

**KATHMANDU VALLEY WORLD HERITAGE PROPERTY  
NEPAL  
Ref. 121bis**

**STATE OF CONSERVATION REPORT 2024**



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## **1. Executive Summary of the report**

With the establishment of the International Scientific Committee for Kathmandu Valley (ISC-KV) and the regular meetings (annual meetings and triannual hybrid review meetings) it has been possible to carefully plan out and monitor the required activities for the Kathmandu Valley World Heritage Property.

The activities have been organised under three main categories.

1. Activities related to post-earthquake recovery and lessons learned.
2. Activities related to improved management.
3. Activities related to capacity building and training.

There has been progress in the first two categories of activities, as will be presented. However, the State Party requests the international community to assist in providing capacity building and training, particularly focused on various recommendations made by the World Heritage Committee such as on the Historic Urban Landscape approach, on practical procedures for the protection of urban housing and ancient settlements, on value-based heritage assessment and conservation management planning and on socio-economic revitalisation programmes.

### **Response to the Decision of the World Heritage Committee**

Responses to the individual points of the World Heritage Committee decisions have been provided. There has been progress on all activities which have been carried out as per the recommendations and guidance of the ISC-KV. There is still a lot to be done, but things are moving in the right direction.

### **Other current conservation issues**

The completed, ongoing and remaining works in respect to post-earthquake recovery have been provided for each of the seven monument zones. There are now only few remaining projects left (refer table on page 8).

### **Reporting on Major Developments (OG Para 172)**

There are presently no planned works being carried out beyond the reconstruction and restoration of monuments damaged by the 2015 Gorkha Earthquake.

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

### **Decision 45 COM 7B.45**

Kathmandu Valley (Nepal) (C 121bis)

The World Heritage Committee,

1. Having examined Document WHC/23/45.COM/7B,
2. Recalling Decision **44 COM 7B.33** adopted at its extended 44th session (Fuzhou/online, 2021),
3. Welcomes the State Party's continued efforts towards the recovery of the property following the 2015 Gorkha earthquake and the establishment of the International Scientific Committee for Kathmandu Valley (ISC-KV);
4. Calls upon the international community to continue supporting the State Party's recovery work through financial, technical or expert assistance, including support for local communities and their housing and social needs, and in particular to contribute the resources needed to enable the active participation of international experts in the newly-established ISC-KV;
5. Notes the submission of the revised Integrated Management Framework (IMF), which will be subject to a Technical Review by the Advisory Bodies and subsequently become part of the New Master Plan for Pashupati Protected Monument Zone, and requests the State Party to submit the entirety of the New Master Plan document and the revised IMF to the World Heritage Centre for review by the Advisory Bodies prior to formal government approval;
6. Urges the State Party to update the Recovery Master Plan (RMP), including revisions to the six-year plan and timetable, and to establish RMPs for each Protective Monument Zone of the property that is in line with the 2011 UNESCO Recommendation on the Historic Urban Landscape (HUL), and reiterates its request to the State Party to integrate the RMPs for each Protective Monument Zone of the property within the overall socio-economic revitalization programme for urban communities;
7. Recalls the conclusions and recommendations of the 2019 joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission, especially the mission's findings regarding adverse effects on the authenticity of the property and the focus on monuments at the expense of other attributes, with the resulting consequences for traditional urban housing and ancient settlements, and therefore reiterates its request that the State Party fully implement all of the Reactive Monitoring mission's recommendations and report on its progress;
8. Notes the information provided regarding the Patan Durbar Square Monument Zone sewer project, the Lal Baithak wing of the National Art Museum, Bhaktapur, and the proposed expansion of the Ring Road at Swayambhu, reminds the State Party of its previous request that the revised documentation of the Patan Durbar Square Monument Zone sewer project be submitted to the World Heritage Centre, and also reminds the State Party that details of these projects and any other major projects, including

Heritage Impact Assessments (HIAs), should be submitted to the World Heritage Centre for review by the Advisory Bodies before any decision is made that would be difficult to reverse, in line with Paragraphs 118bis and 172 of the Operational Guidelines;

9. Requests the State Party to ensure that the draft procedures and format for HIAs in Nepal are reviewed to be consistent with the Guidance and Toolkit for Impact Assessments in a World Heritage Context, prior to being adopted;
10. Requests the State Party to adopt and implement the recommendations of the first ISC-KV from March 2023, and particularly the following overarching tasks and programmes:
  1. Finalize post-disaster recovery phase,
  2. Review and revise, if necessary, the Integrated Management Plan,
  3. Review and revise, if necessary, the effectiveness of essential management procedures and tools,
  4. Establish a comprehensive information management system,
  5. Provide capacity strengthening and training,
  6. Establish regular ISC-KV and Coordinative Working Committee (CWC) meetings;
11. Finally 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.



## **Response to each of the paragraphs of the World Heritage Decisions**

1. Having examined Document WHC/23/45.COM/7B,
2. Recalling Decision **44 COM 7B.33** adopted at its extended 44th session (Fuzhou/online, 2021),
3. Welcomes the State Party's continued efforts towards the recovery of the property following the 2015 Gorkha earthquake and the establishment of the International Scientific Committee for Kathmandu Valley (ISC-KV);
4. Calls upon the international community to continue supporting the State Party's recovery work through financial, technical or expert assistance, including support for local communities and their housing and social needs, and in particular to contribute the resources needed to enable the active participation of international experts in the newly-established ISC-KV;

We welcome the support of the international community and thank UNESCO Kathmandu Office for their continued support.

5. Notes the submission of the revised Integrated Management Framework (IMF), which will be subject to a Technical Review by the Advisory Bodies and subsequently become part of the New Master Plan for Pashupati Protected Monument Zone, and requests the State Party to submit the entirety of the New Master Plan document and the revised IMF to the World Heritage Centre for review by the Advisory Bodies prior to formal government approval;

The process of reviewing, revising and augmenting the management of Kathmandu Valley World Heritage property is ongoing. This process entails the review of the **Integrated Management Framework** document, as well as the preparation and establishment of **Sector Strategies**: (a) Heritage Conservation Management Plan, (b) Urban Planning, (c) Subsurface Archaeology, (d) Community and Sustainable Development, (e) Disaster Risk Management and (f) Visitor Management. Sector Strategies for Heritage Conservation Management, Subsurface Archaeology and Visitor Management are in the process of being prepared.

The currently reviewed Integrated Management Framework is submitted with this report as an annex. (Annex 1)

The New Master Plan for Pashupati Protected Monument Zone has been adopted. The Master Plan was developed by an expert committee established by the Ministry of Culture, Tourism, and Civil Aviation. This committee included official members of related stakeholders and renowned national experts from diverse disciplines related to the conservation and management of the site. Since the Pashupati Area Development Trust operates as an autonomous entity under the Ministry of Culture, Tourism, and Civil Aviation, guided by its Trust Act, the newly developed Master Plan is currently being implemented, endorsed by the Trust's Governing Council. The Master Plan, originally prepared in Nepali, is currently undergoing translation into English. Once the translation is complete, it will be submitted.

6. Urges the State Party to update the Recovery Master Plan (RMP), including revisions to the six-year plan and timetable, and to establish RMPs for each Protective Monument Zone of the property that is in line with the 2011 UNESCO Recommendation on the Historic Urban Landscape (HUL), and reiterates its request to the State Party to integrate the RMPs for each Protective Monument Zone of the property within the overall socio-economic revitalization programme for urban communities;

As recommended by the ISC-KV, a final '**Recovery Plan: Remaining Activities Report**' is being prepared and continually being upgraded. A more elaborate '**Post-disaster Recovery: Lessons Learned Report**' is also being prepared which will involve the main authorities, organisations, community members, as well as craftspeople. A publication is planned to be released on the tenth anniversary of the Gorkha Earthquake, on 25th April 2025.

We welcome the support of international experts to help integrated the 2011 UNESCO Recommendation on the **Historic Urban Landscape (HUL)** into the management approach and develop an overall **socio-economic revitalization programme for urban communities**.

7. Recalls the conclusions and recommendations of the 2019 joint World Heritage Centre/ICOMOS/ICCROM Reactive Monitoring mission, especially the mission's findings regarding adverse effects on the authenticity of the property and the focus on monuments at the expense of other attributes, with the resulting consequences for traditional urban housing and ancient settlements, and therefore reiterates its request that the State Party fully implement all of the Reactive Monitoring mission's recommendations and report on its progress;

A response to the **recommendations of the 2019 joint World Heritage Centre / ICOMOS / ICCROM Reactive Monitoring mission** has been provided below.

- *Ongoing deterioration of some structures that have yet to be repaired (e.g. Hanuman Dhoka Palace)*

Almost all the conservation and restoration work on the earthquake-damaged monument within all Protected Monument Zones of the KVWP, including Hanuman Dhoka Palace, has been completed. The overall rehabilitation status is provided in the respective section.

- Lack of attention given to the recovery of the urban and ancient settlements of the KVWHP;

The Department of Archaeology, in close coordination with the local government, is committed to the recovery of urban and ancient settlements within the KVWHP.

- Loss of traditional housing within the KVWHP monument zones and buffer zones;

However, the protection of the living heritage site with private housing is always tough and challenging. The Government of Nepal has implemented specific bylaws for its protection. Additionally, there is a 'technical committee' formed under the provision of

the Ancient Monument Preservation Rule, consisting of all relevant authorities, to monitor and recommend on the implementation of the bylaws. The Department of Archaeology, in close coordination with the local government, is consistently committed to the recovery of the urban and ancient settlements within the KVWP.

- Unsympathetic new development around the edges of the KVWHP monument zones, particularly around the edges of the main squares (e.g. Dattatreya Square in Bhaktapur);

The Department of Archaeology, in close coordination with the local government, is always committed to the recovery of the urban and ancient settlements of KVWP. Regarding the housing around Dattatreya Square in Bhaktapur, the Department coordinates with Bhaktapur Municipality.

- Uncontrolled development in the monument zones and buffer zones;

This is being addressed individually through the Coordinative Working Committee which has representatives from all the Monument Zones of the KVWHP.

- Impacts of new urban infrastructure (utilities and roads) on KVWHP and its setting, including visual impacts and physical impacts, as well as impacts on subsurface archaeology;

The Department of Archaeology, in coordination with relevant stakeholders of the site, including the municipality, has been focusing on minimizing the impact of new urban infrastructure. In the Pashupati PMZ, the newly adopted Master Plan could be a significant tool for controlling such unwanted development.

Patan Municipality and Bhaktapur Municipality have already begun restoring the inner streets of the old city with traditional fabric, replacing black topping with stones or bricks. Measures such as the restoration of traditional rest houses along the sides of the street and the conservation, restoration and management of traditional water sources will contribute to retaining the traditional urban fabric of the city.

Regarding 'subsurface archaeology,' the Department of Archaeology has already initiated work, addressing it as one of the 'sector strategies' within the Integrated Management Framework for KVWHP.

- Lack of master planning to guide recovery and new development, including urban infrastructure, within the KVWHP, its monument zones and buffer zones;

The recovery works are largely completed and any development works carried out within the KVWHP follow the regulations defined within the IMF, or then is subject to a HIA.

- Lack of values-based conservation management planning for each of the monument zones (including buffer zones) to guide conservation, management, adaptation and change affecting the monuments and other attributes of the KVWHP, their significant settings, and their associated intangible heritage;

In regard to this, the International Scientific Committee (ISC-KV) will be helpful. Working on and managing the mentioned subject is also one of the recommendations of the ISC-KV.

- Lack of values-based conservation management planning for the major monument complexes (particularly palaces and large sattal complexes) to guide the conservation, management and adaptation of the monuments, their significant settings, associated collections and intangible heritage;

In this regard, the International Scientific Committee (ISC-KV) will be helpful. This is also a part of one of the recommendations of the ISC-KV. Additionally, the preparation and implementation of the sector strategy for the IMF-KV, which is already in progress, is expected to be a guiding tool on this subject.

- Lack of cyclical maintenance programs to ensure the monuments are maintained in good condition;

The maintenance of the monuments is closely linked to the individual caretakers. This is an issue that is being addressed through the sector strategy on conservation presently being prepared as a part of the overall management plan.

- Lack of disaster risk management planning for the monument zones and major monument complexes;

The Disaster Risk Management Plan is also one of the 'sector strategies' of the Integrated Management Framework (IMF) for the KVWHP. The UNESCO Office in Kathmandu, in close coordination with authorities, such as the Department of Archaeology and other stakeholders, has provided immense support on this subject. The sector plan to be prepared by the Department will also reference the document UNESCO Kathmandu Office has prepared.

- Lack of support and resourcing allocated to the recovery of the Changunarayan temple complex (including sattals); and

Currently, almost all of the earthquake-affected monuments in the Changunarayan site have been completed. The detail of the recovery status is mentioned in the respective section of this report.

- Potential demolition and replacement of Lal Baithak, Bhaktapur.

The issue of the Lal Baithak of Bhaktapur Durbar has been resolved. This portion of the palace is going to be conserved in the same style without dismantling the entire structure.

8. Notes the information provided regarding the Patan Durbar Square Monument Zone sewer project, the Lal Baithak wing of the National Art Museum, Bhaktapur, and the proposed expansion of the Ring Road at Swayambhu, reminds the State Party of its previous request that the revised documentation of the Patan Durbar Square Monument Zone sewer project be submitted to the World Heritage Centre, and also reminds the State Party that details of these

projects and any other major projects, including Heritage Impact Assessments (HIAs), should be submitted to the World Heritage Centre for review by the Advisory Bodies before any decision is made that would be difficult to reverse, in line with Paragraphs 118bis and 172 of the Operational Guidelines;

The decision has been taken to restore the Lal Baithak wing of the National Art Museum, Bhaktapur, without dismantling the building.

In respect to the proposed expansion of the Ring Road at Swayambhu, different alternatives are being considered. The State Party will keep the World Heritage Centre on any progress in respect to this project.

Revised documentation of the Patan Durbar Square Monument Zone sewer project has been provided in Annex. (Annex 2)

9. Requests the State Party to ensure that the draft procedures and format for HIAs in Nepal are reviewed to be consistent with the Guidance and Toolkit for Impact Assessments in a World Heritage Context, prior to being adopted;

The **Heritage Impact Assessment Procedures** have been adopted by the Government of Nepal to provide the legal basis to carry out such assessments within the National Context, also beyond World Heritage properties. The 'Guidance and Toolkit for Impact Assessments in a World Heritage Context' has also been reviewed by the Department of Archaeology, along with experts of ICOMOS Nepal. The latest guidance documents are a great improvement from the previous ones prepared in 2011, and have been taken into account while preparing the detailed procedures and format for HIAs to be submitted to the World Heritage Centre. This will be presented to the ISC-KV during its next annual meeting in March 2024.

10. Requests the State Party to adopt and implement the recommendations of the first ISC-KV from March 2023, and particularly the following overarching tasks and programmes:
  1. Finalize post-disaster recovery phase,
  2. Review and revise, if necessary, the Integrated Management Plan,
  3. Review and revise, if necessary, the effectiveness of essential management procedures and tools,
  4. Establish a comprehensive information management system,
  5. Provide capacity strengthening and training,
  6. Establish regular ISC-KV and Coordinative Working Committee (CWC) meetings;

The activities of the State Party have been planned around the recommendations of the ISC-KV. The activities have been divided into three main categories which cover the recommendations of the ISC-KV.

**Earthquake Recovery:** addressed [1] Finalize post-disaster recovery phase.

**Improve Management:** addresses [2] Review and revise, if necessary, the Integrated Management Plan, [3] Review and revise, if necessary, the effectiveness of essential

management procedures and tools, and **[4]** Establish a comprehensive information management system.

**Capacity Building:** addresses **[5]** Provide capacity strengthening and training:

As has been mentioned under **[6]** Establish regular ISC-KV and Coordinative Working Committee (CWC) meetings, these have been continued. In respect to the ISC-KV, there have been tri-annual hybrid meetings and an annual meeting is planned in March 2024. The CWC has been meeting initially every month, which has now been changed to every two months, and these meetings take place in the monument zones in rotational basis.

11. Finally 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.

We hereby submit the State of Conservation report for examination by the World Heritage Committee at its 46th session. We would like to thank the World Heritage Committee, the World Heritage Centre and the advisory bodies, ICOMOS and ICCROM, for their support and for providing us with valuable recommendations, particularly after the devastating Gorkha Earthquake.

### 3. Other current conservation issues

The State Party has consistently provided information on the State of Conservation and the ongoing activities within the individual monument zones of the Kathmandu Valley World Heritage property. Along with the routine maintenance and management of the site, almost all restoration and rehabilitation work on the monuments affected by the 2015 earthquake has been completed. As one of the recommendations of the International Scientific Committee (ISC-KV) is to prepare a recovery plan for the remaining monuments, significant progress is being made to finalize it by June of this year. The department has allocated a budget to address various subjects under these recommendations, including preparation of the recovery plan. All relevant authorities, such as the Department of Archaeology, Municipalities, Trust, and Committee, have expressed their active participation in the completion of the restoration and rehabilitation efforts.

#### Summary of the After-Earthquake Conservation restoration Status (KVWP)

PMZ	Completed	Ongoing	Yet to start
Hanumandhoka	23	3	1 Agam Chhen and others
Pashupati	36 projects (10 shivalayas, 8 shivalayas, 4 shivalayas of Gaurighat, 4 shivalayas of Agnishala & 2 Chautariya shivalaya, Seto Sattal complex with 3 small and 2 big temples: each counted as one project)	1	2
Swayambhu	21 (All)	No	No
Bouddha	3 (All)	No	No
Patan	17	2	No
Bhaktapur	21	5	No
Changu	7 Projects (2 Balambu Patis are counted as one project)	2	No
Total	128 (+9+7+3+3+1+5)		

**Project status for each Monument Zone with Project Names**

Completed	To be Completed soon	Ongoing	Yet to start
<b>HANUMANDHOKA</b>			
Degutaleju Temple Panchamukhi Hanuman Temple Laxminaraya Temple Kageswar Temple Gaddi Baithak Natyeswar Temple Taleju Temple Dashain Ghar Shiva Temple in front of Singh Dhoka Nagara Ghar Maru Sattal (Kasthamandap) Tarini Bahal Dhukuti Ghar Saraswati Temple Pratap Malla Stone Pillar and statue Bamsagopal Temple Kacha Degas (16 nos.) Kastha Mandap Dasavatar Temple Gopinath Temple Majudega Temple Jagannath Temple Basantapur Durbar		Tribhuvan Gallery Building  Shiva-Parvati Temple  Pati in front of Bhairavnath Gan	Aagam Chhen and West wing  Shiva temple of Nagpokhari



Completed	To be Completed soon	Ongoing	Yet to start
<b>PASHUPATI</b>			
Bankali Sattal Bhasmeswar Sattal Pandra Shivalaya Sattal Chautariya Shivalaya Guheswari Sattal-Northeast Pode Pati Rammandir-Bagmati East Amar Kanteswar Sures Kanteswar Shankaracharya Temple (Bhuteswar) Kulananda Jha Sattal Ghyampe Pati Taraprakaseswar Temple Kotilingeswar Temple Bagmati River Bank Sattal, Guheswari Guheswari Temple Bhansar Tahabil Office building Rudra Gadeswar Sattal Guheswari Sattal North Gorakhnath Pakshala Yoginaraharinath Sattal Shankarnarayan Sattal Kirateswar Sattal Shivalayas of Mrigasthali (8 nos.) Dyochhen of Dathu Tole Jitjungprakaseswar Temple Guheswari Sattel - West Shree ko Pakshala Shankaracharya Seto Mandir Saptami Sattal Ten Shivalayas of Shlesmantak area		Viswarupa temple	Vajra Ghar  Pancha Dewal

Birbhadreswar Shivalaya			
Tribhuvan Sattal			
Char Shivalaya (Gaurighat-4nos.)			
Char Shivalaya (Agnihotri-4nos.)			
Seto Sattal complex of Guhesari- Gaurighat road (6nos.)			

Completed	To be Completed soon	Ongoing	Yet to start
<b>SWAYAMBHU</b>			
Basubandhu Chaitya			
Tasigomang Chaitya			
Anantapur Temple			
Pratappur Temple			
Purano Swayambhu Chaitya			
Manjushree Sattal			
Santipur Pati			
Stone Pillar of Mayur			
Stone Pillar of Sadakshari Lokeswar			
Stone pillars (two) of Tara			
Big Bell of Anantapur			
Vayupur Temple			
Basupur Temple			
Ajima Temple			
Dyochhen			
Manjushree Shrine			
Seto Sattal			
Anandakuti Vihar			
Devadharma Vihar			
Gyanmala Bhajan Ghar			
Shantipur			

<b>BOUDDHA</b>			
Bouddhnath Stupa			
Rengrikrepa Stupa			
Mani wall			

Completed	To be Completed soon	Ongoing	Yet to start
<b>PATAN</b>			
Taleju South		Degutaleju Temple	
Taleju North			
Sundari Chowk			
Manimandap North		Narashimha Temple	
Keshav Narayan Temple			
Yognarendra stone pillar and statue			
Bahadur Shah Bhawan		Old Adalat Bhawan	
Bhimsen Stone Pillar (Simha Pillar)			
Krishna Mandir			
Manimandap South			
Biswanath Temple			
Char Narayan Temple			
Harishankar Temple			
Radhakrishna Temple of Swatha			
Kumbheswar Temple			
Bhimsen Temple			
Keshavnarayan Chowk			

Completed	To be Completed soon	Ongoing	Yet to start
<b>BHAKTAPUR</b>			
Yantra Vatsala		Yaksheswar Temple	
Narayan Temple East of Silu Mahadev			
Narayan Temple South of Yaksheswar			

Ganesh Temple near to Golden gate Narayan Temple just west of Siddilaxmi Balakhu Ganes Pati Rameswar Badrinath Temple Kedarnath Dwarika West Gate of Durbar Square Nyatapal Temple Bhairav Temple of Taumadhi Golmadi Ganes Temple Siddilaxmi Temple Dwimaju Chowk Balakhu Ganesh Pati North Tabela Ghar of Taleju Vatsala Temple Taba Sattal Shilu Mahadev (Fasidega)		Thanthu Durbar  Pujari Math  Jangam Math  Lalbaitak Durbar	
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Completed	To be Completed soon	Ongoing	Yet to start
<b>CHANGUNARAYAN</b>			
Changu Narayan Temple Kileswar Mahadev Temple Chhinnamasta Temple Amatya Sattal Saraswati Temple Bhimsen Pati Balambu Pati		Chaughera Sattal  Laxminarayan Sattal	Bhairav Pati

## **HANUMANDHOKA PROTECTED MONUMENT ZONE**

The Hanumandhoka Durbar Protected Monument Zone, one of the three palace sites of the Kathmandu Valley and one of the seven sites of the Kathmandu Valley World Heritage Property, encompasses the main historical palace complex, several temples, and shrines of religious and architectural importance, as well as numerous heritage structures with secular value. In the Hanumandhoka Durbar Protected Monument Zone, the restoration of monuments affected by the 2015 earthquake is nearing completion. As summarized on the previous page, 23 monuments have already been conserved or restored in the Hanumandhoka Durbar MPZ, while the remaining 3 in progress and 2 yet to start are discussed below.

For the restoration of the affected monuments in the Hanumandhoka Durbar Protected Monument Zone, the Department of Archaeology, Kathmandu Municipality, Hanumandhoka Durbar Museum Development Committee (HMDC), some NGOs, and local user committees are involved. The involvement of the Chinese Government in the restoration of Basantapur Durbar is also a very significant part of the Hanumandhoka Durbar rehabilitation process. DoA, KMC, and HMDC have managed their own funds for the rehabilitation work, whereas the NGOs have used international funding, and the user groups have worked with the funds provided by the municipality. The Chinese Government is also working with direct involvement.



In Hanumandhoka, the conservation of Kasthamandap has become an example of handling a big project by a user's committee. The restoration project has already been successfully completed. Also, following the historical facts revealed by the rescue archaeology of the foundation, the restoration work was undertaken using a complete traditional technique and materials, along with extensive documentation of each activity. Renowned national experts were involved voluntarily in the entire process of restoration.

As in the other sites, the collaborative approach, with the mutual involvement of both the Department of Archaeology and Kathmandu Municipality, international agencies, NGOs, and user committees, has played a crucial role in the successful rehabilitation of the site.



### ***Tribhuvan Gallery Building***

The Tribhuvan Gallery Building, situated on the west of Nasal Chowk, covering a big part of the palace in its western wing is a historical building built in Rana Period, in second half of 19th Century, and is one of the oldest historical architectures built in neoclassical style. Since there was museum gallery dedicated to exhibit the material belonged to late king Tribhuvan, it is named after the same subject. Along with many others, this part of the palace also was damaged severely. Currently the building is under conservation, and almost 70 percent work has been completed.





As all the adjacent monuments are conserved without dismantling entire structure but carefully replacing unusable elements by the new item of similar materials, this Tribhuvan Gallery Building is also being conserved applying the same technique. Protection of the fresco on the outer wall of the building in its northern portion is one of the challenging work of the conservation project. Department of Archaeology has taken all the responsibility of this project.

### ***Mahadev-Parabit Temple (Astayogini Temple)***

The temple of Astayogini, more commonly known as the Mahadev-Parvati temple, is situated just outside the main Hanumandhoka Palace complex on its western side, near the prominent big bell. This temple stands as one of the significant monuments in this historical site, despite its construction in the 19th century, owing to its profound historical value. Commissioned by Bahadur Shaha, the temple was built to enshrine the images of Astayoginis before his military campaign against Tibet. It is said that the Nepali team won the war and that victory became one of the milestones in the history of Nepal.

The western facade of the temple is adorned with intricate carvings depicting soldiers wielding rifles. Though, it was not collapsed, the structure suffered severe damage

during the devastating earthquake of 2015. In response to this challenge, a meticulous conservation effort has been initiated, aiming to preserve the temple without dismantling its entire structure. The strategy involves replacing unusable elements with new materials possessing the same properties while salvaging and reusing as much of the original artistic material as possible.

Prior to commencing the conservation work, a comprehensive documentation and assessment of the temple's structure were undertaken. Upon obtaining approval from the Department of Archaeology, the conservation efforts are currently ongoing, led by the Bagmati Province Government. Despite a temporary halt due to technicalities, the project has since resumed with the goal of completion within the current fiscal year.

### ***Agamchhen***

The temple of the Agam deity, more commonly known as Agamchhen, is a religiously significant structure in Hanumandhoka. Situated just above the main gate of the palace, it is joined with the oldest western wing of the palace.

"Agama", literally, refers to a course or a path of scriptures that provide guidelines for rituals, worship, and temple construction as well. The Agamas are considered an authority in worship and hold particular significance in the Shaiva, Shakta, and Vaishnava traditions. They cover various aspects of religious practices, including rituals, mantras, meditation, and philosophical principles. The Agamas are believed to be revealed knowledge directly transmitted by deities like Shiva, Shakti, Vishnu, etc., to Rishis. These scriptures play a crucial role in shaping religious and spiritual practices within Hindu temples, guiding priests in conducting ceremonies, performing pujas, and constructing and consecrating temple structures.

The Agamchhen temple in Hanumandhoka, established during the Malla Period, shares the same spirit. Due to its rich religious, cultural, and traditional background, the conservation work on Agamchhen has been temporarily halted to explore a respectful and authentic approach of conservation. The damaged structure has already been studied and documented in detail, especially under two major projects: one led by Japanese experts and the other led by Nepali expert, including a damage



assessment. A committee involving the Department of Archaeology, Kathmandu Municipality, DoA site office, priests, and other stakeholders is working to find the best way to proceed with the proper conservation of the structure without dismantling the entire edifice.

### ***Shiva Temple of Nagpokhari***

The Shiva temple located beside Nagpokhari in Hanumandhoka was collapsed during the 2015 earthquake. In response to this, the Japanese Government extended technical support for the study of the structure. A comprehensive study and documentation, along with proposed drawings, has been successfully completed and submitted to the Department of Archaeology. As a result, the DoA has formulated plans to allocate a budget for the restoration of this temple in the upcoming Fiscal Year.

## **PASHUPATI PROTECTED MONUMENT ZONE**

The Pashupati Protected Monument Zone, one of the seven sites of the Kathmandu Valley World Heritage Property, encompasses hundreds of temples, including the main Pashupatinath temple, which holds supreme significance for Hindus of the world. The site boasts also numerous heritage structures with secular value, contributing to the overall grandeur of the area. Pashupati PMZ stands out as the largest site in terms of both area and the number of monuments within the Kathmandu Valley World Heritage Property. Additionally, the site holds importance due to its natural landscape with religious and cultural values.

In the Pashupati Protected Monument Zone, the restoration of monuments affected by the 2015 earthquake is nearing completion. Due to the considerable number of heritage structures, the impact of the earthquake on monuments has been significant. Despite this, considerable progress has been made in restoring monuments of the site. As summarized on the previous page, a total of 62 heritage structures have already been restored, comprising in 36 projects in Pashupati PMZ, with the remaining 3 still in progress.

For the restoration of the affected monuments in the Pashupati Protected Monument Zone, the Department of Archaeology functions solely as a monitoring authority, with all financial and managerial responsibilities undertaken by the Pashupati Area Development Trust (PADT). The Department provides technical assistance to the trust when necessary and grants approval for restoration and other site management projects proposed by the PADT. All restoration projects are undertaken by the Trust through a tendering process.

