# STATE OF CONSERVATION REPORT

(in compliance with Paragraph 169 of the *Operational Guidelines*) Town of Luang Prabang (Lao People's Democratic Republic) (C 479bis)

January 2024

# 1. Executive Summary of the report

In accordance with the Decision **45 COM 7B.43** the Lao People's Democratic Republic provides this State of Conservation Report for the Town of Luang Prabang World Heritage Property.

This report updates the Committee, in line with the provisions of paragraph 172 of the Operational Guidelines, of the developments that may impact the Outstanding Universal Value of the World Heritage Property, sinch the last report which was submitted to the World Heritage Centre in January 2022.

The State Party notes the concerns raised in the advisory bodies' technical reviews, and the Committee's decision at the 45<sup>th</sup> session of the World Heritage Committee, 45 COM 7B.43 (Riyadh 2023).

Specifically, in response to the Committee's decision, 45 COM 7B.43, this State of Conservation Report provides updated information on strategic planning projects for Luang Prabang, namely the *Urban Environment Improvement Investment Project*, and the *Luang Prabang Smart and Integrated Urban Strategy*.

The report also outlines the updates to the Management Plan (PSMV) for the World Heritage Property as well as details on restoration work carried out for the Property's ponds and wetlands.

The report provides further requested information on developments in the Property, including the Nam Khan Bridge reconstruction project, Nam Kahm River protection works and other restoration projects. The report also provides information on a number of other potential development projects in the Buffer Zone of the World Heritage Property.

An update on the proposed Lunag Prabang Hydroelectric Power Project is also provided.

The Report reflects the State Party's continuing efforts to safeguard and conserve the Outstanding Universal Value of the Town of Luang Prabang World Heritage Property, and their continued adherence to the guidance and requests set out by the Committee.

The report is structured according to the required format. The text of the Committee decision is given first, in italics. The response of the state party follows and is not indented or italicised.

# 2. Response to the Decision of the World Heritage Committee

### Decision: 45 COM 7B.43

The World Heritage Committee,

- 1. <u>Having examined</u> Document WHC/23/45.COM/7B,
- 2. <u>Recalling</u> Decision 44 COM 7B.32 adopted at its extended 44th session (Fuzhou/online, 2021),
- 3. <u>Acknowledges</u> the State Party's efforts to implement activities for preservation, education and monitoring, but <u>reiterates its request</u> to the State Party to submit the Infrastructure Development Plan for review by the Advisory Bodies prior to its final approval and implementation;

The Government of Laos continues to support and drive measures to conserve the Outstanding Universal Value of the World Heritage Site, and to support the social and economic wellbeing of the communities in and around the WHS. In this context, and in light of the above request, the following two initiatives are highlighted for consideration:

### **Urban Environment Improvement Investment Project**

The GoL has recently secured funding from the Asian Development Bank (ADB) for the Urban Environment Improvement Investment Project, which was approved in April 2023 (see summary in Appendix 1). The project has not yet commenced on site, and detailed design work remains to be undertaken.

The aim of the project is to support sustainable, inclusive, and resilient urban development in Luang Prabang, both within and outside the WHS. The proposed project consists of multisector investments which aim to:

- (i) improve the quality and coverage of urban infrastructure and services;
- (ii) strengthen institutions and capacity to foster climate and disaster resilient development pathways;
- (iii) promote inclusive and gender-responsive urban planning;
- (iv) enhance women's leadership and economic empowerment;

The project will bring quality of life infrastructure benefits to the WHS, as well as focusing on improving its overall aesthetic with the removal of foreign objects, such as cables, which challenge its visual integrity. Key elements of the project include:

- A women's leadership and employment programme including business support and pilot childcare provision, and a women-led creative industries business development network.
- The first creative city strategy for Lao PDR.
- Capacity development efforts to support tariff reforms, strengthen financial management, facilitate private sector investment, and improve disaster preparedness and response.
- Citywide inclusive sanitation (CWIS) including upgrading of septic tanks, installation of grease traps, construction of treatment facilities.
- Improved septage and solid waste collection including provision of electric trucks, expansion of service areas and existing composting scheme.

• Urban streetscaping improvements including road surfacing and lighting improvements, undergrounding of utility lines and park rehabilitation.

The development of the project included the preparation of a Heritage Impact Assessment (HIA), which did not identify any significant negative impacts.

The procurement process for project management and the design team has begun. The State Party will keep the World Heritage Centre appraised of the project's development. Full details on the project can be found here: <u>https://www.adb.org/projects/53203-001/main</u>.

### Luang Prabang Smart and Integrated Urban Strategy

An additional step towards conserving the OUV of the WHS is the Luang Prabang Smart and Integrated Urban Strategy. The strategy, which was prepared by the provincial government with ASEAN Australia Smart Cities Trust Fund assistance, is focused around three pillars: Integrated Tourism and Heritage Destination, Clean and Safe Environment, and Sustainable Villages and a 15-Minute City.

The ADB defines a *smart city* as "a city where people and the environment come first, with urban liveability as the overarching objective, and smart technologies are used as meant to achieve these outcomes<sup>1</sup>".

The ADB's Smart City Analytical Framework sets out three key components of a smart city, which are:

- i) **High-level objectives,** which establish the city's desired greening, inclusive, competitiveness, and resilience outcomes.
- ii) **Intervention areas**, comprising urban subsectors where smart interventions could be introduced, including urban and land use planning, mobility, and the environment. Interventions are selected based on the city's priorities and needs.
- iii) **Enabling factors**, which refer to the underlying factors influencing successful smart city implementation. These include policy and governance structures, digital skills and capabilities, funding models, and interagency planning and coordination.

Under the Integrated Tourism and Heritage Destination pillar, Smart City projects include electronic ticketing systems, real-time monitoring, and heritage impact assessments to sustainably manage tourist attractions. The Clean and Safe Environment pillar addresses infrastructure and services like smart septic tank systems, pollutant traps, and electric waste collection vehicles to enhance urban living.

The Sustainable Villages and 15-Minute City pillar aims to transform urban management and transport systems, emphasising community participation and reducing congestion. Initiatives include self-sustaining urban villages, pedestrianisation, traffic simulation, and smart shuttle services. The strategy adopts an integrated spatial planning approach, considering heritage, tourism, and sustainability, guided by a comprehensive geographic information system.

Implementation will be overseen by a steering committee chaired by the provincial governor, with working groups dedicated to each pillar. The State Party will continue to provide the World Heritage Centre with updates on the strategy's progress.

<sup>&</sup>lt;sup>1</sup> ADB. 2021. Creating Livable Asian Cities. Manila. https://www.adb.org/publications/creating-livable-asiancities

Further details can be found at <u>https://events.development.asia/materials/20231206/luang-prabang-</u><u>smart-and-integrated-urban-strategy-report-series.</u>

The executive summary is in Appendix 11.

- 4. Acknowledges the findings and recommendations of the 2022 joint World Heritage Centre/ICOMOS Reactive Monitoring mission to the property, and the continuing efforts by the State Party to address those findings and invites the State Party to continue implementing all mission recommendations, and in particular to:
  - a) Address the preservation of attributes that support the Outstanding Universal Value (OUV) of the property by:
    - (i) Affording priority to the 142 remaining buildings, especially those entirely constructed of wood, as part of a contingency plan for cases of advance decay, including possible public allocations,

Over the course of the last year the World Heritage Management Division (formerly the World Heritage Office) in Luang Prabang has undertaken a series of surveys across the World Heritage Site, updating the management information relating to the WHS and the GIS data held about the site. This has included completing condition assessments for all identified buildings, the results of which are enclosed in Appendix 2. In summary, there are 142 outstanding buildings in the conservation list that have not yet been restored (including civil and religious buildings). Among them, 110 are in a moderate state of deterioration, while 32 are severely deteriorated.

Most of these buildings are privately owned. The World Heritage Management Division has engaged with owners, when ownership information is available, regarding conservation works and needs for these buildings. The World Heritage Management Division continues to provide professional advice and guidance to owners seeking to conserve and safeguard their privately owned buildings. This is a priority for the World Heritage Management Division and a key aspect of their remit.

The World Heritage Management Division continues to seek sources of government and foreign support. The World Heritage Management Division intends to develop a programme of participatory action for youth, educational institutions, and private sector groups to support the restoration of these buildings on a case-by-case basis. The State Party will ensure that the World Heritage Centre is kept up to date throughout this process.

# (ii) Ensuring access to affordable materials for construction and repair, as well as traditional conservation skills to sustain the authenticity of the property,

One of the key roles of the World Heritage Management Division in Luang Prabang is to engage with owners of historic properties and to provide professional advice and guidance to those seeking to conserve and safeguard their privately owned buildings. The World Heritage Management Division also work with and engage with monasteries across the WHS, supporting their ongoing conservation projects. This includes advising on the selection of appropriate materials and the use of appropriate building techniques. Wherever possible the World Heritage Management Division support owners and contractors with identifying sources for such materials.

Last year the World Heritage Management Division provided advice to 119 projects in the WHS. This included:

- 26 Houses
- 23 Restaurants
- 18 Guesthouses
- 8 Hotels
- 6 Religious buildings
- 32 Shops

In relation to traditional conservation skills, the Wat Siang Muan, Wat Pha O, and College of Fine Arts provide training in the design and decoration of new temples, carving of new statues, incorporation of appropriate decorative elements into institutional buildings, and support for any other commemorative projects. Of the active Wats in the city centre, the Wat Sop Sickharam is notable for providing training in practical skills and craft relating to the maintenance and decoration of historic Wats and the creation of assorted artefacts. Overall, these centres are particularly focused on conservation works relating to religious heritage in the monasteries.

The State Party recognises the importance of ensuring access to affordable materials for construction and repair, as well as traditional conservation skills to sustain the authenticity of properties and will continue to support access to these skills and materials.

# (iii) Pursuing the rehabilitation programme for wetlands and ponds, highly valued ecological attributes of OUV,

Since 2020, improvement projects have been carried out at 7 ponds in World Heritage Areas. Between 2020 and 2022, the World Heritage Management Division carried out improvements at 5 ponds. Further improvements were carried out at 2 additional ponds by the Urban Development and Service Office in 2023.

The type of work carried out has included:

- Removing build-up of mud
- Installing stones around certain ponds
- Creating a drainage system
- Installing septic tanks
- Releasing fish
- Fencing the ponds

The State Party will continue to pursue the rehabilitation and protection of the ecological attributes of OUV and will keep the World Heritage Centre informed of the status of the wetlands and ponds, and rehabilitation programmes.

Details, including images of the two ponds improved in 2020, can be found in Appendix 3.

# *(iv)* Considering public outreach projects to valorise intangible aspects that sustain the Town of Luang Prabang's urban fabric as a living entity,

The World Heritage Management Division has identified 14 intangible elements that are 'at risk' and endangered and is working to protect and promote them. The World Heritage Management Division has begun the process of identifying opportunities for their support and promotion. A website has been developed to share information with the public and to encourage their engagement and education. The website can be found at: https://sites.google.com/view/moladoklp-ich.

Recent anthropological surveys and investigations to inform the Lunag Prabang Hydroelectric Power Project Heritage Impact Assessment (HIA) included extensive engagement with local communities, heads of religious organisations in the city and key ritual owners and practitioners. The reports from that activity are contained in the HIA, which has been provided separately to the World Heritage Centre. The Executive Summary of the HIA can be found in Appendix 13.

Additionally, the World Heritage Management Division engaged Dr Wisa Wisesjindawat-Fink (Michigan State University) to undertake an assessment of the relationship between the Mekong / Nam Khan rivers and the WHS. The environmental data gathered for the project included: time series of water level, the depth discharge, sediment, water quality, land use/cover changes, river attributes, indicators and more. The social data was gathered though the interview of 46 villagers across 7 villages, and subsequent cultural mapping. The final report on the project is awaited. Appendix 4 contains further details on the study.

The State Party recognises the importance of the intangible aspects of Luang Prabang's heritage and continues to work towards their protection through public outreach projects.

- b) Pursue its work updating the Luang Prabang Conservation Plan (PSMV), with technical and financial support by various partners by:
  - (i) Including the appropriate sub-categories such as 'Civil Buildings' and regularly updating GIS inventories of attributes of OUV and adding the contour levels of the embankments, water levels and depth soundings of the Mekong and Nam Khan Rivers, to enable chronological tracking,

The World Heritage Management Division has updated the PSMV with new GIS & CAD datasets to support management and development planning. A review of the WHS, identifying buildings that contribute to OUV and updating records from 2012, was conducted as part of this process. This involved comparative analysis to inform understanding of trends and changes. This work included the use of various data sources such as satellite data, aerial imagery, field surveys, and other data in order to reflect current conservation status and changes to the heritage attributes.

The result is a comprehensive update within the World Heritage property, comprising zones ZPP-Ua and ZPPUb, including ZPP-M and ZPP-N in the updated PSMV. Within the architectural components, the typological classifications proposed by the Mission including traditional and modern architecture have been included.

As set out above, the World Heritage Management Division engaged Dr Wisa Wisesjindawat-Fink (Michigan State University) to undertake an assessment of the relationship between the Mekong / Nam Khan rivers and the WHS. Alongside this, the World Heritage Management Division and GoL are engaged with the developer for the Luang Prabang Hydroelectric Power Project to formalise

arrangements to share data relating to water levels and depth soundings of the Mekong and Nam Khan Rivers.

River surveys have also been undertaken by the developer of the downstream Xayaburi Hydroelectric Power Project. It is anticipated that this data, along with future data collected to support the implementation of the Environmental Management Plan for the Luang Prabang Hydroelectric Power Project will be shared with the GoL and World Heritage Management Division to enable chronological tracking of river-bed profiles.

The State Party will continue to keep the World Heritage Centre up to date on future updates to the PSMV.

(ii) Elaborating policies as part of the PSMV to embrace all elements that support the property's OUV (built heritage, natural, environmental and intangible attributes), and referring to the Sustainable Development Goals (SGDs), and the 2011 UNESCO Recommendation on the Historic Urban Landscape,

As per the letter sent to UNESCO on October 11<sup>th</sup> of this year, the World Heritage Management Division has recently completed the process of updating, revising, and strengthening the PSMV to reflect changes in the macro-economic and social situation in Laos and the wider region, as well as new guidance published since 2012.

The update faced delays due to the pandemic, however, the process began in 2022 and continued through until completion in 2023, including a comprehensive survey and analysis of the property to evaluate the current state of conservation and changes observed over the past two decades.

Following discussion between the World Heritage Centre and the World Heritage Management Division, the following actions to review the property's OUV were agreed upon. The World Heritage Management Division and experts from Michigan State University surveyed and collected information about OUV along the Mekong and Khan rivers, especially the riverbank, the depth, water quality, sedimentation, changing river and the activities related to the river in the World Heritage Protection area by using GIS systems as a tool for monitoring. Inspection and evaluation for this activity was conducted between October-November 2023.

The PSMV includes extensive updates to heritage GIS and urban change analysis. The heritage GIS and database system was updated in order to facilitate tracking changes over time of attributes carrying Outstanding Universal Value of the World Heritage property, comprising architectural, urban, ecological and cultural aspects.

The updated PSMV was sent by letter to UNESCO on 11/11/2023 (No. 222/DICT) (a copy of letter can be found in Appendix 5). Further updates to the PSMV and any changes to the property's OUV will continue to be reported to the World Heritage Centre by the State Party.

# (iii) Reflecting on authenticity as it is applicable to the Asian context, including reference to the Nara Document on Authenticity and the Hoi An Protocols,

Authenticity, as understood in the context of the Nara Document on Authenticity and the Hoi An Protocols highlights the importance of preserving and presenting cultural heritage in a manner that respects the values, traditions, and identity of the communities involved. In this context the World Heritage Management Division is continuing to engage with communities within and around the site

to understand their relationship to it, and the value they place on all aspects of its tangible and intangible heritage including the customs and traditions associated with the site. This work is being informed by a range of activates including:

- Engagement with the Local Heritage Committee.
- Engagement with local stakeholders, property owners and businesses as part of the daily responsibilities of the World Heritage Management Division (who are based in the WHS).
- Engagement with communities through the recent Mekong / Nham Khan analysis (see above).
- Engagement with communities associated with the development of the Luang Prabang HPP HIA which included extensive anthropological analysis and survey (see above).
- Engagement with communities through the development of the Smart City project and the Urban Improvement Infrastructure Project.

All these avenues of engagement are enabling the World Heritage Management Division, and wider stakeholders, to better understand the values that local communities place on the WHS.

The principles inherent in the Nara Document on Authenticity and the Hoi An Protocols guided the updating of the PSMV to ensure that the approach to the conservation of heritage sites respects the values and identity of the communities they represent.

The PSMV seeks to ensure a balance between development and conservation reached through integrated approaches informed by community involvement, respect for cultural diversity and inclusive conservation practices.

- C) Address ongoing and future development initiatives to safeguard the full set of attributes of OUV through proactive planning efforts and a deeper understanding of the social, natural and cultural attributes of the property's OUV and their interconnection, and notably to:
  - (i) Prioritise the studies suggested by the 2019 Technical Review to inform the concept of future actions relating to the riverbank protection, and consider a hybrid system to suit different riverbank landscapes when applicable, in the interest of sustainable development,

Please see response to Item 6 below. This addresses the adoption of sensitive approaches to riverbank protection.

(ii) Consider alternative approaches to the proposed replacement of the Nam Khan River Bridge in light of the ICOMOS technical review, and the option proposed by the Reactive Monitoring mission of a like-for-like replacement,

The Nam Khan Bridge is one of several bridges within the WHS. A reconstruction project has been proposed for the bridge, with a Preliminary Survey Report prepared by the State Enterprise of Communication Construction (SECC) in September 2020. The existing bailey bridge cannot support vehicles and has structural integrity issues.

The proposed reconstruction, which is supported by a technical field inspection carried out in 2021, involves an arch bridge supported by steel beams and a runway surface of RCC concrete. There will be

no pier, with much of the load carried by a steel arch structure. The project aims to enhance traffic flow, cater to increased tourist numbers, and contribute to the economic growth of the city and nearby districts. The need for a topographical survey has been recognised and is part of the survey report.

Several architectural designs for the bridge have been proposed and can be found in Appendix 6. The ultimate architectural design will be informed by the relationship with the surrounding urban buildings and the problems that may affect the flight corridor. Moreover, the final selection will take into account the matters raised in the ICOMOS technical review, as well as the proposal by the Reactive Monitoring mission.

The project is at concept stage and a design has not received approval or funding. The State Party will continue to keep the World Heritage Centre appraised of the progress of the Nam Khan Bridge reconstruction project.

# (iii) Establish and apply Urban Design Guidelines to preserve streetscapes and materials to be used in future development projects in and around the inscribed and buffer zones;

The State Party continues to support efforts to establish and apply Urban Design Guidelines for development projects in and around the WHS and Buffer Zone. The State Party has taken a proactive stance towards the preservation of cultural heritage in the face of future development projects. The State Party will continue to do so, taking into consideration the comments and recommendations of the World Heritage Centre and advisory bodies.

5. Recommends the State Party to continue its efforts in the HIA for the Luang Prabang Hydropower Project (LPHPP) and other future and similar projects so that they pose no threat to the World Heritage properties, their associated values or their environmental setting and notes that previous studies and the Heritage Impact Assessments (HIAs) were submitted in November 2021, December 2022 and January 2023, respectively;

Independent consultants commissioned by the Ministry of Information, Culture and Tourism (MICT) have developed a full HIA for the Luang Prabang Hydropower Project (LPHPP) during 2023. This has been developed in accordance with 2022 UNESCO Guidance on Heritage Impact Assessment in a World Heritage Context.

The development of the full HIA has included:

- A Scoping Report completed at the end of April 2023 and issued to the GoL, MICT, the WHMD, and UNESCO for comment and review.
- An Interim HIA completed at the end of July 2023 and issued to the GoL, MICT, the WHMD, and UNESCO for comment and review.
- A Final HIA completed in January 2024 and issued to the GoL, MICT, the WHMD, and UNESCO.

The HIA has been prepared in full consultation with the World Heritage Management Division in Luang Prabang.

ICOMOS kindly provided comments on the Interim HIA, and these have been taken into account by the independent consultants in the preparation of the Final HIA.

Appendix 13 contains the Executive Summary of the final HIA, the full version has been provided to

UNESCO separately.

The HIA identified no significant impacts (negative, positive or cumulative) on the OUV of the WHS.

As indicated below, other current projects and initiatives in the WHS and Buffer Zone have also been subject to Heritage Impact Assessment (HIA). This will continue to apply for future projects and proposals.

