and tourism are the two main drivers of the economy for the Dzongkhag. Owing to the growing economy and given Paro's proximity to the capital city, the Dzongkhag is growing at a rapid pace, leading to many socio-economic changes, due to which there are a large number of luxurious high-end tourist resorts.

The Paro Valley Development Plan (PVDP) was prepared in the year 2017 with the vision to preserve Paro Valley as an image of Bhutan's cultural landscape. The PVDP aims to integrate urban growth with the natural landscape, ensuring sustainable development and efficient resource use. However, without a Local Area Plan (LAP), implementation faces challenges, especially in areas that are in close proximity to Tshongdue, where rapid development and land fragmentation threaten the PVDP's goals.

#### **Background of Tshongdue-Core (Tshongdue)**

The Tshongdue- Local Area Plan (LAP) will extend from Geptey in the north to Taju in the south, covering an area of 4.037 sq km. This region includes key establishments such as Paro Hospital, schools, corporate offices, residential buildings, and various institutions. The primary reason for developing the LAP is the significant, unregulated development that has occurred in the vicinity of Tshongdue over the past few decades. It has become essential to manage and guide growth in areas lacking a proper plan.

The proposed LAP will be aligned with the Paro Valley Development Plan (PVDP) and the Thimphu-Paro Regional Strategy (TPRS), offering a comprehensive framework for land use, infrastructure, public spaces, and protected areas. By providing a structured approach, the LAP will help prevent haphazard development and ensure sustainable growth in the valley.

It is important to note that the total area of 4.037 sq km for the plan may slightly vary depending on ground realities, especially in cases where small settlements need to be incorporated for a more integrated planning approach.

## **2. Objectives:**

The objective of this TOR is to hire consultancy services for the preparation of a detailed Tshongdue-Core Local Area Plan, Paro.

## **3. Scope of Work:**

The planning boundary stretches from Geptey in the north till Taju in the south, with an area of 4.037 sq.km. The Department of Human Settlement, MoIT hereafter referred as "**Client**" shall be contacted for clarification (if any) on the boundary.

The planning area is approximately 5.5 sq. km. The Department of Human Settlement (DHS), hereafter referred to as the "Client," shall be contacted for any boundary clarifications. At the outset, the Consultant(s) shall discuss the requirements outlined in this ToR, including expectations and potential implementation constraints, with the Client. The outcome of these discussions will form the basis for preparing a Local Area Plan. The consultants will develop a work plan, subject to the Client review and approval. Any changes to the approved work plan require prior Client approval and justification.

### **Preparation of Local Area Plan for Tshongdue\_Extended**

The LAP area will be approximately 5.5 sq. km in area, with boundaries defined by clearly identifiable natural or man-made features. The detailed scope of work for this component must include, but not limited to, the following:

#### **1. Study of Existing Scenario**

- a. Site visits to Paro for proper understanding of the site, its boundary and other features that would have planning implications. The consultants will carry out their own analysis of the area and make recommendations within the planning boundary, if necessary.
- b. Detailed study of the existing scenario which shall include but not limited to:
  - Existing scenario: climate & vegetation, topography & land features, existing land use pattern, existing land ownership pattern.
  - Existing amenities & facilities: road & circulation network, institutional establishment & offices, heritage, religious structures & sacred sites, existing housing.
  - Existing utilities & services: drinking water supply & distribution, storm water drainage system, sewerage & solid waste disposal system, electricity & telecommunication services.
  - Existing irrigation channels and Chhuzhing analysis
  - Analytical study: slope, aspect, contour and hazard analysis (inclusive of the flood and landslide hazard).
  - Land to build form relationship
  - Vital building elements
  - Building height
  - Traditional Bhutanese Architecture
  - Significant cultural landscape areas
  - Study of all the relevant plans, policies, rules and regulations applicable to the LAP.
- c. Demographic studies and planning standards
  - Demographic studies & carrying capacity
  - Existing population studies
  - Population projection
- d. Socio-economic studies

- Economic bases of the proposed plan
- Major on-going and proposed projects
- Potential for industrial, institutional or other developments and establishments

## 1. Proposal for action

**a) Alignment with Thimphu-Paro Regional Strategy, Thimphu-Paro Prospectus and Thimphu-Paro Economic Strategy and CNDP 2030 and other relevant documents:** This plan will align with the proposed strategies and directions outlined in the Thimphu-Paro Regional Strategy.