Similar to other sites, a collaborative approach, with the mutual involvement of both the Department of Archaeology and Pashupati Area Development Trust, has played a crucial role in the successful rehabilitation of the site. This collaborative effort ensures a comprehensive and coordinated restoration process, contributing to the preservation of the cultural and historical heritage of the Pashupati Protected Monument Zone.

### ***Viswarup Temple***

The Viswarup Temple, built in the Mughal dome architectural style within the Pashupati Protected Monument Zone in Shleshmantak, stands as the largest temple constructed during the Rana period. Commissioned by the first Rana Prime Minister, Janga Bahadur Rana, this historical edifice was partial collapsed, particularly in its dome



section, with numerous visible cracks damaging the massive walls. The structural integrity was further damaged by rain, occurring immediately after the earthquake, leading to increased vulnerability due to water penetration.



In response to these issues, a rescue archaeological excavation was undertaken to assess the foundation. Soil investigations were also conducted to evaluate the ground conditions. Subsequently, a decision was made to dismantle the structure while preserving its foundational elements. Currently, the temple is undergoing an extensive

restoration process, with approximately 60 percent of the construction work already completed. The Viswarup restoration project encompasses not only the main Viswarup temple but also includes the restoration of four small temples located at the four corners of Viswarup, along with the restoration of the courtyard Sattal surrounding the entire complex. An archaeological officer, departmental representative, is presented fulltime to observe and advice on the ongoing restoration work.



### ***Pancha Deval Complex***

The Pancha Deval temple complex, comprising five shikhara temples on the same foundation and a considerably raised plinth, is the largest restoration project to be undertaken after the 2015 earthquake in the Pashupati Protected Monument Zone.



None of the five structures have collapsed, but they have been severely damaged. An Italian University, the University Institute of Architecture of Venice (Istituto Universitario di Architettura di Venezia), in collaboration with the UNESCO Office in Kathmandu, conducted a comprehensive study of the site. Coordination efforts also extended to the Department of Archaeology, a central authority for heritage matters, and the Pashupati Area Development Trust, serving as the site manager.

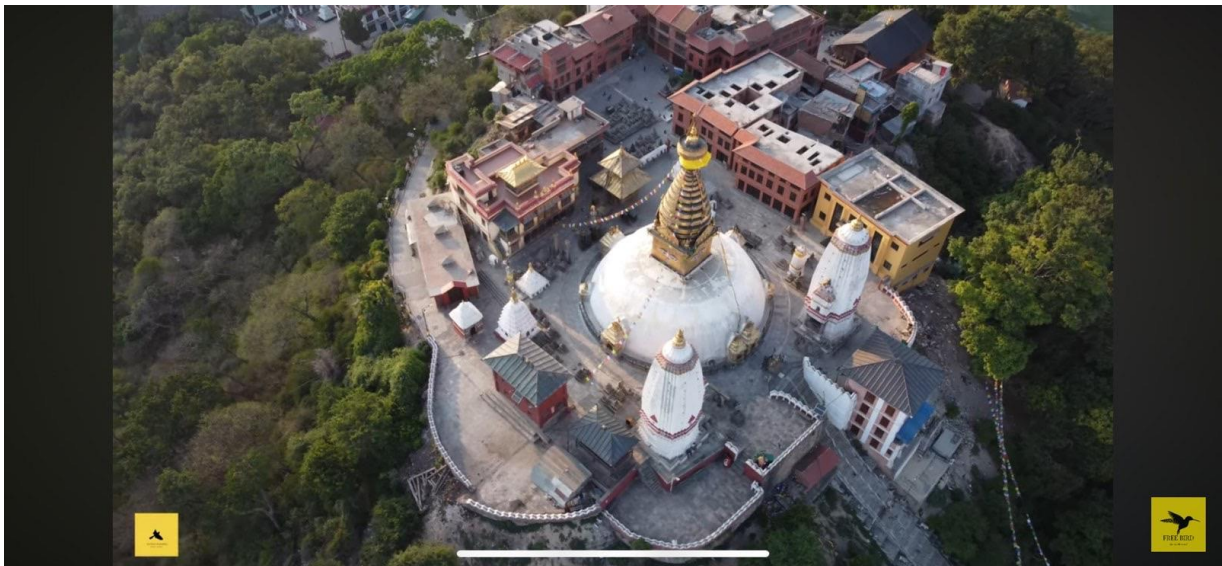


Since all post-earthquake restoration projects in the Pashupati Protected Monument Zone have been carried out by the Pashupati Area Development Trust in coordination with the Department of Archaeology, the department is now coordinating with the trust to initiate the Pancha Deval project based on recommendations provided by the Italian university team.

## **SWAYAMBHU PROTECTED MONUMENT ZONE**

The Swayambhu Protected Monument Zone, featuring the main Swayambhu Stupa and several other monuments of archaeological and historical significance, is also a

site where the restoration of monuments affected by the 2015 earthquake has already been completed. However, the number of monuments to be restored at this site were substantial, with at least 21 monuments being damaged — some collapsed, some partially collapsed, and others with general damage. Among the 21 restoration projects, the Department of Archaeology took total responsibility, including budgeting, for four monuments. Notably, the restoration of one of them, the old monastery, was led by the monastery itself (under the Guthi Corporation) with financial support from the Bhutan Government and other local donors. The remaining 16 monuments were restored through the initiation and budget management of the Federation of Swayambhu Management and Conservation (FSMC).



Additionally, FSMC received partial funding support from UNESCO Office in Kathmandu for the restoration of Shantipur and Tashigomang Chaitya, including support for detailed research and rescue archaeology of the Tashigomang Chaitya. In accordance with the Act, FSMC obtained approval from the Department and worked in close collaboration with it throughout the restoration process. The active participation of the local priest family in the rehabilitation process is also noteworthy. This collaborative approach, involving both the Department of Archaeology and local stakeholders, played a crucial role in the successful completion of the restoration of the site within five years of the earthquake.



## **BOUDDHANATH PROTECTED MONUMENT ZONE**



The Bouddhanath Protected Monument Zone was the first site to complete the restoration of monuments affected by the 2015 earthquake. The number of monuments to be restored at this site was relatively fewer compared to other PMZ. The primary focus of the restoration project was on the main Bouddha Stupa, with additional attention given to the Rangrikrepa Chaitya on the eastern side of the main Stupa and the Mani wall surrounding the Stupa. The restoration efforts were conducted in collaboration with the Department of Archaeology, which holds the sole authority for overseeing monument restoration. However, in this instance, the Bouddhanath Area Development Committee took the lead by managing the budget and initiating the restoration work. In accordance with the Act, the Committee obtained approval from the Department and worked in close collaboration with it. The project also had received support from numerous local donors and engaged the active participation of the local community. This collaborative approach, involving both the Department of Archaeology and local stakeholders, played a crucial role in the successful completion of the restoration within two years of the earthquake.

## **PATAN DURBAR PROTECTED MONUMENT ZONE**

The Patan Durbar Protected Monument Zone, one of the three palace sites of the Kathmandu Valley and one of seven sites of Kathmandu Valley World Heritage Property, encompasses the main palace complex, several temples, and shrines of religious and architectural importance, as well as numerous heritage structures with secular value. In the Patan Durbar site, the restoration of monuments affected by the 2015 earthquake is nearing completion. A total of 20 monuments were recorded as earthquake-affected, with 5 collapsing over the plinth level, and others suffering partial collapse or general damage. As summarized earlier, 17 out of 20 monuments have already been conserved or restored, while the remaining 3 under progress are discussed below.



The Patan Durbar Protected Monument Zone stands out as a site where a significant number of monuments are restored or conserved by an NGO, KVPT, with support from international funding. Key monuments such as the Harishankar temple, Charnarayan temple, Manimandap south, Manimandap north, Biswanath temple, Krishna temple, Taleju south, Taleju north, Sundarichowk, among others, have been successfully conserved or restored by KVPT. Additionally, the Department of Archaeology restored two monuments, Radhakrishna temple and Kumbheswar temple, damaged by the earthquake. The Patan Durbar Development Committee, with partial funding support from the Austrian Government, contributed to the conservation of the Keshavnarayan Chowk, the northern portion of the palace.

For the rehabilitation of some monuments and coordination with work performed by other organizations, Lalitpur Municipality has actively participated. Local residents of the site have also demonstrated their active involvement in heritage conservation. Notably, the Bhimsen temple, a significant and one of the largest heritage structures

in the site, was entirely restored with the participation of local residents who also raised funds themselves.

In accordance with the law, all organizations involved in the restoration project obtained approval from the Department and worked in close collaboration with it throughout the restoration process. This collaborative approach, involving both the Department of Archaeology and local stakeholders, has played a crucial role in the successful completion of the restoration of the site.

### ***Degutaleju Temple***

The Degutale, or Degu Taleju temple, is located in the western part of Patan Durbar, just in front of the Yognarendra statue. It was built in the late 16th or early 17th century by King Shiva Simha Malla to honour Taleju, the patron goddess of the Malla kings. However, only the king and the prescribed priest are allowed to worship in the temple.

According to sources, the temple was originally constructed as a five-storied building. After a fire, it was rebuilt by King Srinivasa Malla with a simplified three-tiered roof. Over the years, the temple has faced earthquake damage, collapsing in 1934, but it was quickly rebuilt. The 2015 earthquake caused further damage, and currently, it is under restoration.

With funding support from the Government of Japan, the Department of Archaeology has undertaken the restoration project, which is being executed through a local user's committee. The temple is being conserved without dismantling the entire structure, but unusable elements are being replaced with new material of the same properties. The old artistic elements are being reused with necessary conservation efforts whenever possible.

### ***Narashimha Temple***

The Narashimha temple, characterized by its Shikhara style of architecture, is situated adjacent to the Yognararendra statue. Even before the 2015 earthquake, the



temple was already in a dilapidated condition. Fortunately, the earthquake did not cause further damage. Currently, the temple is undergoing conservation as part of a project led by the Lalitpur Municipality.

Despite its relatively small structural size, preserving the original authenticity of the temple poses a significant challenge. Notably, the temple features an intricate design with more than one hundred types of artistic bricks. Each of these bricks requires an individual frame for casting, adding complexity to the conservation process. Due to these challenges, the project has been temporarily halted and is expected to resume in the near future. The meticulous conservation efforts aim to ensure the temple's structural integrity while maintaining its unique architectural and artistic elements.

### ***Old Adalat Bhawan (Old Court Building)***

The neoclassical architectural structure, situated on the south side of Patan Durbar and enclosing the south-western section of Bhandarkhal Garden, is one of the three heritage edifices affected by the earthquake that remain to be restored within the Patan Durbar PMZ. Historically serving as a court, it is commonly referred to as Purano Adalat Bhawan or the old court building. This particular building faced severe damage during the 2015 earthquake. While most earthquake-affected structures in Patan Durbar PMZ have already been restored, the restoration of this particular building has been temporarily halted for research and study.

Primarily, the current structure represents the only surviving portion of the building damaged during the earthquake in 1934. Following the earthquake, the upper part of the building was damaged, but the remaining two floors continued to be in use. This information was deduced from old photographs and, after thorough examination, efforts are now underway to restore the building by adding the missing sections. Secondly, there is a plan to conserve the structure without dismantling it entirely. This approach is currently under detailed study for implementation.

## **BHAKTAPUR DURBAR PROTECTED MONUMENT ZONE**

The Bhaktapur Durbar Protected Monument Zone, one of the three palace sites of the Kathmandu Valley and one of seven sites of Kathmandu Valley World Heritage Property, encompasses the main historical palace square, Taumadi Square and Dattaraya Square with Malla palace and several temples, and shrines of religious and architectural importance, as well as numerous heritage structures with secular value. In the Bhaktapur Durbar Protected Monument Zone, the restoration of monuments affected by the 2015 earthquake is nearing completion. As summarized on the previous page, 21 monuments have already been conserved or restored in the Bhaktapur MPZ, while the remaining 5 in progress are discussed below.



For

the restoration of the affected monuments in the Bhaktapur Durbar Protected Monument Zone, the Department of Archaeology and the Bhaktapur Municipality have divided the financial as well as managerial responsibility through mutual understanding. The projects undertaken by the department are carried out under a tendering process, whereas those handled by the municipality are either managed through user committees or by direct purchasing systems.

In Bhaktapur, for the conservation of the Bhairav temple in Taumadi, a new modality was introduced, assigning all technical responsibilities to Khwopa Engineering

College with financial management overseen by the municipality. On the other hand, the substantial local participation in the conservation of the Nyatapoli temple has become an outstanding example of volunteer service.



The restoration of the Shilu Mahadev temple is another post-earthquake restoration example in Bhaktapur. This temple has been restored to its original architectural style, whereas it was destroyed by the previous earthquake in 1034 and rebuilt differently from its original style. In Bhaktapur, the practice of conserving affected architecture without dismantling the entire structure, but only removing and replacing the damaged elements with new ones, has been widely implemented.

The collaborative approach, with the mutual involvement of both the Department of Archaeology and Bhaktapur Municipality, has played a crucial role in the successful rehabilitation of the site.

### ***Yaksheswar Temple***

The Yaksheswar temple, located adjacent to the Vatsala temple in Bhaktapur Durbar Square, also suffered the effects of the 2015 earthquake. Although the damage may not have been visibly severe from the outside, a structural assessment revealed that the temple was structurally weakened and slightly tilted. Despite the initial efforts to conserve the temple without dismantling, it became evident during the restoration process that dismantling was unavoidable.

With great care, the temple structure was systematically dismantled, and the entire process was meticulously documented down to the plinth level. The dismantling process, however, retained the original position of the doors and windows of the ground floor. Currently, over 60 percent of the restoration work has been successfully completed. To ensure structural strength, all the wooden elements of the structure are replaced with new materials, while the majority of the carved wooden elements are skilfully reused. This comprehensive restoration approach aims to not only preserve the historical significance of the Yaksheswar temple but also to ensure its long-term stability and authenticity.

## **CHANGUNARAYAN PROTECTED MONUMENT ZONE**

The Changunarayan Protected Monument Zone, featuring various ensembles, including a significant first historical inscription in Nepal, is also a part of the Kathmandu Valley World Heritage property and is currently in the process of completing the restoration of monuments affected by the 2015 earthquake. Although the main Changunarayan temple and the courtyard Sattal of the complex were architecturally quite big, the number of monuments to be restored at this site were relatively fewer compared to some other Protected Monument Zones (PMZ). A total of 9 monuments were affected by the earthquake, with none of them completely collapsing. However, the Amatya Sattal and some parts of the courtyard Sattal suffered severe damage.



The Changunarayan temple has already been conserved. This conservation work posed significant challenges as it required preserving the structure without



dismantling the entire edifice, only replacing damaged wooden and other elements, all while ensuring the continuity of daily worship at the temple. The Kileswar Mahadev temple and Amatya Sattal in the complex were also conserved without dismantling. For the conservation of these latter two monuments, the NGO - Heritage and Environment Conservation Foundation collaborated with international financial support.

Nevertheless, whether it be conservation or restoration, all efforts have been conducted with the approval and collaboration of the Department of Archaeology, which holds the sole authority for overseeing monument restoration. The ongoing restoration project of the courtyard Sattal, which has already surpassed 80% completion, and the Laxminarayan temple, about 60% complete, are nearing their completion. Once these are finished, only one monument, the Bhairav Pati, remains, with budget allocation planned for the next fiscal year. This collaborative approach,

involving both the Department of Archaeology and local stakeholders, plays a crucial role in the successful completion of the restoration efforts.

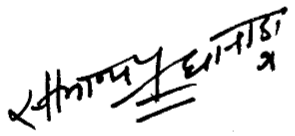
## **Reporting on Major Developments (OG Para 172)**

There are presently no planned works being carried out beyond the reconstruction and restoration of monuments damaged by the 2015 Gorkha Earthquake.

Public access to the state of conservation report

The State Party has no objection to the uploading of the full report on the World Heritage Centre's State of Conservation Information System  
(<http://whc.unesco.org/en/soc/>)

## 5. Signature of the Authority

  
Saubhagya Pradhananga  
Director General  
Department of Archaeology  
**Director General**



31 January 2024



**KATHMANDU VALLEY  
WORLD HERITAGE PROPERTY**

**DRAFT**  
23 JUN 2021

# **INTEGRATED MANAGEMENT FRAMEWORK FIRST AMENDMENT 2021**

**DRAFT**  
**for adoption by the Government of Nepal**

**Submitted to  
Department of Archaeology,  
Government of Nepal**

**28 June 2021**

**Compiled and edited by:  
Kai Weise**



**Weise Consulting Architects and Engineers Pvt Ltd  
Kathmandu**

## **Background**

The World Heritage property within the Kathmandu Valley is probably one of the most complex in the world, comprised of seven monument zones, each with specific management requirements. Each monument zone contributes to the outstanding universal value of the World Heritage property. However, the threat to each zone is different in form and degree. The aim of the Integrated Management Plan (IMP) is to develop a framework for the integration of the seven monument zones within a single management system, while taking into account each of their specific management requirements. The IMP for the Kathmandu Valley World Heritage property has been established consisting of adopted management frameworks, established processes and actions along with various sector plans.

The Kathmandu Valley was placed on the List of World Heritage in Danger in 2003 due to uncontrolled development and loss of historic fabric. With the adoption of the IMP by the cabinet of the Government of Nepal in 2007, the property was removed from the danger list. The World Heritage property was again threatened by the 2015 Gorkha Earthquake, requiring coordinated management.

Provisions in the Integrated Management Framework requires that the entire management system is reviewed every five years

*‘The entire Integrated Management Plan shall be reviewed and amended beginning every five years after adoption of any previous amendments. The Integrated Management Plan will need to incorporate the achievements and experiences of the previous five years and address the issues that are predominant at that given time. The Integrated Management Plan must remain flexible and adapt itself to ascertain the long-term objective of conserving the outstanding universal value of the Kathmandu Valley World Heritage property’.*

The first review of the IMP was started in 2015 with numerous workshops and community consultation. This led to the preparation of a draft amendment in 2015. Due to the Gorkha Earthquake that struck central Nepal on 25 April 2015, the amended document was never adopted. In response to the destruction caused by the earthquake, response and recovery activities were carried out, much of it beyond the framework of the IMP. Furthermore, with the promulgation of the new Constitution of Nepal in September 2015, the federal system of government has been adopted. This will have major implications on governance of culture and heritage over the coming years.

With the first phase of post-disaster recovery coming to an end, and initial establishment of the federal system of government, it is time to review the management system for the Kathmandu Valley World Heritage property. The Department of Archaeology has taken on the task of commissioning the review and preparing amendments to the Integrated Management Framework document. This is the first draft of the amendment.

# KATHMANDU VALLEY WORLD HERITAGE SITE



**DRAFT**

28 JUN 2021

## INTEGRATED MANAGEMENT FRAMEWORK



1 JUNE 2007

**Amendment 2021**

*Prepared by:*



Government of Nepal  
Ministry of Culture, Tourism and Civil Aviation  
Department of Archaeology

*in close collaboration with the  
World Heritage Centre and  
UNESCO-Kathmandu Office*



## FOREWORD TO FIRST AMENDMENT 2021

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**Mr. Damodar Gautam**  
**Director General**  
**Department of Archaeology**  
**Government of Nepal**

Since the preparation of the Integrated Management Framework document and its adoption by the Cabinet of the Government of Nepal in June 2007, the Kathmandu Valley World Heritage property has faced many new challenges.

The Gorkha Earthquake that struck on 25 April 2015 caused extensive damage to monuments. The Gorkha Earthquake had a devastating effect on vernacular architecture and historic monuments. The earthquake destroyed about half a million houses with a further quarter million being seriously damaged. A total of 920 monuments were affected in 31 districts. This does not include approximately 845 Buddhist monasteries which come under the Monastery Management Committee. Of these within the seven monument zones of Kathmandu Valley World Heritage property, there were 33 collapsed and 137 partially damaged monuments.

Furthermore, with the promulgation of the new Constitution of Nepal 2015, the government has gone through major restructuring. The federal system has introduced provincial governments with various important jurisdictions. Furthermore, the local government has been given even greater powers. The reorganization within this new governance system has required flexibility and caution, particularly in respect to the objective of safeguarding heritage, even after the destruction caused by the Gorkha Earthquake.

Taking into account these enormous challenges, it has been high time to adopt an updated and amended management framework document. The process of review took place between 2012 and 2015 in close collaboration with the site managers of the individual monument zones and the local community. A draft amendment was prepared and finalized in April 2015, just when the earthquake struck, changing circumstances and the immediate focus. Now that a certain level of rehabilitation has been carried out, it has been possible to again review the management requirements of the World Heritage property of Kathmandu Valley.

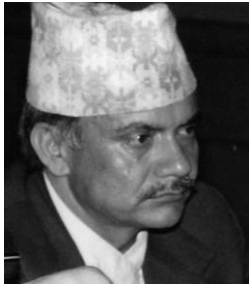
I hereby present you with the new amended Integrated Management Framework document which addresses the latest needs of the Kathmandu Valley World Heritage property. I would first like to thank the members of the Coordinate Working Committee representing all the monument zones for their constant contribution. Further, I would like to thank my team at the Department of Archaeology for supporting this endeavour, which includes Mr Ram Kunwar, Mr Suresh Shrestha, Mr Debendra Bhattra and Ms Subhadra Bhattarai. I would also like to thank our consultants Mr Kai Weise and Ms Anie Joshi for formulating, compiling and editing this document.

June 2021

Damodar Gautam  
Director General  
Department of Archaeology

## FOREWORD FOR 2007 EDITION

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**Mr. Kosh Prasad Acharya**  
**Director General (former)**  
**Department of Archaeology**  
**Government of Nepal**

The Seven Monument Zones of the Kathmandu Valley were inscribed as a single World Heritage Site as early as 1979. Twenty four years later, in 2003, this property was inscribed on the List of World Heritage in Danger due to the loss of traditional vernacular heritage and the threat of uncontrolled development.

Over the past four years, the State Party has committed itself to work closely together with the stakeholders and responsible international agencies to address the issues that have threatened the outstanding universal value of the Kathmandu Valley World Heritage Site. One of the key achievements have been this process oriented Integrated Management Plan, which was prepared in close cooperation between the Department of Archaeology and the local authorities and site managers, with international support and expertise.

The Integrated Management Plan has defined the approach and strategies for the preservation of the outstanding universal value of the property through the improvement of existing institutional, legal and economic frameworks. The process is defined by the sixteen documents that comprise the Integrated Management Plan. The **Integrated Management Framework** is the official document that has been adopted by the State Party, which is supplemented by a working document, the **Integrated Plan of Action**. Additionally, **Management Handbooks** have also been prepared for each of the seven Monument Zones, each supplemented by individual **Plans of Action**. These documents are to be reviewed and revised at regular intervals. I am proud to announce that this process is being implemented.

I would like to take this opportunity to thank all those who have contributed to the preparation of the Integrated Management Plan, many of whom will be responsible for its implementation.

- *The preparation of the Integrated Management Plan was funded by the Dutch Government and the World Heritage Fund.*
- *I wish to thank World Heritage Centre and the UNESCO Kathmandu Office for their cooperation and support.*
- *Here I would specially like to mention the members of the UNESCO – ICOMOS joint missions of June 2006 and April 2007; Prof Herb Stovel, International Technical Advisor and ICOMOS expert and Ms Junko Okahashi of the World Heritage Centre, who supported the project throughout its two years of preparation. The preparation of the Integrated Management Plan was facilitated by Mr Kai Weise, UNESCO Consultant.*
- *I am grateful to the Site Managers and local authorities of the seven Monument Zones and my colleagues of the Department of Archaeology for their enthusiastic participation.*

May 2007

Kosh Prasad Acharya  
Director General  
Department of Archaeology



**Mr. Francesco Bandarin**  
**Director**  
**UNESCO World Heritage Centre**

I sincerely wish to congratulate our friends and colleagues in Nepal, who, with strong sense of responsibility and commitment for the safeguarding and conservation of the country's important heritage of Outstanding Universal Value, accomplished this document through a remarkably process-oriented approach.

It is my great pleasure to mention that this Integrated Management Plan for the Kathmandu Valley World Heritage property could be exemplary, in many respects, for other World Heritage sites in the world which share similar pressing challenges, addressing the social, political and economic complexities of the site with multi-component values.

Heritage values cannot be protected, preserved and promoted without the management capability and the sense of ownership by the site-managers and stakeholders, first locally, nationally, then on the international level. This process for the Integrated Management Plan for the Kathmandu Valley has proved the joint efforts of all concerned, on all levels, and I hope for the best towards the sustainable implementation of the plan, with our continued efforts with no end.

May 2007

Francesco Bandarin  
Director - UNESCO World Heritage Centre



**Prof. Herb Stovel**  
**International Technical Advisor**  
**ICOMOS Expert**

“In summary, the IMP process has accomplished what it set out to do during development – to put in place a widely shared framework for implementation – and provided a complementary and carefully detailed set of guiding management instruments, each adapted to the specificity of the individual monument zones, while focussed at their core on retention of the property's OUV. It can be particularly commended because it constitutes a management plan clearly intended to work to modify and improve an existing management system, and because the focus on “integrated” has ensured pragmatic attention to fitting its objectives and operational activities into existing legal, institutional and economic frameworks”.

May 2007

Herb Stovel,  
International Technical Advisor  
ICOMOS Expert



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# Preamble

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The Integrated Management System for Kathmandu Valley has been established consisting of adopted management frameworks, established processes and actions along with various sector plans. With regular consultation with government authorities, local representatives and community, it has been possible to come to an overall understanding of how Kathmandu Valley, with the seven monument zones, needs to be managed to ensure that heritage is safeguarded while enabling the local communities to improve their livelihood. Close relationship has also been developed with related sectors such as local administration, tourism, sustainable development and disaster risk management. Specific Management Handbooks define management of each of the monument zones.

## The Integrated Management

1. Integrated Management Framework (IMF)
2. Integrated Plan of Actions (IPA)

While the Integrated Management Framework document has been officially adopted by the State Party, the Integrated Plan of Actions is a working document requiring ongoing amendments and changes to be carried out and would be the basis for establishing annual action plans.

## Sectoral Plans or Strategies

Additionally, there are four sectoral plans or strategies:

3. Conservation Management Plan (CMP)
4. Sustainable Development Strategy (SDS)
5. Disaster Risk Management Strategy (DRM)
6. Tourism Management Strategy (TMS)

These sectoral plans or strategies contain detailed definitions, assessments and means of managing the particular sector. Cross-sectoral coordination is achieved through the Integrated Management Framework and Integrated Plan of Actions. An executive summary of each sector plan would be included in the Integrated Management Framework while specific actions determined for each sector would need to be included in the Integrated Plan of Actions. The sectoral plans link to the relevant planning at provincial and federal level that have been prepared through the relevant government agencies, and coordinate with other ongoing planning. This requires close collaboration with the government at local and provincial level as well as the concerned authorities at federal level.

## Monument Zone Management Handbooks

Based on the IMF and IPA, each of the seven monuments zones will prepare their site specific Management Handbooks, which specifically define the management framework and processes.

1. Hanuman Dhoka Durbar Square Monument Zone Management Handbook
2. Swayambhu Monument Zone Management Handbook
3. Pashupati Monument Zone Management Handbook
4. Baudhanath Monument Zone Management Handbook
5. Patan Durbar Square Monument Zone Management Handbook
6. Bhaktapur Durbar Square Monument Zone Management Handbook
7. Changu Narayan Monument Zone Management Handbook

# 1. IDENTIFICATION and OBJECTIVES

## 1.1 INTRODUCTION

**The Integrated Management Framework (IMF) for the Kathmandu Valley World Heritage Property (KVWHP) is a document adopted by the State Party that defines the process of implementing the Integrated Management Plan (IMP). The IMP is comprised of additional supporting documents: the Integrated Plan of Action (IPA), Sectoral Strategies and Site Management documents for individual monument zones.**

### Need for the IMP

The World Heritage property within the Kathmandu Valley is probably one of the most complex in the world, comprised of seven monument zones, each with specific management requirements. Each monument zone contributes to the outstanding universal value of the World Heritage property. However, the threat to each zone is different in form and degree. The aim of this management plan is to develop a framework for the integration of the seven monument zones within a single management system, while taking into account each of their specific management requirements.

The Kathmandu Valley was placed on the List of World Heritage in Danger in 2003 due to uncontrolled development and loss of historic fabric. With the adoption of the IMP by the cabinet of the Government of Nepal in 2007, the property was removed from the danger list. The World Heritage property was again threatened by the 2015 Gorkha Earthquake, requiring coordinated management.

### Status of the IMP

The Integrated Management Plan must be seen as a road map towards achieving the goal of conserving the outstanding universal value of the seven monument zones of the KVWHP. The IMP is not a legal document; however it defines a process which was developed through consensus of the concerned authorities.

Since 2007, the IMP has been implemented. This has been the basis for managing the seven monument zones and ensuring the conservation of the attributes expressing Outstanding Universal Value while

controlling development within the monument zones. The management structures, both at the property level as well as at the site level, have been established and are being adapted to the needs of the specific monument zones.