6. <u>Also notes</u> that the State Party will further elaborate the proposed Mekong and Nam Khan Riverbank Protection project in accordance with the most-recent ICOMOS technical advice, and <u>encourages</u> the State Party to further explore bio-engineered solutions which will ensure protection against disasters as well as maintaining attributes which support the OUV of the property;

The works that are currently ongoing as part of the New Development Project in Luang Prabang riverbank protection works under the *Lao Southeast Asia Disaster Risk Management (Lao SEADRM) Project* differ in design to the emergency works undertaken in response to the 2016 flooding, that were commented on by ICOMOS in their Technical Review Report (TRR).

The current project design will retain the vegetation and gardens along the riverbank that contribute to Luang Prabang's OUV. The primary concern of the TRR related to the upper part of the protection works. However, as per the letter sent to the Secretariate by the Director General of the Heritage Department of the Ministry of Information, Culture and Tourism on May 5, 2023 (No. 323) (see Appendix 7), there are no gabions in the current designs produced by design consultant, ISAN. Furthermore, the construction of the upper part will be closely monitored and consultation with relevant authorities will be undertaken.

As per the letter, the proposed water gates which were also flagged as an issue in the TRR have been dropped from the design of the Lao SEADRM project. Bio-engineered solutions which will ensure protection against disasters as well as maintaining attributes which support the OUV of the property have been included in the project design through the provision of soil cover and seeding to the upper half of the embankment. Further response detail to the ICOMOS TRR by the World Bank Technical Team and Design Consultant ISAN Corporation has been provided as an attachment to the letter (No. 323) (See Appendix 7).

As per the letter, it can be confirmed that the proposals are currently being implemented in a manner that reflects the character and nature of the riverbanks, safeguards areas of tree cover and safeguards the farming / garden landscape of the riverbanks. The importance of the riverbanks has also been highlighted in the emerging Attributes of OUV. The State Party confirms that maintaining the attributes which support the OUV of the property has remained a key strategic focus of the protection works.

- 7. <u>Invites</u> the State Party to strengthen governance and coordination mechanisms relating to the management of the property by:
  - Elaborating an Integrated Tourism Management Plan, in line with the World Heritage Sustainable Tourism guidelines and the ICOMOS International Charter for Cultural Heritage and other relevant guidelines, based on a carrying capacity study, to inform the measures to regulate tourism-related activities and infrastructure development,

# to prioritise the actions, including those to ensure safety and security of visitors (e.g., Mount Phousi),

The State Party is pleased to report that the MICT has initiated the development of a comprehensive tourism management plan to effectively address shared concerns related to heritage and tourism management in Luang Prabang. This will be informed by the recently completed Luang Prabang Smart and Integrated Urban Strategy (see above) which provides an analysis of the current tourism situation and sets out a broad direction for its continued sustainable management.

The State Party will update the World Heritage Centre of future developments to the tourism management strategies in place in Luang Prabang alongside ensuring that the changes reflect the World Heritage Sustainable Tourism guidelines and the ICOMOS International Charter for Cultural Heritage.

b) Resuming the operationalisation of the Heritage Fund with the return of tourists and possible complementary financial support to assist necessary repair and maintenance works for the most significant traditional architecture,

National Law prevents the establishment of local funds, such as the Heritage Fund. Funding raised through measures such as levies and taxes must be provided to central government for equitable distribution.

c) Maintaining the former Luang Prabang World Heritage Office (LPWHO) under restructuring as the unified technical entity overlooking the various aspects of the management of the property with necessary human and financial reinforcement,

The MICT is the primary government body responsible for overseeing the Luang Prabang heritage, culture and tourism sectors, with responsibilities that intersect those of various entities, such as the Luang Prabang World Heritage Management Division, Department of Planning and Investment, Department of Commerce and Industry, DPWT, and the Mayor's Office.

The consolidation of the World Heritage Management Division into the DICT is aimed at improving coordination on tourism-heritage matters. Specifically, the Luang Prabang World Heritage Management Division is responsible for implementing and enforcing the PSMV.

# d) Strengthening the role of National and Provincial Committees for National Heritage to ensure the proactive and informed coordination for major development projects;

The State Party supports the role of National and Provincial Committees for National Heritage to ensure proactive and informed coordination for major development projects. The State Party is continuing to keep their role and involvement under review.

8. <u>Requests</u> the State Party to integrate the World Heritage Convention's principles within the broader context of territorial and developmental planning for World Heritage properties in Lao PDR, including for the properties' buffer zones and wider settings, and to widen the recognition of heritage-related impact assessments and of the obligations of States Parties to the Convention among national and international development stakeholders, to ensure

the coherence of the management framework;

This matter remains under consideration by the State Party.

9. Requests the State Party to submit to the World Heritage Centre, by **1 February 2024**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 46th session, considering that the urgent conservation needs of this property require a broad mobilization to preserve its Outstanding Universal Value.

This Report meets this request.

# 3. <u>Other current conservation issues identified by the State Party which may</u> have an impact on the property's Outstanding Universal Value

At the time of writing, there are no known conservation issues that might have an impact on the property's Outstanding Universal Value beyond those identified and addressed in other sections of this report.

# 4. In conformity with Paragraph 172 of the Operational Guidelines, describe any potential major restorations, alterations and/or new construction(s) intended within the property, the buffer zone(s) and/or corridors or other areas, where such developments may affect the Outstanding Universal Value of the property, including authenticity and integrity.

The State Party provides a brief overview of the following five projects, that meet the requirements of Paragraph 172 of the Operational Guidelines:

# 1. Riverside Tourism Development Project

Oceano Sole Co., Limited's Comprehensive Tourism Development Project in Naxay Village, Maungkham Village and Sanok Village, Chomphet District is located within the Buffer Zone, in an area designated for development. The project is currently in the feasibility assessment stage and the designs have not yet received final approval. The State Party will ensure that the World Heritage Centre is kept abreast of any future developments within the project and changes to project status.

The project is intended to be used for the development of international standard tourism destinations. The State Party mandates stringent measures for all investment projects with potential environmental, societal, or natural impacts, requiring the development and adherence to comprehensive environmental management and monitoring plans.

Project investors are required to submit land survey reports and an Environmental and Social Impact Assessment (ESIA) study, alongside two separate environmental assessments necessitated by the project. A full Heritage Impact Assessment (HIA) has not been undertaken but will be required prior to approval.

Further details on the development can be found in Appendix 8.

## 2. Hillside Tourism Accommodation Project

A medium scale tourism accommodation project, located in the Buffer Zone, west of the WH Property has been proposed by Infinity Tourism Company Limited. The development intends to create a natural and agricultural tourism destination that will ease accommodation pressure within the WHS. The project is currently in the concept stage and has not yet received approval. An ESIA including a HIA is in process.

Requirements for further environmental-social studies, information on the number of natural trees, heritage impacts, project design and activities in each zone as well as designing buildings at a height not exceeding 340 metres compared to sea level have been recognised.

A feasibility study looking at the possibility of expanding the footprint of the development concluded that the extension would not go ahead as per the results of a preliminary land survey. Final designs have not yet been confirmed. The State Party will ensure the World Heritage Centre is kept updated of any changes to the project status and design.

Further details on the development can be found in Appendix 9.

# 3. Mekong Bridge Project

A proposal for a new bridge over the Mekong in the WHS Buffer Zone has been assembled by STS Engineering Consultants Co., Ltd. and International Engineering Consultants Co., Ltd. Several interim studies, analysing the impacts of the possible project outcomes, have been conducted: Study of Traffic and Transportation, Alternatives and Appropriate Alternatives, Engineering Feasibility Study, Environmental Impact Assessment and Project Feasibility Study.

As part of the Alternative and Appropriate Alternative Study, several various design and route types for the proposed bridge and associated roads have been proposed and evaluated. A topographic survey, construction material survey, hydrology and drainage study and geotechnical investigation have been conducted as part of the Engineering Feasibility Study.

A scoping report has been approved by the Ministry of Natural Resources and Environment as part of the EIA. Possible impacts to the WHS have been appraised and are being addressed as part of the project planning. The World Heritage Centre will be kept up to date concerning the future development of the project by the State Party.

Further information on the project can be found in Appendix 10.

# 4. Mekong Footpath Project

This proposed landscaping project aims to improve the landscape of the Mekong River with the construction of walkways and facilities along the riverbank within the territory of the WHS. The Luang Prabang World Heritage Management Division has surveyed, designed and evaluated the project. The project objective is to create a beautiful landscape that can be used as a place to exercise, relax and enjoy the views of the river.

The scope of the project encompasses 8 villages, starting from Xienthong Village to Wat Thad Village, with a total length of 1800 metres, 12 stairs, 18 creek crossing bridges, 2 viewpoints (Xienthong Village and Hua Xieng Village) and 2 public parks (Wat Nong Village and Wat Thad Village).

The State Party will ensure that the World Heritage Centre will be notified when appropriate, concerning any changes to the project.

Further details on the project can be found in Appendix 12.

## 5. Airport Upgrade Project

An upgrade has been proposed to the existing airport in Luang Prabang, which is located approximately 4km from the city centre. The upgrade project is currently in the feasibility stage and pending approval, while undergoing impact assessments. Spearheaded by a Korean partnership, the project consists of several key facets aimed at improving the airport's functionality.

The plan includes a new taxiway, an improved terminal, and upgraded infrastructure. Designed to accommodate small jets like the C737/A320, the project aims to enhance airport capacity without expanding beyond its current boundaries.

The proposed upgrade to the Luang Prabang airport will not have a negative effect on the WHS and will open the city and Site to further tourism. The State Party will continue to monitor the proposal, and the World Heritage Centre will be informed of any changes going forward.

Overall, the State Party will continue to keep the World Heritage Centre updated in a timely fashion with any additional information relevant to the projects discussed above. The State Party is not aware of other potential schemes that have not already been notified to the World Heritage Centre.

# 5. Public access to the state of conservation report

[Note: this report will be uploaded for public access on the World Heritage Centre's State of conservation Information System (https://whc.unesco.org/en/soc). Should your State Party request that the full report should not be uploaded, only the 1-page executive summary provided in point (1.) above will be uploaded for public access].

The State Party is content for the full report to be uploaded to the World Heritage Centre's State of Conservation database.

# 6. Signature of the Authority

APPENDIX 1. PROJECT DESCRIPTION OF THE ADB URBAN ENVIRONMENT IMPROVEMENT INVESTMENT PROJECT.

# I. PROJECT DESCRIPTION

# A. Summary

1. The proposed project will support sustainable, inclusive, and resilient urban development in Luang Prabang, a city in the Greater Mekong Subregion (GMS) north-south economic corridor affected by environmental degradation, climate change, disasters, and diminishing livability. Integrated project investments will (i) improve the quality and coverage of urban infrastructure and services, (ii) strengthen institutions and capacity to foster climate and disaster-resilient development pathways, (iii) promote inclusive and gender-responsive urban management and tourism, and (iv) enhance women's leadership and economic empowerment. The project is expected to benefit 104,500 residents and 1.3 million annual visitors by 2031.

# B. Impact and Outcome

2. The project is aligned with the following impact: quality of life and sustainability of Luang Prabang City improved.<sup>1</sup> The project will have the following outcome: urban development in Luang Prabang City is sustainable, resilient, and inclusive. By 2031, 104,500 residents will benefit from policies, plans, and activities supporting climate-resilient and gender-responsive urban development.

# C. Outputs

3. The project has three outputs: (i) urban infrastructure improved, (ii) enabling environment for inclusive and resilient urban and tourism services strengthened; and (iii) women's leadership and employment enhanced.

4. **Output 1: Urban infrastructure improved.** This output will improve environmental conditions in Luang Prabang City by upgrading urban infrastructure and expanding access to sanitation services, reducing pollution, and increasing resilience to climate change. It includes the following subprojects:

5. **Subproject 1.1: Luang Prabang Solid Waste Management Improvement.** The subproject will: (i) convert the existing 17.1-hectare open dumpsite at KM8 into a semi-aerobic managed landfill (estimated 850,000 m<sup>3</sup> capacity) with proper septage and leachate treatment facilities that use passive solar and reed-bed technologies, gas management facilities, hazardous materials storage area and incinerator, improved access road and drainage, and other ancillary facilities/equipment needed for sustainable operations and maintenance; (ii) divert waste from the landfill by constructing new materials recovery and composting facilities and a waste picker storage and wash-up area; (iii) expanding municipal solid waste collection by increasing and modernizing the collection vehicle fleet of the Urban Services Office (USO) and (iv) improving containerization/pre-collection by supplying 13,000 household waste containers.

6. **Subproject 1.2: Citywide Sanitation Improvements.** The subproject will improve the containment, collection, and treatment of fecal sludge and gray water using a citywide inclusive sanitation (CWIS) approach that prioritizes sanitation Zone I and Zone II, with scope for including densely populated areas in Zone III (Figure 1). Activities include (i) improving on-site containment

<sup>&</sup>lt;sup>1</sup> Ministry of Planning and Investment. 2016. *Vision 2030 and Ten-year Socio-Economic Development Strategy (2016-2025)* Vientiane: Ministry of Planning and Investment.

by installing or upgrading approximately 1,000 septic tanks in Zone I and Zone II;<sup>2</sup> (ii) installing 600 grease traps to treat residential and commercial gray water; (iii) installing 20 decentralized treatment facilities (e.g., anaerobic baffled reactor) in institutions and other large public or private buildings (e.g., schools, government offices, hospitals); (iv) improving and expanding fecal sludge treatment capacity to approximately 40<sup>3</sup>/day; and (v) upgrading the USO collection fleet by providing four additional vacuum trucks and spare parts. A pilot will fit new septic tanks with sensors for real-time monitoring to alert property owners and USO when tanks need desludging.

7. The following eligibility criteria will guide household and public facility selection for the septic tank installation/upgrading program: (i) property owner agreement; (ii) beneficiary willingness to empty tank every 5 years; (iii) poor household including elderly, handicapped or chronically ill with no support, household headed by single woman, or public facility with inadequate funding; (iv) have a latrine already in use; (v) existing septic tank is deficient; (vi) sufficient land availability; (vii) unimpeded access for installation; (viii) no adverse impact on any permanent structures; and (ix) no adverse environmental or social impacts.

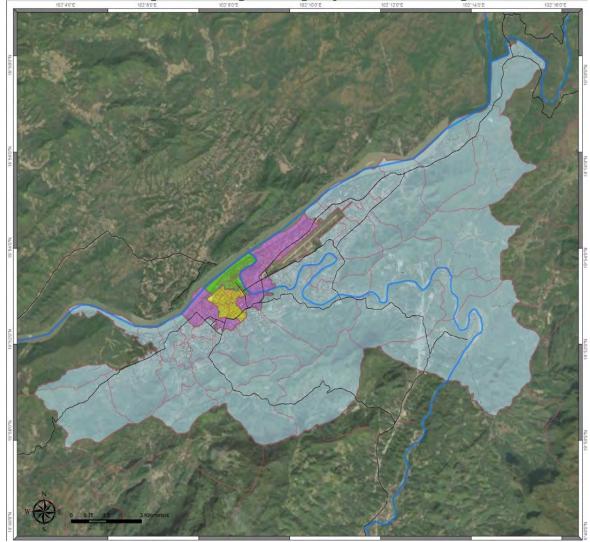


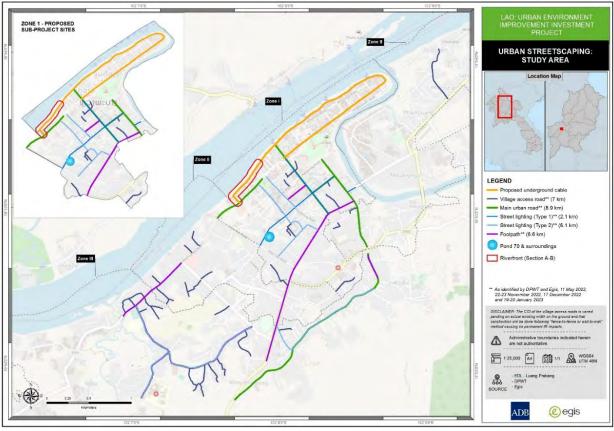
Figure 1: Luang Prabang City Sanitation Zoning

<sup>&</sup>lt;sup>2</sup> The project may decommission or replace dysfunctional septic tanks as required.

Source: Adapted from Luang Prabang USO 2013 Drainage and Sewerage System Master Plan.

8. **Subproject 1.3: Urban Roads, Drainage, Footpaths, Streetlights, Pond 70, and Riverside Park Rehabilitation.** The subproject will (i) rehabilitate about 9 (kilometer) km of main urban roads and 7 km of village access roads and side drains (carriageway width ranges from 4 meters [m] to 7 m) with concrete or asphalt concrete pavement (the road segments within the World Heritage property boundaries will be surfaced with asphalt, concrete-crushed stone, or brick pavers following Word Heritage Office-approved specifications), and lining them with native shade trees; (ii) rehabilitating footpaths along 8 km of selected road segments; (iii) installing energy-efficient streetlights with sensors along about 7 km of select road segments; (iii) Pond 70 cleaning, landscaping using nature-based solutions to buffer flooding and reduce heat-island effects, and footpath construction on public land surrounding the pond; and (v) rehabilitating the Mekong riverside park behind the provincial administration building, including landscaping and 1 km footpath with energy-efficient streetlights along the adjacent road. All side drains will incorporate smart gross pollutant traps where appropriate.

9. **Subproject 1.4: Utility Lines Undergrounding.** The subproject will underground about 3.0 km of 22.0 kilovolt (kV) and/or 0.4 kV power lines, telephone, and other overhead utility lines in the core heritage area to reduce the frequency of power outages and risk of electrocution and fire from windblown utility lines. The underground electric utility lines will facilitate buildout of an electric vehicle charging network, helping future-proof the road network for e-mobility.



#### Figure 2: Subproject 1.3 and 1.4 Locations

Source: Egis, 2023.

4

10. **Output 2: Enabling environment for inclusive and resilient urban and tourism services strengthened.** This output will: (i) prepare a climate-informed, gender-responsive and heritage-sensitive Luang Prabang urban master plan, and establish and build capacity to operate and maintain a geographic information system (GIS); (ii) prepare and implement a climate and gender-responsive urban services institutional strengthening plan including a solid waste management strategy, citywide inclusive sanitation strategy, USO institutional plan, disaster risk management training plan, and urban services and public tourist attraction operation and maintenance capacity development plan; and (iii) prepare and implement a creative city strategy and action plan to enable the city to join the UNESCO creative cities network, and establish a women-led creative industries innovation network, with business development and childcare services for eligible female entrepreneurs.

11. Activity 2.1: Prepare updated Luang Prabang urban master plan. This activity will prepare an integrated, climate-informed, gender-responsive, and heritage-sensitive urban master plan based on broad consultations with women and men, gender analysis, and other diagnostic studies. The plan will include an urban report, gender-responsive urban development guidelines, a land use plan based on sustainable urban planning principles, a transport network and mobility plan based on "15-minute city" principles, urban planning regulations, design guidelines and controls favoring women-friendly public parks and other urban spaces, and other required volumes following the Law on Urban Planning (2017). The master plan will integrate subsector considerations holistically in a single spatial framework.

12. Activity 2.2: Develop GIS, user manuals, gender-responsive urban development guidelines, and Luang Prabang city scale model. This activity will establish a GIS for the City of Luang Prabang to facilitate digital planning and assessment using geospatial data. The system will allow for sex-disaggregated data to be stored, retrieved, and visualized. Comprehensive user manuals in English and Lao will also be prepared. The GIS will host the updated urban master plan, as well as integrate with GIS systems used by other agencies in Luang Prabang such as the World Heritage Office and USO to facilitate interdepartmental coordination and collaboration in the planning and management of Luang Prabang City. The GIS will be used to determine optimal routing of household solid waste collection and fecal sludge collection. A scale model of the city will supplement the GIS to facilitate planning and investment promotion.

13. **Activity 2.3: Design and implement GIS trainings.** This activity will design and implement a comprehensive training program for officials in charge of operating and maintaining the GIS; and establish mechanisms to enable collaborative, integrated urban planning/management, and decision-making processes.

14. Activity 2.4: Prepare USO institutional development plan and tariff reforms. This activity will prepare and implement a climate- and gender-responsive urban services institutional strengthening plan for the Urban Services Office (USO). This involves, using an inclusive, participatory, and women-friendly approach to (i) update and enhance USO's institutional plan and service delivery planning; (ii) design and implement a tariff reform and revenue generation program to sustainably finance USO's operations, including (a) operations of the project-supported solid waste management and citywide sanitation strategies, (b) the operation and maintenance of the managed landfill, and (c) introduce combined billing for septic tank desludging and piped water supply; and (iii) prepare a detailed USO training needs assessment to guide USO staff selection of higher education and vocational training subjects.