**b) Land Use Rationalisation:** Assess existing geotechnical studies and align land use with the Thimphu-Paro Regional Strategy (TPRS) and Paro Valley Development Plan (PVDP). Rationalise the PVDP's land use, including protection zones such as buffers and forest/environmental designations. Propose a land use plan based on density distribution and carrying capacity analysis.

**c) Proposed Infrastructure and Urban Services Plans:** Assess the following based on projected population, demand, capacity, and propose a distribution network plan:

1. Water supply, Wastewater and stormwater Drainage networks
2. Firefighting facilities
3. Solid waste collection and disposal system
4. Utilities network (electricity, telecom, TV cables, etc)
5. Street lighting and underground utilities corridor
6. Housing and shelter systems

**d) Preliminary Assessment of Public Infrastructure and Public Amenities Requirements:** Assess land resource requirements for public infrastructure based on existing pressures and proposed carrying capacity as well as infrastructural proposals in the TPRS and PVDP

**e) Establishment of Land Pooling Contribution Ratio:** Determine the land pooling contribution ratio based on public infrastructure and amenity requirements.

**f) Plot Reconfiguration Plans:** Develop a plot reconfiguration plan once the land pooling contribution ratio is agreed upon incorporating major infrastructure networks and public facilities/amenities. The Plot Reconfiguration Plan should be prepared based on the following principles:

1. The reconfigured plots need to be replotted based on the principle of correspondences (meaning that the reconfigured plots should be located as close to the original location as possible and in similar topography and soil conditions)
2. The reconfigured plot should be buildable (Design of block dimensions and plot shapes should ensure the overall optimal efficiency and buildability of plots)
3. The future subdivision of bigger plots should be considered while replotting.
4. The reconfigured plots should have access (Road access should be provided to each reconfigured plot in the LAP. Wherever it is not feasible to provide road access due to steep terrain or other unavoidable circumstances, footpath access should be provided and adequate access should be provided for future subdivision.

**g) Detailed Circulation, Connectivity, and Mobility Plan:** Include new and upgraded roads and intersections, pedestrian networks, on- and off-street parking facilities, public transport systems (bus routes, taxis, stands, pullovers, and related facilities).

**h) Open Space and Green Infrastructure Plan:** Identify hierarchy of Open Spaces

within the LAP and proposed Open Spaces based on the required catchment sizes in the Spatial Planning Standards 2017 and on the principles of walkability and international best practices.

**i) Protections Plan:** Identify measures to mitigate hazards and protect assets in all protection zones, including permitted/prohibited development and uses. Proposed open spaces as buffers for disaster reduction where feasible. Climate change adaptation and disaster mitigation measures should be considered.

**j) Urban Design Guidelines:** Provide best practice urban design guidelines for Streets, Open Spaces and Public Realm.

**k) Investment and Implementation Strategy and Plan:** Outline activity sequencing, prioritisation, and phasing strategy and plan for implementation.

**l) Development Control Regulations (DCRs):** This document will contain detailed information on land use and building construction, procedures for building permits, and regulations on aspects such as plot coverage, maximum density, building height, etc., for different land use zones/precincts. The DCR should also include subdivision guidelines, minimum plot sizes for future subdivision, as well as compliance and enforcement clauses. The DCR will incorporate standards for street hierarchy and the public realm.

## **2. Urban Design**

Prepare detailed urban design for selected areas and/or elements through the analysis conducted in the LAP preparation. These should include key development areas and areas with proposed significant improvements (e.g., design for an existing street or river frontage, or design for infill developments within an established residential area etc). The design must include elements such as street sections, building height and massing, uses and frontages, design for public realm, design for movement and car parking. In addition, it must include detailed construction drawing and estimation for implementation.

## **4. Key Personnel and Qualifications**

The consultancy team shall have key personnel with the following minimum qualifications and experience:

- a. **One Team Leader:** Minimum qualification of a Bachelor's Degree in Urban and Regional Planning, Urban Development/Management, or Urban Design with at least 7 years of professional work experience.
- b. **Two Urban Designers/Urban Planners/Architects:** Minimum qualification of a Bachelor's degree in the field with at least five years of work experience.
- c. **One Civil Engineer:** Minimum qualification of a Bachelor's Degree in the field with a minimum of 3 years of work experience in Infrastructure and Utilities Development
- d. **Transport Planner/Engineer:** Minimum qualification of a Bachelor's Degree in Transport Engineering or Planning with minimum of 3 years of work experience.