The IMP must be reviewed every five years. The process of reviewing the management system began in 2012, however, due to the Gorkha Earthquake the amendments were never finalized. The initial phase of post-earthquake recovery is coming to a close and with the new Constitution of Nepal being implemented, this amendment of the IMF document has addressed the most updated status of the World Heritage property.

### The IMF Document

The IMF is a document adopted by the State Party that defines the framework within which the IMP is to be implemented.

This document is comprised of three parts:

#### **Part 1: Identification and Objectives**

This section defines the KVWHP and its seven monument zones. The objectives of the IMP are formulated based on the need to address specifically identified issues.

#### **Part 2: Integrated Management Framework**

This section gives the overall strategies and defines in detail the institutional, legal and resources frameworks.

#### **Part 3: Implementation and Coordination**

This section gives the outline on the long term process of implementing the IMP, the sector-wise coordination and the Monitoring Framework. This links with the sectoral plans or strategies that deal with the management of conservation, sustainable development, disaster risk and tourism.

## 1.2 DEFINING THE PROPERTY

### Name of the property:

Kathmandu Valley World Heritage

### Date of Inscription:

1979 (boundary modified in 2006)

### Location:

The World Heritage Site is comprised of seven Monument Zones which are all located within the Kathmandu Valley. The Monument Zones are strewn across the three districts of Kathmandu, Lalitpur and Bhaktapur, within the Bagmati Province of Nepal.

### Description of the Site:

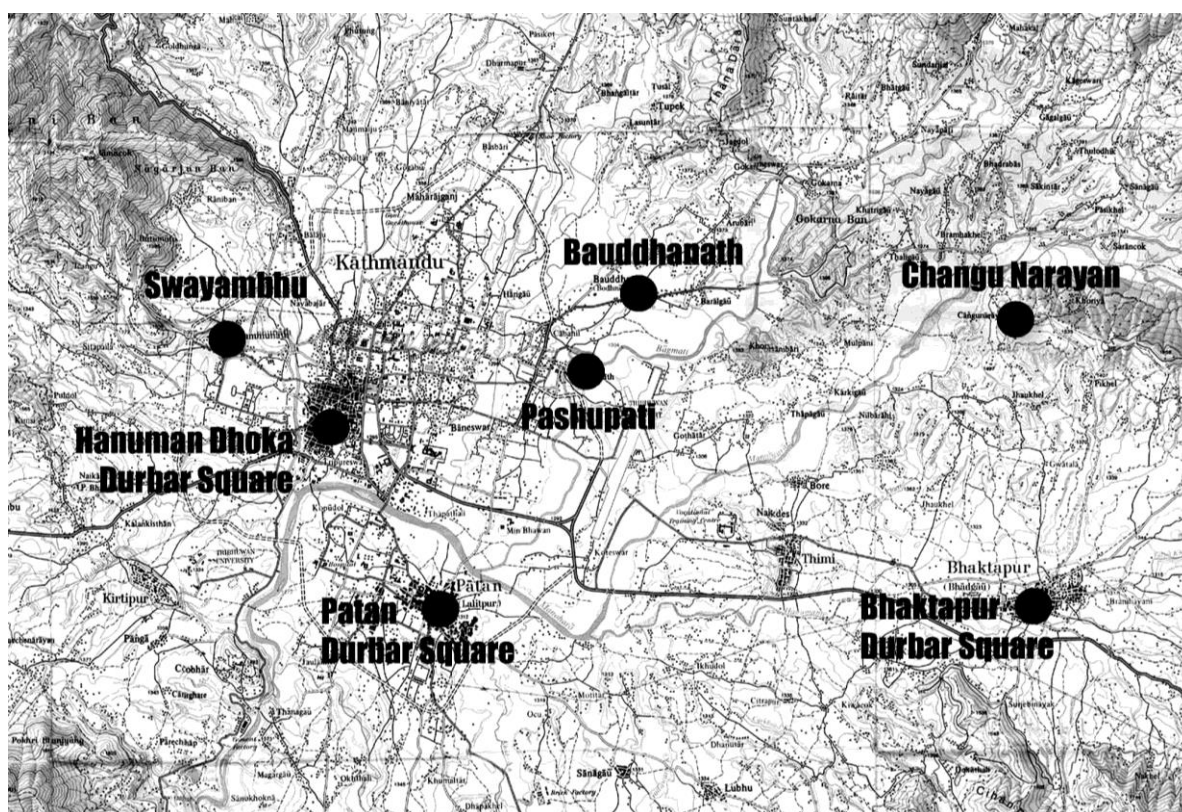
The Kathmandu Valley property is inscribed on the UNESCO list of World Heritage as a single site, comprising of seven Monument Zones. The cultural heritage of the Kathmandu Valley is illustrated by seven groups of monuments and buildings which display the full range of historic and artistic achievement for which the Kathmandu Valley is world famous. The seven include the Durbar Squares of Hanuman Dhoka (Kathmandu), Patan and Bhaktapur, the Buddhist stupas of Swayambhu and Bauddhanath, and the Hindu temples of Pashupati and Changu Narayan.

### Authorities:

The State Party is represented by the *Department of Archaeology*, Ministry of Culture, Tourism and Civil Aviation as provided for by the Ancient Monument Preservation Act 1956.

The seven Monument Zones come under the jurisdiction of the local authorities as defined by the Local Government Operation Act 2017. There are four Monument Zones within the *Kathmandu Metropolitan City*; Hanuman Dhoka Durbar Square, Swayambhu, Bauddhanath and Pashupati. The Patan Durbar Square lies within *Lalitpur Metropolitan City*, the Bhaktapur Durbar Square within *Bhaktapur Municipality* and Changu Narayan within the *Changu Narayan Municipality*.

The *Pashupati Area Development Trust* has the authority to manage the Pashupati Area as per the Pashupati Area Development Trust Act 1996. The *Federation of Swayambhu Management and Conservation* represents the local NGOs of the Swayambhu area. The *Bauddhanath Area Development Committee* was established to manage the Bauddha area.



The Seven Monument Zones of the Kathmandu Valley World Heritage Site



## 1.2.1 RETROSPECTIVE STATEMENT OF OUTSTANDING UNIVERSAL VALUE

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**During the second cycle of periodic reporting on the implementation of the World Heritage convention in Asia and the Pacific between 2010 and 2012, a retrospective Statement of Outstanding Value was prepared and adopted by the World Heritage Committee.**

### **Brief synthesis**

Located in the foothills of the Himalayas, the Kathmandu Valley World Heritage property is inscribed as seven Monument Zones. These monument zones are the Durbar squares or urban centres with their palaces, temples and public spaces of the three cities of Kathmandu (Hanuman Dhoka), Patan and Bhaktapur, and the religious ensembles of Swayambhu, Bauddhanath, Pashupati and Changu Narayan. The religious ensemble of Swayambhu includes the oldest Buddhist monument (a stupa) in the Valley; that of Bauddhanath includes the largest stupa in Nepal; Pashupati has an extensive Hindu temple precinct, and Changu Narayan comprises traditional Newari settlement, and a Hindu temple complex with one of the earliest inscriptions in the Valley from the fifth century AD. The unique tiered temples are mostly made of fired brick with mud mortar and timber structures. The roofs are covered with small overlapping terracotta tiles, with gilded brass ornamentation. The windows, doorways and roof struts have rich decorative carvings. The stupas have simple but powerful forms with massive, whitewashed hemispheres supporting gilded cubes with the all-seeing eternal Buddha eyes.

As Buddhism and Hinduism developed and changed over the centuries throughout Asia, both religions prospered in Nepal and produced a powerful artistic and architectural fusion beginning at least from the 5th century AD, but truly coming into its own in the three hundred year period between 1500 and 1800 AD. These monuments were defined by the outstanding cultural traditions of the Newars, manifested in their unique urban settlements, buildings and structures with intricate ornamentation displaying outstanding craftsmanship in brick, stone, timber and

bronze that are some of the most highly developed in the world.

### **Criterion (iii):**

The seven monument ensembles represent an exceptional testimony to the traditional civilization of the Kathmandu Valley. The cultural traditions of the multi ethnic people who settled in this remote Himalayan valley over the past two millennia, referred to as the Newars, is manifested in the unique urban society which boasts of one of the most highly developed craftsmanship of brick, stone, timber and bronze in the world. The coexistence and amalgamation of Hinduism and Buddhism with animist rituals and Tantrism is considered unique.

### **Criterion (iv):**

The property is comprised of exceptional architectural typologies, ensembles and urban fabric illustrating the highly developed culture of the Valley, which reached an apogee between 1500 and 1800 AD. The exquisite examples of palace complexes, ensembles of temples and stupas are unique to the Kathmandu Valley.

### **Criterion (vi):**

The property is tangibly associated with the unique coexistence and amalgamation of Hinduism and Buddhism with animist rituals and Tantrism. The symbolic and artistic values are manifested in the ornamentation of the buildings, the urban structure and often the surrounding natural environment, which are closely associated with legends, rituals and festivals.

## **Integrity**

All the attributes that express the outstanding universal value of the Kathmandu Valley are represented through the seven monument zones established with the boundary modification accepted by the World Heritage Committee in 2006. These encompass the seven historic ensembles and their distinct contexts. The majority of listed buildings are in good condition and the threat of urban development is being controlled through the Integrated Management Plan. However the property continues to be vulnerable to encroaching development, in particular new infrastructure.

## **Authenticity**

The authenticity of the property is retained through the unique form, design, material and substance of the monuments, displaying a highly developed traditional craftsmanship and situated within a traditional urban or natural setting. Even though the Kathmandu Valley has undergone immense urbanization, the authenticity of the historic ensembles as well as much of the traditional urban fabric within the boundaries has been retained.

## **Protection and management requirements**

The designated property has been declared a protected monument zone under the Ancient Monument Preservation Act, 1956, providing the highest level of national protection. The property has been managed by the coordinative action of tiers of central government, local government and non-governmental organizations within the responsibilities and authorities clearly enumerated in the Integrated Management Plan for the Kathmandu World Heritage Property adopted in 2007.

The implementation of the Integrated Management Plan will be reviewed in five-year cycles allowing necessary amendments and augmentation to address changing circumstances. A critical component that will be addressed is disaster risk management for the property.

## 1.2.2 AUTHENTICITY OF PROPERTY

### Authenticity (*How attributes convey their significance*)

The authenticity of the Kathmandu Valley World Heritage property is retained through the unique form, design, material and substance of the monuments, displaying a highly developed traditional craftsmanship and situated within a traditional urban or natural setting, which have however throughout history gone through the process of cyclical renewal.

*As per the Operational Guidelines for the Implementation of the World Heritage Convention, properties nominated under criteria (i) to (vi) must meet the conditions of authenticity. Authenticity is a measure of the degree to which the values of a property may be understood to have been credible, truthful, and genuinely expressed by the attributes of the property. (Operational Guidelines 2005 Para 79/80)*

### Discussion on Authenticity

Every component of the World Heritage property, be it the monuments or the surrounding context, has inherent values that encompasses a specific meaning of authenticity within itself. This does not allow a general understanding of authenticity to be formulated for the overall property. However, certain principles must be formulated to establish a basis for the preservation of the value of the property.

The conservation of a heritage property must fulfil two tasks:

1. be a testimony to the achievements of the past which necessitates the preservation of specific tangible elements in its original state; and
2. the continuation of a living cultural heritage which must be based on the appreciation of the past, however taking change into account.

### Cyclical Renewal

The principles that have governed the construction and the maintenance of the monument throughout its history, is an inherent aspect defining the character of the monument.

The monuments of the Kathmandu Valley have been exposed to two extreme natural phenomena throughout history, earthquakes and dampness. In response to the effects of these natural phenomena, the monuments have traditionally undergone cyclical renewal. *(It must be noted here that Nepal has never been a colony of any western empire, had little contact to the outside world until 1951,*

*and was therefore only recently introduced to the western concept of conservation).*

Cyclical renewal in the case of the Kathmandu Valley has clearly meant reconstruction. This is especially obvious after the destruction of monuments due to earthquakes.

*Most monument Zones still have testaments of the hasty renewal after the 1934 earthquake. It is clear that at that point in time, many monuments were not renewed as per their original form (e.g. the Chaturmukhalinga Mahadev Temple in Hanuman Dhoka and the Fasi Dega Temple in Bhaktapur). There is also proof of monuments that were destroyed during the 1934 earthquake that were never reconstructed (e.g. the Hari Shankar Temple in Bhaktapur).*

Taking into consideration that the authentic character of a monument Zone should not be understood as the original character, the form of these testaments of the 1934 earthquake should remain unaltered. It might, however, be necessary to review this principle for specific cases.

*For example, during the restoration of the 55-Window Palace in Bhaktapur, it was found that many wooden elements that were reused after the hasty reconstruction in 1934 were replaced in the wrong position or direction, contrary to traditional construction practice. It was decided to rectify this during the restoration process.*

*On the other hand, the Chyasilin Mandapa on the Bhaktapur Durbar Square, which was totally destroyed during the 1934 earthquake*



*was reconstructed five decades later based solely on photographs. The Mandapa itself has very little that could be called authentic, however it does contribute to recreating a part of the original (pre-1934) identity of the Bhaktapur Durbar Square.*

The 1934 earthquake also had major impact on the urban fabric surrounding the Monument Zones.

*In and around Hanuman Dhoka, major urban renewal was carried out during the reconstruction procedure. The buildings along Juddha Saddak were reconstructed in the white stucco facades of the Rana style. The Basantapur Square was carved out of the urban fabric. (Even today, one of the listed monuments of Hanuman Dhoka is Banya Bahal in the middle of Basantapur Square – however a Bahal is a courtyard building).*

The most predominant problem facing the urban fabric is the rising dampness. The lack of damp proofing in traditional buildings destroys the brickwork on the ground floor over time. Cyclical renewal through reconstruction has traditionally been the only means of responding to this problem.

## The Attributes

The process of cyclical renewal should however follow strict guidelines. The cultural value need to be truthfully and credibly expressed through a variety of attributes (Operational Guidelines para 82).

### Form and Design:

Restoration should be carried out based on detailed documentation of the building. This would mean that the form and design of the building must not change.

The nomination document emphasises the “Newari” style of buildings. However, the Newari style went through transformations and can be roughly categorised into *Malla style* and *Shah style*. The later Shah period was greatly influenced by the white stucco Rana style (a western neo-classical style introduced by the Rana prime ministers towards the end of the 19th century).

*It must be noted here that none of the Rana style buildings within the Monument Zone boundaries were considered listed monuments in the nomination document.*

Restoration of structures should not discriminate between Malla, Shah and Rana style buildings. However, buildings that were built using reinforced cement concrete and are considered obtrusive need to be rectified – not in pursuit of regaining lost authenticity, but to minimise their impact on their surroundings. Rectification should be done respecting the neighbouring historic buildings.

### Materials and Substance:

The use of construction materials is very closely linked to the structural system of the monument. Malla, Shah and Rana buildings were load-bearing fired brick or adobe masonry structures with mortar comprising of a combination of earth, lime, surkhi (brick dust) and sand. In most cases this was combined with wooden post structures. There are also some examples of stone structures. The traditional workmanship entailed in the production of the materials or construction elements are an important aspect in retaining authenticity.

A high degree of ornamentation was achieved specific to each of the styles. This is especially the case with ornamental fired bricks, intricate carving of wooden elements and stucco ornamentation of the Rana style buildings. The use of stone and carved stone elements was limited to some temples. The correct interpretation and employment of these elements is an important aspect in respect to authenticity.

*There has been a general trend to use the traditional Dacchi Appa bricks for restoration and the construction of new buildings within the monument zones. However pleasing it maybe aesthetically, this clearly goes against the principle of authenticity. Dacchi Appa bricks were only used for buildings commissioned by the Malla kings (with some exceptions), however all other private buildings were constructed of Ma Appa.*

The materials used for paving must be verified for their appropriateness in respect to authenticity.

Should materials that are new to the site be employed for technical reasons – especially in respect to dealing with stability and dampness - they need to be either reversible or of a durability that is at least equivalent to traditional materials. *This is especially the case with the most intrusive material of our times; cement concrete. However differentiation needs to be made between mass concrete and reinforced concrete. Various forms of mass concrete have been known to have survived for centuries, while the lifespan of reinforced concrete is considered to be between 50 to 70 years.*

#### **Use and Function:**

The traditional use and function of the major monuments must be retained, especially so for the religious monuments. However, the use and function of monuments such as palaces will inevitably be impacted by the changing political scenario. The generally accepted practice of “adapted re-use” should be utilised. However, the degree to which the buildings are altered to cater to a new function must be minimised and should ideally be reversible, to allow for a clear differentiation between old and new.

*The adapted re-use of the palaces – or parts thereof – has already been implemented in the palaces at Hanuman Dhoka, Patan and Bhaktapur by using them as museums.*

The use and function of public spaces and urban fabric will change based on the continuation of a living heritage. The change should, however, be based on the understanding and appreciation of the heritage values of the site.

The scale of the streets and squares were created for pedestrian use.

The private buildings were used as dwellings and for commercial purposes. The function of these buildings should be regulated to allow for only traditional and compatible activities. Individual historic buildings might be conserved through “adaptive re-use”. This is especially the case with buildings that are

functionally obsolete. It can not be expected that historic buildings which are obsolete due to their design, such as ceiling height below 180cm, continue to be used.

#### **Traditions, Techniques and Management Systems:**

Traditions: refer to “Language and other forms of Intangible Heritage”;

Techniques: refer to “Materials and Substance”;

The traditional management system was comprised of the community based *Guthis*. After the nationalisation of *Guthis* in 1964, most *Guthis* have become non-operational. Consideration could be given to the possible revival of the *Guthis*, however the concept of community based preservation of monuments should be seen as an authentic management system.

#### **Location and Setting:**

Most often location and setting is an integral part of a heritage property.

The “Authenticity of Location” would mean that no monument should be moved to a new location.

To be in a position to approach the issue of “Authenticity of Setting” in a practical manner, certain spatial demarcation is required. The setting would generally refer to the context within which the heritage property is situated and the *sensual* impact it has. This spatial area surrounding the heritage property has been demarcated, where necessary, as a buffer zone. The character of the setting must not change, however the “Authenticity of Setting” restricts itself to ensuring the protection of the values of the heritage property itself.

#### **Language and other forms of Intangible Heritage:**

The predominant aspects of Newari culture needs to be preserved, which would mean their language, customs and festivals.

*This is especially so for such unique customs as those linked to the living goddess Kumari.*

The regular activities and the festivals that are carried out by the community at the religious sites must continue. The significance of many of the monuments and surroundings are closely linked to their religious value.

**Spirit and Feeling:**

Authenticity in respect to spirit and feelings would refer to *sensual* impact of the heritage property, which is closely linked to its identity. The visual environment, linked to sound and smells reflects the sentiment of a place. It is clearly not acceptable to preserve the authentic spirit and feeling of a polluted, unhygienic environment of historic cities. However, the spirituality of the religious monument zones needs to be retained by preserving the sensual impact. This means controlling pollution – air, water, noise – and the change of the visual environment.

**Authenticity and the rehabilitation after the Gorkha Earthquake**

With the extensive destruction caused by the Gorkha Earthquake that struck central Nepal on 25 April 2015, the following reconstruction, or the next phase of cyclical renewal that took place, tested the concept of authenticity.

It is particularly important to note that the main causes for damaged or collapsed of most traditional structures were lack of maintenance and previous inappropriate interventions. Further research will show that the structural performance of the traditional monuments are adequate without introducing interventions using new technology and materials. Authenticity is linked to, not only the design and materials, but also to the knowledge and skills of the traditional artisans. This is what needs to be protected.

The concept of authenticity has also required some adaptation to the circumstances and conditions in the Kathmandu Valley. As defined even before the earthquake, the need for cyclical renewal has been stated. Furthermore, the destruction caused by the earthquake has required reconstruction of monuments. Where possible, salvaged materials were to be used to reconstruct, however, the value lies in the correct design and detailing, use of similar materials which have been worked, as far as possible, in the traditional manner. This requires artisans to be supported to ensure that they retain their knowledge and skills and pass it on to the next generation.

A key aspect of post-earthquake rehabilitation has been the involvement of the various stakeholders and the importance shown to cultural heritage in the recovery process. There is a need for mutual understanding and collaboration between the respective stakeholders, whether government authorities or related community members. Access to the monuments, and rehabilitation of traditional functions is critical to maintain the authenticity of the site, monument or cultural objects, since the living heritage provides the monument with its primary significance, and its continuity.

### 1.2.3 INTEGRITY OF THE PROPERTY

#### **Integrity (How the attributes sustain their significance)**

**The integrity of the Kathmandu Valley World Heritage property is retained by means of the clearly defined Monument Zone boundaries encompassing the elements that contribute to the outstanding universal value, which are guaranteed maintenance and protected by means of the Integrated Management Plan.**

*As per the Operational Guidelines for the Implementation of the World Heritage Convention, all properties nominated for inscription on the World Heritage List must satisfy the conditions of integrity. Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. (Operational Guidelines 2005 Para 87/88)*

#### **Discussion on Integrity**

Integrity refers to the wholeness and intactness of the World Heritage property and its attributes. The quantitative aspect of integrity takes into account whether the boundaries encompass the attributes and linkages that give it its outstanding universal value. The qualitative aspect of integrity takes into account the intactness of each component of the property.

#### **The extent to which the property includes all elements necessary to express its outstanding universal value:**

The outstanding universal value of the Kathmandu Valley is expressed through the seven Monument Zones that together comprise the World Heritage property. The boundaries encompass the listed monuments and the context within which they are located. The extent of the boundaries in respect to the inclusion of the surrounding context has been debated due to the differences in interpretation of the nomination document. The value of the urban fabric surrounding the three durbar squares has been considered as the context within which the listed monuments are located and not in respect to being elements that are themselves of outstanding universal value.

#### **The extent to which the property is of adequate size to ensure the complete representation of the features and processes which convey the property's significance:**

The extent of the property encompasses the surrounding open spaces and the predominant context surrounding the listed monuments.

The relationships and dynamic functions present in the Monument Zones have been partially included within the boundaries. Six out of the seven Monument Zones have a buffer zone to further safeguard its value.

#### **The extent to which the property suffers from adverse affects of development and/or neglect:**

The seven Monument Zones of the Kathmandu Valley were placed on the List of World Heritage in Danger in 2003 due to the loss of traditional vernacular heritage and persisting uncontrolled development.

However, the majority of monuments listed in the nomination document are in good condition, many of them in an even better condition than when the site was inscribed. The main problem is the change that the surrounding context has undergone. The ongoing challenge is to bring the impact of the deterioration processes under control.

There are only few cases of listed monuments suffering from neglect, and even these are in the process of being restored. Neglect can only be referred to the lack of strict implementation of the bylaws.

#### **Integrity and rehabilitation after the Gorkha Earthquake**

The extensive destruction caused by the 2015 Gorkha Earthquake raised the question whether the integrity of the heritage property was lost. As discussed under authenticity in the previous section, the rehabilitation of the monument zones have been a priority for the State Party, and progress can be noted both in respect to tangible and intangible heritage.

## 1.2.4 SUSTAINABLE DEVELOPMENT

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**Sustainable Development must be pursued within the Kathmandu Valley World Heritage property. This means that conservation of cultural and natural heritage must go hand-in-hand with social and economic development, taking into account the needs of future generations.**

### Discussions on Sustainable Development

The Brundtland Commission defined Sustainable Development as, “development that meets the needs of the present without compromising the ability of future generations to meet their own need”. Sustainable Development is considered to be based on the following three policy areas or “pillars”; economic development, social development and environmental protection. There have however been further elaborations done to this definition, namely in respect to the inclusion of culture (or cultural diversity) as an integral part of our environment or even as the fourth pillar of Sustainable Development. By inclusion of culture – especially in respect to heritage conservation – the definition of Sustainable Development embraces a whole new dimension; that of our past.

The conservation of “heritage” - be it cultural or natural - reflects the key principle of Sustainable Development; it is the conservation of that which we inherit from the past, which is of *value* and is worth preserving for future generations. “Value” as utilized here, is the qualitative aspect of “need”, the term referred to in defining Sustainable Development.

The four components of Sustainable Development are interdependent and must therefore be understood within their integral framework.

#### **Economic Sustainability**

Economic Sustainability is achieved when all people have access to an improved standard of living without impairing future economic development.

#### **Social Sustainability**

Social Sustainability is achieved when transformations of social structures improve capacity of societies to achieve their

aspirations while retaining their positive features.

#### **Environmental Sustainability**

Environmental Sustainability is achieved when the consumption of nature’s resources does not exceed their replenishment.

#### **Cultural Sustainability**

Cultural Sustainability is achieved when heritage (as defined in the second paragraph) is conserved without inhibiting the achievement of society’s basic needs.

### **Relevance to the Kathmandu Valley World Heritage Site**

The Kathmandu Valley World Heritage property encompasses seven monument zones that are under great pressure to “change”. This change needs to be directed along the principles of Sustainable Development. This means that conservation of cultural and natural heritage must go hand-in-hand with social and economic development, taking into account the needs of future generations.

### **Sustainable Development Goals (SDGs) and management of World Heritage**

Para 36 of the 2030 Agenda for Sustainable Development Declaration states; ‘We pledge to foster intercultural understanding, tolerance, mutual respect and an ethic of global citizenship and shared responsibility. We acknowledge the natural and cultural diversity of the world and recognize that all cultures and civilizations can contribute to, and are crucial enablers of, sustainable development’. The SDG goals and targets are relevant to the management of Kathmandu Valley World Heritage property, allowing resources to achieve the SDGs to be utilized.



## 1.2.5 BOUNDARY and BUFFER ZONES

**The modifications to the boundaries and buffer zones of the seven Monument Zones of the Kathmandu Valley were approved by the World Heritage Committee during their 30th session in July, 2006.**

*As per the Operational Guidelines for the Implementation of the World Heritage Convention, the delineation of boundaries is an essential requirement in the establishment of effective protection of nominated properties and should be drawn to ensure the full expression of the outstanding universal value and the integrity and/or authenticity of the property. Wherever necessary for the proper conservation of the property, an adequate buffer zone surrounding the nominated property should be provided for, which has complementary legal and/or customary restrictions placed on its use and development. (Operational Guidelines 2005 Para 99/103/104)*

### Boundaries

The seven monument zones of the Kathmandu Valley were inscribed on the List of World Heritage in 1979 based on the nomination document, which included maps specifying boundaries. However, the boundaries that the State Party gazetted were modifications which were not officially approved by the World Heritage Committee. The boundaries of the monument zones were gazetted as Protected Monument Zones (PMZ) out over a period of 20 years:

- 1978 (2035) SWAYAMBHU STUPA
- 1984 (2041) BAUDDHANATH  
HANUMAN DHOKA DURBAR SQ.  
BHAKTAPUR DURBAR SQ.  
LALITPUR DURBAR SQ.  
CHANGU NARAYAN
- 1987 (2044) increased HANUMAN DHOKA  
DURBAR SQUARE
- 1994 (2051) increased SWAYAMBHUNATH
- 1996 (2053) increased BHAKTAPUR DURBAR SQ.  
increased LALITPUR DURBAR SQ.
- 1998 (2055) PASHUPATINATH  
decreased BAUDDHANATH

After the Kathmandu Valley was inscribed on the List of World Heritage in Danger in 2003, the World Heritage Committee requested the State Party to redefine the boundaries.

The redefinition of the boundaries was prepared by the Department of Archaeology in close consultation with the local authorities and taking into account the recommendations made by the International Technical Workshop held in Kathmandu in May, 2004 (WHC / DoA / UNESCO Kathmandu) and the ICOMOS / WHC Missions to Kathmandu Valley in March, 2005 and June, 2006. The redefined boundaries were approved as minor modifications by the World Heritage Committee during their 30th session in July, 2006.

### Buffer Zones

On inscribing the Kathmandu Valley on the List of World Heritage in Danger in 2003, the World Heritage Committee also requested the State Party to establish adequate buffer zones for the Monument Zones.

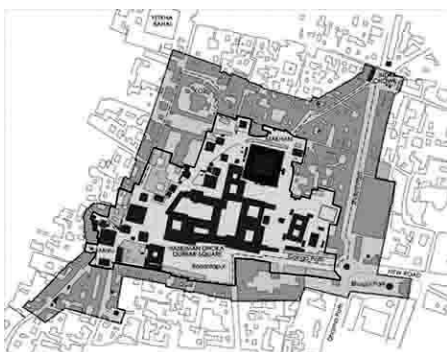
The buffer zone proposals were prepared by the Department of Archaeology in close consultation with the local authorities and taking into account the recommendations made by the International Technical Workshop held in Kathmandu in May, 2004 (WHC / DoA / UNESCO Kathmandu) and the ICOMOS / WHC Missions to Kathmandu Valley in March, 2005 and June, 2006.

The buffer zones for Patan Durbar Square and Bhaktapur Durbar Square encompass the whole historic city areas. It was not found necessary for Changu Narayan Monument Zone to have a buffer zone. The buffer zones of the remaining four Monument Zones (Hanuman Dhoka Durbar Square, Swayambhu, Bauddhanath and Pashupati), were defined as the area between the newly redefined monument zone boundaries and the latest gazetted PMZ boundaries.