15. Activity 2.5: Prepare and implement solid waste management strategy and citywide inclusive sanitation program. This activity will: (i) prepare an integrated solid waste

management strategy to expand waste collection and separation, process waste streams (e.g., materials recovery and composting), and, with project financing and consulting services support, support first-year landfill operations and maintenance; and (ii) prepare a citywide inclusive sanitation program to strengthen sanitation regulations, produce septic tank design standards. The waste management strategy will incorporate a gender audit of existing practices and incorporate broad consultations with women and men. The project will implement public awareness programs on proper household disposal and segregation of waste, septic tank replacement and desludging, and socialization of solid waste and environmental fees.

16. Activity 2.6: Design and implement urban services and public tourist attraction O&M training. This activity will develop and implement financial management and public asset O&M training for at least 300 officials (at least 30% women) from organizations responsible for urban services, public works, and tourist attractions O&M. These include the Provincial Department of Public Works and Transport (DPWT), City Office of Public Works and Transport (OPWT), Department of Information, Culture and Tourism (DICT), and the Urban Services Office (USO), among others. Training will be tailored to the specific needs of each respective organization, prioritizing O&M training for project-supported infrastructure and services. Specific attention will be given to smart urban management, smart tourism solutions, and optimizing private sector involvement in O&M through public-private partnerships (PPP). The O&M training program will include family-based, community, and web-based programs to encourage men and boys to contribute to family caregiving. Childcare and family care services will be made available for eligible female training participants.

17. Activity 2.7: Implement disaster preparedness training. This activity will provide disaster preparedness and response training for 200 public works, urban management, tourism, and other officials (at least 30% women) and business associations in alignment with Lao PDR's National Strategy on Disaster Risk Reduction 2021–2030 objectives to increase disaster risk reduction capacity for civil servants and community leaders in a sustainable way by using national training and education resources.

18. **Output 3: Women's leadership and employment enhanced.** This output will design and implement: (i) a higher education scholarship program for female officials employed in the water supply, sanitation, urban, and tourism sectors; (ii) urban services and tourism vocational training program for women in working in the water supply, sanitation, public works, and tourism sectors; and (iii) organize business development services and pilot child and family care services for eligible scholarship recipients and training participants.

19. Activity 3.1: Implement higher education scholarship program. This activity will provide scholarships to pursue tertiary education in relevant fields to: (i) 120 female public works/urban services officials employed in the water supply, sanitation, public works, and urban services subsectors from all provinces in the Lao PDR; and (ii) 30 female public provincial and district tourism officials working in Luang Prabang province. The program aims to enhance MPWT's capability to implement the Strategy for the Advancement of Women in the Public Works and Transport Sector 2014-2025 and human resource development objectives of Luang Prabang's Tourism Sector Five Year Plan 2020-2024. Eligible educational institutions will be based in the Lao PDR, other Association of Southeast Asian Nations members countries, and the People's Republic of China. Eligible scholarship expenditures will include tuition and fees, learning materials, travel and living allowances, and other expenses as permitted by MOF guidelines.

20. MPWT will administer the national public works/urban services higher education scholarship program and DICT will administer the provincial tourism higher education scholarship program. Each will establish a gender-balanced management and selection committee headed by a senior official and comprised of human resource and technical department members to: (i) develop eligibility criteria and (sub)sector priorities; (ii) establish application and selection procedures; (iii) determine funding available per-scholarship; (iv) adopt an implementation schedule including the application and selection cycles (e.g., guarterly/biannually); (v) prepare and implement a communications plan about the scholarship program; (vi) receive, review, and approve applications; and (viii) conduct impact/tracer studies to evaluate the number of alumni that apply improved leadership competencies (target 80%) and the transformational gender impacts of the program. The scholarship program will include in-person and web-based programs to encourage men and boys to contribute to family caregiving. Childcare and family care services will be made available for eligible scholarship recipients while enrolled in the program. The expected type and timing of higher education scholarships to be supported by the project is summarized below:

Level	2024	2025	2026	2027	2028	2029	Total
Bachelors	0	40	35	0	0	0	75
Masters	0	25	25	20	0	0	70
Doctoral	0	5	0	0	0	0	5
Total	0	70	60	20	0	0	150

Table 1: Expected Level and Timing of Higher Education Scholarships

Source: Asian Development Bank and Ministry of Public Works and Transport.

21. Activity 3.2: Implement urban services vocational training program. This activity will design and implement a national urban services vocational training program targeting 1,000 female public works/urban services officials from all provinces covering (i) water supply, sanitation, and public works vocational, professional, and leadership training programs (including short-term executive learning programs for female managers). Vocational training for female officials in engineering and other non-traditional green urban services and public works-related topics will enable women to take on higher responsibilities and contribute directly to more sustainable and resilient urban development and management.

22. MPWT will manage the urban services vocational training program and establish a training program management committee to (i) develop eligibility criteria and (sub)sector priorities; (ii) establish application and selection procedures; (iii) set annual training plans, budgets with application and selection cycles; (iv) prepare and implement a communications plan about the scholarship program; (v) receive, review, and approve applications; and (vi) conduct tracer and transformation gender impact studies. The urban services vocational training program will include family-based, community, and web-based programs to encourage men and boys to contribute to family caregiving.

23. Activity 3.3: Implement tourism vocational training program. This activity will design and implement tourism-related trainings for about 450 public and 450 private sector female workers (open to female applicants from Luang Prabang province), covering (i) food safety and hygiene, (ii) food and beverage services, (iii) heritage tour guiding, (iv) foreign languages, (v) digital skills and business planning for micro and small enterprises, (vi) tourism health and safety certification program (e.g., Lao Safe for accommodations and transport (ground & water), and (vii) tourism-related emergency planning and response. Tourism-related training will target women already working in tourism and hospitality. 24. DICT will manage the tourism vocational training program and establish a training program management committee to (i) develop eligibility criteria; (ii) establish application and selection procedures; (iii) set annual training plans, budgets, application, and selection cycles; (iv) prepare and implement a communications plan about the training program; (v) receive, review, and approve applications; and (vii) conduct tracer and transformation gender impact studies. The tourism vocational training program will include family-based, community, and web-based programs to encourage men and boys to contribute to family caregiving.

25. **Activity 3.4: Prepare creative city strategy and action plan.** This activity will, through a participatory process with local stakeholders in the creative industry sector and local government agencies, prepare and implement a creative city strategy and action plan and apply to join the UNESCO Creative Cities Network. This involves: (i) raising awareness among local stakeholders about the benefits of supporting the creative industries and Luang Prabang City joining the network; (ii) establishing a consultative group to support the mapping exercise, preparation of the strategy and action plan and the application – the consultative group will include members of the women-led creative industries design network to be established by the project (ref. activity 2.7 below); (iii) preparing a Luang Prabang City creative asset inventory; (iv) preparing the creative city strategy and four-year action plan for Luang Prabang City setting out specific projects and initiatives to be implemented, including a financing plan; and (iv) submitting the Luang Prabang City government endorsed application to UNESCO.

26. Activity 3.5: Establish women-led creative industries business development network. This activity will establish a women-led creative industries business development network focusing on creative industries. The network will: (i) undertake gender-sensitive training needs assessment; (ii) organize demand driven training on topics such as business registration, financial literacy and accounting, product design, digital design, intellectual property rights protection, business management, marketing, and digital payments; (iii) engage national and regional creative industry resource persons to implement training and provide mentoring support; (iv) set up shared advisory services within the network or through the network's linkages to enhance quality of product design, provide market information, and organize small-group mentor calls; and (v) organize seminars, social events, mentorship, and business matching opportunities to enable business acceleration and innovation. Network members will lead preparation and implementation of the creative city strategy and action plan and organize family-based, community, and web-based programs to encourage men and boys to contribute to family caregiving.

27. Activity 3.6: Implement business support services for women-led creative industries business development network. This activity will, through the women-led creative industries business development network, support business development for at least 50 women-owned creative enterprises. Business support services will be demand driven and focus on expanding women's access to regional merchandise trade and tourism services trade.

28. **Childcare and family care services design.** The pilot child and family support program will be integrated into capacity building and training programs and designed in detail by the PCU and PIU prior to implementing the scholarship and training activities based on a survey of women requiring childcare or family care services to understand their needs and requirements, including exploring the use of social franchising and cooperatives.

29. The design and monitoring framework in Appendix 1 presents the expected project impact, outcome, and outputs.

APPENDIX 2. CONDITION ASSESSMENTS OF LUANG PRABANG BUILDINGS.

There are 142 outstanding buildings in the conservation list that have not been repaired and in moderate and deteriorated condition (including civil and religious buildings). Among them, there are 110 buildings moderately deteriorated (64 civil buildings and 46 religious buildings) and very deteriorated 32 buildings (18 civil buildings and 14 religious buildings). Please see attached for detail

## Works already undertaken to preserve these buildings.

Most of the buildings are the property of the local people. So we tried to encourage people to restore the building with owner's budget. In addition, the World Heritage Management Division has surveyed, collected information and designed the restoration methods beside that we try to find sources of funding from the government and foreign to support.

- **Any works plan and funded to preserve these buildings.** The World Heritage Preservation Fund is preparing for implementation.
- Any "contingency plan" (or other plan) that will address these buildings in the future Create activities for the participation of various parties such as the youth, educational institutions and private sectors to support the restore buildings depending to each case.

# Bad condition of inventory buildings (Monastry and Civil)

List	N.IN	Material	Village	Value	Bad	Remark
I	Civils				18	
1	21	В	CHOUM KHONG	PSMV	✓	
2	22	В	CHOUM KHONG	PSMV	✓	
3	30	В	PAKHAM	PSMV	✓	
4	48	В	TONG CHA LEAUNE	PSMV	✓	
5	58	В	MEUNNA	UNESCO	✓	
6	89	В	XIENG MOUANE	PSMV	✓	
7	93	В	HOUA XIENG	PSMV	✓	
8	100	вт	XIENG THONG	UNESCO	✓	
9	121	вт	CHOUM KHONG	PSMV	✓	
10	122	вт	CHOUM KHONG	PSMV	✓	
11	129	вт	РАКНАМ	UNESCO	✓	
12	154		MEUNNA	PSMV	✓	
13		BBC	XIENG MOUANE	PSMV	✓	
14	228	BBC	CHOUM KHONG	UNESCO	✓	
15	231	BBC	РАКНАМ	PSMV	✓	
16	343	BC	THAT LUANG	PSMV	$\checkmark$	
17	371	BC	KHAM YONG	PSMV	✓	
18	440	BCT	VIXUN	UNESCO	$\checkmark$	
			Monastry		14	
1	490	вт	Xiengmuane	PSMV	$\checkmark$	
2	538	BBC	Vatthat	PSMV	$\checkmark$	
3	571	BC	XM(Salatham)	PSMV	$\checkmark$	
4	582	В	XM(Longkhoune)	PSMV	$\checkmark$	
5	591	В	Thamxiengmene	PSMV	✓	
6	592	В	Thamxiengmene	PSMV	$\checkmark$	
7		BC	XM(Hasieu)	UNESCO	$\checkmark$	
8		В	XM(Hasieu)	PSMV	$\checkmark$	
9	597	BBC	XM(Hasieu)	PSMV	$\checkmark$	
10	600	ВТ	XM(Khokpab)	PSMV	✓	
11	601	BC	XM(Khokpab)	PSMV	✓	
12	602	вт	XM(Khokpab)	PSMV	✓	
13	603	вт	Sangkhalok	PSMV	✓	
14	608	вт	Sangkhalok	PSMV	$\checkmark$	

Luang Prabang, date .....

Head of division

Legend B= Timber BT= Timber-Plaster BC= Lime brick BCT= Lime brick- Plaster BBC= Timeber - lime brick BTBC= Timber Plaster lime brick

Lis	N.IN	Material Village Value Moderate		Moderate	Remark	
I			Civil		64	
1	2	В	PHONE HEUANG	PSMV	✓	
2	23	В	PAKHAM	PSMV	$\checkmark$	
3	24	В	PAKHAM	PSMV	$\checkmark$	
4	28	В	PAKHAM	UNESCO	$\checkmark$	
5	29	В	PAKHAM	PSMV	$\checkmark$	
6	33	В	PAKHAM	PSMV	$\checkmark$	
7	34	В	PAKHAM	PSMV	$\checkmark$	
8	35	В	PAKHAM	PSMV	$\checkmark$	
9	36	В	PAKHAM	PSMV	$\checkmark$	
10	44	В	VAT THAT	PSMV	✓	
11	51	В	MANO	PSMV	✓	
12	55	В	APHAY	PSMV	$\checkmark$	
13	56	В	VIXUN	PSMV	$\checkmark$	
14	60	В	VIXUN	PSMV	$\checkmark$	
15	64	В	MEUNNA	PSMV	$\checkmark$	
16	65	В	MEUNNA	PSMV	$\checkmark$	
17	68	В	MUANG NGA	PSMV	$\checkmark$	
18	72	В	PHAN LUANG	PSMV	$\checkmark$	
19	73	В	PHAN LUANG	PSMV	$\checkmark$	
20	76	В	XIENG MENE	PSMV	$\checkmark$	
21	79	В	XIENG MENE	UNESCO	$\checkmark$	
22	80	В	XIENG MENE	PSMV	$\checkmark$	
23	84	В	XIENG MENE	PSMV	$\checkmark$	
24	87	В	THAT LUANG	PSMV	$\checkmark$	
25	90	В	THAT LUANG	PSMV	$\checkmark$	
26	91	В	MUANG NGA	PSMV	$\checkmark$	
27	92	В	MUANG NGA	PSMV	$\checkmark$	
28	98	BT	XIENG THONG	UNESCO	$\checkmark$	
29	103	вт	KHILI	PSMV	$\checkmark$	
30	108	вт	PHONE HEUANG	PSMV	$\checkmark$	
31	117	вт	VAT SENE	PSMV	$\checkmark$	
32	124	вт	XIENG MOUANE	PSMV	$\checkmark$	
33	132	вт	PAKHAM	PSMV	$\checkmark$	
34	134	вт	PAKHAM	PSMV	$\checkmark$	
35	136	вт	PAKHAM	PSMV	$\checkmark$	
36	139	BT	TONG CHA LEAUNE	UNESCO	$\checkmark$	
37	147	BT	APHAY	PSMV	✓	
38	159	BT	PHAN LUANG	PSMV	✓	
39	160	BT	XIENG MENE	PSMV	$\checkmark$	
40	174	BTBC	PAKHAM	PSMV	$\checkmark$	
41	183	BTBC	AHAM	PSMV	$\checkmark$	
42	184	BTBC	APHAY	PSMV	$\checkmark$	
43	186	BTBC	APHAY	PSMV	$\checkmark$	
45	200	BBC	PHONE HEUANG	PSMV	✓	

# Moderate condition of inventoriy buildings (Manasteries and Civils)

46	214	BBC	VAT NONG	PSMV	$\checkmark$	
47	232	BBC	HOUA XIENG	PSMV	✓	
48	248	BBC	VIENG XAY	PSMV	✓	
49	249	BBC	VIENG XAY	PSMV	✓	
50	251	BBC	АРНАҮ	PSMV	✓	
51	254	BBC	АРНАҮ	PSMV	✓	
52	258	BBC	APHAY	PSMV	✓	
53	260	BBC	APHAY	PSMV	$\checkmark$	
54	268	BBC	MEUNNA	PSMV	✓	
55	269	BBC	PHAN LUANG	PSMV	~	
56	326	BC	PAKHAM	UNESCO	<b>~</b>	
57	334	BC	THAT LUANG	PSMV	✓	
58	361	BC	VIENG XAY	UNESCO	<b>V</b>	
59	370	BC	KHAM YONG	UNESCO	✓	
60	411	ВСТ	XIENG MOUANE	PSMV	✓	
61	414	ВСТ	РАКНАМ	PSMV	✓	
62		BCT	TONG CHA LEAUNE	UNESCO	✓	
63		ВСТ	THAT LUANG	PSMV	√	
64	432	BCT	VIENG XAY	PSMV	✓	
Ш			Monastry	•	46	
65		BCT	Xiengthong-Khili	PSMV	✓	
66		BCT	Phonheuang	PSMV	<ul> <li>✓</li> </ul>	
67	463		Phonheuang	PSMV	<b>√</b>	
68		ВСТ	Phonheuang	PSMV	<b>√</b>	
69	473		Phonheuang	PSMV	<b>√</b>	
70	475		Vatsene	PSMV	<b>√</b>	
71	477		Vatsene	PSMV	<b>√</b>	
72	478		Vatsene	PSMV	<b>√</b>	
73	479		Vatsene	PSMV	<b>√</b>	
74	482		Vatnong	PSMV	<b>√</b>	
75		BCT	Xiengmuane	PSMV	<b>√</b>	
76			Xiengmuane	PSMV	<b>√</b>	
77		BC	Xiengmuane	PSMV	<b>√</b>	
78			Xiengmuane	PSMV	✓ ✓	
79		BBC	Chomkhong	PSMV		
80		BC	Chomkhong	PSMV	<ul> <li>✓</li> </ul>	
81		BC	Xiengmouane	UNESCO	✓ ✓	
82		BBC	Xiengmouane	PSMV	✓ ✓	
83		BCT	Xiengmouane	PSMV	✓ ✓	
84		BC	Xiengmouane	PSMV	✓ ✓	
85		BC	Xiengmouane	UNESCO	v √	
86		BC	Aphay	UNESCO	✓ ✓	
87		BBC	Aphay	PSMV	✓ ✓	
88 89		BC	Aphay	PSMV	✓ ✓	
		BC	PAKHAM		✓ ✓	
90 91		BCT	PAKHAM	PSMV	▼ √	
		BCT	PAKHAM	PSMV	✓ ✓	
92	519	BTBC	РАКНАМ	PSMV	V	

93	536	BTBC	Vatthat	PSMV	$\checkmark$	
94	537	BBC	Vatthat	PSMV	✓	
95	539	BTBC	Vatthat	PSMV	✓	
96	541	BCT	Vatthat	PSMV	✓	
97	545	BBC	Thatluang	UNESCO	✓	
98	550	BC	Meunna	UNESCO	$\checkmark$	
99	555	BBC	Meunna	PSMV	✓	
100	561	BT	Phonsaat	PSMV	$\checkmark$	
101	564	BC	Kamyong, Chomsi	UNESCO	✓	
102	565	BC	Kamyong, Chomsi	PSMV	✓	
103	567	BC	Meuangnga(Taohai)	PSMV	$\checkmark$	
104	568	В	Meuangnga(Taohai)	PSMV	$\checkmark$	
105	570	BC	Xiengmene(Salatham)	PSMV	$\checkmark$	
106	573	BT	Xiengmene(Xiengyeune)	PSMV	$\checkmark$	
107	578	BC	Xiengmene(Chomphet)	UNESCO	$\checkmark$	
108	590	BCT	Thamxiengmene	PSMV	$\checkmark$	
109	599	BC	Xiengmene(Khokpab)	UNESCO	$\checkmark$	
110	607	BT	Sangkhalok	PSMV	$\checkmark$	

Luang Prabang, date .....

Head of division

# Legend

B= Timber BT= Timber-Plaster BC= Lime brick BCT= Lime brick- Plaster BBC= Timeber - lime brick BTBC= Timber Plaster lime brick



# Lao People's Democratic Republic Peace Independence Democracy Unity Prosperity

Department of Information, Culture and Tourism LPB World herititage Mnagement Division

No...../DPL

List of inventory buildings status in Luang Prabang World Heritage site

	List of Inventory building	Total Restored	Restored	%					The st	tatus of the	e buildi	ng that	has not ye	t been
No					Not yet	%	Demolish	%			rep	aired	Deteriora ted52.314	
			<sup>70</sup> Resto	Restorate <sup>70</sup>	Demonsh	70	Good %		Moder	0/_	Deteriora	%		
									<b>G</b> 000	/0	ate	/0	ted	/0
1	<b>Religion Building</b>	168	73	43.45	88	52.38	7	4.17	28	31.82	46	52.3	14	15.9
2	Public Building	443	267	60.27	168	37.92	8	1.81	86	51.19	64	38.1	18	10.7
3	Total	611	340	55.65	256	41.90	15	2.45	114	44.53	110	43.0	32	12.5

Luang Prabang, date .....

Head of division

APPENDIX 3. REHABILITATION OF PONDS BY WORLD HERITAGE MANAGEMENT DIVISION.

# The Improvements inventory pond in World Heritage Areas in the past:

# Conducted by LuangPrabang World Heritage Management Division

- 2020: Improvement ponds No. 67, No.82 both have removed the mud, install stones around the pond, create Drainage system, install septic tank, release fish and install fence around pond
- 2022: Improvement ponds No. 60, No.61, No. 85; all 3 ponds have removed the mud, release fish;

# Conducted by Urban Development and service office

2023: Improve pond No. 77 removed mud and clean the pond;

- Improve pond No. 70, clean the pond.