People with work experience in Bhutan or in similar regions and ability to communicate in Dzongkha will be considered an advantage.

### **Notes:**

- i. The Team Leader could be either an urban planner or an urban designer.*
- ii. There shall be at least an urban planner or urban designer in the consultant's team either as a team leader or as a member/s.*
- iii. All work experiences of key personnel shall be supported by proper work completion certificates and degree certificates with CVs signed by the key personnel and*

*countersigned by the employers.*

## **5. Duty Station:**

Thimphu/Paro

## **6. Roles and Responsibilities:**

### **a. Responsibilities of Dzongkhag Administration**

The Dzongkhag Administration shall assist the Consultant(s) within the project area and is responsible for:

- Facilitating meetings and data collection from relevant departments, government agencies, and stakeholders.
- Coordinating and arranging public consultation meetings and presentations to the public.
- Providing cadastral maps and land ownership details.
- Providing timely feedback on draft reports and plans submitted by the Consultants.

### **b. Responsibilities of DHS**

The Department of Human Settlements shall provide the following data related to the LAP:

- Topographic survey.
- Report on geo-tech studies within the planning area.
- Land data and tentative planning boundary
- Provide timely feedback on the draft reports and plans submitted by the Consultants.
- Coordinate presentations and meetings convened at the DHS and Ministry.

### **c. Responsibilities of Bhutan foundation**

**Please add if applicable la**

## **7. Duration:**

The project shall be completed within six (6) months from the date of signing the contract. The Consultants shall prepare their work plan in line with the tentative work plan under the monitoring section.

## **8. Methodology:**

The consultant shall be competent to apply the Land Pooling technique for the assignment, including plot reconfiguration and calculation of the contributing ratio.

## **9. Deliverables:**

The Consultants shall submit the following as per the work plan attached herewith:

- a) **Inception Report:** The inception report shall lay out all major aspects of the project, including:
  - i. Overall assignment objectives and strategies.
  - ii. Work plan outlining main activities and sub-activities, methodology and timeline schedule of activities.

- iii. List of key and supporting staff, their qualifications and experiences, tasks assigned and time allocations.
- iv. Reports (literature) reviewed and data referred.
- v. Programme of consultation meetings with stakeholder agencies.
- vi. Site visits, survey, data collection and analysis.
- vii. Frequency and schedule of public consultation meetings.
- viii. List of reports, drawings and maps to be produced.

b) **Concept Plan:** This document is a sketch of the Plan. It includes all components of the Plan but there are no dimensions and the decisions are based on notions and common wisdom. The idea of the Concept Plan is to introduce the exercise to all stakeholders involved. The related public discussions introduce concerned citizens to the plan operation and generate a preliminary discussion about the scope and components of the plan, including vision and goals for the LAP area. The Concept Plan will clearly state the issues and initial proposals related to land use, green infrastructure, transport network etc. around which further work will evolve and give a direction to the plan.

c) **Draft Local Area Plan:** The Draft Local Area Plan will be composed of written documents and maps, based on the analysis conducted as well as the comments and feedback from the workshops and consultations. It will have all the components, which are detailed out in this ToR. It will be presented at an appropriate and legible scale. Along with the draft LAP (including individual plot level plotting) it will be accompanied by a land use map, transport plan, green infrastructure plan and urban design guidelines. At this stage, a conceptual design composed of written documents and drawings, based on the analysis conducted and the comments and feedback from the consultations, is to be included.

d) **Final Draft Local Area Plan:** The final document, composed of written documents and maps, incorporates revisions and comments from the draft LAP and public consultation meetings. It covers all the components or aspects stated in this ToR. All submissions will be perfectly bound reports with soft copies of all files. The final document will be composed of written documents and drawings, with revisions and incorporation of comments received on the urban design concept and from public consultation and stakeholder meetings. The document will cover all the components or aspects stated in this ToR.

e) **Final LAP:** Incorporate the comments given by the Ministry and Dzongkhag during the approval stage. The final document will be composed of written documents and maps, with revisions and incorporation of comments received from the ministry.

All submissions will be in the form of perfectly bound reports with soft copies of all files.

#### f) **Consultation with Dzongkhag Administration, DHS, and Other Stakeholders**

The Consultant(s) must closely consult with the Dzongkhag Administration, DHS, and stakeholder agencies throughout the project. Any comments, advice, or instructions on study/design work must be strictly and promptly implemented by the Consultant(s). The nature and frequency of coordination and consultation meetings will be determined through discussions between the Consultant(s) and the Client. All the signed minutes and Record of Discussions are to be submitted to the Client.