The buffer zones were approved by the World Heritage Committee during their 30th session in July, 2006



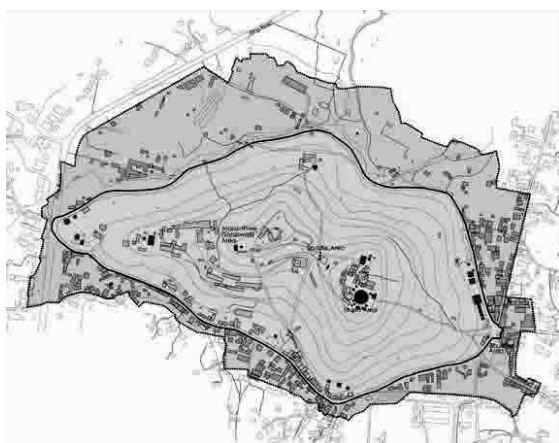
The following boundaries and buffer zones have been approved by the World Heritage Committee during their 30th session in July, 2006:



#### **HANUMAN DHOKA DURBAR SQUARE MZ**

The boundary encompasses the main monuments and the surrounding context of squares and open spaces, thereby ensuring the identity of the monument zone is retained. (Area 5.09 ha approx.)

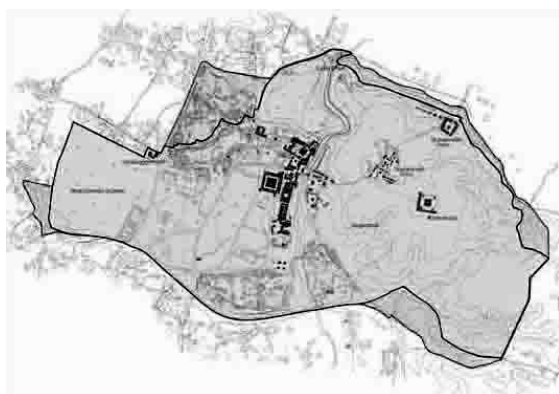
The buffer zone includes a strip of urban fabric surrounding the monument zone and corresponds to the area gazetted in 1989. (Area 6.47 ha approx.)



#### **SWAYAMBHU MZ**

The boundary encompasses the entire hillock which is an integral part of the identity of the Swayambhu stupa, and contributes to the outstanding universal value of the property. (Area 32.63 ha approx.)

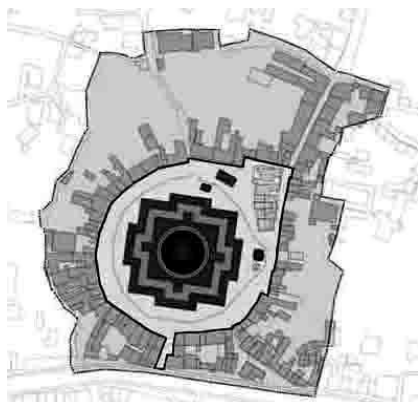
The buffer zone encompasses a strip around the foot of the hillock and corresponds to the area gazetted in 1994. (Area 25.18 ha approx.)



#### **PASHUPATI MZ**

The boundary encompasses the areas that have important religious and historic links to the main Pashupatinath temple that as a whole contributes to the outstanding universal value of the property. (Area 83.55 ha approx.)

The buffer zone encompasses a strip of land of varying depth around the monument zone and corresponds to the area gazetted in 1998. (Area 11.55 ha approx.)



#### **BAUDDHANATH MZ**

The boundary encompasses the open space and circumambulatory path around the main stupa. The monument itself clearly retains outstanding universal value. (Area 1.27 ha approx.)

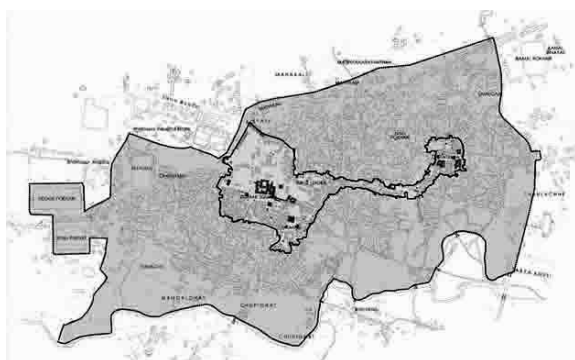
The buffer zone encompasses the buildings surrounding the circumambulatory path, as well as certain open spaces beyond the circle of buildings and corresponds to the area gazetted in 1998. (Area 2.83 ha approx.)



### PATAN DURBAR SQUARE MZ

The boundary encompasses the Durbar Square and extends toward the north including Kwa Bahal and the Kumbeshwor temple. The boundary corresponds to the area gazetted in 1996. (Area 15.89 ha approx.)

The buffer zone encompasses the whole historic city of Lalitpur comprising of the municipal the 'Conservation Sub-Zone' and the 'Mixed Old Settlement Sub-Zone'. (Area 103.17 ha approx.)



### BHAKTAPUR DURBAR SQUARE MZ

The boundary encompasses the Durbar Square and Taumadi Square and the trade route up to Dattatraya Square. The boundary corresponds to the area gazetted in 1996. (Area 14.60 ha approx.)

The buffer zone encompasses the whole historic city of Bhaktapur comprising of the municipal 'World Heritage Zone' and the 'Old City Zone'. (Area 121.43 ha approx.)



### CHANGU NARAYAN MZ

The boundary encompasses a large part of the Changu Narayan hillock based on ownership patterns and access paths. The boundary corresponds to the area gazetted in 1984. (Area 35.92 ha approx.)

No Buffer Zone has been proposed for Changu Narayan Monument Zone. The Monument Zone comprises of large areas of natural setting, which itself functions as a buffer.

**The boundaries and buffer zones of the monument zones have legally defined based on demarcations made on cadastre plans. The monument zones are protected under the provisions of the Ancient Monument Preservation Act 1956, gazetted as Protected Monument Zones (PMZ), which only exclude the buffer zones of Patan Durbar Square and Bhaktapur Durbar Square.**

## 1.3 OBJECTIVES OF THE IMP

### 1.3.1 OBJECTIVE STATEMENT

**The primary objective of the Integrated Management of the seven monument zones of the Kathmandu Valley is to protect the Outstanding Universal Value of the World Heritage property as well as the locally recognised heritage values, while taking into account the standard of living, safety and economic viability of the community living within the World Heritage property.**

*A Management plan can be understood as an operational instrument to utilise available resources to protect defined OUV, while responding to circumstances in the given context.*

The principles that are to be observed in achieving the management goals are:

#### **Significance-driven**

The concern for the conservation of the significance of the site is at the core of decision-making and must be balanced against the interests of other sectors;

#### **Promotes local empowerment**

Devolution of powers to the local site managers must be accomplished to whatever degree possible, however without losing the integration and coordination between the components of the overall World Heritage property;

#### **Social and economic sustainability**

The integrated management will be prepared on an understanding of sustainability, both in respect to social as well as economic operations of the site;

#### **Local communities to profit**

Local communities will profit from developments that take place and all management and planning decisions will take into account the needs of the communities;

#### **Bottom –up approach**

The integrated management will take into account the realities at the site level when developing conservation strategies. This is particularly so in respect to the living cultural heritage of the site;

#### **Integrated approach**

The integrated management will follow a systemic and holistic approach to conservation, taking into account the significance of the monuments, the cultural and natural context within which they are found and the living heritage that lends them their local value;

#### **Process oriented**

The integrated management will focus on the processes and linkages between the components of the site and the various actors to allow for realistic long-term implementation;

#### **Beyond heritage boundaries**

The planning of Kathmandu Valley will go beyond the boundaries of the cultural heritage site and buffer zone and will find means of addressing issues in the surrounding areas.

### 1.3.2 KEY OBJECTIVES

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#### A. Planning and Policy

**A1:** To have Master Plans for all seven Monument Zones which are coordinated with overall municipal planning and provide linkages to the involvement of affiliated government authorities and line agencies.

**A2:** To develop a clear strategy for the conservation of privately owned historic buildings. This would include clearly defined controls and incentives.

**A3:** To prepare rectification plans for inappropriate buildings within the WH area.

#### B. Legislation

**B1:** To have the sixth amendment to the Ancient Monument Preservation Act prepared and gazetted with relevant provisions to ensure better procedures, Heritage Impact Assessment, highest protection for World Heritage, preparation of inventories and provisions for protective zones around listed monuments and archaeological sites.

#### C. Operationalising Site Management

**C1:** To give the site managers the lead role in managing the WH property in close collaboration with the site offices of the DOA, while coordinating with relevant communities.

**C2:** To train and build capacity of the Site Managers for them to fulfil their tasks.

**C3:** To ensure that CWC meetings take place possibly monthly to review reporting from weekly monitoring and to coordinate.

**C4:** To simplify official procedures and processes and make them more effective in respect to heritage conservation, particularly in respect to employing traditional artisans.

**C5:** To have gazetted inventories of classified monuments for all WH areas and buffer zones and utilise the inventories as a planning tool in conjunction to the bylaws.

#### D. Establish Sectoral Plans

**D1:** Ensure conservations strategies are carried out in close collaboration with the site managers and local community, ensuring that proper procedures are followed.

**D2:** To develop strategies to maximise the profitability for the local community. To develop strategies for the sustainable economy of the community within the WH areas without impacting the heritage value.

**D3:** To develop a sustainable strategy for visitor management and develop quality facilities and site interpretations.

**D4:** To establish a strategy for Disaster Risk Reduction along with an emergency reporting system and an authority to deal with crisis situations.

#### E. Information and Research

**E1:** To establish a documentation and research centre for the WH property.

**E2:** To coordinate research on the WH property and related topics in close collaboration with national and international educational institutions. .

**E3:** To create awareness amongst the community, the general public and students on the value of the World Heritage property.

**E4:** To ensure site museums are established in the monument zones linked to the history and culture, to allow for awareness buildings and community participation.

#### F. Sustainability

**F1:** To support and promote traditional artisans in maintenance and restoration works.

**F2:** carry out activities to assist in the achieving the SDGs, particularly those linked to cultural heritage and communities.

**F2:** To ensure the implementation and regular review of the integrated management plan.



### 1.3.3 CONSERVATION APPROACH

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**This section provides an overview of mutual agreed approach to conserving the major attributes of the heritage property. This is the basis for working on detailed legal instruments and procedures.**

#### **General Conservation Approach**

The general approach to conservation is to ensure that all significant attributes are safeguarded through regular monitoring, maintenance and control of activities that might impact the attributes. While ensuring that the attributers are safeguarded, activities linked to the local intangible heritage shall be promoted. A balance shall be achieved to ensure sustainable development taking into account the livelihood of the local community, their cultural identity as well as their spiritual sentiments. This will be the basis for the establishment of the Integrated Management System.

#### **Approach for Built heritage**

The built heritage includes the architectural monuments, as well as the ensembles and historical civic infrastructure. These would be subjected to structural threats, or deterioration caused by plant growth, misuse and vandalism. The built heritage is also subject to the impact of new developmental works, as well as motorized traffic and pollution. The approach to protecting built heritage is first to identify and prepare inventories with detailed documentation. Regular monitoring and maintenance is required. Any threats to the built heritage, which is not compatible with the overall significance of the property, will be eliminated.

#### **Approach for Cultural Artefacts**

Cultural objects, include those that are displaced and in museums or cultural artefacts that are in situ such as statues, inscriptions, ancient stone elements, and various forms of building ornamentation. The cultural artefacts are threatened by physical destruction due to lack of protection, or theft. The approach to protecting cultural artefacts is first to prepare inventories with detailed documentation. The artefacts will be provided appropriate protection. Protocols for

providing physical protection, including removal, replacement with replicas, as well as detailed studies will be prepared and action taken accordingly.

#### **Approach for Intangible Heritage**

Festivals, celebrations, processions, religious practices as well as the overall customs, belief system and way of life of the local communities are important attributes to the cultural heritage site. This will also include traditional crafts and skills. Intangible heritage can be threatened by magnified trends of change often caused by external influences that endanger the basic identity of the local communities. Intangible heritage will be documented, where possible. Required support and protection will be provided to the relevant communities to ensure continued practice, study, training and safeguarding of intangible heritage.

#### **Approach for Landscape**

The urban and natural landscape creates the context of the monument zones. These attributes are not only within the World Heritage property, but also in the surrounding buffer zone and beyond. For each of the monument zones, a master plan will be prepared which clearly defines the means of conserving the urban and natural setting, closely linked to the municipal planning.

#### **Approach for Archaeology**

Sub-surface Archaeology in the Kathmandu Valley includes the remains of earlier settlements, built heritage and early habitation. This includes the foundations of existing built structures. Potential sub-surface archaeology will be surveyed and risk map will be prepared, ensuring that all activities within the areas of potential sub-surface archaeology is regulated. Protocols for archaeological research and protection will be prepared.

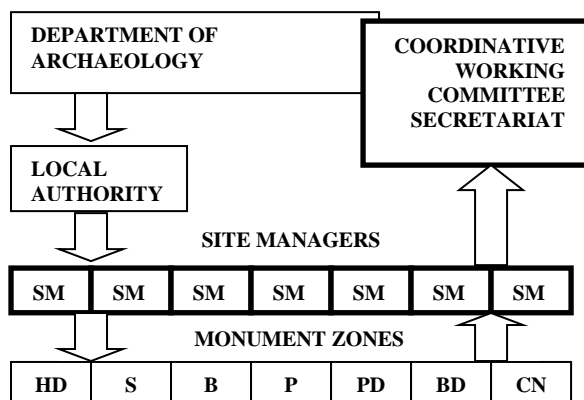
## 2. INTEGRATED MANAGEMENT FRAMEWORK

### 2.1 OVERARCHING STRATEGIES

The overarching strategies required for achieving the management objectives must lay down the parameters for carrying out the specific actions detailed in the Plan of Action. The strategies would need to address the institutional, legislative and economic frameworks.

#### Institutional Framework

The Department of Archaeology is to remain the principle authority for the coordination of conservation activities of the World Heritage areas. However, powers in respect to enforcing bylaws and monitoring are to be handed down to the local authorities, and clearly defined site managers for each of the seven Monument Zones are to be established.



Identification and improvement of processes and linkages within the management structure are to be carried out to have a clear communication system for flow of information and decisions and separation of reporting and decision making processes for regular cases and irregular and emergency cases.

For the conservation of historic buildings, community involvement and participation is to be encouraged, incorporating risk management. Capacity building is to be considered critical for the successful implementation of the Management Plan.

#### Legislative Framework

Clarifications are to be sought for overall legislation dealing directly or indirectly with heritage conservation to reduce duplication and contradictions.

Each Monument Zone will have four sets of regulations:

- I. The conservation of classified monuments identified in the inventories prepared for each of the Monument Zones;
  - II. The bylaws and regulations for the construction of new buildings within the boundaries and buffer zones of each Monument Zone;
  - III. The guidelines for the rectification of inappropriate buildings within the boundaries and buffer zones of each Monument Zone;
  - IV. The development guidelines for public spaces, circulation, services and the conservation of the natural environment
- Each set of regulations will be accompanied by detailed implementation processes.

Awareness to be raised on heritage values and the objectives of the Guiding Conservation Principles and bylaws for practical implementation.

#### Resources Framework

The resources framework consists of sections dealing with human resources, financial resources and material and equipment resources. These resources will be considered not as separate entities, but as part of a comprehensive package. For each of these resources the typology, source and general scale will be defined.

The planning of required resources will be given high priority, directly related to all management issues that need to be addressed and the related actions that need to be carried out. The resources are to be identified specifically for implementing required actions: routine, time-bound projects and emergency response.



## 2.2 INSTITUTIONAL FRAMEWORK

### 2.2.1 THE AUTHORITIES

The “State Party” is represented by the Department of Archaeology, under the Ministry of Culture, Tourism and Civil Aviation. Management, however, management needs to be carried out by Site Managers specific to each of the Monument Zones, leaving the Department of Archaeology with the task of coordination and monitoring and retaining responsibility for the classified monuments.

#### Central Government

The authority within the central government that is responsible for heritage conservation (and the World Heritage Site) is the *Department of Archaeology* (DoA), under the Ministry of Culture, Tourism and Civil Aviation. The *World Heritage Conservation Section* of the DoA deals exclusively with World Heritage (Kathmandu Valley and Lumbini). The DoA also has site offices in Kathmandu (*Hanuman Dhoka Palace Maintenance Office*) Lalitpur (*Lalitpur Monument Conservation and Palace Maintenance Office*) and Bhaktapur (*Bhaktapur Monument Conservation and Palace Maintenance Office*) that are responsible for restoration and conservation works, as well as coordination with processes dealing with the respective municipalities.

#### Local Government

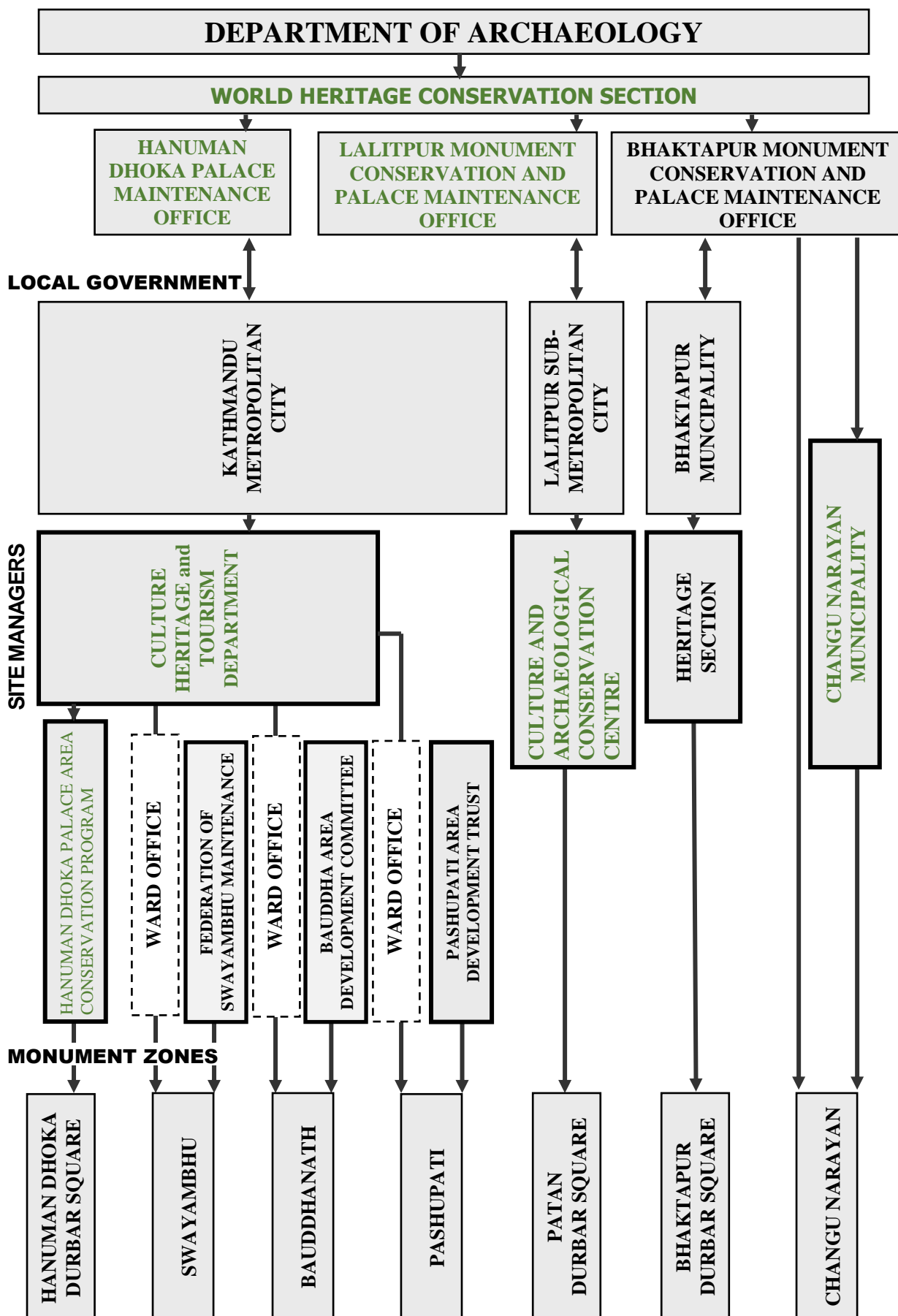
Each of the seven Monument Zones is managed by a particular Local Government. The Local Government Operation Act 2017, gives the Local Government certain responsibilities in respect to heritage conservation. This is especially the case with the Municipalities, which have both the capacity and the resources. There are four Monument Zones within the *Kathmandu Metropolitan City* (Hanuman Dhoka Durbar Square, Swayambhu, Baudhanath and Pashupati), and one each within *Lalitpur Metropolitan City* (Patan Durbar Square) and *Bhaktapur Municipality* (Bhaktapur Durbar Square). In the case of *Changu Narayan Municipality*, which was recently established, the Local Government still requires capacity building to manage heritage conservation.

Based on the Constitution of Nepal 2015, a new level of government has been established at provincial level. The Kathmandu Valley World Heritage property falls within **Bagmati Province**. Once fully established various function would be taken over by the provincial government.

#### Site Managers

Within the institutional framework of the central government and the local government, each Monument Zone has clearly defined Site Managers. The *Culture Heritage and Tourism Department* of Kathmandu Metropolitan City is responsible for managing the four Monument Zones within their area. However, only in Hanuman Dhoka Durbar Square have they established a *Hanuman Dhoka Palace Area Conservation Programme Site Office*. In Swayambhu, the *Federation of Swayambhu Management and Conservation* (a federation of local NGOs) semi-officially carry out various maintenance and cleaning activities. A similar situation can be found in Baudhanath, with the *Bauddha Area Development Committee*. Pashupati, on the other hand, is managed by the *Pashupati Area Development Trust* that was created based on an Act passed by parliament in 1997. The *Heritage, Culture and Archaeology Conservation Centre, World Heritage Section* of the Lalitpur Sub-metropolitan City and the *Heritage Section* of the Bhaktapur Municipality are responsible for the Monument Zones within their respective areas. In Changu Narayan, the newly established *Changu Narayan Municipality* has taken on the role of site manager, supported by the Bhaktapur Monument Conservation and Palace Maintenance Office.

**DEPARTMENT**



## 2.2.2 THE SITE MANAGERS

**The Site Managers will be the most local level appropriate for the task and in the case of municipalities, an appropriate department / division or section will be specified.**

### Site Managers:

The Site Managers for the Monument Zones:

#### **Hanuman Dhoka Durbar Square:**

- Culture Heritage and Tourism Department, Kathmandu Metropolitan City, Hanuman Dhoka Palace Area Conservation Program
- Hanuman Dhoka Palace Maintenance Office

#### **Swayambhu:**

- Culture Heritage and Tourism Department, Kathmandu Metropolitan City
- Federation of Swayambhu Management and Conservation

#### **Bauddhanath:**

- Culture Heritage and Tourism Department, Kathmandu Metropolitan City
- Bauddhanath Area Development Committee

#### **Pashupati:**

- Culture Heritage and Tourism Department, Kathmandu Metropolitan City
- Pashupati Area Development Trust

#### **Patan Durbar Square:**

- Culture, Heritage and Archaeology Conservation Centre, World Heritage Section
- Lalitpur Monument Conservation and Palace Maintenance Office, Department of Archaeology

#### **Bhaktapur Durbar Square:**

- Heritage Section, Bhaktapur Municipality
- Bhaktapur Monument Conservation and Palace Maintenance Office, Department of Archaeology

#### **Changu Narayan:**

- Changu Narayan Municipality
- Bhaktapur Monument Conservation and Palace Maintenance Office, Department of Archaeology

The Site Managers need to be given adequate capacity and training to be in a position to fulfil their tasks. The Department of Archaeology will, however, remain the primary authority and provide support to the local level Site Managers, particularly until they have the capacity and expertise to fulfil their duties.

### **Responsibilities of the Site Manager:**

- to coordinate the implementation of the applicable legislation;
- to coordinate with all relevant “actors” within the WH area;
- to carry out weekly monitoring and prepare weekly monitoring reports;
- to send a representative to participate in the monthly Coordinative Working Committee meetings and report on the state of conservation;
- to review and revise the Plan of Action and prepare Annual Action Plans;
- to participate in awareness building on conservation of the Monument Zone;
- to carry out risk management and emergency response to disasters;

### 2.2.3 COORDINATIVE WORKING COMMITTEE

The integrated management of the seven Monument Zones will be carried out by the Coordinative Working Committee (CWC), which is chaired by the Department of Archaeology and comprised of members from each Monument Zone. The Coordinative Working Committee will have its secretariat located within the office of the World Heritage Section of the Department of Archaeology.

#### Coordinative Working Committee (CWC):

The Coordinative Working Committee (CWC) is the key institution for the integrated management of the Kathmandu Valley World Heritage Site. The CWC is chaired by the Head of the World Heritage Section of the Department of Archaeology with members representing each of the Monument Zones. Representatives of each of the Monument Zones will be members of the CWC.

The CWC shall meet at regular intervals not exceeding two months and may call upon emergency meetings when necessary. When found necessary, the CWC may invite representatives from related government authorities, line agencies and experts to their regular or emergency meetings.

#### Responsibilities of the Coordinative Working Committee:

- to hold meetings at regular intervals not exceeding two months,
- to coordinate and monitor the progress of implementing IMP;
- to coordinate the implementation of the applicable legislation;
- to coordinate the activities of the Site Managers and the DoA;
- to coordinate with related government authorities, line agencies and experts;
- to supervise site monitoring, receive reports from the Site Managers and give necessary instructions for site implementation;
- to coordinate response to emergency situations after disasters;

#### CWC Secretariat:

The Coordinative Working Committee Secretariat will be the focal point for the integrated management of the Kathmandu Valley World Heritage Site. The CWC Secretariat will look after the administration of the CWC and call regular and emergency meetings.

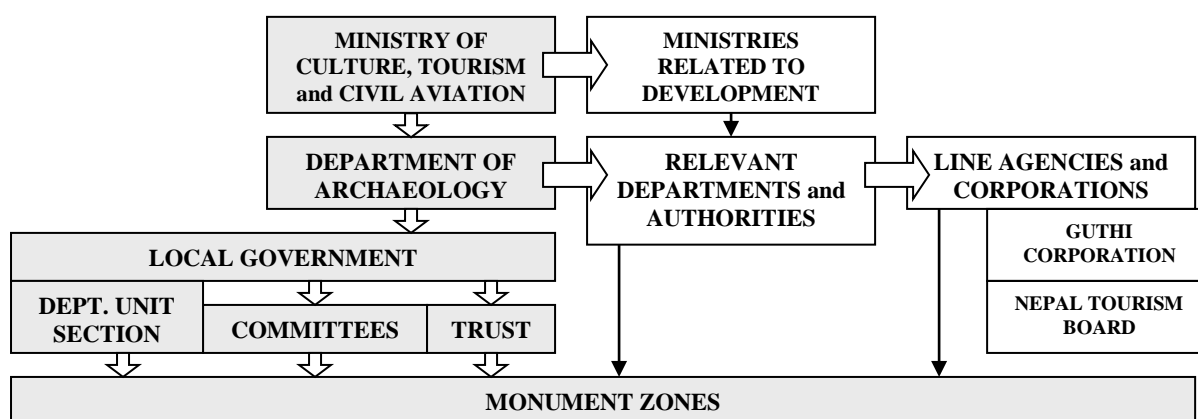
The World Heritage Conservation Section of the Department of Archaeology is responsible for running the CWC Secretariat within their premises. The CWC Secretariat will have a designated office, which will also serve as a documentation centre for the KVVHS.

#### Responsibilities of the CWC Secretariat:

- to work as a focal point for all aspects of integrated management of the WHS;
- to coordinate and implement all administrative activities of the CWC;
- to call regular and emergency CWC meetings;
- to prepare and distribute minutes of all CWC meetings;
- to record and document the progress of implementing the IMP;
- to run a documentation centre for the KVVHS

## 2.2.4 ASSOCIATED AUTHORITIES

There are government authorities from other sectors that carry out work within the Monument Zones. Through the adoption of the Integrated Management Framework by the State Party at cabinet level, associated authorities (ministries, departments and line agencies) are made party to the implementation of the Integrated Management Plan. The State Party will notify all associated authorities, simultaneously establishing a consultation and conflict resolution process.



Beyond the basic management structure established around the Coordinative Working Committee, there are numerous government authorities that have important roles to play within the World Heritage property. These authorities shall coordinate their activities with the World Heritage management through the Coordinative Working Committee. (The ministries, departments, authorities and line agencies listed below are indicative, since there are regular rearrangements made, particularly in respect to aligning the government to the new Constitution. This is particularly the case in respect to the Provincial Government which is still in the initial stages of establishment).

### Associated Provincial Level Authorities and related activities:

Sn	Authorities	Related departments	Related activities
1.	Minister for Social Development		Sustainable Income generation for communities living within the monument zones
2	Minister for Industry, Tourism, Forest and Environment		Provincial level tourism development and environmental protection
3	Minister for Physical Infrastructure and Development		Deal with appropriate activities within the monument zone in respect to infrastructure and rehabilitation
4	Minister for Economic Affairs and Planning		Coordination of planning at local, provincial and central level considering conservation and protection of monument zones
5	Minister for Land Management, Agriculture and Co-operatives		To deal with land issues, related to communities, and guthis, and provide support to traditional community activities.
6	Minister for Internal Affairs and Law		Align provincial laws on heritage conservation with central and local laws, and requirements.