No. 67 After

No. 82 After

#### **APPENDIX 4. RIVER STUDY.**

# River study by expert between 23 Oct – 17 Nov 2023

# Integrating environment monitoring of the Mekong River and Nam Khan in Luang Prabang World Heritage

**Goal:** To understand the perceptions of villagers towards the **LPB town** and **the World Heritage status** and its **surroundings/environment** (MeKhong, Nam Khan river)

#### environmental data:

Hydro Scientific logical data: time series of water level, the depth discharge, sediment, water quality, land use/cover changes, river attributes, indicators etc.

### Social science data (conducting interviews) by using Cultural Mapping:

- Conduct interviews in 7 villages
- Conduct Cultural Mapping

#### Conduct interviews in 7 villages:

- I. Luang Prabang ancient town
- II. Luang Prabang World heritage town
- III. Traditional and cultural practices that connect to the Rivers
- IV. Mekong and Nam Khan Rivers knowledge and awareness:
- V. Livelihood and environment of the Rivers

#### Group of participants :

- Village committee
- Youth group
- Riverine activities: vegetable garden
- Boat taxi
- Pottery
- Fishers
- Collection of food in the river: Kai, vegetables,..,
- Spiritual knowledge that is connected to rivers.

#### Interviewed 46 voluntary villagers in 7 villages:

#### Cultural Mapping workshop

#### Next step:

- Transcribe interview survey, analysis
- Revise the 1<sup>st</sup> draft of maps from Cultural mapping workshop
- Follow up data request from governor offices
- Conduct interviews with youths and government officers

APPENDIX 7. LETTER TO THE SECRETARIATE BY THE DIRECTOR GENERAL OF THE HERITAGE DEPARTMENT OF THE MINISTRY OF INFORMATION, CULTURE AND TOURISM ON MAY 5, 2023 (NO. 323).



#### LAO PEOPLE'S DEMOCRATIC REPUBLIC PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

MINISTRY OF INFORMATION, CULTURE AND TOURISM HERITAGE DEPARTMENT

VIENTIANE CAPITAL, DATE

No. 323/Don 5 Мау 2023

The Secretariate

UNESCO World Heritage Centre 7, place de Fontenay 75352 Paris 07 SP France

Subject: Report on the Technical Review by UNSCO with support from ICOMOS for the New Development Project in Luang Prabang riverbank protection works under the Lao Southeast Asia Disaster Risk Management (Lao SEADRM) Project.

The Heritage Department, Ministry of Information, Culture and Tourism of the Laos PDR has acknowledgement the technical review and appreciated the recommendation on the New Development project in the town of Luang Prabang by the UNESCO with support from the ICOMOS, on January 2023.

We were grateful for your review as of the TRR and to inform the timely implementation of the project. There is an urgency to complete the works within the remaining dry seasons before project closing in December 2024, to provide bank protection for areas of Luang Prabang that are subject to high flood risk, bank erosion and scouring. Therefore, the response of the TRR and an urgency requisition are:

- Start the project preparation work such as: UXO clearance, Clearing and Grubbing and Contractor's establishment as well as start the construction of Toe protection work which is the lowest part of the embankment construction to be completed before raining season of this year 2023.
- (2) The main concern relates to the upper part, more visible parts of the embankment, the slope protection works will be construct respectively both left and right banks of the Nam Khan River in order to response to the severe erosion occurring. Per the Lao SEADRM design, there are no gabions included in the works that the design consultant, ISAN, have designed. Furthermore, no gardens or other areas of cultivation will be affected by the project. However, the construction of the upper part will be monitor and consultation with concern relative authorities and report to the UNESCO World Heritage Centre provided with the heritage impact evaluation report and the construction method of "Typical Cross Sections" of the embankments to aside from the potential impacts to the gardens and traditional cultivation along the riverbanks.
- (3) The DOW together with the design consultant ISAN, explained that most of these requirements "Bio-engineered solution" have already been included through the provision of soil cover and seeding to the upper half of the embankment. A "seeding" specification would need to be added to the contract requiring randomly mixed native plant species of seeds to be adopted. This approach of planting has already been incorporated for the park
- (4) Concern was also expressed about the adoption of water gates and the polluted water that they would temporarily impound. However, as the proposed water gates were dropped from the Lao SEADRM project this can be ignored.

The DOW with support from ISAN provided a technical explanation of the details provided in the Detailed Design report over a meeting with Department of World Heritage Office and Department of

Public Work and Transport of Luang Pravang (DPWT-LPB). The use of "pure bioengineering methods" may not be able to protect against the intensity of erosive forces arising from floods in this particular part of the river that are exacerbated by the unusual alignment of the river channel where it joins the Mekong.

More response detail to ICOMOS Technical Review Report (TRR) by the World Bank Technical Team and Design Consultant ISAN Corporation provided as attachment.

Thank you for your kind support.



Director General Heritage Department Ministry of Information, Culture and Tourism

### APPENDIX 10. MEKONG BRIDGE.



## **Alternatives and Appropriate Alternative**

## **Alternatives and Appropriate Alternative**

51

69

- Bridge Locations and Road Route Lines
- Structural Bridge Type
- Unique Architectures

Chiangman - Luang Prabang Bridge



## **Alternative and Appropriate Alternative**



• Alternative 1: Chomphet – Muangkham – R13

51

- Alternative 2: 4B Phuwow
- Alternative 3: 4B Thai-Laos Friendship

Chiangman - Luang Prabang Bridge



## **Alternative Route 1**

 มีจุดเริ่มต้นโครงการที่ถนนหมายเลข 4B ที่บริเวณวงเวียนเมืองจอมเพชร ผ่านบ้านน้ำตาล อ้อมหลังบ้านนาไซเจริญ มาข้ามแม่น้ำโขงที่บ้านม่วงคำ แนวที่ออกจากแยกจอมเพชร จะผ่านพื้นที่ที่ยังไม่ได้พัฒนาค่อนข้างมาก ทำให้สามารถรองรับการพัฒนาเมืองใหม่ของแขวงหลวงพระบางในฝั่งเมือง จอมเพชรได้ดี ซึ่งจะไม่ติดข้อจำกัดของพื้นที่มรดกโลก ก่อสร้างอาคารได้สูงมากขึ้น รองรับการพัฒนาพื้นที่อุตสาหกรรมตามแผนการพัฒนาได้ดี มี ผลกระทบต่อที่พักอาศัยของประชาชนในปัจจุบันจำนวนน้อย เสียพื้นที่ทำการเกษตรไม่มาก การเชื่อมโยงการเดินทางจังหวัดน่าน หรือเมืองหงสา ผ่านเมืองจอมเพชรไปเมืองหลวงพระบางจะสะดวกกว่าทางเลือกอื่นๆ ระยะทางของแนวเส้นทางอยู่ที่ 10.975 กม









## **Alternative Route 2**



**Alternative Routes No.2** 

### Alternative route no.2, L = 2.950 km

• 4B road (4.0 km from Chomphet City)>> Ban Chan Road>> crossing Mekong River at President Krisorn Monument-Podti-Sala Road>>Pu-wow Road







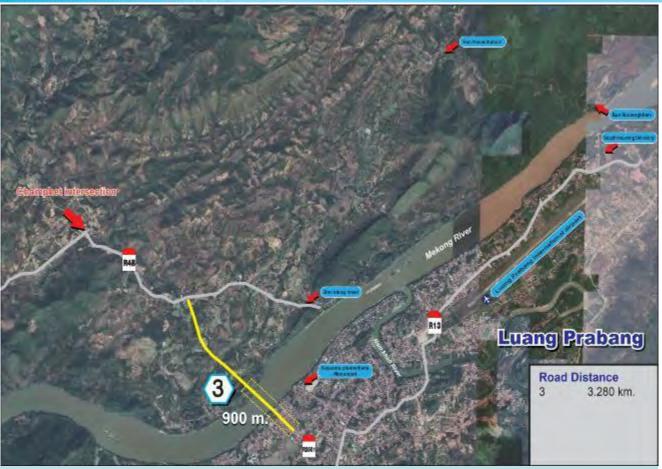




Chiangman - Luang Prabang Bridge



## **Alternative Route 3**



**Alternative Routes No. 3** 

### Alternative route no.3, L = 3.280 km

4B road (3.85 km from Chomphet City)>>
 Ban Chan Road>> crossing Mekong River at
 Poti-Sala and 2501 Roads>>Po-Si Market











## **Evaluation Results**

เกณฑ์การศัดเลือกตำแหน่งสะพาน					
ดับ	หัวข้อในการพิจารณาเปรียบเทียบ	น้ำหนักคะแนน	ทางเลือกที่ 1	ทางเลือกที่ 2	ทางเลือกที่ 3
1	ด้านวิศวกรรม				
1	1.1 ด้านวิศวกรรมจราจร				
	1.1.1 การเชื่อมโยงโครงข่าย	7.00	7.00	4.20	4.20
	1.1.2 ระยะทาง	3.00	0.72	3.00	2.70
	1.1.3 จำนวนจุดตัด	3.00	2.01	3.00	3.00
:	1.2 รูปแบบทางด้านเรขาคณิต				
	1.2.1 เรขาคณิตทางดิ่ง	3.00	0.80	2.87	2.70
	1.2.2 เรขาคณิตทางราบ	3.00	0.86	2.70	2.00
:	1.3 ด้านการก่อสร้าง				
	1.3.1 ความยากง่ายในการก่อสร้างตามแนวสายทาง	4.00	4.00	1.16	3.36
	1.3.2 ปัญหาการจราจรช่วงก่อสร้าง	3.00	0.72	3.00	2.70
	1.3.3 ระยะเวลาที่ใช้ในการก่อสร้าง	4.00	2.48	2.58	3.48
	รวมด้านวิศวกรรม	30.00	18.58	22.51	24.14
2	ด้านเศรษฐศาสตร์และการลงทุน				
2	2.1 การลงทุน				
	2.1.1 ค่าการลงทุน	10.00	7.96	7.21	10.00
	2.1.2 ค่าบำรุงรักษา	5.00	1.70	4.80	5.00
	2.1.3 ค่าจัดกรรมสิทธิ์ที่ดินและรื้อถอนอาคาร	5.00	1.04	5.00	3.41
	2.1.4 ผลตอบแทนทางเศรษฐกิจ และการจราจร	10.00	10.00	4.00	4.00
	รวมด้านเศรษฐศาสตร์	30.00	20.70	21.01	22.41

3	ด้านผลกระทบต่อสิ่งแวคล้อม				,
-	3.1 ผลกระทบต่อวิถีชีวิตของประชาชนในพื้นที่โครงการ	6.00	6.00	1.44	2.04
	3.2 ผลกระทบด้านการกิดขวางทางไหลของน้ำ	6.00	3.12	6.00	4.20
	3.3 ผลกระทบด้านการคมนาคมชนล่ง ผู้ใช้ทาง อุบัติเหตุ และดวามปลอดภัย				
	3.3.1 ผลกระทบต่อผู้ใช้เส้นทางต่อเกิดอุบัติเหตุ และความปลอดภัยในการคมนาคม (จำนวนจุดตัดถนนสายหลัก-รอง)	3.00	1.89	3.00	3.00
	3.3.2 ผลกระทบต่อผู้ใช้ทางต่อการเข้าถึงพื้นที่ต่างๆ ที่แนวเส้นทางโครงการตัดผ่าน (จำนวนจุดตัดถนนท้องถิ่น)	3.00	2.01	3.00	3.00
	3.4 ผละกระทบด้านการโยกย้ายและเวนดีนที่ดิน				
	3.4.1 จำนวนสิ่งปลูกสร้างที่ต้องรื้อย้าย (หลัง)	6.00	6.00	1.20	0.66
	3.4.2 จำนวนที่ดินที่ต้องเวนดีน (ไร่)	6.00	1.14	5.70	6.00
	3.5 ผลกระทบด้านมรดกโลก	10.00	10.00	0.80	1.70
	รวมด้านผลกระทบต่อสิ่งแวดล้อม	40.00	30.16	21.14	20.60
	รวมคะแบบทั้งหมด	100.00	69.44	64.65	67.15

Xieng Man - Luang Prabang Bridge





# **Bridge Design**

Chiangman - Luang Prabang Bridge





## **Bridge Structure**

Evaluation of appropriate bridge type had been made and reported. The Balanced Cantilever Bridge is selected for design development at selected Location (Location 1).

**Conceptual Drawings:** 

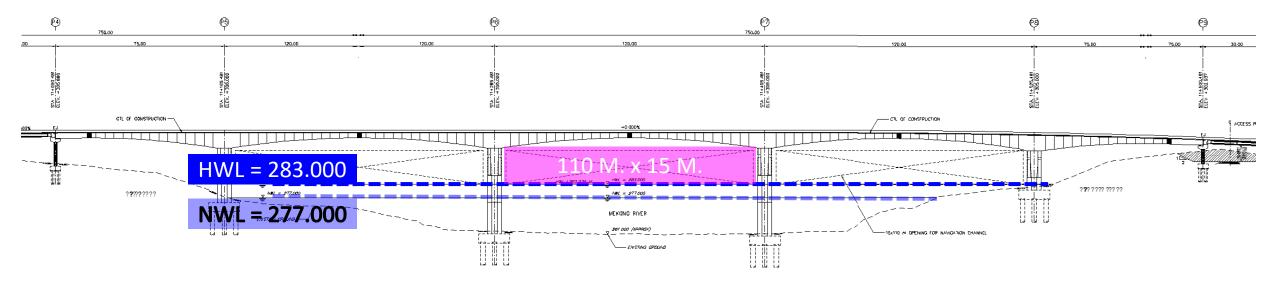
- River crossing using Balanced Cantilever Span Set: 5 Spans 75+120+120+120+75 m
- On shore span, 30 m I-girder bridge
- 4% grade
- 2 Traffic Lane (3.5m width)
- 2.5 m wide shoulder
- 1.5 m wide bicycle lane on each side
- 1.5 m wide footpath
- Concrete Bridge Approach Structure

## Chiangman - Luang Prabang Bridge





## **Balanced Cantilever Bridge**

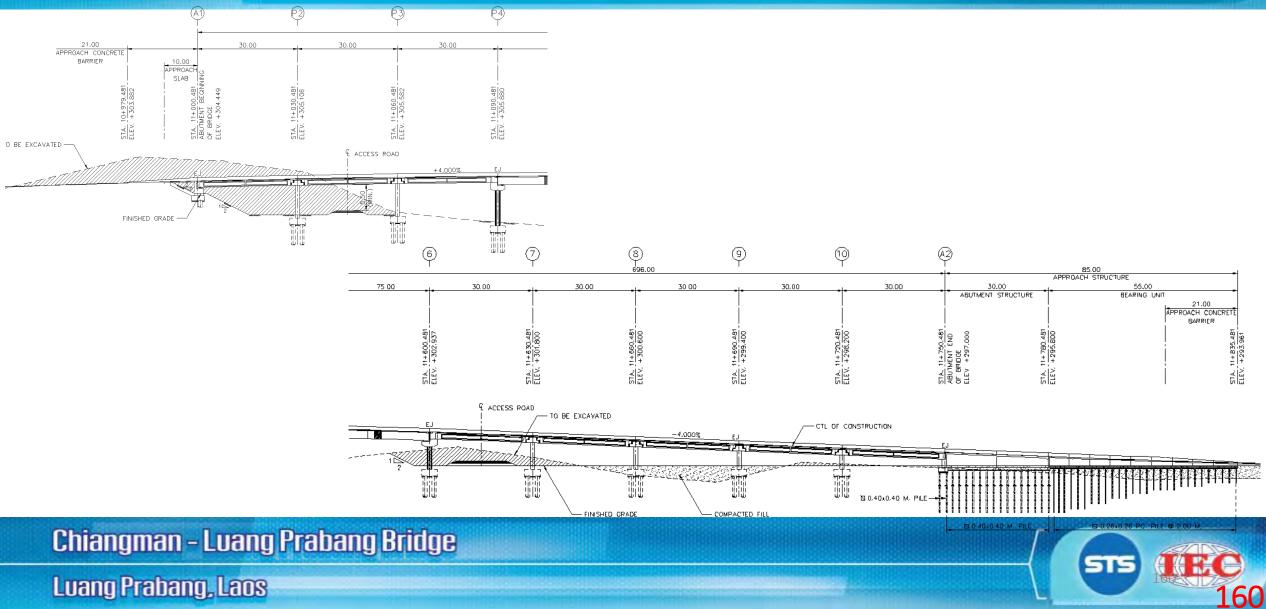


Chiangman - Luang Prabang Bridge





## **Onshore Span**



### APPENDIX 5. UPDATED PSMV.



### Lao People's Democratic Republic Peace Independence Democracy Unity Prosperity

Department of Information, Culture and Tourism LuangPrabang Province LuangPrabang World Heritage management Division

abang Province No /DICT LuangPrabang, Date M October, 2023

### **FINAL REPORT**

### Attn: Honorable Director of UNESCO

Subject: Final Report on completion of the updating of Plan de Sauvegarde et de Mise en Valeur "PSMV" (Data collection of buildings, religious buildings in the ZPP\_Ub area).

 Referring to: Contract N°: 4500479541, date 17 February 2023 between LuangPrabang World Heritage office and UNESCO for updating the Plan de Sauvegarde et de Mise en Valeur (PSMV).

The Luang Prabang World Heritage Management Division, Department of Information, Culture and Tourism, is pleased to announce the completion of the Plan de Sauvegarde et de Mise en Valeur (PSMV) ZPP-Ub update project. As the project owner and implementation unit, we have diligently worked to fulfill the scope of the contract, as outlined below.

### I. Background

The PSMV ZPP-Ub update is the second phase of the project, following the completion of the ZPP-Ua project in 2022. The main objective of this update is to establish a comprehensive conservation strategy for the city's future development. To achieve this, a thorough analysis of the conservation strategy thus far and the current state of the city's conservation is necessary. Therefore, we have updated all the information describing the city, comparing it with the state of 2001. This has enabled us to identify the strengths and weaknesses of the conservation plan implemented over the past 28 years and adapt and improve the regulations accordingly. In line with the recommendations of the RMM of the World Heritage Center and ICOMOS 2022, we have reported the issue to the local and national committees for World Heritage and presented it to international organizations for technical research and funding sources. We believe that this project will contribute significantly to the preservation and development of the city's heritage, and we look forward to sharing more updates in the future.

Department of Information, Culture and Tourism, LuangPrabang Province, Phanom Village Tel/Fax: 071 212 044 <u>www.tourismluangprabang.org</u>, P.O Box 717.

Within the scope of the International cooperation, under the overall authority of the Director of the UNESCO Bangkok, under the guidance of the World Heritage Centre, the direct supervision of the Chief of the Culture Unit, The Laung Prabang wolrd heritage office (Now is Luang Prabang World Heritage Management Division) and UNESCO have signed a contract following framework:

- Following the recommendations of the Reactive Monitoring Mission to the Town of Luang Prabang World Heritage property in April 2022, undertake updates to the heritage GIS and database system in order to facilitate tracking changes over time of attributes carrying Outstanding Universal Value of the World Heritage property, comprising architectural, urban, ecological and cultural aspects. The updating process should use various data sources such as satellite data, aerial imagery, field survey, and other data in order to reflect current conservation status and changes to the heritage attributes. This activity should result in the Approved TOR by Chief of Culture Unit comprehensive update within the World Heritage property, comprising zones ZPP-Ua and ZPPUb including ZPP-M and ZPP-N. Within the architectural components, reflect the typological classification proposed by the Mission including traditional and modern architecture.
- In consultation with UNESCO, convene online reflection session with relevant authorities and specialized experts in various fields to discuss how to reinforce the integration of emerging issues, notably environmental and ICH dimensions, into the heritage GIS and database system.
- In consultation with UNESCO, arrange technical training to strengthen skills for GIS mapping and data analysis focusing on integrating emerging dimensions into World Heritage monitoring and management system, notably environmental issues like river conditions including contour levels of the embankments, water height fluctuations and depth soundings of the Mekong and Nam Khan River.
- Present the updated heritage GIS and urban change analysis to relevant authorities and specialized experts in order to review the current condition of the site. On this basis, and bearing in mind the guidance of the Reactive Monitoring Mission, develop practical recommendations for updating and potential expansion of the World Heritage management system and plan [Plan de Sauvegard et de Mise en Valeur (PSMV)] to reflect current issues and emerging priorities within the World Heritage property and buffer zone, particularly environment and living heritage. The future updating of the PSMV should be planned in coordination with other relevant authorities as well as provincial and municipal level plans for urban planning, environmental protection, tourism planning and other related development.
- Make available updated GIS data for (i) monitoring the state of conservation of the site, heritage impacts and associated mitigation measures and (ii) supporting the planning and implementation of other relevant urban planning and development initiatives, as appropriate, to ensure most current heritage data is available for accurate assessment, planning and monitoring on an urgent basis.