#### g) **Public Consultations**

The Consultants shall organise a minimum of three public consultation meetings for the Local Area Plan. All the signed minutes and Record of Discussions are to be submitted to the Client. The public consultations are to be held during the following phases:

1. Before concept plan, the consultant must engage the public and stakeholders for visioning and constraints mapping

2. After draft LAP, conduct one on one public consultation to resolve the plot level issues
3. After Final draft LAP, third public consultation to present the changes and findings of the plan

## **10. Reporting:**

Reporting shall be as follows:

- Presentation of the inception report the client and workshop with Public
- Presentation of the Concept Plan
- Presentation of the Draft LAP and Concept Urban Design including one on one public consultation
- Presentation of the Final Draft LAP and Final Urban Design including public consultation
- Incorporation of feedbacks and comments from the Ministry with final report and plans

\* The consultant shall respond or report to the client as and when required.

Report Format:

- 6 colored hard copies (reports in A4 & maps in A3 color size (1:500 scale).
- Soft copy in MS Word and PDF format
- Soft copy of drawings/maps in AutoCAD and shape files or any other formats.
- PPT slides.

## **11. Budget and Resources:**

**The mode of payment shall be as follows:**

Sl. No	Stages of work	Amount Payable
<b>1</b>	Upon Submission of the Inception Report	10% of the contract amount
<b>2</b>	Upon Submission of Concept Plan	20% of the contract amount
<b>3</b>	Upon Submission Draft LAP and Concept Urban Design	30% of the contract amount
<b>4</b>	Upon Submission of Final Draft LAP and Final Urban Design	30% of the contract amount
<b>5</b>	Upon Ministry's approval	10% of the contract amount

\* The mobilization advance will not be paid and the amount will be for the five stages of works as stated above

## **12. Risk Management:**

The following are the risk identified and its mitigation measures:

1. **Timely Project Completion:** There could be delays in the final project report submission beyond the contract duration. To mitigate this, the consultant shall be liable for a penalty of 0.1% of the contract amount for everyday from the project deadline or approved extension deadline. Submission of the incomplete final report and re-submission shall be also considered a delay.
2. The consultant shall carry out any additional works if technically necessary for the holistic completion of the project due to unforeseen circumstances beyond the scope

of the works, at no extra cost to the client. It is also very important that the consultant considers the issues beyond LAP boundaries because the source for water supply and natural gullies/drainage systems originate from adjacent areas due to the topography which greatly impacts the LAP area.

3. All parts of the final project report submission shall be professionally up to the required standards and for any discrepancy observed after the contract period, requiring resolution due to gross negligence of the consultant shall be liable for penalty of 1% of the final payment for every 24 hours for the duration to complete resolving the discrepancy. The consultant shall be notified, in writing, of the discrepancy requiring resolution and the penalty shall be levied from the day of written notification.
4. The work completion certificate shall be issued only six months after the completion of the project. Instances of significant negligence, if any, will be reflected in the work completion certificate.
5. Gross Negligence: In case of gross negligence or willful misconduct on the part of the consultant or on the part of any person acting on behalf of the consultant, observed even after six months from the end of contract period, the consultant shall be responsible for rectifications in entirety at own cost within agreed reasonable time frame. However, the consultant failing to comply, shall be excluded from future participation in any of the tenders of the client for at least two years and the relevant authorities shall be accordingly informed. Instances of significant negligence, if any, will be reflected in the work completion certificate.
6. Consultant not fulfilling the requirements even after deducting all of the final payment (10%) retained with client, shall be also excluded from future participation in any of the tenders of the client for at least three years and the relevant authorities shall be accordingly informed.





#### **14. Ethical Considerations:**

Highlight any ethical considerations or guidelines that need to be followed during the project/assignment.

#### **15. Approval:**

This Terms of Reference is approved by:

**Name:**

**Position:**

**Date:**

Any amendments to this Terms of Reference must be approved by the relevant authority and documented accordingly.

#### **16. Contact Information:**

For any inquiries or clarification, please contact:

Name: Ms. Kinley Wangmo

Designation: Senior Urban Planner

Organisation: Department of Human Settlement, MoIT

Telephone # 02 338620/02 335799

Email: kinleyw@moit.gov.bt

This Terms of Reference serves as a guide for all parties involved in the project/assignment and should be referred to throughout its duration.