### Associated Central Level Authorities and related activities:

Sn	Authorities	Related departments	Related activities
1.	Ministry of Culture, Tourism and Civil Aviation	<ul style="list-style-type: none"> <li>Department of Archaeology</li> <li>Department of Tourism</li> <li>Nepal Tourism Board</li> </ul>	Implementation of the provisions mentioned in the Ancient Monument Preservation Act and Rules, formulation of bylaws for the private buildings within Protected Monument Zones,

			conservation and management of Protected Monument Zones etc.
2.	Ministry of Federal Affairs and General Administration	<ul style="list-style-type: none"> <li>Local Authorities: Urban and Rural Municipalities</li> <li>Department of Local Infrastructure Development and Agricultural road</li> </ul>	Permission for Drawing Design of Private Houses within the Protected Monument Zone, monitoring on it and implementation of bylaws in this regard and proceed for legal actions to the illegal activities
3	Ministry of Urban Development	<ul style="list-style-type: none"> <li>Department of Urban Development and Building Construction</li> <li>Department of Drinking Water, and Sanitation</li> <li>Kathmandu Valley Development Authority</li> <li>Directorate of Project Implementation</li> <li>Town Development Fund</li> </ul>	formulation and implementation of bylaws for the construction, renovation and reconstruction of government buildings within Protected Monument Zones, management of drinking water supplies through the PMZs, implementation of town planning, arrangement of town development fund
4.	Ministry of Physical Infrastructure and Transportation	<ul style="list-style-type: none"> <li>Department of Road</li> <li>Department of Transportation Management</li> </ul>	Project implementation and other developmental activities in religious, cultural and touristic important places and monuments Physical planning and infrastructure development on privately owned land and its use
5.	Ministry of Land Management, Cooperatives and Poverty Alleviation	<ul style="list-style-type: none"> <li>Department of Land Management and Archive</li> <li>Department of Survey</li> <li>Department of Co-Operatives</li> <li>Guthi Corporation</li> </ul>	Illegal registration of public land / division of public monument illegally and boundaries of such land and/or monuments Management of religious festivals (related part of ICH), Conservation and Management of tangible monuments and their ownership
6.	Ministry of Forest and Environment	<ul style="list-style-type: none"> <li>Department of National Parks and Wild Animals Conservation</li> <li>Department of Forests and Soil Conservation</li> <li>Department of Environment</li> </ul>	Preservation of surrounding natural environment of Protected Monument Zone, environmental management, implementation of policies and monitoring on it
7.	Ministry of Communication and Information Technology	<ul style="list-style-type: none"> <li>Nepal Telecommunication Authority</li> </ul>	implementation of instalment of complex and advanced technologies/equipments within PMZs without any negative impact to the monuments and cultural environment as per the bylaws and other Nepalese legislative provisions, protect from the visual pollution of the PMZs
8.	Ministry of Energy, Water Resources and Irrigation	<ul style="list-style-type: none"> <li>Nepal Electricity Authority</li> </ul>	Extend the electricity poles and cables without any negative impact to the monuments and environment of PMZs, conduct its activities as per the bylaws and other legislations, implement them, monitoring and protect from the visual pollution of the PMZs
9.	Ministry of Home Affairs	<ul style="list-style-type: none"> <li>District Administration Office</li> <li>Police Force</li> </ul>	manage the local monuments and heritage sites as a representative of DOA's provisions in the AMPA, execution of legislative provision with the help of police as well
10	Ministry of Defence	<ul style="list-style-type: none"> <li>Armed Forces</li> </ul>	To manage army presence within the World Heritage, involvement in rituals and celebrations and provide protection.
11.	Ministry of Law, Justice and Parliamentary Affairs		To assist at the time of amendment and/or formulation of bylaws, rules and acts for the protected monument zones as well as for the WORLD HERITAGE properties of Nepal



## 2.3 LEGAL FRAMEWORK

### 2.3.1 LEGISLATION and LEGAL PROVISIONS

The principle Act relevant to the conservation of heritage is the **Ancient Monument Preservation Act (1956)**. There are various other Acts that directly or indirectly address heritage conservation issues, which should augment the principle Act. With the adoption of the new Constitution of Nepal 2015, there is major reforms taking place in the government, bringing about numerous amendments to legislation. The impact on heritage will need to be carefully monitored.

#### **Ancient Monument Preservation Act 1956 - Fifth Amendment 1996**

The legislation for the conservation, protection and management of cultural property is based on the *Ancient Monument Preservation Act (AMPA) 1956*, its subsequent amendments (the latest having been the fifth amendment in 1996) and the *Ancient Monument Preservation Rules 1988*. The Ancient Monument Preservation Act gives the *Department of Archaeology* the legal provisions to declare a monument or area to be a *Protected Monument Zone (PMZ)*. The Department of Archaeology is subsequently responsible for the protection of the site, including the prescription of building bylaws, approving requests for building permits and for any other construction activities within the zone. The Department of Archaeology is given the authority to stop inappropriate and/or illegal building activities and to request for the demolition of unauthorised constructions.

The seven Monument Zones of the Kathmandu Valley World Heritage property have been declared PMZs and the boundaries have been gazetted under the provisions of the AMPA. The Department of Archaeology is therefore responsible for the preservation of the areas comprising the property inscribed on the World Heritage List.

A further amendment of the act (sixth amendment) will consider for example the full and mandatory protection of World Heritage sites, the establishment of Heritage Impact Assessments as a standardized procedure, the preparation of inventories, as well as provisions for protective zones around all ancient monuments and archaeological sites.

#### **Pashupati Area Development Trust Act (1987)**

The Pashupati Area Development Trust Act (PADTA) 1987 is a specific act for the conservation of the Pashupati Area. It provides for the establishment of a Pashupati Area Development Fund to manage, maintain and preserve the natural and cultural heritage in the Pashupati area. The Pashupati area has, however, also been declared a PMZ under the AMPA.

The PADTA established the *Pashupati Area Development Trust (PADT)* as the authority for the development, protection and maintenance of the Pashupati area. The main objective of PADT is the implementation of their Master Plan to develop and conserve Pashupati as a religious centre for the Hindus.

#### **Guthi Corporation Act (1964/1976)**

The Guthi Corporation Act (GCA) 1964 was established in 1964, nationalising *Guthis* (traditional community based trusts with legal ownership of most religious monuments) to a centrally organised unit, the *Guthi Sansthan*. The amendment of 1976 classifies *Guthis* into three categories: Raj Guthi (state), Niji Guthi (private) and Chhut Guthi (exempted). The Guthi Sansthan is to perform religious rites and festivals, preserve cultural heritage, monuments and other religious buildings, preserve ancient ornaments and article of religious and cultural importance.

The Guthi Sansthan is still the legal owner of many monuments and historic buildings within the PMZs. However, due to diminished community support and lack of funds, the Guthi Sansthan's role has been reduced to basically performing religious rights and festivals.

## Building Bylaws

There are legal provisions for the preparation of Building Bylaws by the Department of Archaeology (in the AMPA), by the Municipalities (in the LGOA). The Department of Archaeology has prepared “*Bylaws for conservation and construction in protected monument zones 2064 (2007)*”. Each of the seven monument zones has its own set of bylaws.

## National Building Code

The National Building Code, which was initially prepared in 1994, has recently come into effect and the municipalities have started enforcing the code. Clarification is required on the relevance of the National Building Code for historical buildings. Though load bearing structures are considered in the code, there are no clear references for existing historical structures. National Building Code is required for buildings built using traditional technology and materials.

## Other Legal Issues

One of the main difficulties faced in trying to preserve privately owned historic buildings has been the practice of hereditary division of property. The historic buildings are divided up vertically to allow all parties to own part of the land. There are no legal provisions to stop hereditary division of historic buildings. Legal provision for ownership of individual floors of a building is still under formulation. Retrofitting guidelines for engineered buildings are being adopted but these do not include specific provisions for historical buildings. Specific regulations that are compatible to conservation norms are required to carry out retrofitting interventions in historical monuments.

## Selected list of Legislation

For each of these, the latest amendment will need to be referred to.

- The Lands Act 2021(1964)
- Guthi Corporation Act, 2033 (1976)
- Local Governance Operation Act 2074 (2017)
- Environment Protection Act 2053 (1997)
- Environment Protection Regulation 2054 (1998)
- Soil and Watershed Conservations Act 2039 (1982)
- Building Act 2055 (2008)
- Private Financing in Building and Operation of Infrastructures Act 2063 (2006)
- Nepal Water Supply Corporation Act 2046 (1989)
- Water Supply Management Board Act, 2063 (2006)
- Kathmandu Valley Development Authority Act 2045 (1988)
- Kathmandu Valley Development Authority Regulation 2068 (2011)
- Town Development Act 2045 (1998)
- Town Development Fund Act 2053 (1997)
- Drinking Water Rules 2055 (1998)
- Forest Act 2049 (1993)
- Aquatic Animal Protection Act 2017 (1960)
- National Parks and Wild Life Conservation Act 2029 (1973)
- Ancient Monument Preservation Act 2013 (1956)
- Ancient Monument Preservation Regulation 2046 (1989)
- Tele Communication Act 2053 (1997)
- Tele Communication Regulation, 2054 (1997)
- Nepal Electricity Authority Act 2041 (1984)
- Electricity Act 2049 (1992)
- Electricity Rules 2050 (1993)
- Local Administration Act 2028 (1971)

## 2.3.2 THE CONSTITUTION OF NEPAL 2015

**The Constitution of Nepal 2015 has introduced a three-tiered governance system: Federal, Provincial and Local Government. The rights and responsibilities of each tier has been defined, although this is still in the process of being established.**

The Constitution of Nepal 2015 states under Article 3 that the nation is constituted of the people of Nepal who have “multi-ethnic, multi-lingual, multi-religious, multi-cultural characteristics”. Article 4 also defines Nepal as a secular state, with a footnote explaining that the term “secular” is to be understood as encompassing “protection of religion and culture being practiced since ancient times, and religious and cultural freedom”.

These principles are anchored into the Constitution through Article 32: Right to language and culture. Para 1 provides the right to language, Para 2 provides right to participate in cultural life and Para 3 provides the right to communities to “preserve and promote its language, script, culture, cultural civilization and heritage”.

It is also the objective of the State, as per Article 50 Para 2, “to build a civilized and egalitarian society by ending all forms of discrimination, oppression and injustice based on religion, culture, cultural practices, customs, traditional practices, or on any other grounds”. The objective is also to develop socio-cultural values through means including “respecting cultural diversity and maintaining communal harmony, solidarity and amity”.

Article 51 Section (c) states the policies regarding social and cultural transformation that the State shall pursue. This is defined under seven paras which include (1) harmonious social relations, (3) local participation, (4) developing art, literature and music, (5) ending discrimination and injustice, and (7) adopting a multi-language policy. Section 2 declares that the State shall follow the policy of “conducting studies, research and archaeological excavations and dissemination of information about them for the protection, maintenance and development of historical, archaeological and cultural heritage”. Furthermore, Section 6 declares the State shall follow the policy “to preserve and develop language, texts, culture, literature, arts, motion pictures and property of different castes and communities, on the basis of equity, while also maintaining the country’s

cultural diversity”. It is also important to note that under Section (l) policies regarding tourism, that the State is to pursue the policy of “developing an environmentally friendly tourism industry as an important basis of national economy by identifying, protecting, promoting and publicizing the historical, cultural, religious, archaeological and natural heritage sites of the country, and prioritizing local people in the distribution of benefits of the tourism industry”.

Schedules 5 to 9 of the Constitution of Nepal 2015 explain the division of powers between the federal, provincial and local levels of governments. The management of cultural heritage sites will require collaboration between all levels of government, particularly when multi-sectoral approaches are required. Specific to the culture sector, according to Schedule 8, Serial Number 22, the “preservation and development of language, culture and fine arts” comes under the jurisdiction of the local government. According to Schedule 6, Serial Number 18, the “protection and use of language, culture, script, fine arts and religion” comes under the jurisdiction of the provincial government. Furthermore, Serial Number 21, “Guthi (community trust/endowment) management” also comes under the jurisdiction of the provincial government. It must be noted that Schedule 5, Serial Number 34, declares that “Ancient monuments and places of archaeological importance” comes under Federal Jurisdiction. Schedule 9, the list of concurrent jurisdictions between Federal, Provincial, and Local Level, under Serial Number 12 list archaeology, ancient monuments and museums, which will require clarification. Furthermore, as per Serial Number 17, international treaties and agreements are under Federal Jurisdiction, which in the case of culture sector, would include: the 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, the 1972 World Heritage Convention and the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage.

### 2.3.3 GUIDING CONSERVATION PRINCIPLES

This section deals with the legal framework for the conservation and maintenance of classified monuments. Classified Monuments are all buildings and structures that have been listed and categorised in the most recent inventories prepared by the Department of Archaeology. The Guiding Conservation Principles are to be enforced for all classified monuments.

**The Guiding Conservation Principles are:**

- to preserve and maintain all those elements and attributes that contribute to the value of the historic building / structure for which the monument has been listed and classified in the inventory and
- to ascertain that all other elements and attributes are compatible and appropriate to the building / structure and its context

The conservation of classified monuments shall be carried out as per the value, condition and character of the specific monument. It is therefore not possible to formulate bylaws for conservation of historic buildings. Conservation shall be carried out based on the classified inventory, which is the only legal document that defines each monument individually.

The classified inventory shall contain specific information on the monuments, to allow it to be used as the basis for conservation. This means that the *“elements and attributes that contribute to the value of the historic building or structure for which it has been listed and classified in the inventory”* shall be clearly stated.

These *“elements and attributes”* may include the overall structure, various individual elements (such as carved windows) or a specific attribute which bears witness to an important historic event or process. These elements and attributes shall be conserved as stringently as possible. *“All other elements and attributes”* shall be *“compatible and appropriate to the building / structure and its context”*. Once the primary elements and attributes have been preserved, the remaining elements and attributes can only be modified if these are compatible and appropriate in respect to mass (height, coverage and form) and exterior (material, colour, texture, order, scale and proportions) to the overall monument and surrounding historic buildings.

#### Implementation Process

The Guiding Conservation Principles will be accompanied by a detailed implementation process clearly defining the authorities, the flow

of information and the decision making and monitoring provisions. The principal authority for classified monuments and archaeological sites is the DOA.

Special provisions and procedures must be ascertained for all classified monuments and archaeological sites. This means that a separate set of parameters will be used to assess the structural stability of historical buildings. Retrofitting guidelines specific to historical buildings will be prepared and adopted.

#### Preparation of the inventory

An inventory shall be prepared with the cooperation of the DOA, the local authorities and the site managers. The inventory shall list all monuments, cultural objects and intangible heritage, which contribute to expressing the overall value of the heritage property. The inventory shall be regularly updated and gazetted, at least once a year. The basic inventory listing will determine the importance of the element as well as the ownership. This information shall be disseminated to all relevant authorities, organizations and individuals.

Once the individual classified elements have been identified for the inventory, each element shall be provided with a folder containing relevant information required for its safeguarding, care and management. A standardized format shall be developed which is used by all authorities and parties involved in safeguarding the classified elements. The folder shall also contain all information on conservation measures, threats, changes in its condition, as well as the information collected during monitoring.

## 2.3.4 BUILDING BYLAWS

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**This section deals with the legal framework for non-historic buildings and the construction of appropriate buildings on empty plots. Two distinct sets of bylaws are provided, differentiating between the area within the Monument Zone boundary and the buffer zone. These have been adopted by the local authorities.**

### Within Monument Zone boundaries

These Building Bylaws have been specifically prepared for each Monument Zone and are an integral part of the Municipal Building Bylaws.

The responsibility for the enforcement of these bylaws lies with the respective Site Managers, supported by the Department of Archaeology.

### Within the Buffer Zones

The buffer zones have similar bylaws, however focusing more on the impact these buildings would have, rather than the value of the buildings themselves.

**However, it is of paramount importance to keep in mind that no activities should be allowed within the buffer zone that might negatively impact the outstanding universal value of the Monument Zone.** These might be activities or construction that affects the elements and attributes of the Monument Zone; visually, by means of pollutants, noise or smell, or changes the traditional character of the place.

### Implementation Process

The Building Bylaws will be accompanied by a detailed implementation process clearly defining the authorities, the flow of information and the decision making and monitoring provisions.

The implementation of the Building Bylaws will be enforced by the site managers and local authorities. The Department of Archaeology will deal with special cases, especially when dealing with classified monuments and issues that impact the value of the property.

Provisions of black-listing buildings that have been constructed without following the provisions of the bylaws will be introduced. A building that is inappropriate, as defined by the bylaws, or impacts the heritage will not be legalized until rectification are carried out.

### Content of Building Bylaws

The Building Bylaws will address the following issues:

- the positioning of the building on the plot;
- the response to neighbouring buildings and public spaces;
- the volume and size of the building;
- the overall building form including projections and roof;
- the scale of the building and the floors, including cornices;
- the materials;
- the colour and texture;
- the essential construction details;
- the openings;
- the plinth;
- the services, including water, sewage, waste, electricity, telecommunication, drainage, their connections and visual impact;
- the usage and functions;
- building styles if relevant;

The Building Bylaws will also address the following circumstances:

- demolition of existing buildings;
- division of existing buildings;
- reconstruction and the reuse of materials;
- extensions, both vertical and horizontal;



## 2.3.5 PROCEDURES FOR THE PROTECTION OF HERITAGE SITES AND LANDSCAPES

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### Introduction

The ‘Procedures for the Protection of Heritage Sites and Landscapes’ addresses the need for an appropriate approach to conserve the identity of the public and semi-public realm within the heritage site, both within the Protected Monument Zone, as well as the Continuum Zone. The public and semi-public realm encompasses the physical spaces, (such as within the settlement areas the squares, streets, tanks, etc. and natural environment such as the forest, agricultural fields, ponds, rivers, streams, etc.), the intangible heritage linked to these physical spaces and the public services and infrastructure that support the heritage site. These guidelines are to be read in conjunction with all the legal provisions as defined in Chapter 6. Close cooperation of numerous authorities is needed for the implementation of the ‘Procedures for the Protection of Heritage Sites and Landscapes’. There is an addendum to these procedures: (A1+) Protection of Subsurface Archaeology.

### 1. Scope

The ‘Procedures for the Protection of Heritage Sites and Landscapes’ will be adhered to for any construction or development work being carried out within the property by government authorities, line agencies, communities or private entities.

### GENERAL

### 2. Community needs and safeguarding cultural heritage

The basic needs of the community living within the Protected Monument Zone will be given high priority, however, all activities carried out within the heritage property will follow the legal provisions provided in this chapter and be carried out keeping in mind that cultural heritage must be safeguarded;

### 3. Traditional function and land-use

The traditional functions and land-use will be maintained within the Protected Monument Zone. The subzones and the related regulations will be strictly adhered to by all authorities, line agencies, communities and individuals. In the Continuum Zone compatible functions can be introduced however follow all legal provisions.

### 4. Encroachment

Encroachment of public and semi-public spaces is not allowed - at ground level,

below ground level and above ground level – which includes the construction of aprons, plinths steps etc.; spaces that have traditionally been used for public and semi-public functions may not be encroached upon;

### 5. Disaster Risk Management

Disaster preparedness, especially in respect to earthquakes, floods and fires, will be integrated into the overall planning of the heritage property; Risk management and disaster preparedness will be done keeping in mind the authenticity and integrity of the historic area, following a Disaster Risk Management Strategy.

### 6. Monitoring, Research and Heritage Impact Assessment (HIA)

The design and implementation of development works will take into consideration the need to safeguard heritage; priority will be given to carry out research on any aspect of the heritage site to better assess the impact of development; any major works, particularly in the form of time bound projects that could have an impact on heritage will require a Heritage Impact Assessment (HIA) to be carried out through the Department of Archaeology.

### GENERAL PROVISIONS FOR LANDSCAPE AREAS

### 7. Protection of landscape

The natural landscape and the landscape created out of centuries of human activities, which include the natural features and topography, flora and fauna, as well as monuments and subsurface archaeology, will be protected and maintained, only allowing change that is consistent to the intrinsic character of the landscape over time. The natural setting within the property will take into account the spiritual context include other myths and legends.

#### **8. Activities within the landscape**

All activities that take place within the landscape will take into account the need to protect the landscape, respect the heritage and any impact that these activities have on the landscape will be non-intrusive, temporary and removable.

### **GENERAL PROVISIONS FOR SETTLEMENT AREAS**

#### **9. Layout and extent of settlements**

The settlement structure, layout and extent of the settlements within the Protected Monument Zone will be maintained, while developments in the Continuum Zone will strictly adhere to the relevant legal provisions.

#### **10. Identity**

The traditional identity of the public and semi-public spaces (squares, streets, ponds, etc.) must be preserved; the form, shape, boundaries and character of the public and semi-public spaces must not be altered.

### **INFRASTRUCTURE / SERVICES within Heritage Property**

#### **11. Vehicular traffic planning**

Traffic within the heritage property will be planned systematically to ensure minimum impact on the heritage attributes, the environment and the ambience. Where possible, vehicular traffic will be restricted fully within the heritage property, with vehicular parking provided along the periphery, without being intrusive to the heritage property. Through traffic must also be restricted, providing alternative

routes. Emergency access for ambulance and fire brigade must be provided.

#### **12. Public transportation**

Appropriate, non-polluting means of public transportation can be provided throughout the heritage property, particularly for the disabled and aged, however, these must also be restricted to ensure minimum impact on the heritage attributes, the environment and the ambience.

#### **13. Transportation infrastructure and paving**

Transportation infrastructure within the heritage site will be kept to a minimum. Any extensions, widening, construction or changes to roads within the heritage site will be carried out only after detailed planning and a heritage impact assessment. Roads will be paved in an appropriate manner, either in stone or brick, while ensuring a certain level permeability. Where other materials have been previously used, these will be rectified. The level of the road will be fixed to ensure that it doesn't impact and it doesn't rise above the plinth of historical buildings.

#### **14. Surface rain water drains**

Historic and natural drainage systems will be safeguarded and maintained. The historic and natural drainage systems can be augmented where necessary to ensure proper surface drainage throughout the heritage property. The surface drainage will ensure safety of monuments, subsurface archaeology, and within settlement areas buildings are safeguarded. The roads and paths will be kept from water logging.

#### **15. Subsurface drainage, sewerage and water supply lines**

In principle digging within the heritage property is not allowed. Permission for any form of digging will be obtained from the Department of Archaeology. Digging up to 30 cm deep will be allowed by notifying the Department of Archaeology and ensuring that subsurface archaeology is not affected. Digging for the construction of septic tanks, soak pits, sewer and

subsurface drainage and water supply lines within the heritage site is only allowed within the settlement areas, with permission, after detailed planning, archaeological investigations based on archaeological risk maps and where necessary watching brief. Subsurface piping will not be allowed where there is a possibility of archaeological remains. The impact on the environment will follow national norms and will be closely monitored.

#### **16. Electrical and telecommunication cables**

Within the cultural heritage property electrical supply and telecommunication cables will follow the alignment of roads and paths and will not be positioned crossing the landscape. Within the heritage site armoured, electrical cables will be installed underground, at a depth of maximum 30 cm, along the roads and paths. Digging up to 30 cm deep will be allowed by notifying the Department of Archaeology and ensuring that subsurface archaeology is not affected. High tension lines should not cross the heritage property. Electricity and telecommunication connections, particular to monuments and historic buildings will be done in an unobtrusive manner.

#### **17. Electrical supply system**

Transformers will be placed in such a manner that they do not affect the visual integrity of the site. Generators will not be placed in the public and semi-public areas, while also ensuring that the noise from generators does not affect the ambience of the heritage property.

#### **18. Lighting of public and semi-public spaces**

Functional lighting for public and semi-public spaces will be planned and installed in a manner that does not disturb the character of the place. The lamp posts, lamps and lighting brightness and colour, will all be carefully planned to be neutral to the heritage ambience. Cables must be concealed. Lighting with solar panels integrated on the post will not be used. Where possible exposed elements will not be bright and shiny. Lighting for special

occasions and festivals may be developed in a manner that enhances the traditional quality of the place, however, must not be intrusive, and must be removable.

#### **19. Telecommunication and multimedia facilities**

No communication or multimedia cables, equipment and installations should be placed in a location that affects the visual integrity of the historic site. Any towers that need to be constructed must ensure they are not visually intrusive, and ensure monuments and subsurface archaeology are safeguarded.

#### **20. Mechanical Installations**

The installation of utility and mechanical systems such as water or gas meters, antennas, air condition units should be inconspicuously placed.

#### **21. Solid Waste Management**

Provisions will be made for disposal of solid waste with allocated collection points (preferably with separation of bio-degradable, glass, metal, plastics, etc.). Recycling will be promoted; composting biodegradable materials will be promoted. Aesthetically designed rubbish bins will be provided and strategically located for public and semi-public spaces. Provisions for regular solid waste collection should be made.

#### **22. Public access and fencing**

Public access to the landscape, including the forests and the river, other than when areas are cordoned off for security purposes. No area of the landscape will be enclosed within compound walls. Fencing will only be used where it is essential for the security of the heritage property. All other fencing will be removed. Fencing, where essential will be designed in a manner that befits a heritage site, without being flashy and obtrusive.

### **NATURAL FEATURES, FLORA AND FAUNA**

#### **23. Protection of natural features and topography**

The natural environment of the hills will be protected. Care will be given to ensure proper protection is provided from erosion. There will be no digging, levelling, changing the topography or slopes within the landscape.

#### **24. Protection of ancient and natural water bodies**

All water bodies such as ancient reservoirs and tanks, as well as natural streams and ponds will be protected. The ancient and natural hydrology systems will be maintained and where required rehabilitated to manage water resources and help mitigate flooding. No lake, pond, tank, water reservoir, rivers, rivulets, streams, natural drain, spring or water source or any other water course will be permitted to be filled up.

#### **25. River protection**

Rivers will be protected from pollution and inappropriate use. The river ecosystems of the rivers that flow through the property will be protected in respect to water management and pollution right from its sources. The erosion along the banks will be monitored and protective measures will be taken where required. Other than protective works, no construction will be allowed along the banks of the rivers within the heritage site, other than temporary structures. Historical structures, particularly the ghats, will be maintained and restored.

#### **26. Forest areas protection and tree plantation**

Forest areas will be protected. Within the heritage site, the plantation of trees and shrubs will only be allowed in traditional forest areas and after detailed assessment ensuring there is no negative impact on monuments and subsurface archaeology. Plantation will be done using indigenous species of trees in appropriate locations, ensuring that it is not a mono-culture.

#### **27. Care for animals**

Wildlife and their natural habitat will be strictly protected and cared for in the property, as well as the surrounding region.

Where necessary, they will be provided with medical care.

### **FUNCTION**

#### **28. Traditional Use and Intangible Heritage**

Traditional functions and usage of public and semi-public spaces will be supported. Traditional rituals, processions and festivals that have been performed over centuries in the public and semi-public spaces must in no way be hindered;

#### **29. Signage for orientation and information**

Signage for orientation and information on the heritage site will be provided in a manner that does not have visual impact on the heritage property. No hording boards or electrical screens will be allowed. Signage will be planned in a uniform manner, reflecting the identity of the heritage property, without being obtrusive.

#### **30. Commercial Use**

Use of public and semi-public spaces for private commercial use is not allowed unless specifically managed within allotted areas and designated sub-zones and without disturbing the identity of the place. This also includes the public space in front of commercial buildings such as shops.

#### **31. Commercial Signage**

Commercial signage, hoarding boards, posters, banners etc. are not allowed within the heritage site. Commercial enterprises within the settlement areas may have signboards that follow strict norms of size and aesthetic quality.

#### **32. Controlling Pollution**

Strong measures will be put into place to make the property a minimum pollution zone and all polluting activities must be controlled within the property as well as the surrounding areas.

### **ASSESSMENT AND PROTECTION OF THE LANDSCAPE**

#### **33. Assessment of natural factors**

The impact over time of natural factors that are affecting the landscape will be assessed. These can be natural factors

slowly changing the landscape such as weathering and erosion, particularly considering the effects of climate change. The landscape is also affected by natural hazards such as earthquakes, heavy rains and storms, as well as flooding.

#### **34. Assessment of human factors**

The impact over time of human factors that are affecting the landscape will be assessed. Human activity within the landscape can often have detrimental

effects, particularly through construction activities, excavations, deforestation or change in plantation.

#### **35. Controlling adverse effects**

To ensure that the landscape is maintained to an acceptable degree, it will be necessary to control the factors adversely affecting the landscape, both natural and human, while allowing for social and cultural activities to continue.

## **ADDENDIUM TO 2.3.5: PROTECTION OF SUBSURFACE ARCHAEOLOGY**

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### **Introduction**

The heritage attributes that are under the surface are generally better preserved and are a repository of a huge amount of information on the heritage site. This repository of information must be protected. This repository must only be disturbed when accessed through careful documentation and investigations. The most advance possible technology must be used to ensure that all the evidence is interpreted, and a maximum amount of information is obtained. The following regulations have been adopted to ensure the protection of subsurface archaeology.