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### **II. Implementation**

The Luang Prabang World Heritage Management Division has taken a step towards preserving and developing the Plan de Sauvegarde et de Mise en Valeur (PSMV) by issuing an agreement (No. 104/DPL, dated March 7, 2023) to appoint a technical team and assign tasks for updating the PSMV under contract No. 4500479541, dated February 17, 2023.

The technical team comprises four teams, each assigned specific tasks to ensure the success of the project.

- The first team, responsible for compiling data and creating reports, will create a detailed plan for updating Geographic Information Systems (GIS), prepare a GIS training plan, and organize an international online meeting. Additionally, create a form, and map to collect initial information on the Zpp-Ub, Monastery zone, and Natural zone, also summarize all the map information collected to ensure its accuracy.
- The second team, responsible for collecting and inputting building data, will take photos and collect information about buildings in the Zpp-Ub, Monastery zone, and Natural zone. Draw new buildings on the map, including building boundaries, roof structures, roads, and other elements recommended by the overall steering committee.
- The third team will analyze the data of building changes, focusing on architectural style, building usage, building materials, building condition, number of floors, roof materials, building maintenance levels, and year of building, and create the final PSMV map (basemaps).
- The fourth team, the coordination and financial-administrative team, will coordinate domestic and international efforts, summarize the finance report, and carry out additional tasks recommended by the overall steering committee.

Overall, this technical team's efforts will contribute to the preservation and development of the PSMV, ensuring that the heritage site retains its cultural and historical significance.

### **2.1 Data Collection and Input**

In March, the technical team appointed by the Luang Prabang World Heritage Management Division embarked on a survey to collect data on the approximately more than 3,000 buildings in the ZPP-Ub area. To ensure accuracy and clarity in the resulting map, the team utilized the same data collection method as in the ZPP-Ua area, using aerial and high-angle photography from a drone as reference,(Report No;569/LWHO). By May, the team had successfully completed the data collection phase and proceeded to input the collected data, drawing building boundaries, roof structures, roads, and other essential elements. This process was completed by the end of the August. These meticulous efforts will contribute to the preservation and development of the Plan de Sauvegarde et de Mise en Valeur. By accurately capturing the town's features and structures, we will be able to

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analyze and identify significant changes in the townscape in the future, enabling us to make informed decisions regarding the preservation and growth of this cherished world heritage site.

### 2.2 Online Reflection Session

The Luang Prabang World Heritage Management Division, in collaboration with the World Heritage Center and UNESCO Bangkok organized multiple online meetings with esteemed international experts from ICOMOS, Michigan State University, Tokyo Institute of Technology in Japan, Switzerland, and Malaysia. These meetings focused on several key topics, including the current GIS system of the Luang Prabang World Heritage Office, the current status of Intangible Cultural Heritage (ICH) in Luang Prabang, and the Outstanding Universal Value (OUV) and management plan for Luang Prabang. During these meetings, the experts shared their experiences on how GIS was utilized for environmental and ICH monitoring in various parts of the world. They also discussed the relevance of climate change as a reference for the next steps in GIS data analysis in Luang Prabang. Through these insightful discussions, the Luang Prabang World Heritage Management Division gained valuable knowledge and expertise.

### 2.3 GIS Training for the Environment Monitoring

During a meeting between the World Heritage Center and the Luang Prabang World Heritage Management Division, the Center proposed a review of the Outstanding Universal Value (OUV) of the heritage site. This review would involve an examination of the attributes of the OUV and the establishment of indicators for each attribute, which could be added to a database using the GIS system. However, after much discussion, it became apparent that improving the OUV and setting these indicators would require a long-term commitment of both budget and technical staff. Additionally, meetings at multiple levels would need to be organized to achieve this goal. As a result, the meeting participants unanimously agreed on the following course of action:

LuangPrabang World Heritage Management Division and expert from Michigan state University will survey and collect information about OUV along the Mekong and Khan river, especially the riverbank, the depth, water quality, sedimentation, changing river and the activities related to the river in the World Heritage Protection area by using GIS systems as a tool for monitoring, inspection and evaluation in the future for this activity will conduct in October-November 2023.

### 2.4 Data Analysis

As already mentioned the data analysis could be perform after comperhenship data collection to track the significal change of townscape, the data analysis covered the following catergories:

- Building Usage and activities
- Building Condition
- Building Material
- Number of Floor
- Roof Material

- Free area and Built area
- · Classify of public buildings and religion buildings
- Classify of Private buildings (Annex1 for the details)

### III. Future Steps

Following the completion of data analysis, the Luang Prabang World Heritage Management Division plans to share the results with relevant authorities and specialized experts in order to conduct a thorough review of the current condition of the site. This review is a crucial step in the updating of the master plan of conservation (PSMV). Once the results have been approved by the Lao government, they will be made available for monitoring the state of conservation of the site, assessing heritage impacts, and identifying any associated mitigation measures.

Sincerely Yours,

Director of Department of Information, Culture and Tourism

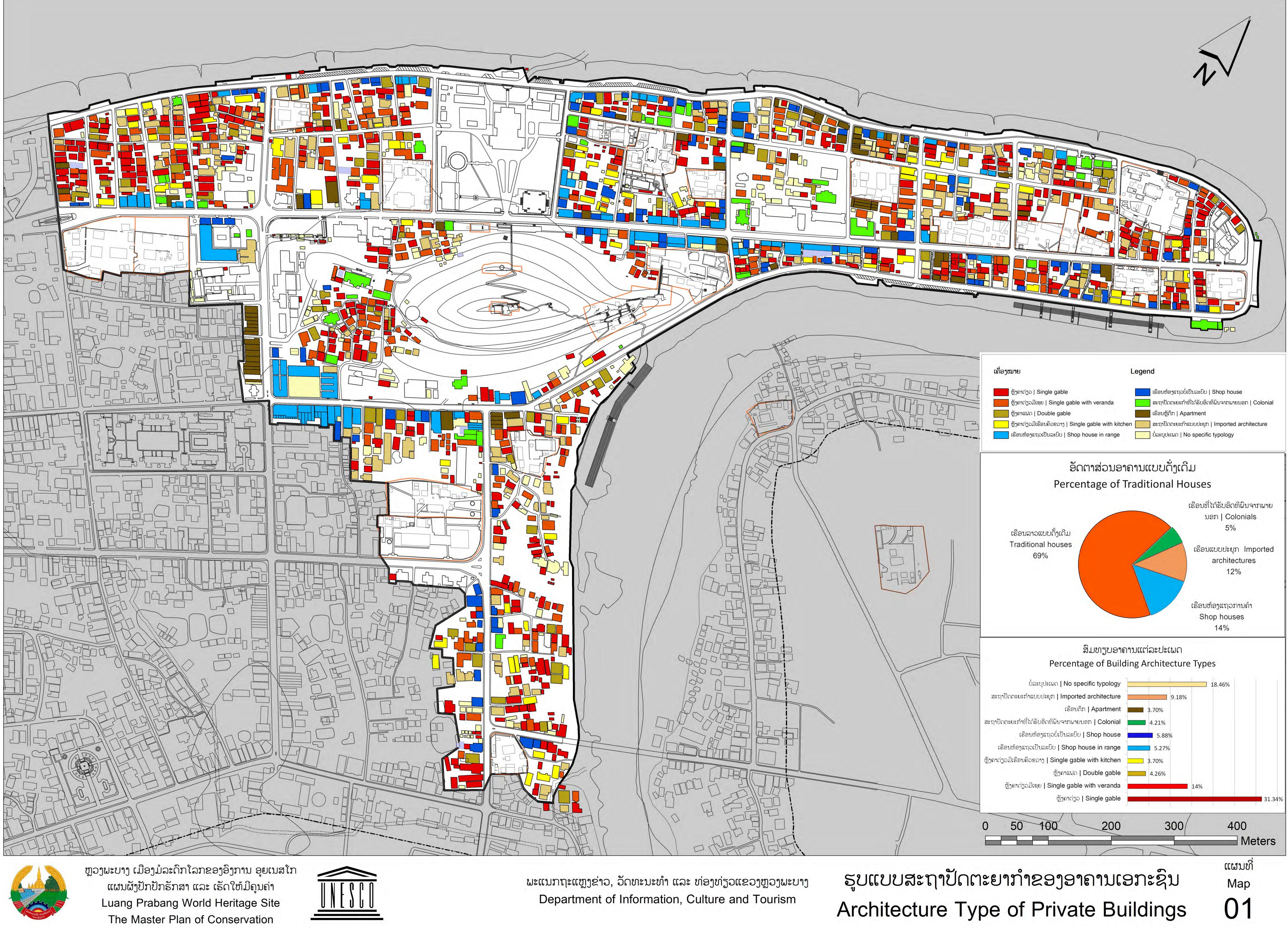


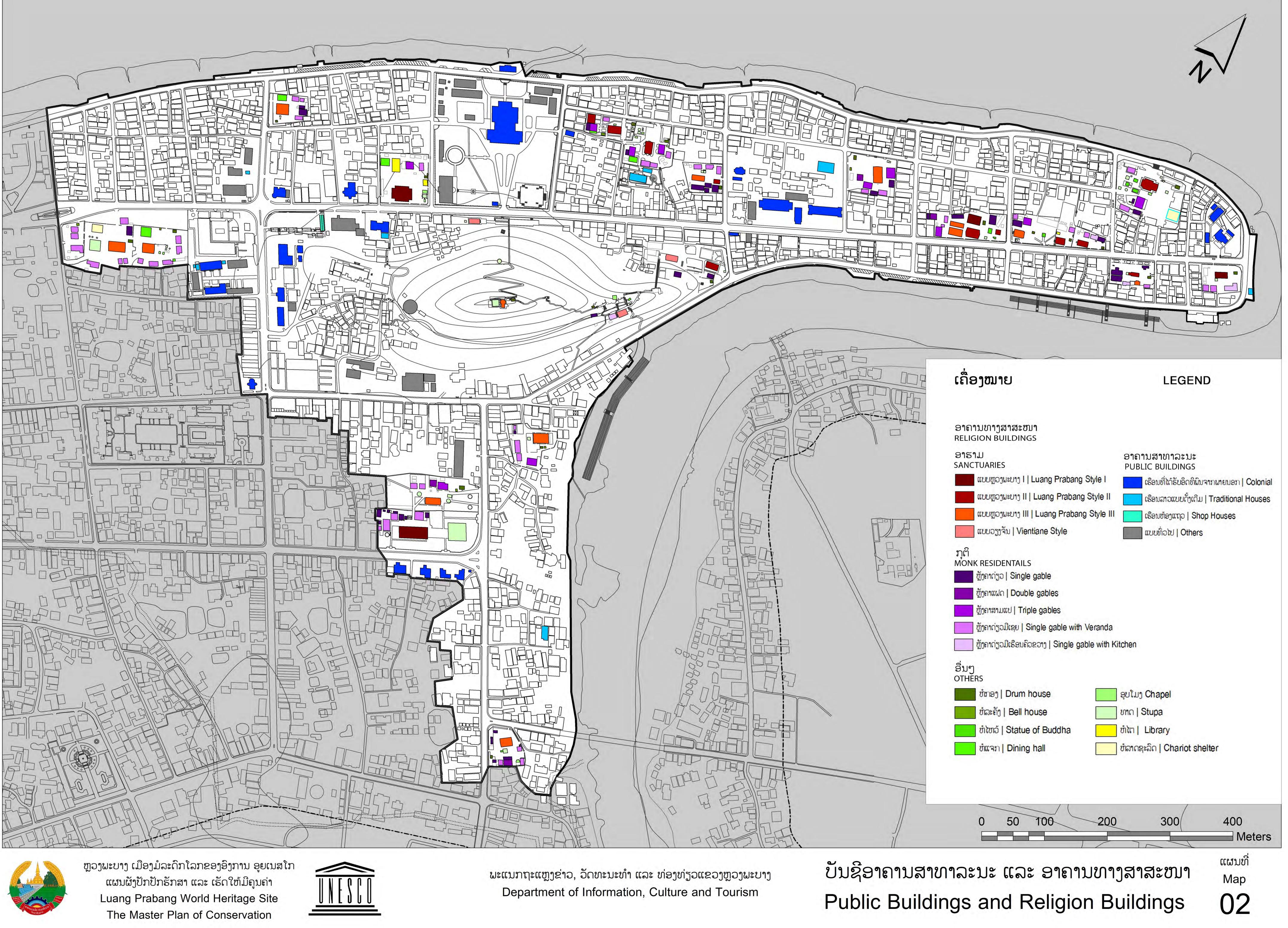
Soudaphone KHOMTHAVONG, Ph.D.

LuangPrabang Province

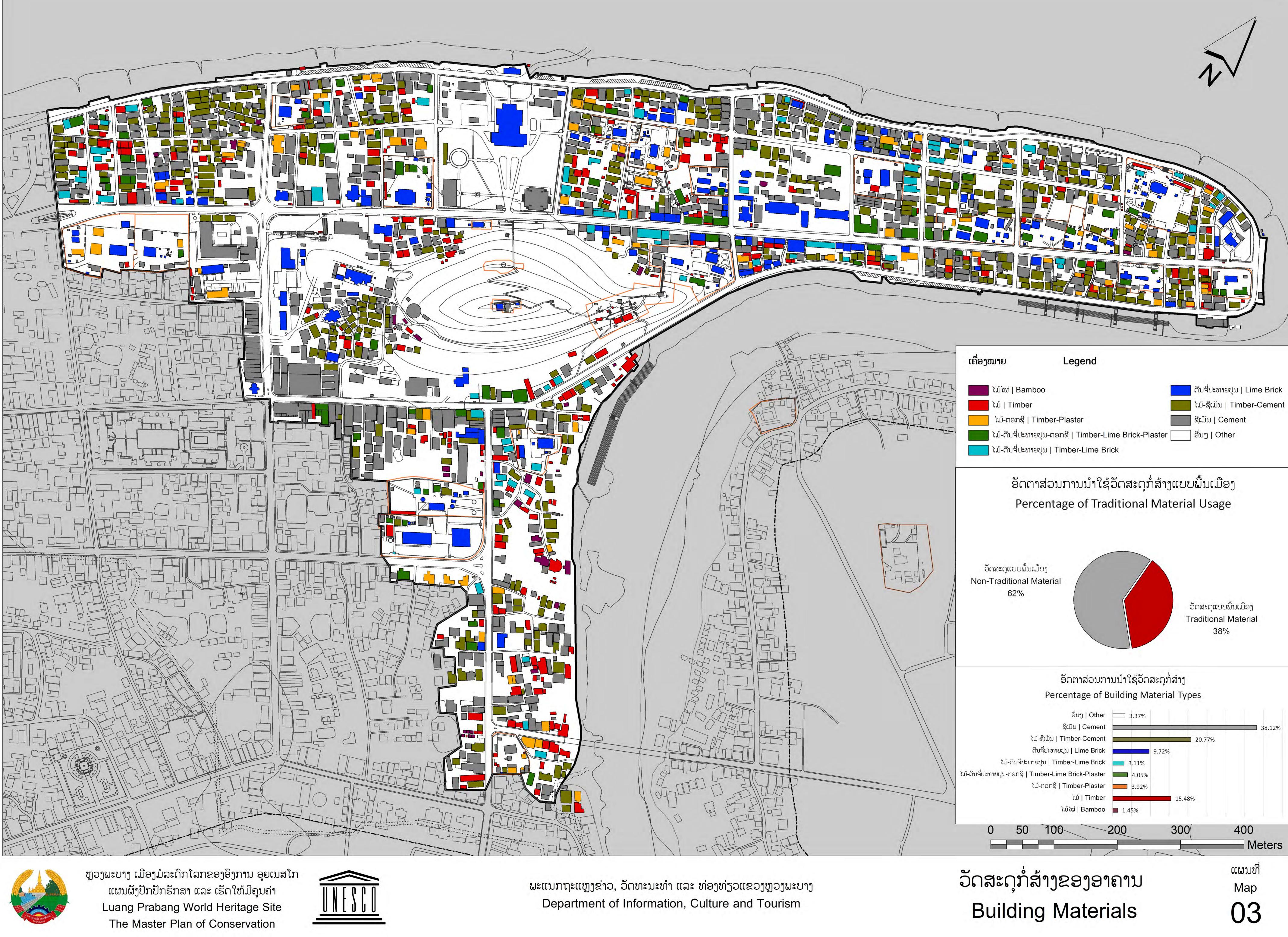
### ANNEX

Department of Information, Culture and Tourism, LuangPrabang Province, Phanom Village Tel/Fax: 071 212 044 <u>www.tourismluangprabang.org</u>, P.O Box 717.



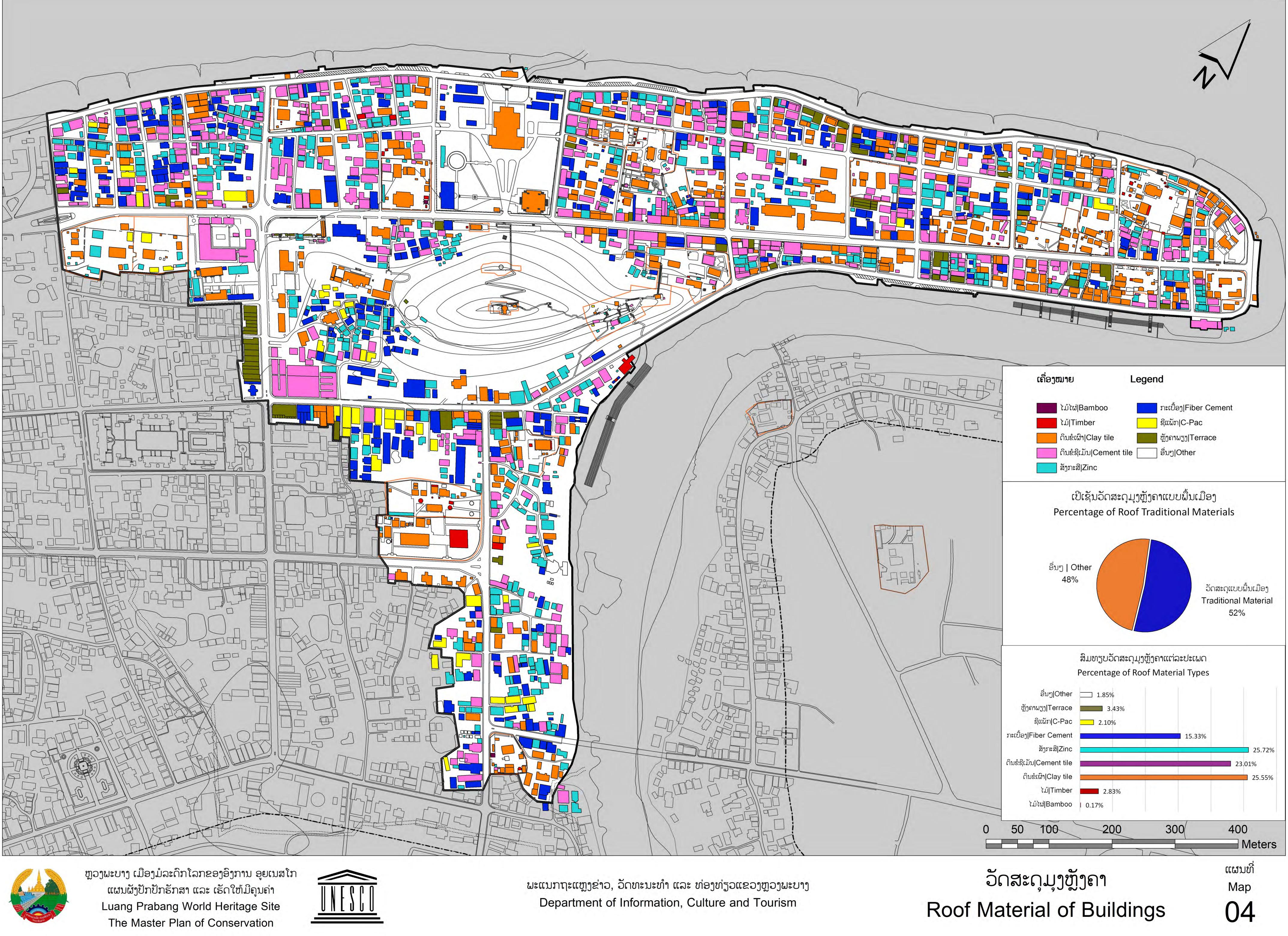




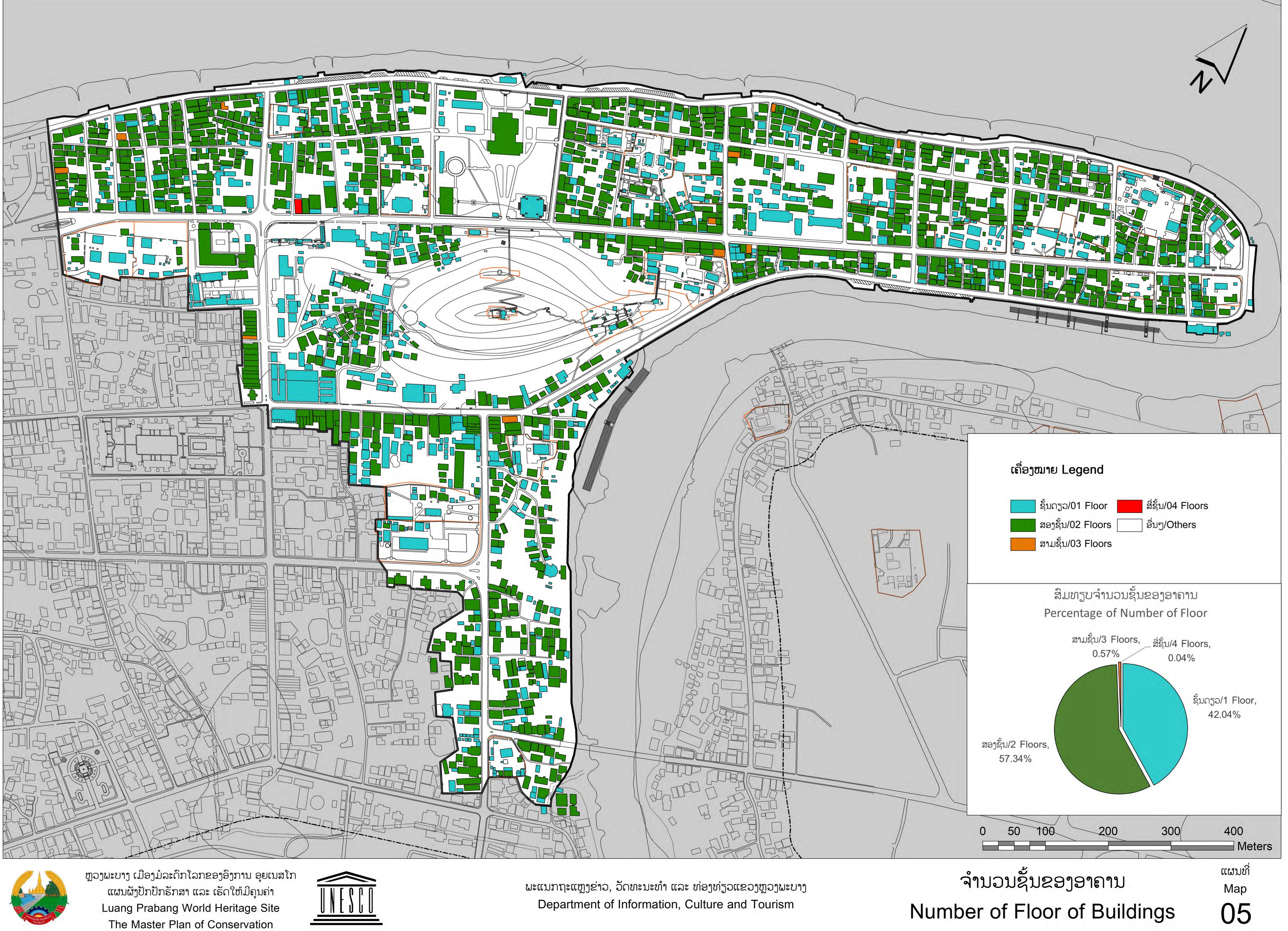


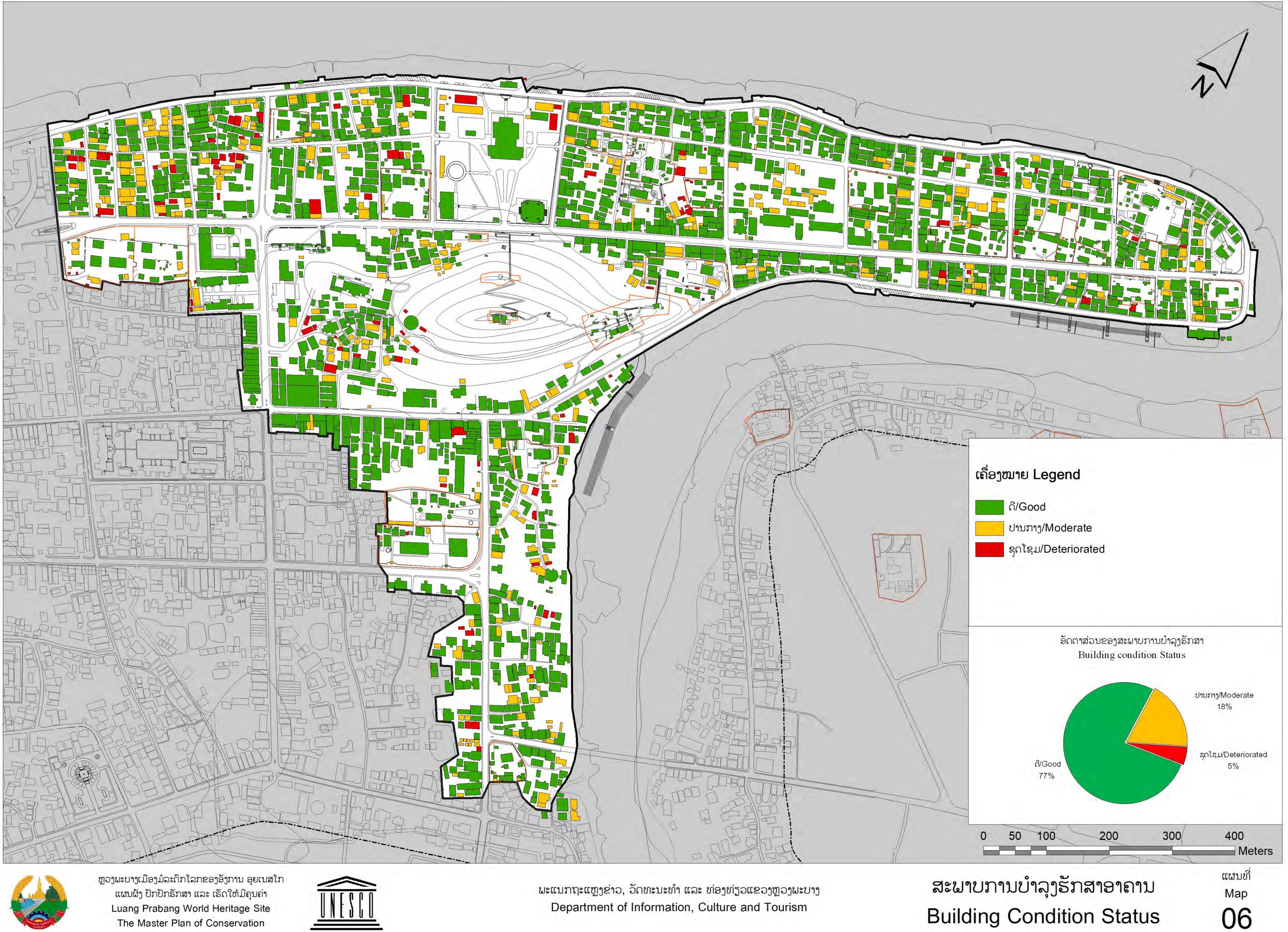


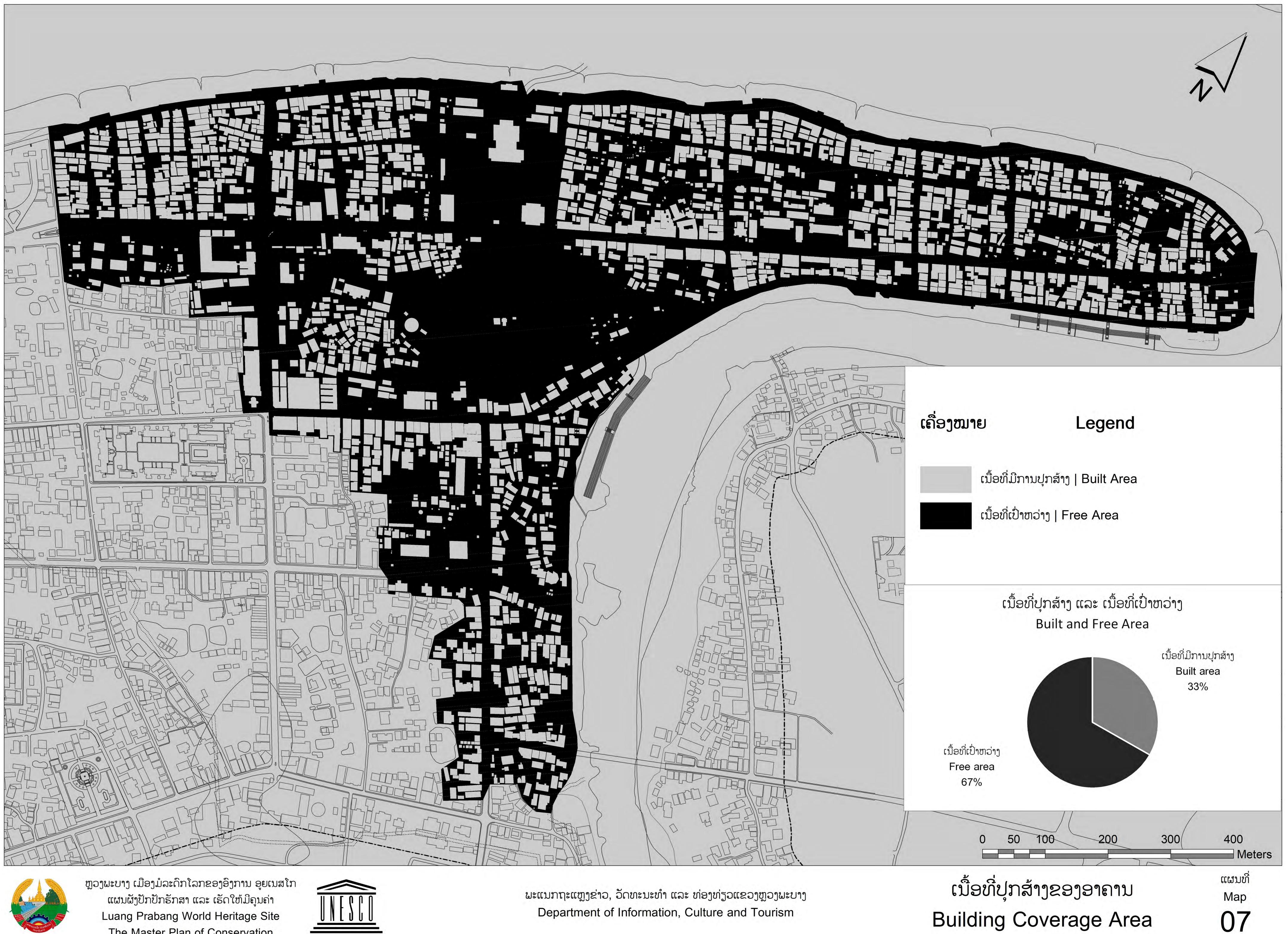






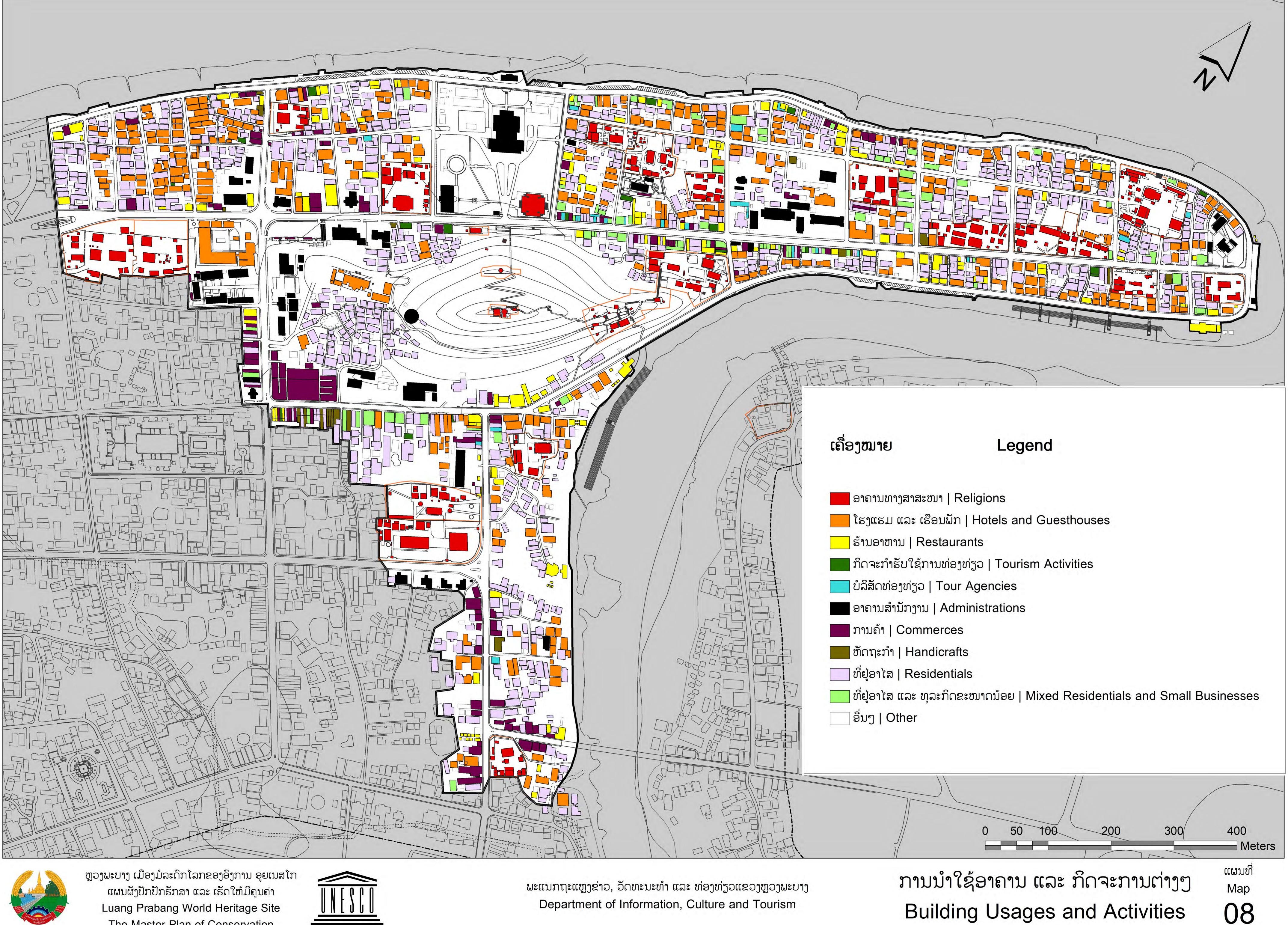






The Master Plan of Conservation





The Master Plan of Conservation

### APPENDIX 6. NAM KHAN BRIDGE.

### 3.2. 2. Bridge alignment and profile

The re-construction of Nam Khan will replace the existing bridge of old bailey bridge crossing Nam Khan river.