1. The protection of the archaeological vestiges, visible or below the current land surface that are testimony to the history of the property is non-negotiable. This includes archaeology below open areas, streets, lanes and courtyards and foundations of buildings, which is critical also in respect to new plantations and existing plantations
2. The subsurface archaeological heritage areas of the property are to be mapped for risk and assessed for safeguarding the phases of development and linked historic periods are to be standardized to ensure a coherent understanding of the property for purposes of research, interpretation and presentation.
3. All activities and interventions within the Protective Monument Zones are to be non-intrusive to the archaeological vestiges and be reversible without causing any damage to the archaeological vestiges and integrity of the site.
4. Shelters, whether permanent or temporary, will only be provided for the most significant archaeological vestiges and only if found to be essential for their long-term conservation and if developed in an appropriate manner.
5. The exposed archaeological vestiges are to remain visible to visitors and provisions are to be made for any future archaeological structures to be kept exposed and visible for visitors as long as it does not compromise their long-term conservation.
6. The archaeological vestiges are to be presented to the visitors in a clear and truthful manner. Access onto all monuments will be restricted and clearly defined paths and areas will be provided for the visitors and pilgrims.
7. Provisions are to be made for worship and mediation which fulfils the requirements of the pilgrims, however, ensuring the protection of the archaeological vestiges.
8. Archaeological research, surveys and investigations will be carried out using the latest technology and methods.



## 5.3.6 PROCEDURES FOR THE PROTECTION OF BUILT HERITAGE

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### Introduction

The ‘Procedures for the Protection of Built Heritage’ addresses the need for an appropriate approach to conserve the identity of all forms of built heritage within the heritage site, both within the Protected Monument Zone, as well as the Continuum Zone. Built heritage is comprised of the main monuments, such as temples, stupas, shrines and palaces, as well as historical buildings, which might be privately owned. Built heritage also encompasses public structures such as sattals, patis, ritual platforms, ghats, as well as historical steps, bridges, retaining walls, etc. These guidelines are to be read in conjunction with all the legal provisions as defined in Chapter 6. Close cooperation of numerous authorities is needed for the implementation of the ‘Procedures for the Protection of Built Heritage’. There is an addendum to these procedures: Adaptive Reuse of Historical Buildings.

### 1. Scope

The ‘Procedures for the Protection of Heritage Sites and Landscapes’ will be adhered to for any conservation, construction or development work being carried out within the Pashupatiksetra by government authorities, line agencies, communities or private entities.

### GENERAL

### 2. Categorization of built heritage

The categories of monuments are to be standardized to ensure a coherent understanding of the property for purposes of research, interpretation and presentation. The phases of development and linked historic periods are to be standardized to ensure a coherent understanding of the property for purposes of research, interpretation and presentation.

### 3. Documentation and recording

An inventory will be prepared of standing monuments and cultural objects, including detailed documentation so there is record for any potential post-disaster reconstruction

### 4. Original form and material

All monuments will be safeguarded in their original form and material. Damaged monuments will be restored to their original form based on documentation, reuse of original material and where necessary replaced with similar materials.

### 5. Use of new technology and materials

New technology or materials will not be allowed in work carried out on built heritage. Such materials and technology will only be acceptable for providing support to damaged structures to retain original fabric, with permission from the DOA.

### ASSESSMENT OF BUILT HERITAGE

### 6. Category of vulnerability

Built heritage will be assessed as per their vulnerability and will be categorized under the 3 levels of (1) critically vulnerable (2) vulnerable (3) minimally vulnerable.

### 7. Prioritization for intervention

Built heritage will be prioritized for conservation, based on the immediate risks, urgency for intervention, potential loss of significance, level of damage, significance, religious sentiments, liturgical requirements, as well as availability of resources for the particular monument.

### TRADITIONAL TECHNOLOGY, MATERIALS AND SKILLS

### 8. Traditional procedures and rituals

Traditionally specific procedures and rituals will be carried out considering that these procedures and rituals are part of the living heritage significance ensuring cultural continuity of the monument. It will be ensured that traditional procedures and rituals are respected and performed while carrying out any work.

### 9. Material availability and specification

The availability of materials and their specifications will be considered in the design of conservation works. The procurement of appropriate necessary materials will be facilitated by the government. The replacement with alternate materials where strongly justified will follow strict rules in respect to compatibility, proven performance, demonstrable beneficial effect, no negative impacts, removability and possible future corrective measures.

#### **10. Crafts-persons availability and training**

The master crafts-persons with the required traditional crafts will be given high recognition and high priority will be given to the training of new crafts-person. It will be ensured that work is carried out by crafts-persons with an acceptable level of expertise and experience or under the guidance of an experienced master. As many of the conservation treatments will require intervention by trained masons and crafts-persons, they should be given training to document their work in a format prescribed by DOA.

#### **11. Capacity building and awareness**

Capacity building for undertaking conservation works of cultural heritage will become an integral part of site management. Skills and knowledge will be imparted to various target audiences including community volunteers, site staff and decision makers to ensure their regular and appropriate involvement. Regular activities and interactions will be carried out to inform and create awareness within the community as well as to a wider audience within the country, but also at international level.

### **CONSERVATION OF BUILT HERITAGE**

#### **12. Stabilizing damaged structures**

Built heritage with critical structural damage will be stabilized using the most appropriate methods and technology to ensure minimum intrusiveness, removability, renewability and with least visual impact. When in doubt, interventions should be of temporary

nature and adopting an observational approach.

#### **13. Consolidation of non-structural elements**

Built heritage with damage that does not have structural implications will be consolidated using traditional methods and materials. The sealing of cracks will be carried out with appropriate and compatible materials to ensure that there is no adverse impact caused by the material, blends in with the existing structure and ensures that water penetration into the structures is hindered. The use of modern technology and materials can only be used to provide critical protection to the monument which is justified and agreed upon by the DOA, is removable without any major damage to the original structure.

#### **14. Conservation of ornamentation**

The ornamentation of the built heritage such as mural paintings, decorative stucco work and glazed stone and terracotta will be conserved and protected.

#### **15. Subsurface repairs**

The foundations of built heritage will be retained as far as possible and will only be strengthened if there is clearly visible damage. Any interventions in the foundations will require a Heritage Impact Assessment. Any intrusive subsurface repairs or assessments should be preceded by a watching brief and, if necessary, rescue excavations by an archaeologist, under the supervision of DOA. Further regulations are provided under ‘(A1+) Protection of Subsurface Archaeology’.

#### **16. Consideration for living monuments**

Living monuments will be conserved to the maximum extent possible while seeking to accommodate changes necessary for their use as active monuments, while having no negative impact on significance.

#### **17. Non-conjectural restoration**

Restoration should be based on complete documentation and to no extent on conjecture. Only if sufficient documentation is available, and later alterations are considered inconsistent to the structure’s integrity, will built heritage

be restored or reconstructed back to an earlier style.

#### **18. Reuse of original material**

The built heritage will be restored by reusing as much materials as possible in their previous location and function. When certain parts or elements of the monument need to be replaced, these will be done by using materials that are as similar to the historic as possible in quality, chemical and physical composition and workmanship.

### **CONSERVATION OF MONUMENTS WITH LATER INTERVENTIONS**

#### **19. Phases of buildings**

All phases of buildings will be considered to be of equal importance and will, as far as possible be protected.

#### **20. Assessment of past structural interventions**

Previous stabilizing interventions will be assessed for their performance. These could be internal metal frames, external metal supports or ties, brick piers or concrete tie beams. Depending on the condition and effectiveness of the stabilizing interventions, they might need to be removed, retained, replaced, repaired or new stabilizing methods introduced.

#### **21. Removal of inappropriate interventions**

Past inappropriate interventions in incompatible materials are to be assessed on whether they might be a threat to the monument. If assessments and comparisons to other similar circumstances show that these additions could pose a threat to the monument, then these components will be removed as long as the removal does not cause excessive damage to the structure. If necessary, traditional materials or techniques will be used in any replacement.

### **MONITORING, MAINTENANCE AND SECURITY**

#### **22. Monitoring and maintenance system**

All built heritage attributes will be provided with a framework for monitoring and maintenance and responsibilities will be clarified among associated communities,

other stakeholders and authorities. Where possible the resources for maintenance will be ensured. The means and procedures for maintenance of, as well as the responsible bodies, will be determined.

#### **23. Continuity**

To ensure the continuity of the built heritage, only appropriate functions will be allowed. The monuments should survive in good condition over time which will require consideration of renewal and maintenance. All interventions will take into account how they contribute to the performance of the structure over time.

#### **24. Traditional maintenance procedures**

All interventions and restoration methods will ensure that procedures are put into place for regular maintenance and repair of decayed fabric. Maintenance and repair will take into account traditional construction approaches and materials.

#### **25. Structural health monitoring**

Provisions for periodic structural health monitoring for structural performance will be established. Material testing will be carried out regularly, along with, where possible, the installation of sensors, to monitor the structural

#### **26. Emergency and safety measures**

Safety measures will be required for built heritage, and where relevant evacuation routes for visitors and other safety and security measures will be established in consultation with all stakeholders as well site managers.

#### **27. Modern installations and services**

Built heritage will in principle not be provided with modern installations and services. However, where necessary for functional or security reasons, certain provisions will be allowed, ensuring that the installation does not damage the structure while fixing, and that installations are not visibly obtrusive. Refer to '(A2+) Adaptive Reuse of Historical Buildings' Article 7 for mandatory considerations on installations and services for built heritage.

## ADDENDIUM TO 2.3.6: ADAPTIVE REUSE OF HISTORICAL BUILDINGS

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### Introduction

There are many historical buildings that have become obsolete in respect to their original function. For the continued monitoring and maintenance of such buildings, it is essential that they are given an appropriate new function. Any newly introduced function must be compatible with the character of the heritage site, the specific location, as well as the historical building. To ensure that the new function is compatible, a Heritage Impact Assessment will be carried out before finalizing the adaptive reuse.

1. For historical buildings with adaptive reuse, all provisions and regulations provided in '(A2) Procedures for the Protection of Built Heritage' will be valid.
2. For the conservation of historic buildings, either the historic function will be maintained or adaptive reuse will be assigned to ensure the regular upkeep and the continued value of the structure.
3. In the case of structures that already have communities involved in using and maintain them, such as for social service, religious activities or residential purposes for related communities, these activities will be supported.
4. Historic buildings will be conserved taking into account their structural system, main architectural components as well as decorative elements. Any required restoration works will be carried out ensuring that interventions ensure that materials, techniques and craftsmanship are as per the historic records.
5. Any alterations that might be required must ensure that the building does not lose its historic identity and the alterations are sympathetic, non-intrusive, reversible and visually compatible.
6. The foundations of historic buildings will be retained as far as possible and will only be strengthened if there is clearly visible damage. Any interventions in the foundations will require a Heritage Impact Assessment. Any intrusive subsurface repairs or assessments should be preceded by a watching brief and, if necessary, rescue excavations by an archaeologist, under the supervision of DOA. Further regulations are provided under '(A1+) Protection of Subsurface Archaeology'.
7. The historic buildings that are still being used or are given new functions might require modern installations and services such as electrical and plumbing, as well as for safety and security. However, the installation will not damage the structure while fixing, and the installations will not be visibly obtrusive. The following installations might be considered, and will only be installed with permission from the DOA.
  - a) Water supply and drainage, where it is ascertained that it will not affect the historical building. The water supply and drainage system will follow the '(A1) Procedures for the Protection of Heritage Sites and Landscapes'.
  - b) Toilet facilities and sewerage, will where possible not be installed within the historical buildings. Should it be essential for the adaptive reuse, then it should be done in a manner that it has minimum impact on the historical building. The sewage disposal system will follow the '(A1) Procedures for the Protection of Heritage Sites and Landscapes'.
  - c) Lighting system can be installed for security, safety and as per functional requirement, however, it will be carried out using the highest of safety precautions, ensuring the mitigation of electrical fire hazards.
  - d) Decorative lighting will not be allowed. Festive lighting will only be installed for special occasions.

- e) Installations for fire safety equipment will be considered as per vulnerability assessments.
- f) Sensors to monitoring health of buildings should be considered wherever possible, linking this to a technical support system and regular maintenance.
- g) Essential installations for security, which might include modern locking systems, will be integrated into the historical building, in a non-destructive manner, and without being visually obtrusive. Rolling shutters will not be allowed.

### 5.3.7 PROCEDURES FOR THE PROTECTION OF CULTURAL ARTEFACTS (IN STONE, CLAY, METAL AND TIMBER)

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#### Introduction

For the purpose of these procedures, cultural artefacts will be defined as objects created by humans, which provide information about the culture or civilization that created, maintained and used them, are of importance and are worthy of preservation. These procedures will focus on cultural artefacts that were produced from stone, clay, metal and timber, but might be valid for artefacts of other similar materials. These procedures do not encompass sites and built heritage, nor easily movable artefacts that are not bound to a specific location.

Provisions are to be made for worship and mediation which fulfils the requirements of the pilgrims and devotees, however ensuring the protection of the cultural objects.

The cultural artefacts will be defined under the following **categories**:

- 1) **Statues** – This category includes idols within and outside of temples and other worshipping complexes, free standing statues, including lingams, and other objects of veneration.
- 2) **Inscriptions** – these particularly focus on the stone inscriptions, but there are also inscriptions on copper and timber, and even on burned clay elements.
- 3) **Elements of monuments** – these are elements such as carved timber struts, doors and windows, plinth stones, metal *gajurs*, and also bricks, tiles and plain timber elements, that have been displaced from the built structure.
- 4) **Miscellaneous** – this category includes such artefacts as stone spouts, steles, stone

pillars, *jarun* (stone water tanks), small stone chaityas, etc.

The **significance** of the cultural artefacts can be for the following reasons:

- 1) **Historical** – this refers particularly to the inscriptions, but can also be for the age of cultural artefacts.
- 2) **Sacred** – this refers particularly to idols, as well as to ritual and devotional objects,
- 3) **Artistic** – this refers mainly to works of exquisite craftsmanship, which even when possibly losing its religious or sacred significance, is still of great value.
- 4) **Structural** – this refers to elements of buildings, particularly when they have been displaced.

All cultural artefacts, as defined in these procedures, have an **original location**. This location might be within the city square, along the river bank, within a particular building or as part of a built structure. The original location might have been changed in the past, however,



it is important to determine, if possible, the earliest known location of any cultural artefact. Many artefact will have been displaced in the past. There would have been various reasons for such **displacements** to have occurred.

- i. Due to past disasters, e.g. because of the destruction of the original location.
- ii. For protection or reuse through official procedures.
- iii. Due to theft or other illicit means.
- iv. Caused by unknown events in the past.

### Basic guiding principles

1. Cultural artefacts will remain in their original locations.

*This principle ensures that cultural objects are not moved unless the cultural object cannot be protected or has become functionally obsolete and must be replaced.*

2. Displaced cultural artefacts will be restituted in their original locations.

*This principle ensures that cultural objects that are displaced due to natural or human causes, will be returned to their original location, if they can be provided adequate protection and if they can perform their required function.*

3. Cultural artefacts will not be threatened by or subjected to hazards of natural or human causes.

*This principle ensures that cultural objects are protected from damage, destruction, erosion, theft, or any other negative impact.*

4. Cultural artefacts that are threatened, will be provided adequate and appropriate protection in their original location.

*This principle ensures that, where possible, the cultural artefacts are provided adequate and appropriate protection from all possible hazards.*

5. If appropriate protection is not possible in their original location, the cultural artefacts will be moved to an appropriate location.

*This principle ensures that cultural artefacts that are threatened or are being impacted, and cannot be protected in their original location, will be moved to a location where appropriate protection can be provided.*

6. Should a cultural artefact become obsolete, in respect to their function, these artefacts will need to be replaced, following traditional procedures.

*This principle ensures that cultural artefacts that have become functionally obsolete, whether as a structural element in a monument or as an object of worship, can be removed and replaced, however, ensuring that the replica is similar in design and material, and fabricated through traditional techniques, and reinstalled as per traditional practices.*

7. Cultural artefacts are to be accessible to the public.

*This principle ensures that cultural objects are made accessible to the public. There might be restrictions to cultural artefacts that are used for rituals or due to beliefs, can only be viewed by certain initiated individuals, however, this must be justified accordingly.*

### Standard procedure to ensure protection

Rapid assessments will be carried out using the ‘traffic light’ approach: green for low, amber for medium and red for high. When several factors are considered, the final assessment would be the combined overlap of the results.

#### Basic identification and assessments

- Listing – identification of objects along with value assessment  
*Cultural objects will be identified, mapped with GPR coordinates, and provided with an initial assessed value. In certain cases, this might require further research.*
- Inventory – including documentation and assessment of condition  
*The listed cultural objects will be documented in detail, including photographic and possibly 3D scanning, which will include a detailed condition assessment.*
- Threats – assessment of threats  
*An assessment of threats to the cultural object in its present location will be done. The possible hazards might be natural or human, with sudden impact*

or slow effect. The possible need for mitigation measures will be highlight.

- Prioritization – based on level of value, condition and threats

*Based on the assessment of value, condition and existing threats, the cultural objects will be prioritized for planning response and mitigation measures. In certain cases, emergency responses might be needed and immediate protective action will be carried out.*

#### **Protection of cultural artefacts in situ**

- Planning of approach to ensure protection in situ.

*Wherever possible, the cultural object will remain in situ and will be provided adequate protection in this location. The protective measures will need to be effective for all forms of hazards, without diminishing the functional and aesthetic values of the cultural artefact.*

- Implementation of protective measures or removal.

*Should an acceptable means of providing protection for the cultural artefact be found, this will be implemented as soon as possible. If it is not possible to protect the cultural artefact in its original location, it will need to be removed and provided appropriate protection in a new location.*

#### **Protection of displaced cultural artefacts**

- To assess original location for threats  
*A displaced cultural object, whenever possible, will be returned to its original location, however, the original location will first need to be assessed for threats. The possible hazards might be natural or human, with sudden impact or slow effect. The possible need for*

*mitigation measures will be highlight.*

*As with cultural artefacts in situ, appropriate mitigation measures will be planned. If there are threats and appropriate mitigation measures are not possible, then the displaced object will not be returned to its original location, and will be stored in an appropriately protected and secured location nearby.*

#### **Removal and replacement of cultural artefacts**

- Clarify justification for removal, whether obsolete or lack of protection.

*If the cultural object is damaged and cannot carry out its required function, or is not acceptable for ritual purposes, or if the cultural object cannot be provided with adequate protection, the cultural object must be removed from its original location.*

- Requirement for replacement for functional reasons and type of replacement.

*Should a cultural object be removed from its original location, depending on its function, whether structural or religious, in certain cases aesthetic, it will need to be replaced. The replica must be similar in design and material.*

- Storage, protection and display of removed cultural object.

*The cultural object that is removed will be stored in an appropriate location, ideally close to its original location, will be provided adequate protection and security, and were possible and of sufficient interest, will be displayed for viewing by the public.*

### 5.3.8 PROCEDURES FOR THE SAFEGUARDING INTANGIBLE HERITAGE

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#### Introduction

Intangible heritage must remain alive, relevant and flexible to changing circumstance. The knowledge and skills must be transmitted to future generation. Intangible heritage is often associated with specific sites, built heritage, cultural artefacts, or might be manifested in the production of cultural objects. Intangible heritage will change and adapt, as required by the community, and only those aspects that are recognized and continue to be relevant to the community need to be safeguarded. Safeguarding intangible heritage ensures that the circumstances required for its continuity is provided. Safeguarding measures must always involve the relevant community, and be carried out with their consent.

These procedures have been established to guide the authorities and site managers of cultural heritage properties on safeguarding intangible heritage. The following provisions are to be considered strictly within the parameters of managing cultural heritage properties and does not profess to address all forms of intangible heritage.

#### Categories of intangible heritage

For the purpose of these procedures, intangible heritage will be identified under the following categories:

1. Activities and events related to social practices and religious beliefs  
*This category includes all forms of festivals, processions, celebrations and rituals that take place within the cultural heritage property. These activities might take place at a specific location, or numerous locations, in the open spaces or within the monument, or along a certain linear route.*
2. Traditional craftsmanship including knowledge and skills  
*This category includes all forms of craftsmanship required to create monuments, cultural artefacts or objects required for the activities under Category 1. The creation of such structures or objects requires knowledge and skills, and is often linked to a set of intrinsic rituals and procedures.*

3. Significance and meaning given to particular locations and their physical manifestation

*This category includes the relationship to the landscape, the natural and built environment, in respect to myths, legends or history. These would include significance given to natural features such as forests, rivers, gorges, as well as the related flora and fauna.*

4. Other forms of intangible heritage

*This category encompasses particularly those forms of intangible heritage that might not be directly related to the cultural heritage property, but might be identified within the area. These might be various forms of performing and visual arts, music, oral traditions and other forms of cultural expression.*

#### Basic guiding principles

For the purpose of these procedures, UNESCO's 'Twelve ethical principles for safeguarding intangible cultural heritage' have been adapted to the requirements of specific cultural heritage properties.

1. The relevant communities and individuals will have the primary role in safeguarding intangible heritage.  
*All safeguarding measures will involve the relevant community, and be carried out with their consent. The communities will decide on the value of their intangible heritage, the degree of*

*threats they are facing, and the necessity for preventive and mitigation measures. Community consultations will ensure honest and transparent dialogue, leading to free, prior, sustained and informed consent. The impact of any actions on intangible heritage will be carefully assessed before being carried out.*

2. Equal priority will be given for safeguarding the intangible heritage of all communities.

*Considering cultural diversity, the intangible heritage of all communities will be respected. This will require a mutual respect to be developed between communities, as well as the State authorities. Particular attention will be provided to respecting the elders, involving the youth, ensuring gender equality and assuring human dignity. Under certain circumstances, means of conflict resolution will be required.*

3. Safeguarding ensures the circumstances required for the viability of intangible heritage and its continuity through practices, representations, expressions, knowledge and skills, and where required adaptation to changing circumstances.

*Communities and community members have the right to their intangible heritage, which must remain viable, by providing the conditions required for its continuity. Communities can determine how to adapt their intangible heritage to ensure viability and continuity.*

4. The locations of significance for communities, particularly in respect to carrying out activities related to their intangible heritage, will be protected and made accessible.

*The locations and places of significance, particularly to practice activities related to intangible heritage will be made accessible to the related communities and community members.*

*Customary practice of accessibility will be respected.*

5. The safeguarding of the intangible heritage and associated activities will benefit the related communities and community members.

*The safeguarding of intangible heritage will allow for continued practice, belief, as well as documentation, research, adaptation, use and promotion for the benefit of the related communities and community members.*

6. Special provisions will be made to carry out documentation, research, promotion, and recognition of traditional knowledge and skills.

*To develop general awareness and acceptance beyond the respective communities, and to understand the continuously changing condition of intangible heritage, the mechanisms and means of documentation and research will be established, along with promotion and recognition of traditional knowledge and skills.*

### **Standard procedure for safeguarding intangible heritage**

These standard procedures are based on the requirement for safeguarding intangible heritage in specific heritage sites. The intangible heritage might be directly linked to the location, site, monument or objects within the specific area based on history, customary practice or beliefs, or be related to the use, management and maintenance of the place.

### **Identification and empowerment of associated communities**

- The communities and community members who created, and have been maintaining and using the heritage property, whether site, monument or object, will be identified.

*All communities and community members who are related to the heritage property will be identified, defining their specific relationship and related intangible heritage.*

- The identified communities and community members will be

empowered as per their specific relationship with the heritage property. *The communities and community members will be empowered to participate in safeguarding the intangible heritage related to their specific activities, which might be associated with the maintenance, restoration or use of the heritage property.*

***Inventory of activities, expressions and products of intangible heritage***

- An inventory will be prepared of the various categories of intangible heritage, as defined above.

*The inventory will be a means of safeguarding the intangible heritage, and must not exclude that which might not have been*

- For the purpose of these procedures, the intangible heritage is related to specific locations, which will be identified in respect to the specific intangible heritage.

*The locations related to intangible heritage can be singular, multiple, linear or omnipresent.*

***Protection of place of significance for intangible heritage***

- The locations will be defined in a particular manner, with specific characteristics, as required by the related intangible heritage, which will be protected.

*The characteristics of the location, as defined in the creation of a specific place, allows for the practice of specific forms of traditional activities and rituals, or reflects certain forms of belief, or is the expression of intangible heritage, which must be retained to safeguard the intangible heritage.*

- The heritage property, whether site, monument or object, will be protected as required by the intangible heritage. *The protection will be provided to ensure that the related usage, expression and beliefs are taken into consideration. The protection in*

*certain circumstances might require certain changes to take place as circumstances changes, however, such change must be justified through the requirements of the intangible heritage.*

***Support and promotion for traditional artisans and practitioners of intangible heritage***

- Within the broader classification of communities and community members, the artisans and practitioners of intangible heritage will be identified.

*This group is specifically focused on those who carry out activities within the heritage property, ensuring the safeguarding and continuity of intangible heritage, by being the custodians of the related knowledge and skills. .*

- Inventory and Documentation of the knowledge and skills of artisans and practitioners of intangible heritage.

*The inventory will focus on the knowledge and skills related to activities carried out by artisans and practitioners of intangible heritage, including the expression and, where relevant, the product of these activities.*

- Facilitate the transmission of knowledge and skills over generations.

*The inventory and documentation of intangible heritage is not sufficient to ensure continuity of the intangible heritage, for it needs to be transmitted to the next generation. This requires facilitation and support to ensure viability.*

- Provide recognition to the artisans and practitioners of intangible heritage.

*Recognitions can be through certification, conferring of titles, through medals and prizes, and media coverage were appropriate.*

***Improving the understanding and awareness of intangible heritage***

- The intangible heritage of all cultures and communities need to be understood to develop mutual



acceptance, which requires general awareness.

*Information on the intangible heritage of all related communities will be disseminated to allow for general awareness to develop. This is linked to sharing of information, where possible, allowing observation and participation in each other's activities.*

**Protection from inappropriate activities**

- Inappropriate activities need to be mitigated.

*Provisions will be made to control inappropriate activities in the Protected Monument Zone to*

*safeguard the intangible heritage, as well as the monuments, archaeological vestiges and cultural objects, the environment, as well as maintaining the sacred character of the place.*

- Only new activities that are appropriate and not offensive will be allowed.

*The introduction of new activities will only be done if they are not offensive and are compatible to the character and heritage of the property.*

## 5.3.9 ZONING WITHIN MONUMENT ZONES AND RELATED REGULATIONS

### Introduction

Each of the monument zones including their buffer zones of the Kathmandu Valley will prepare zoning plans with clearly demarcated subzones identifying the related approach to conservation and protection, the allowed activities, along with guidelines and related bylaws where applicable. These zoning plans will comply with the procedures and guidelines provided in this document, as well as relevant building bylaws prepared by the Department of Archaeology.

### Possible subzones

For each of the monument zones, the following subzones might be considered.

#### 1. Sacred Subzones

Which might include areas of particularly importance in respect to sacredness. This subzone might only be used for sites dedicated to religious activities such as Pashupati, Changu Narayan, Swayambhu and Baudhanath.

#### 2. Conservation Subzone

The area where the main monuments are located, and the main focus is conservation, with no new construction being allowed. This would include the main Durbar Squares of Kathmandu, Patan and Bhaktapur.

#### 3. Settlement Subzone

This is the area where traditional settlements are located, where building

bylaws define any new interventions. Settlement subzones will be defined in all seven monument zones.

#### 4. Utility Subzone

This is an area where utilities are established for the functioning of the monument zones. Particular focus will be given on providing services to ensure the continuity of intangible heritage.

#### 5. Rectification Subzones

These are areas which have been inappropriately developed in the past and need to be rehabilitated in an appropriate manner. Rehabilitation planning will be carried out.

### Regulations for subzones

For each of these subzones development regulations and building bylaws, where relevant will be provided.



## 5.3.10 POST-EARTHQUAKE REHABILITATION PROCEDURES

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### Introduction

The “Post-Earthquake Rehabilitation Procedures” provide the legal framework for the restoration and reconstruction of monuments damaged and destroyed by earthquakes. These provisions can also be used for damaged caused by other hazards. The major destruction caused by the 2015 Gorkha Earthquake will still require rehabilitation. Consideration must also be given to the destruction caused by the 1934 Great Nepal Bihar Earthquake.

These procedures have been established to guide the authorities and site managers on rehabilitation of built heritage that has been damaged or destroyed by earthquakes, or other hazards. The following provisions have been prepared to be considered along with the officially adopted ‘Basic Guidelines for the Conservation and Reconstruction of Earthquake-Damaged Heritage 2072’. These procedures will also be understood in conjunction with the other legal provisions provided herewith, particularly ‘(A2) Procedures for the Protection of Built Heritage’.

### General considerations

- 1) Response based on damage assessment and documentation  
The response and interventions will be based on detailed condition assessments which ensure the highest possible level of research and detailed documentation, taking into account transformations of the built heritage over time.
- 2) Vulnerability reduction of built heritage  
All interventions will consider the reduction of vulnerability of monuments. Vulnerability assessments and appropriate interventions to reduce vulnerability will also be carried out over time on non-damaged monuments.
- 3) Hazards and multi-hazards considerations  
Every site, monument and cultural object will be provided maximum protection from all possible hazards such as earthquakes, but also flooding, landslides, fires, lightning and possibly hazards based on visitors and other functional requirements.

This will be connected to a larger national level disaster risk mitigation policy and a site disaster risk mitigation and management plan.

### Assessment of built heritage and appropriate interventions

The following procedures will be followed in the process of assessing built heritage impact by earthquakes and taking the decision on the general approach to rehabilitation.

1. Vulnerability assessments need to be carried out on heritage buildings by multi-disciplinary experts (not only engineers!) with understanding of conservation.
2. The outcome of the vulnerability assessment would conclude whether interventions are required or not.
3. If interventions are required, the first option would be to carry out repairs of the damaged parts, using original material and technology. It would need to be assessed whether this is sufficient or not.
4. If repair work is no sufficient, retrofit can be used to ensure that the original structural system can be retained. For heritage structures possible retrofit methods must ensure minimum intrusiveness and the possibility of removal.
  - Possible interventions might be steel ties.
  - RCC and cement in any form is not acceptable.
5. If the heritage building has to a large degree collapsed, affecting its original structural system, these damaged elements (which generally does not include the

foundations!) will need to be rebuilt to its original state.

- Certain enhancements might be acceptable if they are in traditional technology, craftsmanship and material.

### **Guidelines for the rehabilitation of built heritage**

As defined in the ‘Basic Guidelines for the Conservation and Reconstruction of Earthquake-Damaged Heritage 2072’, the damage to the built heritage will be categorized under the following three categories which are (1) totally collapse, (2) critically damaged and (3) non-critically affected. Guidelines have been provided below for each of these categories.

#### **1. Interventions for totally collapsed built heritage**

Totally collapsed structures will be rebuilt as per their original design, reusing as much of the salvaged material as possible. The foundations will not be removed and, where necessary, the plinth will be restored. Traditional technology, materials and skills will be used to reconstruct the monument. New materials and technology will not be introduced.

#### **2. Interventions for critically damaged built heritage**

As much of the critically damaged structure as possible will be retained, providing where necessary additional supports. Such interventions would need to be appropriate, technically and visibly, and should prioritize the use of traditional materials.. These original elements will be properly safeguarded and conserved. Where these monuments need to be rebuilt, the conditions defined under category 1 will be followed. The dismantling protocol will be followed.

#### **3. Interventions for non-critically affected built heritage**

Non-critically affected monuments, that have not lost their structural integrity and only require minimum non-critical

interventions, will be protected and conserved. Conservation materials of original quality, chemical and physical composition and workmanship.

### **Procedures for the rehabilitation of built heritage**

The rehabilitation of built heritage will strictly follow the procedures as provided under ‘6.5.1 Procedures and mandatory phases’, and detailed out below: (1) Preparation, (2) Design (3) Implementation and (4) Completion.

#### **1. Preparation**

The first stage of rehabilitation of heritage at monument level shall ensure necessary preparations including documentation, assessment and research. Documentation will be required of the original structure before the earthquake and the present status of the site and the salvaged materials. General assessment of the built heritage in its present state include structural, material and functional aspects will be carried out. Research will be carried out wherever the general assessments are not considered to be sufficient. The preparation phase will also deal with the salvaging of materials and temporary interventions.

#### **2. Design**

The second stage of rehabilitation of built heritage focuses on design and will focus on approach, interventions and realization. This means that the structural interventions and the architectural conservation approach will be designed. The artisans and required material procurement will be planned. An implementation plan will be prepared.

#### **3. Implementation**

The third stage of rehabilitation of built heritage will ensure appropriate implementation through a community based reconstruction in *amanat* procedure. During implementation, all activities will be documented. Work will be strictly supervision. Relevant traditional rituals will be carried out, with the priests, community members, as well as the artisans.

#### **4. Completion**

The fourth stage of rehabilitation of built heritage will ensure proper completion. Once completed the work will be audited for quality, design and cost. The built heritage will be handed over to the responsible

authority with a clearly defined monitoring and maintenance system, which is understood, adopted and fully established. Required training, if required, will be provided.

## ADDENDIUM TO 5.3.10 DISMANTLING PROTOCOL

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### Introduction

If possible heritage buildings and structures and any parts thereof will not be demolished or dismantled. Damaged structures will be stabilized and as much as possible of the original fabric will be retained.

Should it be found necessary for any damaged heritage building or structure or any part thereof to be dismantled, technical and legal justification will be required which also takes into account the sentiments of relevant stakeholders.

- Technical justification will be provided by a competent team of experts with in depth knowledge of structural aspects of heritage buildings and structures as well as conservation principles. The justification will provide an explanation of why the structure cannot be retained.
- Legal justification be given by a competent authority based on relevant legislation, laws, guidelines and other relevant documents adopted by the government. This would include but not only consist of the Ancient Monument Preservation Act, the Basic Guidelines for the Conservation and Reconstruction of Earthquake-Damaged Heritage 2072 and the Post Disaster Recovery Framework.
- The justification will also be based on interaction with relevant stakeholders which could include community members, user groups, priests and caretakers.

The decision to dismantle the whole or part of any historic building or structure will be taken with the understanding that dismantling will be carried out in a systematic manner, with continuous monitoring and documentation, and

that the process can be discontinued at any given time if found necessary. The dismantling process will follow the hereunder defined protocol.

### Objectives

The Dismantling Protocol aims at achieving two main objectives.

1. To better understand the building technology, materials, chronology and alterations, changes and additions, and particularly previous interventions to the structure. It will thereby be possible to determine the original structure, the alterations over time and the reason for the structure to be damaged.
2. To ensure that all materials are carefully removed to ensure detailed documentation, assessment and any further research can be carried out, while also ensuring that the material can be reused as far as possible for reconstruction.

### Teams

Once the justifications have been agreed upon, there will be two teams involved in the dismantling process, a team each to ensure that the two objectives are attained.

- I. The technical support team will ensure that documentation, assessment and whatever research is required will be carried out.
- II. The dismantling contractor team will ensure that the equipment, adequately skilled workers as well as necessary

supervisors are provided to allow for a systematic dismantling process in close collaboration with the technical support team.

### **Preparation of Site**

- A large enough space will be demarcated and fenced off to provide protection to bystanders as well as safety to the salvaged materials.
- Storage space for the various salvaged materials will be clearly defined particularly in respect to timber elements, terracotta elements, mortar and plaster, as well as miscellaneous materials and object of special significance.
- Necessary scaffoldings along with platforms and pulley systems will be arranged for.

### **Planning dismantling procedures**

The following considerations will be made when planning dismantling procedures:

- Safety of the technical support team, the dismantling contractor team as well as bystanders will be considered high priority.
- The stability of the structure being dismantled as well as structures and other nearby threats will be closely monitored.
- The chronology of dismantling will consider both the rational of implementation as well as the need for documentation.
- The process will begin with cleaning of the site of all waste, foreign materials and surface vegetation.
- In principle dismantling will be carried out from the top to the bottom of the structure.

### **Removal of materials by dismantling contractor team**

- The removal of materials will be done systematically, piece by piece and layer by layer, and only after it has been documented and assessed by the technical support team.
- The materials will be removed from its position carefully so that other parts of the structure are not affected.

- The material once removed will be transported in a manner that ensures that it does not get damaged more than it might already be. It will be ensured that any labelling done by the technical support team will remain on the object.
- The material will be stored in the designated storage space in a manner determined by the technical support team. This is to ensure that the material is easily assessable and well protected.

### **Documentation, assessment and research by technical support team**

- During the dismantling process the structure will be documented in detail using photography as well as scale drawings and if possible other appropriate means.
- Damage will be mapped in detail, particularly where there are cracks, damaged elements, as well as collapse patterns.
- The collapsed sections will be carefully excavated in the presents of an archaeologist using relevant archaeological procedures.
- Each major element of the structure will be documented which includes material identification, design, connections between similar as well as adjacent materials.
- This might require further research on materials to identify timber, brick, mortar, plaster, stone, etc. The materials will furthermore be assessed for material deterioration, aging or weathering.
- Materials used for later interventions will specifically be studied and mapped out.
- Each element will be assessed in respect to its function, whether structural, architectural or as ornamentation. The significance of these elements in respect to fulfilling their functions will be studied in detail.
- Construction materials will be labelled where relevant, particularly in respect to timber elements and other important elements that will be reused during reconstruction, possibly in the original location.

- Intricate ornamentation will be documented using photogrammetry. Where possible murals will be salvaged. Samples of carved stuccowork will be salvaged for future use to create moulds or used as samples for use during reconstruction.

### **Final reporting**

- The final reporting will consist of the overall results of documentation, assessment and research. This would mean the following information will be provided as far as possible.
  - Information on the original architectural and structural design and details. This is of course often difficult to assess and might need to be assessed individually.
  - Information on later interventions that were carried out as partial restoration, strengthening or in some cases in the event of maintenance.
  - The damaged caused by earthquake or due to other reasons, particularly the reason for the latest damage or collapse.
  - The detailed documentation and assessment of individual materials and structural elements, assessment of their state, possibility of reuse as well as location of storage.

- The documentation, assessment and research carried out during dismantling will be the basis for reconstruction. This means that the requirements for reconstruction will constantly be kept in mind ensuring the outcome allows for sufficient information is available as required for reconstruction.

- The documentation of the structural system of the original structure and possible later interventions will allow for structural assessments to be carried out and structural design proposed for reconstruction.
- The detailed documentation of all elements will allow for the reuse of these in their original location. The elements that are deteriorated will be identified accordingly determining the need for replacement. This will clearly need to be differentiated between materials that have a particular identify such as carved wooden elements and materials that will be reused however in their general location such as bricks.

The reuse and the recreation of elements of ornamentation will be determined through the documentation and salvaging process during dismantling.



## 2.3.11 RECTIFICATION GUIDELINES

The ‘Rectification Guidelines’ provide the legal framework for rectifying existing buildings that have a negative impact on the elements and attributes that contribute to the outstanding universal value of the Monument Zone.

The basic principle of the rectification guidelines is:

- to remedy those elements and attributes of inappropriate buildings that contribute negative impact on the value of the surrounding historic context;
- specifically focusing on compatibility of mass (height, coverage and form) and exterior (material, colour, texture, order, scale and proportions)

Inappropriate buildings shall be rectified to fulfil the following conditions, however keeping in mind the basic principles mentioned above:

### Mass

- Must not be higher than the neighbouring historic buildings or must comply with the relevant article in the Building Bylaws;
- Must not cover areas that are not within the plot, with the possible exception of sloping (non cement concrete) roof projections;
- The overall form of the building must be compatible to neighbouring historic buildings or must comply with the relevant article in the Building Bylaws for roof, balconies, projections, etc.

### Exterior

- The materials, colour and texture of all elements of exposed facades or facades that could be exposed in the future must be compatible to neighbouring historic buildings or must comply with the relevant article in the Building Bylaws;
- The order of elements of the main facades and of the elements themselves must comply to traditional rules;
- The scale and proportions of the main facades must be rectified to whatever degree possible to reduce their negative impact on any adjacent historic buildings

### Implementation Process

The Rectification Guidelines shall be accompanied by a detailed implementation process clearly defining the authorities, the flow of information and the decision making and monitoring provisions.

### Inappropriate Buildings:

Inappropriate Buildings can generally be understood as those buildings that do not correspond to any of the traditional styles of architecture normally understood to be found within the Kathmandu Valley and do not correspond in scale, height, façade (material, colour, texture) with the surrounding historic buildings.

### Application:

**The conservation of historic buildings shall be given priority before the rectification of inappropriate buildings. The implementation of the Rectification Guidelines should not be used to legitimise illegal construction in the future. The implementation process will take into account the legal status of the inappropriate building, structures and infrastructure. The guidelines are to be implemented with authorisation of the Department of Archaeology.**

## ADDENDIUM TO 5.3.11 Rectification Procedures

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### Introduction

The “Rectification Procedure” provide the legal framework for rectifying existing inappropriate structures, buildings and other forms of development that have a negative impact on the heritage site. Inappropriate structures, buildings and other forms of development encompass legal and illegal construction and development activities carried out in the past that have ongoing physical, visual or sentimental impact on the environmental or cultural attributes of the heritage property.

### 1. Identification of inappropriate structures and other forms of development

Construction and developments that were carried out in the past that do not comply with the present legal provisions, impact monuments, subsurface archaeology, intangible heritage or environment, or affect the cultural sentiment of the community will undergo a Heritage Impact Assessment (HIA).

### 2. Emergency rectification

Should construction and developments that were carried out in the past or are ongoing have a continuing or increasing impact on monuments, subsurface archaeology, intangible heritage or the environment, or affect the cultural sentiment of the community, rectification procedures will be carried out immediately.

### 3. Rectification over time

Construction and developments that were carried out in the past that do not comply with the present legal provisions that however do not have continued or increasing impact on monuments, subsurface archaeology, intangible heritage or the environment, or affect the cultural sentiment of the community, will be rectified or phased out over a period of maximum 5 years, to be implemented as per the decision of PADT and DOA.

### 4. Timeframe for rectification

The duration of time allotted for rectification will depend on the scale of investment, the legality of the

development, the degree of inappropriateness and whether it is located in the Protected Monument Zone or Continuum Zone. The suggestion on timeframe will be provided within the Heritage Impact Assessment.

### 5. Implementation and covering of cost for rectification

The rectification of inappropriate developments and construction carried out by the authorities within the Protected Monument Zone or on identified heritage in the Continuum Zone will be rectified by the authorities. If the inappropriate structures, buildings and other forms of development are considered to be carried out illegally, the entire cost for rectification will be borne by the developer. If at the time of construction and development they were considered legal, then the cost of rectification will be borne equally between the developer and the government.

### 6. Compensation for the outcome of rectification

No compensation will be given for the loss of property or income caused through the rectification of inappropriate structures, buildings and other forms of development; Consideration will be given to construction and development that were legal at the time of execution and the developer has not been able to gain sufficient income from the investment.

## 2.3.12 ADDITIONAL TOOLS AND PROVISIONS

Various management tools have been established or are in the process of being established. These are important means of implementing and enforcing the legal provisions and are considered part of the legal framework package. These will be used within the overall management system; this means the institutional, legal and the resources frameworks.

### **‘Prioritize Heritage’ Initiative**

This initiative has been established to ensure that all site managers prioritize heritage in their decision-making procedures. This will require the review of the management structures and relevant capacity to make appropriate decisions and carry out conservation works. All staff of DOA and site managers must have basic training in heritage conservation, and only the relevant conservation officers shall take decisions and supervise work within the heritage property.

### **Heritage Impact Assessments (HIA)**

Heritage Impact Assessment has been legally established. The implementation of Heritage Impact Assessments (HIA) will be a strategic means of ensuring that development and conservation activities in and around heritage properties are compatible and appropriate. This will give the DOA the authority to demand HIA wherever found necessary and it will be carried out based on the standardized procedures.

### **‘One Map’ Coordination**

The maps of all relevant government authorities will be harmonized, allow for the heritage zoning to be made more functional. This will allow for information to be shared and planning and decision-making to be done in a coordinated manner. The basic legal maps are the cadastre plans of the Survey Department for planning at the level of individual plots.

### **Data Management System**

Effective management requires easy access to information which is regularly updated. The information collected through regular monitoring will be feed into a data management system, allowing site managers to obtain accurate information. The data management systems will link inventories, mapping and assessments to the map while additionally linking this to management activities such as monitoring and activity reports.

### **Inventories of Significant Attributes**

Inventories will include both tangible and intangible attributes of the heritage property. The assessments carried out by DOA assisted by various organizations and experts will be linked to the information of the individual attributes as compiled in the data management system. The inventories shall be constantly updated and close cooperation will be maintained to ensure that the inventory is used as a management tool.

### **Archaeological Risk Map (ARM)**

The archaeological risk maps define which areas have subsurface archaeology, which areas could have subsurface archaeology and which areas most probably don't have subsurface archaeology. The map will become part of the legal system for protecting sub-surface archaeology. This will also be the basis for decision making in respect to any infrastructure or development works that might need to be carried out.

### **Adapted National Building Code**

The National Building Code will have provisions to address the particular characteristics of traditional construction. This will allow for historic structures that are tested over time to be legally approved, without necessarily introducing modern interventions.

### **Traditional Artisan Promotion**

Traditional artisans shall be promoted and supported to carry out conservation works within the heritage property. Provisions shall be made within the Public Procurement Act to address this issue.

### **Training Programmes**

To ensure that there is sufficient capacity to implement the management system correctly, regular training programmes are required. Such activities will to be carried out targeted specifically to requirements directly related to safeguarding heritage, but also in respect to overall management.

## **2.4 RESOURCES FRAMEWORK**

**For the Institutional Framework and the Legal Framework to function, resources are required. These resources shall be assured as required by the State Party, so that the Kathmandu Valley World Heritage property is safeguarded, while promoting the heritage for appropriate functions and income, while**

Resources required for managing Kathmandu Valley World Heritage property have been identified under three sections:

- 1. Human Resources**
- 2. Financial Resources**
- 3. Material and Equipment Resources**

These resources need to be considered not as separate entities, but as part of a comprehensive package. For each of these resources the typology, source and general scale of will be defined. Detailed requirements would however need to be assessed in the Annual Action Plans linking it to the planned actions.

Resources are required for various categories of actions to address identified issues. For the management of the cultural heritage site resources are required to carry out:

- 1. Routine Actions**
- 2. Time-bound Interventions**
- 3. Emergency Response**

Each category of action would require different types of human resources, financial resources and material and equipment resources.

Resources are required for the integrated management and coordination along with the implementation of the sector plans. Therefore, activities can be categorized under the following heading:

- 1. Integrated Management**
- 2. Conservation**
- 3. Sustainable Development**
- 4. Disaster Risk Management**
- 5. Tourism Management**

The management of these different attributes will require differing resources both in typology as in scale.

The planning of required resources will be given high priority, directly related to all management issues that need to be addressed and the related actions that need to be carried out. For each action, the required human and financial resources will be identified so that prioritization and implementation planning can be carried out in a realistic manner. In addition to the direct resource needs and use, the indirect implications on sustainable development of the heritage property will be considered. This requires an in-depth consideration of the socio-economic implications of all activities that are carried out within the heritage property.

The following sub-sections will define the various types of resources and what they will be required for within the management system for Kathmandu Valley World Heritage property.

## 2.4.1 HUMAN RESOURCE MANAGEMENT

**Human resources for management of a cultural heritage site consist of people with the required knowledge and skills to maintain and safeguard the significant attributes. Human resources incorporate the managers and planners as well as those responsible for carrying out skilled or non-skilled activities on the site, their availability, motivation, training and remuneration.**

### Required Human Resources

For **routine actions** and the general management of the heritage site managers will be provided, who can monitor the property, do reporting, carry out necessary procedures for guiding development, as well as managing the museum and database. The managers at the cultural heritage site must understand the legal and technical aspects of safeguarding heritage. This would be essential for both for the DOA as well as at the Site Managers. Particular importance needs to be given to the required experts for maintaining the site, monuments and cultural objects, as well as intangible heritage.

For **time-bound Interventions** which includes the preparation, planning, design, monitoring and auditing of projects, required expertise will be made available to ensure successful, efficient project are carried out. The experts, artisans, contractors, labor must understand the legal and technical aspects of safeguarding heritage. The projects that are carried out, particularly in respect to conservation works and related research must have the best trained and experienced experts with the specific expertise in the tasks that they are to perform. For development projects there must be experts involved who have knowledge of working within a cultural heritage site.

For **emergency preparedness and response**, trainers and responders will be ensured, both at local as well as national level, who are adept with the conditions and requirements of a heritage property and are trained in dealing with cultural landscapes, monuments, historic buildings and cultural artefacts. All forms of hazards, whether natural or human induced, will be considered in the preparedness and response procedures.

***Awareness and general understanding of cultural heritage:*** The managers and decision-makers at shall be provided training and awareness on conservation management

*procedures and requirements for the heritage property to ensure that all decisions and actions are appropriate and compatible to the relevant legal provisions and procedures as defined in the IMF document.*

***Collaboration and Monitoring:*** The management of a large heritage property requires the close collaboration of all the departments of the local and provincial government as well as line agencies to ensure coordination. Collaboration will allow for efficient use of the scarce human resources.

### Securing Human Resources

- **Local:** Local expertise will be used particularly in respect to monitoring the site, and activities requiring local knowledge. This will be an opportunity for local community to get involved in assisting in managing the cultural heritage site.
- **National:** national expertise will be represented within advisory committees to allow for regular involvement in the management of the heritage property. This would include members of educational institutions and professional associations of archaeologists, architects, engineers, conservators, social and cultural studies,
- **International:** International expertise will be kept on a roster to allow for support whenever required. This would be closely linked to ongoing research and support for project design and implementation.

The roster will also include government officers and staff in the various relevant departments who will be responsible for the respective sectors and category of actions. This is especially important since on-going training and meetings will be coordinated according to the assessment of capacity of the government officers and staff with respective responsibilities.



## 2.4.2 FINANCIAL RESOURCE MANAGEMENT

**Financial resources for management of a cultural heritage site consist of different forms of funding required for maintaining and safeguarding the significant attributes.**

Financial resources are required for managing the heritage property, for monitoring, reporting, maintaining, restoring and for emergency response. Incentives are also required for guiding development and for ensuring that heritage is safeguarded. This might consist of subsidies on restoration costs and services, tax exemptions (house, land, material, permits, etc.) and bank loans for restoration. Additionally, a fund will be required to support conservation.

### Required Financial Resources

Funding routine actions will be through regular annual budget. Funding will be provided to the site managers for monitoring, maintenance and administrative functions. Funding will also be ensured for the running of the museums and maintaining a database. Funding will be augmented through the participation of the local and provincial government in the management of the heritage property.

Funding for time bound interventions will be provided to implement prioritized activities; however, these funds will be separated from the regular budget. Time bound projects do not need to be aligned to fiscal years and can be planned and implemented through external contracts; however, the responsibility for monitoring and auditing will remain with the site management.

Funding for emergency response as well as preparedness will be provided as a separate budget both at local as well as national level. Funding will be provided for training, awareness building, monitoring and planning as well as for equipment and site interventions. Minimum requirements will be fulfilled at site level with national level resources being made available when required. All forms of hazards, whether natural or human induced, will be considered in the preparedness and response procedures.

Financial resources will also be required for the overall development of the Kathmandu Valley World Heritage monument zones beyond the specific safeguarding and management of the cultural heritage, as defined in the sector plans.

### Securing Financial Resources

The administrative costs of managing the Monument Zones shall be borne by the respective Site Managers. A large part of the tasks determined for site management of the Monument Zones are to be implemented by the Local Government (Kathmandu Metropolitan City, Lalitpur Sub-Metropolitan City, Bhaktapur Municipality and Changu Narayan Municipality). Changu Narayan Municipality shall be supported by the Department of Archaeology office in Bhaktapur. Pashupati Area Development Trust has the authority and the funds to participate as a full-fledged partner to Kathmandu Metropolitan City in managing Pashupati Monument Zone. The Federation of Swayambhu Management and Conservation and the Bauddhanath Area Development Committee have income by way of collecting visitor fees which covers their administrative costs.

The World Heritage Section and the site offices of the Department of Archaeology in Kathmandu (Hanuman Dhoka Palace Maintenance Office), Lalitpur (Lalitpur Monument Conservation and Palace Maintenance Office) and Bhaktapur (Bhaktapur Monument Conservation and Palace Maintenance Office) shall be provided an annual budget that allows them to carry out their tasks of coordinating, implementing and monitoring the activities laid down in the Integrated Management Plan.

The funding for running the Coordinative Working Committee Secretariat will be borne by the Department of Archaeology. The CWC meetings would generally be carried out at the Department of Archaeology, unless other provisions are made. The necessary funds would be made available by the Government in the annual budget of the Department.

## Funding

Most conservation efforts are being funded through conventional channels; either directly by the government or by international “donors”. Potential partners shall be drawn on to carry out conservation, monitoring and safeguarding.

### Central Government funding

The central government shall fund the functioning of the Department of Archaeology as the overall responsible authority for World Heritage.

The central government shall fund the maintenance of classified buildings that require immediate attention. The central government shall also put aside funds for situations requiring emergency response.

The central government shall arrange for funding through government, international or private sources for the conservation of classified buildings as well as safeguarding other elements of the property that express outstanding universal value.

The central government shall contribute to the Conservation Assistance Fund which shall be used mainly for privately owned classified monuments and shall be administered by the local government under the supervision of the Department of Archaeology.

### Local Government (municipal) funding

The municipalities are the main authorities directly involved with site management. The administrative aspect of managing the monument zones shall be borne by the respective offices of the municipalities responsible for heritage.

The municipalities shall contribute to the Conservation Assistance Fund and shall administer the Fund. The Conservation Assistance Fund shall be used for the safeguarding and conservation of classified buildings and elements of the site.

The municipalities shall fund the general cleaning, maintenance and upkeep of the monument zones, except for those that have separate site managers such as in Swayambhu, Baudhanath and Pashupati. The municipalities shall therefore also be responsible for the

collection of entrance fees for the monument zones that they are responsible for.

### Dedicated Site Managers

Swayambhu, Baudhanath and Pashupati monument zones have dedicated site managers, established to deal specifically with the management of the particular monument zone. These site managers (Federation of Swayambhu Maintenance, Baudha Area Development Committee and Pashupati Area Development Trust respectively) are responsible for collecting entrance fees and are therefore responsible for the cleaning, maintenance and upkeep of the respective monument zones.

### Conservation Assistance Fund

In 2004, as per the instruction of the **National Development Action Committee**, an integrated **Coordinative Action Plan** for the conservation of the Kathmandu Valley World Heritage Site was set up in collaboration with all the stakeholders (Kathmandu, Lalitpur and Bhaktapur municipalities, Department of Archaeology, the National Planning Commission and the Ministry of Finance). Simultaneously, the **Conservation Assistance Fund** was established. The central government put aside funds which are to be matched by the Municipalities. The government shall ensure that the Conservation Assistance Fund is established and functioning.

This Fund has been established to provide partial funding for the restoration of private historic buildings. Provisions have also been made to allow for the funds to be utilised for the expropriation of historic buildings that are in threat of being destroyed. This is usually when owners are not willing to implement restoration even after being provided financial assistance.

### Funding Partners

Funding shall be sought through International Partners such as UNESCO, or directly from embassies, international development banks and INGOs dealing with conservation and sustainable development.

Funding shall also be sought from national institutions, banks, NGOs, heritage organizations, community members, philanthropists and agreeable industries.

**Income**

The monument zones shall have a clear business plan to ensure certain income, while supporting the local economy and guiding the safeguarding and conservation of the classified buildings and elements that express outstanding universal value of the site.

**Tourism**

Tourism is the most obvious source of income for any heritage site. In the case of Kathmandu, tourism has been the driving force behind heritage conservation, often dictating the local economy. The foreign, local and religious tourists contribute to the economy of monument zones.

The site managers of all seven Monument Zones are collecting entrance fees from tourists. The funds collected from the tourists shall be fully utilised within the Monument Zones. The use of these fees for projects beyond the general administration, maintenance and monitoring shall be reviewed by the Coordinative Working Committee.

**Local Economy**

The local economy in and around most Monument Zones is geared towards Tourism. The religious Monument Zones cater to varying degrees to the religious visitors. The Durbar Squares are, however, city centres and are therefore also vibrant areas for the local economy. The success of conserving historic buildings will depend on a flourishing local economy.

**Sustainable Economic Development**

Sustainable Economic Development is required in Kathmandu Valley considering the projected changes that will be taking place over the next decades. This means that the entire economy particularly of the local community will be affected. A high priority will be given to improving the livelihood of local community members by providing support and incentives towards their traditional activities local manufacturing and production. Financial support for communities to maintain their traditional buildings will be arranged.

**Taxation**

Taxation within the Monument Zone areas shall be seen as potential tools for providing incentives to owners to conserve historic buildings.

The various forms of taxation shall be used to guide conservation within the monument zones:

The central government taxation is based on direct and indirect taxation. Direct taxation would mean personal taxes and company or corporate taxes. Indirect taxation is based on VAT. In addition to these, there are various service charges and fees. Relevant is, for example, the fees pertaining to the purchase and sale of property.

Municipal taxation consists of house and land tax or integrated property tax, vehicle entrance tax, rent tax, business tax, entertainment tax, advertisement tax, etc. In addition to these taxes, there are service charges and fees. Especially relevant are the building permission fees.

### 2.4.3 MATERIAL RESOURCE MANAGEMENT

**Material and equipment resources for management of a cultural heritage site consist of required appropriate materials and specialized equipment to maintain and safeguard the significant attributes.**

Material for the conservation of monuments and their ornamentation will be provided for which would include both traditional as well as highly specialized materials. In a similar manner basic equipment will be required for the management of the cultural heritage site, however highly specialized equipment would be necessary to carry out extensive survey as well as minutely detailed investigations.

#### **Required Material and Equipment Resources**

**Material and equipment resources for routine actions** will be provided to ensure that monitoring and maintenance of the cultural heritage site is possible. This means the basic requirements of transportation, communications and documentation will be provided. Additionally, the material and equipment required for maintaining, cleaning and safeguarding the main attributes of the property will be provided. These requirements will be provided through the regular annual budget.