Figure 12. Bridge alignment of Nam Khan bridge



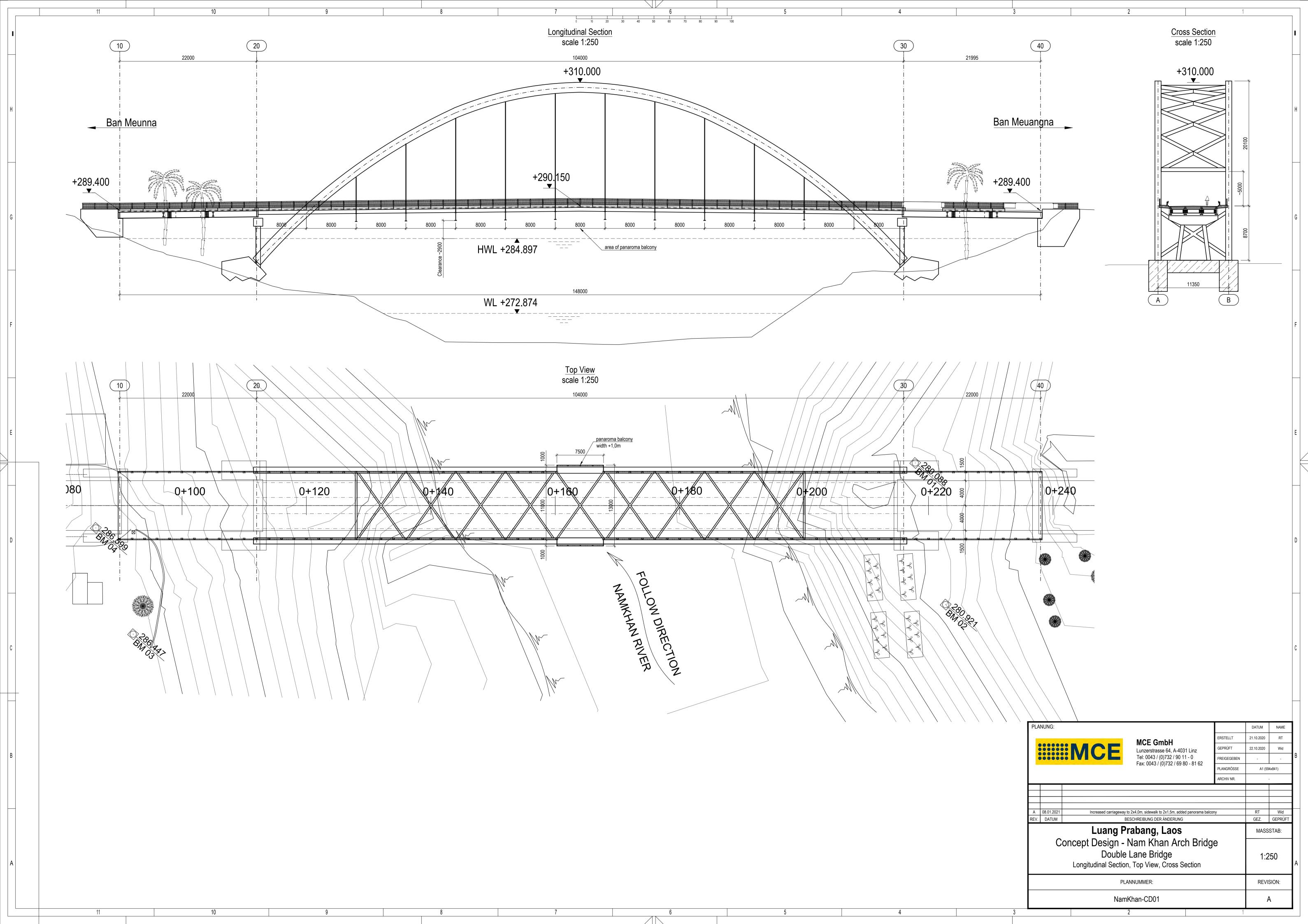
Style-1

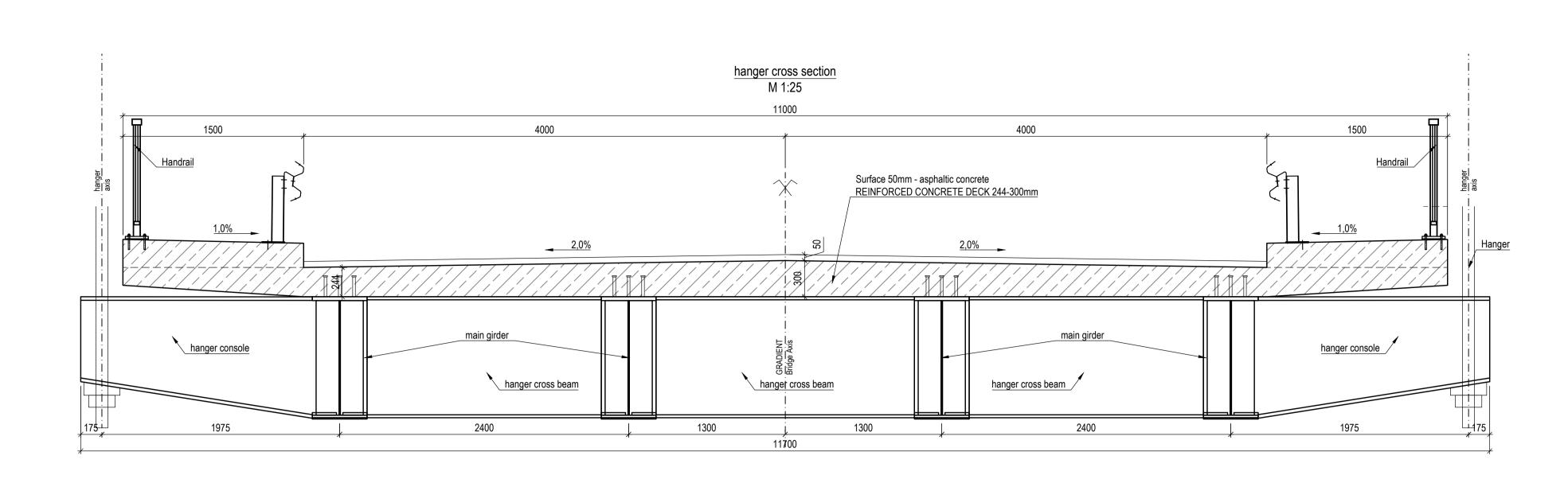


Style-2

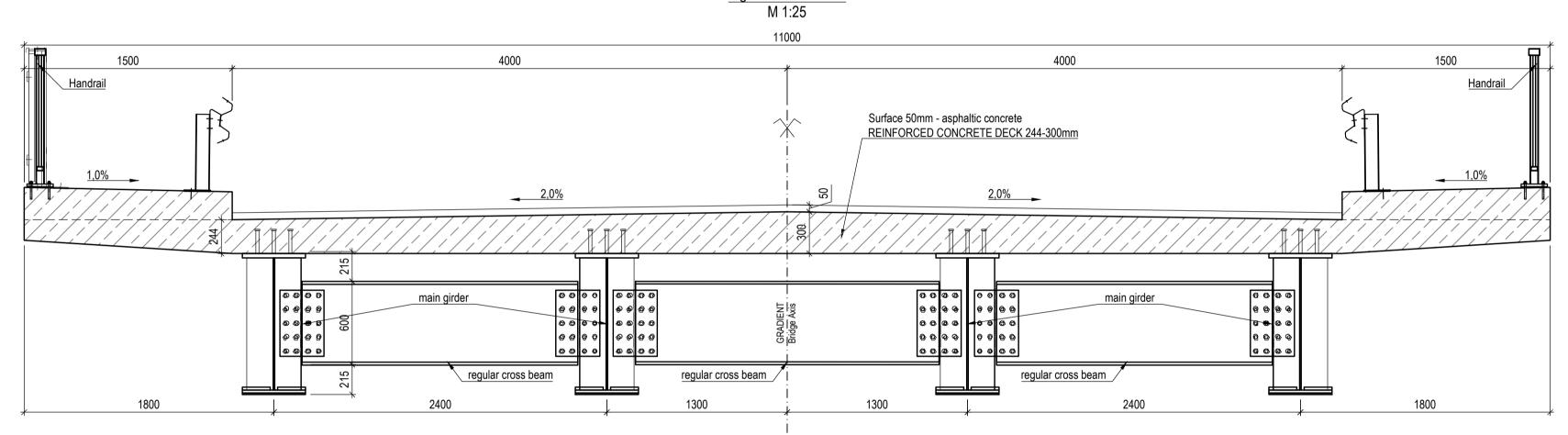


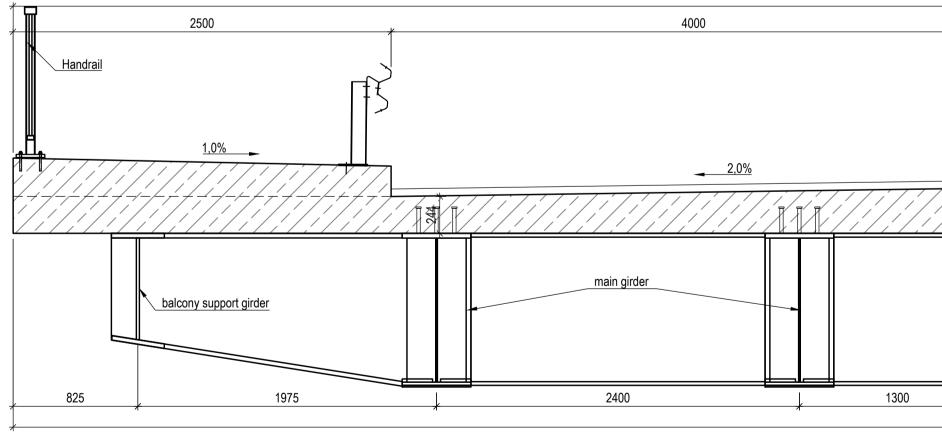
Style-3





0 10 20 30 40 50 60 70 80 90 100





11

D

B

11

10

### regular cross section

## panorama balcony cross section M 1:25

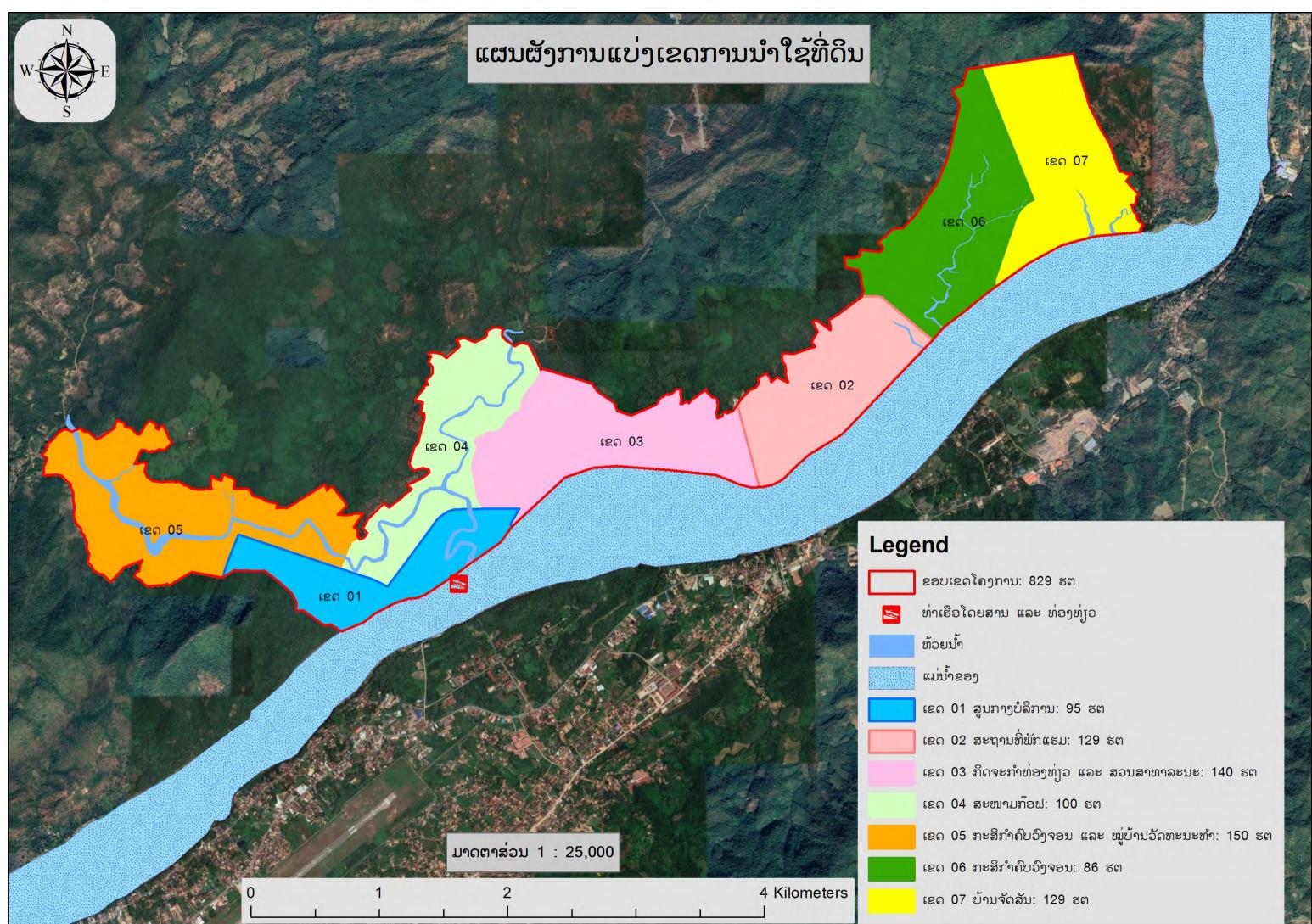
13000			×
v	4000	2500	<b>m</b> 1
Surface 50mm - asph	altic concrete CRETE DECK 244-300mm		Handrail
	main girder	balcony support girder	
1300	2400	1975	825
13000		· · · · · · · · · · · · · · · · · · ·	

4

	6	5	4

PLA	NUNG:				DATUM	NAME	
			MCE GmbH	ERSTELLT	21.10.2020	RT	
-	MCE GmbH Lunzerstrasse 64, A-4031 Linz Tel: 0043 / (0)732 / 90 11 - 0 Fax: 0043 / (0)732 / 69 80 - 81 62	GEPRÜFT	22.10.2020	Wid			
		FREIGEGEBEN	-	-			
				PLANGRÖSSE	A1 (594x841)		
			ARCHIV NR.		-		
A	08.01.2021         Increased carriageway to 2x4,0m, sidewalk to 2x1,5m, added panorama balcony		ony	RT	Wid		
REV.	REV. DATUM BESCHREIBUNG DER ÄNDERUNG			GEZ.	GEPRÜFT		
Luang Prabang, Laos					MASSSTAB:		
Concept Design - Nam Khan Arch Bridge Double Lane Bridge Cross Sections				1:25 REVISION:			
PLANNUMMER:							
NamKhan-CD02			А				

APPENDIX 8. COMPREHENSIVE TOURISM DEVELOPMENT PROJECT IN NAXAY VILLAGE, MAUNGKHAM VILLAGE AND SANOK VILLAGE, CHOMPHET DISTRICT, LUANG PRABANG PROVINCE -OCEANO SOLE CO., LTD.



# ແຜນຜັງລວມ

- ເຂດສູນການຄ<sup>້</sup>າ
   ເຂດທຸລະກິດ ແລະ ການຄ<sup>້</sup>າ
   ເຂດທະນາຄານ ແລະ ໂຮງໝໍ
   ເຂດທ່າເຮືອ

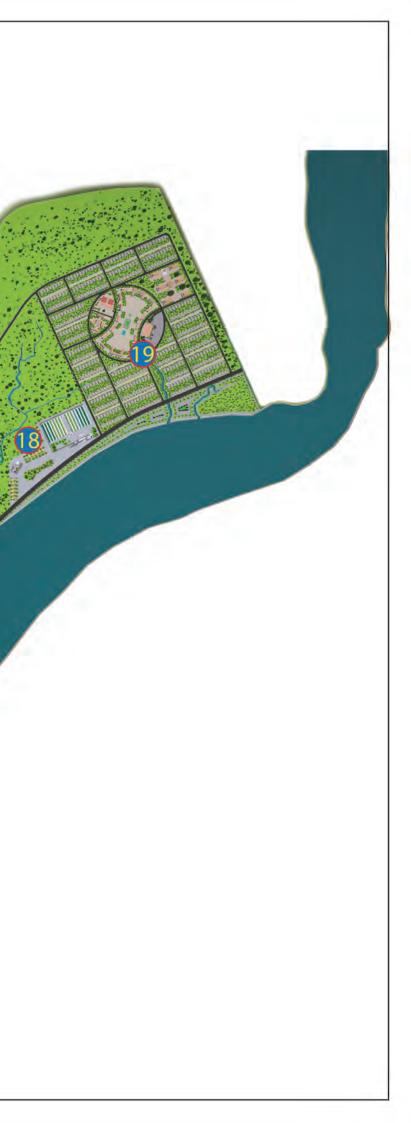
- 5. ເຂດສູນປະຊຸມ 6. ເຂດຮ້ານອາຫານ

- ເຂດໂຮງແຮມ
   ເຂດໝູ່ບ້ານຊີນເຜີ່າ
   ສູນສະໂມສອນຕີກອບ
   ຈຸດຊ້ອມຕີກອບ
- 11. ສ່ວນສາທາລະນະປະກອບມີ: Skywalk ແລະ ຂີວແກ້ວ

- 12. ເຂດຣີສອດ

- 12. ເຂດຣສອດ
   13. ຈຸດຊົມວິວ
   14. ສູນອະນຸລັກສັດນ້ຳ
   15. ເຂດກິດຈະກຳທາງນ້ຳ
   16. ເຂດຈັດສັນທີ່ພັກໄລຍະຍາວ
   17. ເຂດຈຳລອງສະຖານທີ່ທອງທ່ຽວອາຊຽນ
   18. ເຂດພັດທະນາກະສິກຳຄົບວົງຈອນ
   19. ເຂດໝູ່ບ້ານຈັດສັນ
   20. ເຂດກະສິກຳ

- 21.ໂຮງງານແປຮູບຜະລິດຕະພັນກະສິກຳ 22. ເຂດລົ້ງງສັດ







ເຂດບໍລິການ





ເຂດຫ້ອງປະຊຸມ

ເຂດຮ້ານອາຫານ





ເຂດໂຮງແຮມ





ສຸນການຄ້າ



ເຂດທະນາຄານ ແລະ ໂຮງໝໍ



ເຂດທ່າເຮືອໂດຍສານ, ທ່ອງທ່ຽວ, ຂົນສິ່ງສິນຄ້າ ແລະ ສຸນຂໍ້ມຸນຂ່າວສານການທ່ອງທ່ຽວ



ເຂດສະຖານທີ່ພັກແຮມ

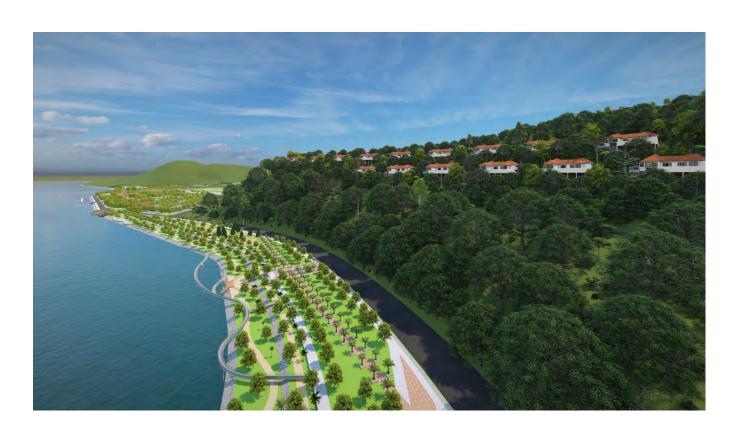




ສະຖານທີ່ພັກແແຮມ ແບບອາຄານດ່ຽວ



ເຂດສະຖານທີ່ຈຳລອງສະຖານທີ່ທ່ອງທ່ຽວ (ອາຊຽນ)



ເຂດກິດຈະກຳການທ່ອງທ່ຽວ



ເຂດຣີສອດ ແລະ ຈຸດຊົວວິວ



ສຸນອະນຸລັກສັດນໍ້າ

ສວນສາທາລະນະ







ສະໜາມກ໊ອຟ







ເຂດບ້ານຈັດສັນ

### APPENDIX 9. HILLSIDE TOURISM DEVELOPMENT – INFINITY TOURISM COMPANY LTD.



### ເຂດສະຫງວນ ພູ ແລະ ປ່າໄມ້ NC

#### ທີ່ຕັ້ງຂອບເຂດ :

ແມ່ນກວມເອົາບັນດາພູ ແລະ ສາຍພູທີ່ຢຸ່ອ້ອມຮອບເຂດປົກປັກຮັກສາ ເຊິ່ງມີບັນດາພຸດັ່ງນີ້ : ພຸເຫຼັກ, ພຸຊ້າງ, ພຸຊວງ, ພຸກິວ ຫວນ, ພຸຈອມຫວດ, ພຸໂດ, ພຸຊອນ, ຜາຕັ່ງນາຍ ແລະ ຜາດັດແກ້.

#### ລັກສະນະຂອງເຂດ :

ເປັນເຂດທີ່ປະກອບດ້ວຍບັນດາພຸນ້ອຍໃຫ້ຍ ແລະ ສາຍພຸທີ່ຕັ້ງລຽບລຽງກັນປຽບເໝືອນກຳແພງທີ່ອ້ອມຮອບຕິວເມືອງຫຼວງພະ ບາງ, ອຸດົມສິມບຸນເຕັມໄປດ້ວຍປ່າໄມ້ທຳມະຊາດ ແລະ ພຶດພັນນາໆຊະນິດ.

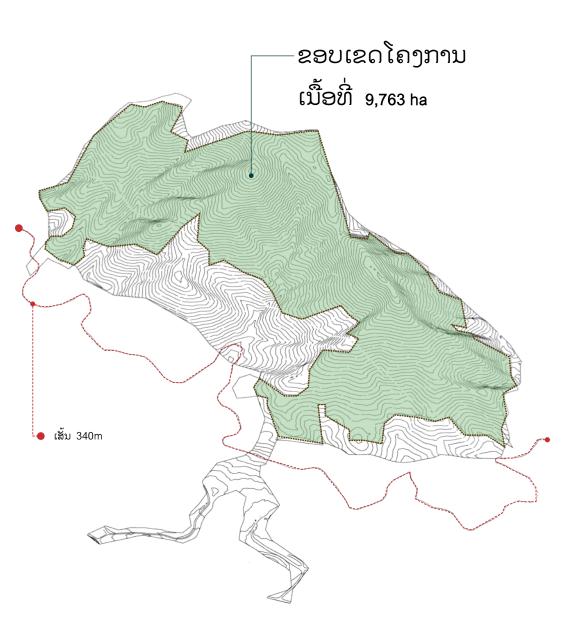
#### ຈຸດພິເສດຂອງເຂດ :

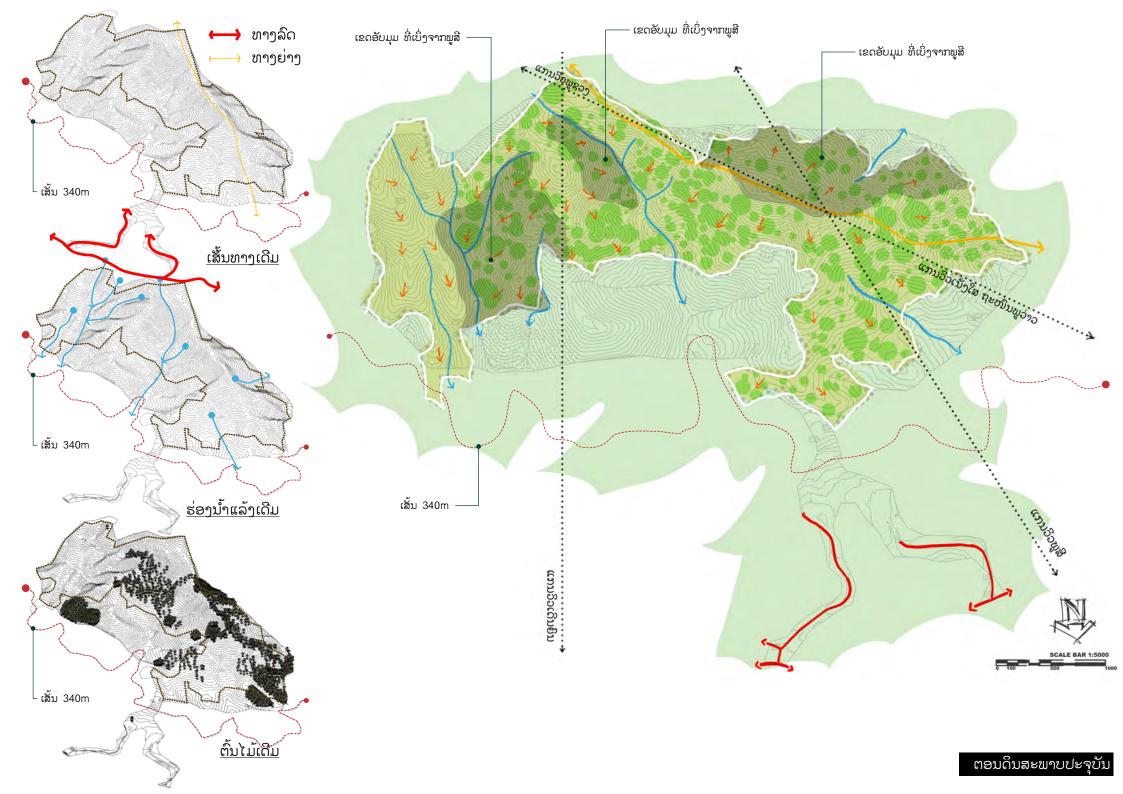
ບັນດາພຸນ້ອຍໃຫຍ່, ສາຍພຸດັ່ງກ່າວມີປະຫວັດຕ່ານານ ແລະ ຄວາມໝາຍທາງດ້ານປະຫວັດສາດທີ່ກ່ຽວພັນກັບການສ້າງຫຼວງ ພະບາງ ແລະ ເປັນສ່ວນປະກອບທີ່ສຳຄັນ ທາງທິວທັດທຳມະຊາດໃຫ້ແກ່ຕິວເມືອງ.

#### (ດັ່ງກ່າວນີ້ບໍ່ໄດ້ນຳໃຊ້ ສ.ນ.ດ)

ພາກທີ່ 1	ລັກສະນະຂອງກິດຈະການທີ່ອານຸຍາດແລະເກືອດຫ້າມ
<b>ມາດຕາ 1 :</b> ກິດຈະການ ທີ່ອະນຸຍາດ	<ul> <li>ການຮຸດຄົ້ນເຄື່ອງປ່າຂອງດຶງ</li> <li>ສາລາຊິມວິວ ກະຫັດລັດເບົາບາງ. ນຳໃຊ້ວັດສະດຸໃຫ້ກິມກິນກັບທຳມະຊາດ, ສຳລັບຮັບໃຊ້ໃຫ້ແກ່ການ ຫ່ອງທ່ຽວ</li> </ul>
<b>ມາດຕາ2 :</b> ກິດຈະການ ທີ່ເກືອດຫ້າມ	<ul> <li>ຫ້າມຕັດຕົ້ນໄມ້, ຖາງປ່າເຮັດໄຮ່.</li> <li>ຫ້າມປຸກສ້າງກິດຈະການຕ່າງໆປຸລູງບຕາມຕິນພູທີ່ສູງເກີນລະດັບ 340ມ ທຽບໃສ່ລະດັບ ໜ້ານ້ຳທະເລ (ຂຶ້ນກັບສະຖານທີ່ປຸກສ້າງຕິວຈິງ)</li> <li>ຫ້າມຂຸດຄົ້ນຫີນພູ, ດິນ.</li> </ul>

( ໃນບັນດາມາດຕາອື່ນໆ ແມ່ນບໍ່ມີເງື່ອນໄຂໃດໆ ).





- 1 ຈຸດຈອດລົດນ້ອຍຄາດໂຄ
- 2 ພາກສ່ວນບໍລິຫານໂຄງການ
- 3 ຈອດລົດແຂກ
- 4 ຈຸດຊົມວິວຕົວເມືອງ
- 5 ພາກສ່ວນບໍລິການແຂກລວມ
- 6 ຫ້ອງພັກແຂກລວມ
- 7 ຫ້ອງພັກແຂກສ່ວນໂຕ
- 8 ຝ່າຍກັ້ນນ້ຳ ຮູນແບບນ້ຳຕົກທຳມະຊາດ
- 9 ບ່ອນກາງເຕັ້ນລວມ
- 10 ລານກິດຈະກຳລວມ
- 11 ບໍລິການ ແລະ ກາເຟ
- 12 ສວນສັດນ້ອຍ
- 13 ສວນຊາ
- 14 ສວນກະສິກຳສົ່ງເສີມປະຊາຊົນປູກຜັກທ້ອ<mark>ງຖິ່</mark>ນ



ແກນວິວເດີນຍິນ

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วิวสุดยอด

สงมาก!



14

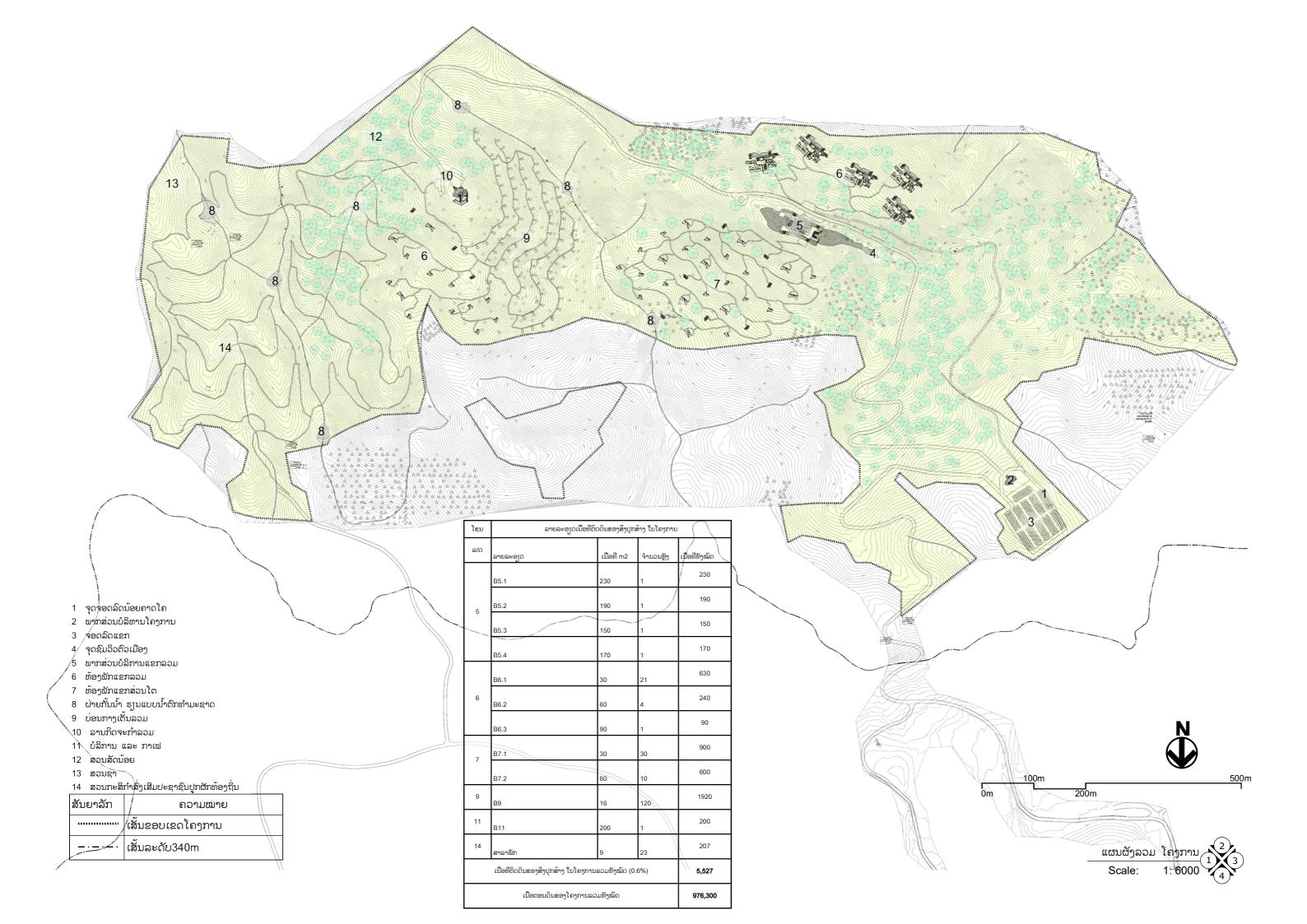


ຫາງລົດແຂກ ທາງລົດບໍລິການ ຫາງລົດນ້ອຍໂຄຄາດ ທາງຢ່າງໄມ້ດິນຫີນ ເສັ້ນສະລິງ

Encerter.

SCALE BAR 1:5000

ແຜນຜັງກິດຈະກຳລວມ



APPENDIX 11. EXECUTIVE SUMMARY OF THE LUANG PRABANG SMART AND INTEGRATED URBAN STRATEGY.

# **EXECUTIVE SUMMARY**



Photo: Adobe Stock.

Nestled in the northern region of the Lao People's Democratic Republic, Luang Prabang is one of the larger cities in the country. Infused with local Buddhist culture and traditions, its heritage boasts a unique mix of distinctive, low-rise vernacular and French colonial architecture, and a tropical riverine and forested landscape. Since Luang Prabang's designation as a World Heritage Site in 1995, its tourism and its population growth has resulted in outward city expansion and new economic opportunities. However, growth also brought about urban challenges in traffic congestion, littering, and indiscriminate wastewater discharge, overcrowded tourism sites, and wetland and pond loss, affecting the city's livability and heritage. As population and visitor numbers continue to grow, such problems unabated will inevitably worsen. These problems are accentuated by structural issues, such as a lack of funding, fragmented decision-making, and weak coordination between agencies.

The Luang Prabang Smart and Integrated Urban Strategy was prepared by the Luang Prabang provincial government, with the ASEAN Australia Smart Cities Trust Fund assistance and is based on extensive consultations with public and private stakeholders during mid-2022 through mid-2023. It outlines a smart city strategic infrastructure plan to achieve Luang Prabang's ambition to become a more livable heritage city for all. This ambition statement encapsulates the city's key attributes: its heritage, urban fabric, and its people. Three strategic pillars: (i) Integrated Tourism and Heritage Destination; (ii) Clean and Safe Environment; and (iii) Sustainable Villages and a 15-Minute City—guide the specific strategies and smart city projects required to realize Luang Prabang's livable heritage city ambition.

Under the pillar Integrated Tourism and Heritage Destination, Luang Prabang is envisaged as a sustainable destination that protects and leverages its built, natural, and intangible cultural heritage. Smart city projects include a dynamic electronic ticketing system for tourist attractions, real-time site monitoring, and heritage impact assessment guidelines. The Clean and Safe Environment pillar will provide Luang Prabang residents and visitors with the infrastructure and services needed to ensure a livable urban environment, such as clean water, clean streets, and safe sanitation. Smart city projects include smart septic tank systems, storm drains with gross pollutant traps, and electric waste collection vehicles. Under the Sustainable Villages and 15-Minute City pillar, Luang Prabang's urban management and transport systems will be transformed to strengthen community participation and reduce congestion and pollution. Smart city projects include self-sustaining urban villages where residents assemble to live, work, play, learn, and enjoy public spaces. Pedestrianization of the World Heritage Site, traffic simulation to improve transport planning, and smart shuttle services are also prioritized. An overarching integrated spatial planning approach factoring heritage, tourism, and sustainability considerations, and a comprehensive geographic information system will guide these efforts.

The strategy will be implemented under the supervision of a steering committee chaired by the provincial governor and supported by multisector working groups. Each working group will oversee one of the three strategic pillars, ensuring that smart city initiatives across the different domains are aligned with the overarching ambition and contribute to urban sustainability, resilience, social inclusion, and livability outcomes.

APPENDIX 12. MEKONG FOOTPATH PROJECT.

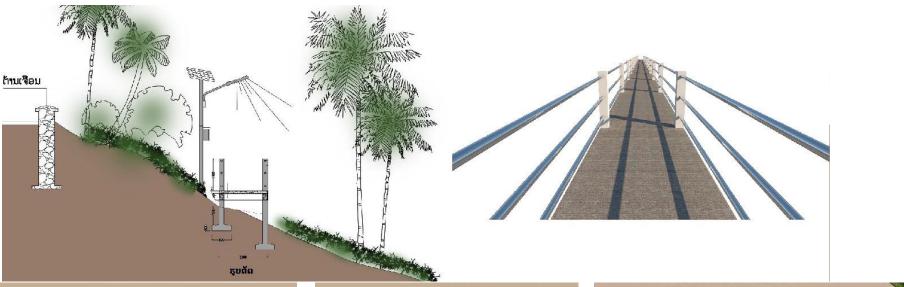


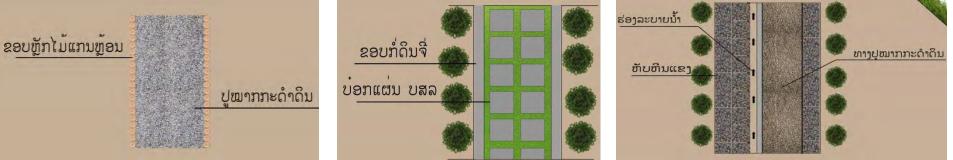
**1. ບ້ານຊຽງທອງຄີຣີ** ເລີ່ມຕົ້ນຈາກຂຶ້ນໄດວັດຊຽງທອງ ມີຄວາມຍາວ 54 ແມັດ ມີລະດັບສູງຈາກໜ້ຳນ້ຳທະເລແມື່ນ 284-286



# ທາງເລືອກໃນການອອກແບບເບື້ອງຕົ້ນ







### **2. ບ້ານໂພນເຮືອງ** ມີຄວາມຍາວ 222 ແມັດ ແລະ ມີຂົວ 2 ຈຸດ





**3. ບ້ານວັດໜອງ** ມີຄວາມຍາວ 285 ແມັດ ແລະ ມີຂົວ 3 ຈຸດ ແລະ ສວນ 1 ຈຸດ







### 4. ບ້ານຊຽງມ່ວນ ມີຄວາມຍາວ 154 ແມັດ



### 5. ບ້ານຈຸມຄ້ອງ ມີຄວາມຍາວ 95 ແມັດ



### **6. ບ້ານປ່າຂາມ** ມີຄວາມຍາວ 210 ແມັດ ແລະ ຂົວ 1 ຈຸດ





**7. ບ້ານຫົວຊຽງ** ມີຄວາມຍາວ 233 ແມັດ ແລະ ຂົວ 2 ຈຸດ



## **8. ບ້ານວັດທາດ** ມີຄວາມຍາວ 650 ແມັດ ແລະ ຂົວ 6 ຈຸດ







### ຮູບແບບທາງຍ່າງ, ຂີວ ແລະ ໄຟເຍືອງທາງ



#### **APPENDIX 13. LPHPPHIASUMMARY**



# **Luang Prabang** Hydroelectric Power Project Heritage Impact Assessment: Summary

January 2024

### **EXECUTIVE SUMMARY**

### Introduction

This Heritage Impact Assessment (HIA) provides an assessment of the potential impacts of the proposed Luang Prabang Hydroelectric Power Project (LP HPP) on the Outstanding Universal Value of the Town of Luang Prabang World Heritage Site (Luang Prabang WHS).

The HIA has been prepared by CBA, independent UK-based landscape, environmental and heritage practice, on behalf of the Government of Lao People's Democratic Republic (GoL) represented by the Ministry of Information Culture and Tourism (MICT).

The Luang Prabang Hydroelectric Power Project involves the construction and operation of a run-of-river hydropower plant on the Mekong River, approximately 25km upstream from the Luang Prabang WHS in the central northern part of the Lao People's Democratic Republic.

### Development of the HIA

Extensive research, anthropological study, and engagement with local, national and international stakeholders have informed the development of this HIA. The World Heritage Management Division has been involved throughout the process, along with the MICT, ensuring that those with direct day-to-day responsibility for the management of the WHS and for working with local communities have been fully engaged in the development of the HIA and that it reflects local realities.

Review and input has also been received from a range of expert parties, both within the HIA team and in external organisations, including from ICOMOS (with reviews of past HIAs and the July 2023 Interim HIA), hydrological, dam safety and ecological experts at Afry (as part of the developer consultant team and authors of previous HIAs), and the experts on the Independent Dam Safety Panel who have been appointed to guide the further design development of the project.

The HIA has been undertaken in the context of the UNESCO HIA Guidelines (2022) and has addressed a wide range of baseline issues and potential impacts. It is considered to offer a robust assessment of potential impacts to the OUV of the WHS.



Importantly, the HIA has also enhanced the baseline understanding of the WHS for the benefit of both the HIA and the future management of the WHS. Current published understandings of the WHS are strongly rooted in its tangible cultural heritage and do not reflect the wider intangible heritage of the City and its people, and the important connections between those aspects. Through extensive desk-based analysis and anthropological survey the HIA has developed a deeper understanding of the intangible heritage of the WHS.

A key outcome of this process has been the establishment of 9 Attributes of OUV, these are the physical elements, and tangible or intangible aspects or processes, of the property that express, embody, and convey its OUV. The following sets out the newly defined attributes:

- Attribute 1: Unique living amalgam of cultural traditions expressed through physical architecture and urban form and living traditions, practices and beliefs.
- Attribute 2: Network of historic living village communities that provide a spatial and communal structure for the town, with distinctive and differing traditions and practices.
- Attribute 3: Economic, social, and cultural hub for the wider region, historically and contemporarily
- Attribute 4: Historic administrative, political and royal capital of Laos and Luang Prabang, and home to the Prabang palladium
- Attribute 5: Distinctive blend of traditional local architecture and French colonial buildings (1986-1953) in a largely intact urban form that reflects its traditional and colonial history
- Attribute 6: Exceptional surviving assemblage of active Wats (Buddhist temple complexes) displaying architectural forms and decorative traditions unique to Luang Prabang and Laos; with ongoing religious and educational uses
- Attribute 7: Living and evolving belief systems, religious practices, festivals and rituals that are partly common to wider northern Lao and partly unique to Luang Prabang, blending Buddhist, animistic and other traditions
- Attribute 8: Visual, physical, spiritual and functional relationships to the Mekong and the Nam Khan, and wider natural landscape
- Attribute 9: Rich ethnic / cultural diversity contributing to a living heritage of craft, daily life, and belief across the City

These attributes, along with the established statements of authenticity and integrity form a robust basis for assessing the potential impacts of the project on the OUV of the WHS.



### **Key findings**

A key element of the HIA has focussed on understanding the changes associated with the LP HPP, taking into account the embedded design mitigation that has already sought to address a number of construction and operation impacts. This review explored and analysed:

- Potential changes relating to natural flood events and induced flood events
- Potential changes to downstream fisheries
- Potential changes to river morphology, hydrology, and sedimentation
- Potential changes to artificial wetland environments
- Potential changes to river navigation and traffic
- Potential changes to road traffic
- Potential visual changes
- Potential economic and tourism changes

This analysis identified a range of changes that could have negative or positive, temporary or permanent impacts on the OUV of the WHS. These included:

- Construction period navigation restrictions
- Operational period navigation changes
- Risk of changes to fish populations & river ecology
- Changes to bedload sediment levels
- Natural floods management measures
- Flooding due to dam failure

The assessment of potential impacts on OUV from these potential changes has identified no significant negative impacts on the OUV of the WHS, and some limited benefits. A combination of design decisions including, notably, the fact it is a run-of-river hydroelectric scheme (not a storage dam), its fish pass and navigation mitigations, its design development in terms of earthquake and flood risk, and its distance from the WHS, result in a scheme that does not harm the WHS to any notable degree.

There are some minor / negligible negative impacts. Firstly, some temporary impacts due to navigation restrictions during construction, and, secondly, a negative impact has been recorded with regard to a potential impact on attributes of OUV due to impacts on fishing opportunities.



The flood warning measures that arise from the scheme provide benefits for the tangible and intangible heritage of the WHS, and should provide comfort and surety for its communities. This is a minor benefit.

Overall, the scheme would not significantly harm the OUV of the WHS, and would provide a limited benefit.

This outcome reflects the fact that two key issues previously identified as potential risks have been addressed either through revisions to the design, or clarification of information, these include:

- Catastrophic Flooding due to dam failure the dam has been designed to withstand a 1:10,000 year earthquake event without loss of functionality, there is no realistic risk of dam failure. Even so, design measures have reduced the flood levels at Luang Prabang arising from failure to the equivalent of a 1:100 year flood event
- Changes to water levels on the Mekong past the WHS as a run-of-river dam the project will not alter water levels on the Mekong past the WHS

In terms of Cumulative Impacts, no significant additional cumulative impacts have been identified, but risks exist in relation to fish and bedload sediment.

### **Mitigation Requirements and Recommendations**

As a major infrastructure project, governed by national law, and funded by international finance institutions (under IFC standards) the LP HPP has extensive environmental and social mitigation obligations and plans in place. Key elements of this in relation to the WHS include:

- Concession Agreement with GoL which establishes key mandatory standards and requirements
- Environmental Management and Monitoring Plans for operational and construction phases addressing maters including river ecology, fish, sedimentation, pollution etc
- Emergency Action Plan for construction and operational phases

In addition, the project has commissioned an Independent Dam Safety Review Panel, to provide ongoing design guidance and recommendations.



It has also been recommended in the HIA that a River Traffic Management Plan is prepared to ensure that navigational closures during construction and operation are managed and communicated to minimise disruption; and that worker inductions provide guidance in relation to appropriate behaviour should workers wish to visit the WHS.

Additionally, opportunities for benefit and enhancement have been identified, in terms of skills training, traditional arts / crafts employment opportunities, publication of information on the intangible heritage of Luang Prabang and an ongoing process of engagement with communities.





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