**Material and equipment resources for time bound interventions** will generally be linked to the particular projects. This means the material and equipment necessary for the particular time-bound intervention will be arranged for by those responsible for implementation. There is however certain material that are regularly required particularly for very specific tasks in conservation that might best be arranged by the government through specific developing specific suppliers or establishing stores. This is also the case for equipment particularly those required for regular recurring projects such as in monument conservation or archaeological investigations.

**Material and equipment resources for emergency response** will need to be stored and made available when required. These materials and equipment will be part of the disaster risk management planning (refer Disaster Risk Management Strategy Document). Certain basic equipment will be stored at site along with materials required for immediate response. A larger source of materials and equipment for emergency response needs to be accessible when required from provincial or national level.

#### **Securing sufficient Material and Equipment Resources**

Government will acquire equipment that is necessary to carry out monitoring, assessments and surveys. This will go along with establishing well equipped conservation labs. A detailed inventory of such equipment shall be made as required for work in the monument zones of the Kathmandu Valley World Heritage property. The inventory will determine the whether the equipment would be used regularly and would therefore need to be acquired. Depending on the expense, such equipment could be provided at either site level or national level. Furthermore, equipment that is expensive and not regularly used can be leased or integrated into projects to be carried out by international partners who will provide the necessary equipment or the use of such equipment in the respective locations.

Research into traditional materials and construction equipment and techniques is required. Along with these the equipment and techniques used for construction will be better understood to allow for proper conservation.

### 3. IMPLEMENTATION

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#### 3.1 INSTITUTIONALIZATION

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The implementation of the Integrated Management System is an ongoing process that requires regular review, amendment and detailing of action plans. The changing circumstances at site bring new challenges and issues which the management system needs to address. The management frameworks and processes that have been established will allow for appropriate actions to be carried out addressing the issues facing the cultural heritage site.

The management that is established focused on the cultural heritage property will work closely with the sectors relevant for the sustainable development of the site and surrounding area. This would primarily be the authorities and agencies linked to urban planning and the governance of the associated areas within the Kathmandu Valley. Additionally, the management system will work closely with the authorities and agencies relevant to sustainable tourism development as well as disaster risk management. An over view of these sectors and relevant strategies have been provided in this section which will link to relevant attached documents: Sustainable Development, Tourism Management and Disaster Risk Management.

The section also provides the required monitoring and reporting procedures and schedules along with the required reviews and assessments of the management system itself.

##### 3.1.1 ESTABLISHING FRAMEWORKS

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###### Institutional Framework

The institutional framework for the management of the Kathmandu Valley World Heritage property has been identified under section 2.2 of this document. The institutional framework shall be maintained and where necessary established as per the provisions in this document. The coordination between the DOA, the municipalities and the specific site managers shall be maintained through the Coordinative Working Committee (CWC).

The CWC and its members shall ensure close cooperation with the associated authorities that are working within the monument zones and buffer zones as provided in section 2.2.4 of this document. The Government of Nepal is committed to ensuring that all its offices shall participate in ensuring the maintenance and protection of the heritage site.

To improve the functioning of processes within the institutional framework, specific actions shall be developed and carried out are:

**Orientation Programmes:** all new members or representatives within the CWC or any of the positions that deals with the WH property shall be given orientation of the site and its management system. Especially planned orientation programmes shall be provided for decision makers within the relevant ministries, local government bodies, site managers and communities.

**Dissemination of Information:** a means shall be devised for news on the heritage sites to be disseminated to the associated authorities and community. This shall be done through various forms of media including radio, newspapers and a newsletter.



## Legal Framework

The **Ancient Monument Preservation Act 1956** shall be amended to take into consideration the full and mandatory protection of World Heritage sites, the establishment of Heritage Impact Assessments as a standardized procedure, the preparation of inventories, as well as provisions for protective zones around all ancient monuments and archaeological sites. Accordingly the regulations, bylaws and other legal instruments shall be amended.

All **guidelines, regulations and bylaws** shall provide special consideration for historical buildings, particularly classified monuments. This includes the National Building Code, retrofitting guidelines and any other legal instruments that are developed and enforced within the World Heritage boundaries and the buffer zones. A separate set of parameters will be used to assess the structural stability of historical buildings. Retrofitting guidelines specific to historical buildings will be prepared and adopted. Special provisions shall be established for privately owned historical buildings and particularly classified monuments to ensure that the buildings are not vertically divided, allowing for more flexible ownership modalities to ensure the building's protection.

An **inventory** shall be prepared as defined under section 2.3.3. The inventory shall be regularly updated and gazetted, at least once a year. This information shall be disseminated to all relevant authorities, organizations and individuals. Each classified elements shall be provided with a folder containing relevant information required for its safeguarding, care

and management. A standardized format shall be developed which is used by all authorities and parties involved in safeguarding the classified elements.

## Resources Framework

The human and financial resources as well as material and equipment for implementing actions as defined in the Integrated Plan of Actions document have been assured by the government. This will allow for monitoring, routine maintenance, reporting as well as the functioning of the site managers and the CWC. The regular budget and staff will also ensure the running the museum, maintaining the data base, carrying out Heritage Impact Assessments and maintaining the inventory.

Resources will also be provided for implementing time bound projects which focus on specific interventions that improve the condition of the cultural heritage site. Furthermore, the resources required for emergency response including preparedness will be provided for.

The overall management framework also includes the planning linked to related sectors. These are particularly focused on the protection of the site, monuments and cultural artefacts, as well as the intangible culture heritage, including sustainable development, disaster risk management and sustainable tourism. The conceptual plans and strategies have been adopted as part of the Integrated Management System; however further detailed planning is required. These detailed plans will then become part of the overall management system.

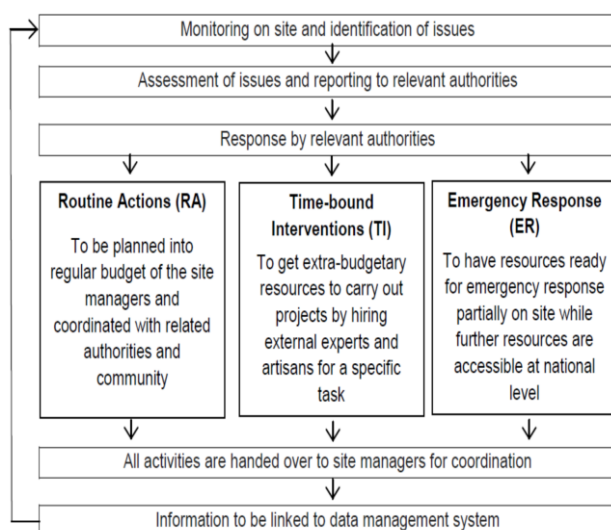
### 3.1.2 ESTABLISHING PROCESSES

Management processes take place based on the institutional, legal and resources frameworks that have been established for the management of the cultural heritage site. For these processes to function, a clear means of communication needs to be established which ensures that necessary information is disseminated as per the requirements of each component of the system, in order for them to carry out their respective responsibilities. This also requires each component of the system to have the capacity to carry out their respective responsibilities.

#### **The overall management procedure entails the following components:**

To ensure an efficient and effective management of the heritage property, it is necessary to clearly define all essential management processes. These would include but not restrict themselves to the following procedures for decision-making and implementation: for any kind of conservation work; for any kind of construction work; for any kind of archaeological work; for visitor management; for providing services, for monitoring and for maintenance. These

processes shall be strictly adhered to by the Site Manager and related authorities. Each step in the process would need to identify who carries out what action, what information is passed on, why it is necessary and how long it would take.



*Chart of overall management procedure*

Clear processes will be put in place also to control development in the buffer zone and protective area to ensure that the outstanding universal value of the World Heritage property is safeguarded. These would include but not restrict themselves to the following procedures for decision-making and implementation: for controlling pollution; for controlling construction of large infrastructure and tall buildings; for controlling traffic and for controlling flooding. Processes shall also be established to ensure sustainable development.

For each set of actions as defined in the Integrated Plan of Action, a detailed implementation process is required. For all activities, detailed step by step procedures are to be established and agreed upon. Standard procedures for various activities have been established, such as for building permit procedures as well as coordination amongst the authorities and stakeholders. For each of the category of actions (routine actions, time-bound interventions or emergency response) different formats would be required

### ***Routine actions***

For the implementation of routine actions each process would roughly be developed following the given format:

office or person dealing with issue	type of action or decision	required information to be received	maximum time for action or decision
...	...	...	...

This means that a detailed process flowchart will be prepared for all routine actions to be carried out within the cultural heritage site or buffer zone.

### ***Time-bound interventions***

For the implementation of time-bound interventions the following phases will be followed. The following three phases must be carried out including where relevant the various points mentioned under each phase.

#### **Phase 1: Preparation** including:

- (1) Documentation (2) Assessment (3) Research (4) Inventory of existing status (5) Temporary Interventions

#### **Phase 2: Design and Planning** including:

- (1) Structural Interventions (2) Conservation (3) Material – requirement and supply (4) Artisan – requirement and availability (5) Implementation Planning

#### **Phase 3: Implementation** including:

- (1) Rituals (2) Documentation of Implementation (3) Supervision and Monitoring (4) Handing-over procedures (5) Audit – quality and financial

### ***Emergency response***

For the **implementation of emergency response** detailed procedures will be developed. Basic response procedures are also provided within the Disaster Risk Management Plan which is part of the Integrated Management System. More elaborate procedures will be defined in the Disaster Risk Management Plan for Kathmandu Valley World Heritage property which is to be prepared. Training will be provided on these procedures.

### 3.1.3 PLAN OF ACTION

**The Plan of Action is a formulation of specific tasks that need to be accomplished to achieve the Key Objectives of the IMP. These tasks or actions are planned taking into account the implementing authority, the time scale and funding sources.**

#### Plan of Action

A **Plan of Action** shall be developed and annually updated based on the Integrated Management objectives given in Part 1.3. For each Monument Zone, a “**Monument Zone Plan of Action**” shall be developed and annually updated based on the management objectives identified for the specific Monument Zone. For each action, the lead agency, timescale, funding source along with possible interim measures shall be indicated.

Preparation and updating of the Plan of Action shall be carried out by the **Coordinative Working Committee**, which represents the DOA and the Site Managers.

#### Annual Action Plan

Based on the overall Plan of Action, detailed **Annual Action Plans** shall be prepared to implement tasks within the framework of this integrated management framework. This shall take place at integrated level as well as at Site Management level and annual review meetings shall be held to check progress. These Annual Action Plans need to coincide with the official fiscal year starting mid-July of each year.

#### Categories of Actions

All actions shall be categorized under the following three headings:

**Routine procedures:** these are all actions that are usually routines carried out over a longer period of time. This category includes actions such as monitoring and maintenance.

**Time-bound projects:** these are actions that address specific issues which are carried out within a given timeframe. This category includes specific planning, restoration and infrastructure development.

**Emergency response:** these are all actions that are linked to immediate response to emergencies. Such actions cannot be planned but are based on preparedness and mitigation.

#### Actions

The Actions shall be formulated based on the management objectives. The Actions shall be specific and realistic with a clear understanding of how they will be implemented.

The Actions shall be categorised under the headings used for the formulation of the objectives:

- A. Planning and Policy
- B. Legislation
- C. Operationalising Site Management
- D. Establishing Sectoral Plans
- E. Information and Research
- F. Sustainability

#### Lead Agency

For each Action a Lead Agency shall be determined that will be responsible for implementation. The indicated Lead Agency shall be involved in the formulation of the action to allow it to take on full responsibility for carrying out the action.

#### Time Scale

For each Action, a time scale shall be indicated. The Time Scale needs to indicate approximately when the Action needs to start and when it needs to end (with respective indicators). Certain Actions may be part of a continuous process and need to be indicated respectively. This links back to the categories of routine, time-bound and emergency response actions.

#### Resource

For each Action, the required resources will be indicated including the potential source of obtaining the resource. This would be annual budgets, extra-budgetary projects, international assistance, or local community based interventions.

## 3.2 SECTOR-WISE COORDINATION

The sector-wise coordination is an integral part of the Integrated Management. Sectoral strategies or plans need to be developed to function as a cross-cutting feature of all activities carried out within the World Heritage areas.

The major sectors are; Conservation, Sustainable Development, Disaster Risk Management and Tourism. These sectors are very closely linked to the overall provisions for managing the World Heritage property and must therefore be seen as part of a single integrated system.

### 3.2.1 Conservation Management Plan

The Conservation Management Plan contains assessments of all categories of physical heritage attributes, including the approach to monitoring, safeguarding and conserving them. This also includes the identification of cultural artefacts and potential sub-surface archaeology, preparation of risk maps as well as means of researching, safeguarding and conserving them.

An inventory of physical heritage attributes of Kathmandu Valley World Heritage property will be prepared. All the entries in the inventory need to be protected and therefore the necessary procedures and guidelines need to be established. These heritage attributes would be historic structures, cultural artefacts and elements of the historic city and its surroundings. The urban and natural landscape need to be protected along with the identified as well as potential sites for subsurface archaeology.

The Conservation Management Plan is a component of the overall Integrated Management System of Kathmandu Valley World Heritage property. The Conservation Management Plan will follow the principles, approaches as well as the management frameworks defined in the IMF document. The actions defined for the Conservation Management Plan will be integrated into the overall IPA, so there is coordination with activities linked to the overall management of Kathmandu Valley World Heritage property, as well as with all the sector plans and strategies. Furthermore, cultural heritage properties are protected by the provisions of the Ancient Monument Preservation Act 1956.

The Conservation Management Plan will address conservation issues linked to the built

attributes of the heritage property as well as historic urban infrastructure, cultural objects and sub-surface archaeology. Accordingly, guidelines and procedures will be put in place for the appropriate conservation of these physical attributes.

The conservation plan will include the following components and activities related to research, planning and implementation of conservation activities:

- Documentation and assessment of past interventions
- Documentation of the significance and characteristics of the attributes
- Documentation and understanding of the traditional construction system and architectural vocabulary
- Mapping type of decay and deterioration, and analysis of causes
- Conducting investigations including non-destructive, moderately destructive and destructive material, and structural tests
- Intervention for long term sustainable with planned actions
- Developing sustainable sources for required materials for conservation
- Supporting and developing traditional artisans with their required skills to ensure continuity of their trade, along with documenting the traditional knowledge.

## ADDENDUM TO 3.2.1 PROVISIONS FOR CONSERVATION

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**The following provisions will be considered in preparing the sector plan for conservation.**

### **Different categories of heritage**

Heritage conservation will take into account the site and landscape, the built heritage, cultural objects and intangible heritage. For each of these categories of heritage, different approaches will be necessary, however, the basic principle of ensuring appropriate continuity of the heritage will be followed.

### **General Conservation Approach**

The general approach to conservation is to ensure that all significant attributes are safeguarded through regular monitoring, maintenance and control of activities that might impact the attributes. While ensuring that the attributes are safeguarded, activities linked to the local intangible heritage shall be promoted. A balance will be achieved to ensure sustainable development taking into account the livelihood of the local community, their cultural identity as well as their spiritual sentiments.

### **Approach to Development Controls and Physical Planning**

The general approach to conserving the physical attributes, the built heritage such as monuments, is to safeguard original fabric, while allowing appropriate restoration of living monuments. The parts of monuments that have been recently rebuilt, especially those using inappropriate mortar, will be rehabilitated over time. Interventions to improve structural stability, whether using traditional or modern materials, will be removable and documented to allow for monitoring and replacement. Conservation will include the various types of ornamentation used on the buildings. The general approach to conserving subsurface archaeology is to identify and to safeguard and only where protection is ensured will excavation and presentation be carried out.

Non-intrusive surveys will be carried out and risk maps prepared to ensure that construction work does not damage subsurface archaeology.

### **Approach to conservation of site and landscape**

The landscape and urban setting of the monument zones are comprised of natural features and human interventions over numerous centuries. This created a landscape that contributes to the heritage site's significance and must therefore be maintained. The basic approach to maintenance and safeguarding of the physiographical attributes is to retain the original landscape including the topographical features, flora and fauna. Substantially changing the topography is not permitted, particularly quarrying and levelling sites for construction.

### **Traditional knowledge and skills**

The artisans are critical for the continuity of both tangible and intangible heritage. Priority will be given to ensure that built heritage and cultural artefacts can continue to be created through the relevant artisans. The need for cyclical renewal of heritage requires artisans to be able to restore and maintain the heritage to ensure continuity.

### **Museum in the monument zones**

The museums within the monument zones will be a repository of the displaced cultural artefacts, or those requiring special protection. The museums will also be responsible for documentation and research on the cultural heritage of the particular site. The museums will be a place for local communities to relate to their heritage, and express their interpretations and stories.



### 3.2.2 SUSTAINABLE DEVELOPMENT STRATEGY

**The ‘Sustainable Development’ of the areas within the World Heritage property and buffer zone shall be pursued. This requires the coordination between the heritage site managers and a wide spectrum of authorities, organizations and institutions dealing with development agendas. This can only be possible if the principles for sustainable development are clearly defined, acknowledged and adopted by all relevant actors.**

The key principles for sustainable development shall be defined, acknowledged and adopted by all relevant actors. To ensure compliance by all authorities and line agencies, the Government of Nepal, represented by the Cabinet of Ministers, shall endorse the principles. Furthermore, local organizations and associations shall also be included in defining and enforcing the key principles of sustainable development.

As defined by the Brundtland Commission, Sustainable Development is “development that meets the needs of the present without compromising the ability of future generations to meet their own need”. Sustainable development within the Kathmandu Valley World Heritage Site shall mean that conservation of cultural and natural heritage must go hand-in-hand with social and economic development, taking into account the needs of future generations. The four components of sustainable development shall be taken into consideration when planning and implementing any activities within the World Heritage property. These include economic sustainability, social sustainability, environmental sustainability, as well as cultural sustainability. The radical change that is taking place within the Kathmandu Valley shall be guided by the principles of Sustainable Development.

The establishment and adoption of the key principles for sustainable development shall be the basis for all authorities, organizations and institutions to work together with a shared vision and direction. This shall be relevant for all activities carried out within the World Heritage boundaries as well as the buffer zones. The principles for sustainable development within the World Heritage property and buffer zone shall assign special consideration to the long-term benefits of heritage conservation. This shall especially

focus on the conservation of privately owned historical buildings. Special consideration shall also be given to community activities, celebrations and festivals that define the identity of the heritage site.

The principles for sustainable development shall be linked to the various provisions within the legal framework. The link is especially critical in respect to the Development Guidelines that determines the improvement of infrastructure and services.

The principles of sustainable development shall be linked to the provisions within the resources framework. This is especially critical in respect to defining the funding and income sources that guide the development of the local economy.

Procedures shall be established that ensure the coordination of all relevant authorities during critical decision making processes, whereby the principles for sustainable development are accounted for. This will be aligned with the relevant Sustainable Development Goals (SDGs), particularly Target 11.4 to safeguard the world’s cultural and natural heritage, Target 4.7 appreciation of cultural diversity and of culture’s contribution to sustainable development, and Targets 8.9 and 12.b related to sustainable tourism to support local culture and products.

The priority for action shall be to establish key principles for sustainable development in a format that can be used to assist decision-making processes and assess projects and actions. The implementation shall be integrated into the management processes and monitoring shall be done by the Monitoring Committee established for the implementation of the Integrated Management.

## ADDENDUM TO 3.2.2 PROVISIONS FOR SUSTAINABLE DEVELOPMENT

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**The following provisions will be considered in preparing the sector plan for sustainable development.**

The sector plans dealing with sustainable development will include environmental, social and economic issues. These strategies might be in a single sector plan, but might also be separated into different sector plans. For example Regional and Urban Planning deals with settlement, land-use, infrastructure development and environment. Community Engagement and Livelihood will deal with the sustainability of the communities living in and around the monument zones and how they participate in the cultural activities. The strategy for environmental sustainability will deal with both the need to protect the landscape, as well address issues of pollution and waste management.

### **Regional and Urban Planning**

The regional and urban planning will deal with, not only the property and the buffer zone, but also the larger area which might affect the property. For each monument zones a detailed 'Master Plan' will be prepared that ensures that the maintenance, restoration and development projects are coordinated, controlled and are in line with the overall approach and legal provisions. Changes to land-use, expansion of settlements and the introduction of infrastructure and service need to be planned carefully to ensure sustainable and appropriate development of monument zones. This would ensure that drainage projects as carried out within the Patan Durbar Square are not carried out again.

The regional and urban planning will also resolve many issues that have been identified which will require additional space, improved access and services. The regional and urban planning will also address the protection of related heritage that might not be within the property or even in the buffer zone. The regional and urban planning will also map existing infrastructure, as well as a short, mid- and long-term infrastructure development proposals, which would impact the Kathmandu Valley World Heritage.

### **Community Engagement and Livelihood**

There is a sizable community living within the m zones of Kathmandu Valley. They will need to become partners in the effort to safeguard heritage: the historic structures, the temples and pagodas, as well as the landscape and environment. Particularly important will be to work on issues related to encroachment of important areas as well as management of both solid and liquid waste. Many of the issues that Kathmandu Valley is facing is linked to uncontrolled development and community activities carried out consciously or due to lack of awareness. There will be certain restrictions put on the community and these must contribute to safeguarding heritage. However, the community living within the heritage site must also be able to profit from this location which means they must be given certain privileges, support and subsidies. The local communities must over time become champions of safeguarding the heritage of the Kathmandu Valley.

### **Environment and Landscape**

The Landscape Management Plan will include the overall documentation of physiographical attributes of the monument zones, particularly the landscape. The plan deals with assessment of the environment, the landscape, forested areas, hydrology and other important ecological areas. These will be protected from encroachment, pollution as well as any other threats they might be facing.

The protection of the landscape will ensure that the landscape that defines the monument zones are not altered. Natural features such as rivers and their drainage will be protected. The flora and fauna of these areas are protected. Any sources of pollution, whether of water, land or air, will be dealt with. Rivers will be protected upstream, including watersheds to ensure that quality and quantity of water is ensured. Waste management will be carefully planned.

### 3.2.3 DISASTER RISK MANAGEMENT PLAN

**A Disaster Risk Management Plan for Kathmandu Valley World Heritage property shall be established. The system shall respond to natural as well as human-induced hazards, focusing on reducing vulnerability, while preparing for response and reconstruction, based on the lessons learned from the Gorkha Earthquake.**

A Disaster Risk Management Plan for the Kathmandu Valley World Heritage property shall be defined and established taking into account all relevant authorities. To ensure compliance by all authorities and line agencies, the Government of Nepal, represented by the Cabinet of Ministers, shall adopt the Disaster Risk Management Plan.

We understand that disasters are created through the combination of hazards and the vulnerability of a given site or structure. This interplay between hazards and vulnerability has been going on throughout history and communities had to learn to survive, otherwise they perished. We have come to understand that possibly even characteristics of the hazards might be changing, for example due to climate change. The vulnerability of our environment in many cases has increased drastically due to growing populations and the uncontrolled spread of human habitat and construction with little consideration for risk reduction. There is much that can be learnt from heritage to reduce disaster risk; however these lessons need to be introduced into the mainstream planning and decision making.

As per paragraph 118 of the Operational Guidelines for the implementation of the World Heritage Convention, 'The Committee recommends that States Parties include risk preparedness as an element in their World Heritage site management plans and training strategies'.

The cultural heritage of the Kathmandu Valley has developed with a close association to earthquakes by adapting and regenerating in a process of cyclical renewal. From history, we understand that such destructive earthquakes occur at intervals of between 80 and 100. The lessons learned from the recent Gorkha Earthquake shall be the basis for developing the Disaster Risk Management Plan.

The Disaster Risk Management Plan shall be the basis for all authorities, organizations and institutions to work together in risk reduction and disaster preparedness with a shared vision and direction. This shall be relevant for the World Heritage property as well as the buffer zones. The coordination between the authorities responsible for the management of the World Heritage property and those responsible for disaster risk management shall be ensured.

The principles for risk reduction and disaster preparedness within the World Heritage property and buffer zone shall assign special consideration to the long-term benefits of heritage conservation. This means that heritage shall become an important component of the long-term planning which would include post disaster rehabilitation and reconstruction.

The principles for risk reduction and disaster preparedness shall be linked to the various provisions within the legal framework. The Disaster Risk Management Plan shall take into account the heritage values when establishing legislation for risk reduction and disaster preparedness. Appropriate legislation shall be put in place to deal specifically with the structural stability of historical buildings.

The principles of risk reduction and disaster preparedness shall be linked to the provisions within the resources framework. The necessary resources shall be earmarked to allow for emergency responses to take place immediately.

Procedures shall be established that ensure that all relevant authorities, organizations and institutions become part of the Disaster Risk Management Plan. Detailed procedures shall be put in place, which address risk reduction and disaster preparedness. Implementation shall be integrated into the management processes and monitored by the CWC.

## ADDENDUM TO 3.2.3 PROVISIONS FOR DISASTER RISK MANAGEMENT

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**The following provisions will be considered in preparing the sector plan for disaster risk management.**

The disaster risk management strategy will be based on the principle of ‘Learning from the past and preparing for the future’. This means that there are two main components that needs to be addressed, researched, agreed upon and institutionalized:

### 1. Learning from the Past

#### 1.1 Traditional Knowledge

Cultural heritage is developed on knowledge gathered over centuries, which has allowed it to adapt and persist. The cultural heritage has survived the effects of many hazards. It is essential to understand these adaptations and integrate them into conservation approaches. Any interventions to the structure, material, procedures, systems, and other aspects of cultural heritage will only be carried out based on the understanding of the relevant traditional knowledge.

#### 1.2 Experience from the last earthquake

There are any lessons to be learned from every disaster. The lessons can be learned from understanding the total destruction, the damage, or the resilience of cultural heritage. The 2015 Gorkha Earthquake causes great damage mainly to the built heritage and related cultural artefacts. Which monuments withstood the hazard and why? Which monuments collapsed or were damaged and why? Inappropriate interventions in past restorations and then the lack of maintenance the two main reasons for damage and collapse. These are questions that need to be answered to be able to address similar issues in future.

The lack of procedures adapted to restoration works, the inappropriate use of materials, lack of supply of timber, sub-quality materials, use of inexperienced contractors instead of traditional artisans are things that need to be addressed in preparing for the future disaster response and recovery.

### 2. Preparing for the Future

The preparation for future hazards will be tackled from various angles.

#### 2.1 Reducing vulnerability

The reduction of vulnerability of cultural heritage will be assessed at all levels: site, built heritage, cultural objects and intangible heritage. Vulnerabilities often arise with the introduction of new elements into the context, whether taller buildings or motorized vehicles. These need to be addressed. The vulnerabilities within the cultural heritage itself will need to be carefully dealt with, taking into account the impact of any change to the cultural significance.

#### 2.2 Preparing for response

Preparing for the impact of hazards, which are often beyond the control of human protection, will reduce unnecessary loss of heritage after the initial disaster. This includes the proper means of salvaging of objects, protection of damaged heritage, and careful restoration using traditional techniques and skills. The response phase must protect and stabilize the area of destruction, possibly introducing temporary interventions that will be replaced in the long-term rehabilitation phase.

#### 2.3 Planning sustainable recovery

The post-disaster recovery will consider long-term rehabilitation, sustainability and resilience. This is dependent on the restoration procedures and interventions on the cultural heritage. Long-term protection is also dependent on legal provisions and its enforcement by the relevant authorities. Resilience is dependent on the stakeholders and communities being involved in ensuring continuity of the cultural heritage. These might be the caretakers, the users, the artisans or traditional *guthi* members.

### 3.2.4 TOURISM MANAGEMENT STRATEGY

**Tourism plays a major role in heritage conservation, both as a source of income as well as to gain acknowledgement for the heritage. However, without appropriate management, Tourism can have a negative impact on the property.**

**A Tourism Management Strategy shall be developed that addresses the impact of tourism on the heritage, while ensuring maximum profitability for the heritage site. Regular interaction must be established between the authorities implementing the Tourism Management Strategy and those responsible for the IMP.**

The Tourism Management Strategy is part of the overall management system for the Kathmandu Valley World Heritage property. The tourism sectoral plan will function within the management framework of the IMF, and link with the IPA, while ensuring coordination with the other sectoral plans.

The Tourism Management Strategy shall be developed and implemented through close collaboration of the World Heritage Site managers and the authorities, organizations and institutions related to tourism promotion as well as those related to heritage conservation. A clearly defined committee shall be established with representatives from all relevant authorities, organizations and institutions.

The Tourism sector should become a key partner in the conservation of the heritage sites. This will allow a close synergy to develop between the two sectors. The following key objectives of the Tourism Management Strategy shall be integrated into the overall management framework of the World Heritage property.

- to ascertain the involvement of the Tourism sector in the conservation of the cultural heritage, in respect to financing, marketing and improving tourist facilities;
- to develop standards for tourist facilities which takes into account the preservation of the value of the heritage site;
- to ensure a tourist experience that is based on accurate and correct information while building awareness for the importance for conserving cultural heritage;

- to monitor the negative impact of tourism in the heritage areas and develop measures to keep it within acceptable limits

Reinvestment by the Tourism sector to conserve the heritage resource shall become a priority. A clear strategy shall be developed to utilise the available resources from Tourism. The basic principles that the Tourism Management Strategy shall follow are:

- Tourism shall assist in preserving the outstanding universal value of the World Heritage while respecting the authenticity and integrity of the Monument Zones.
- The tourism sector will ensure that their activities do not contribute to development that has an adverse effect on the heritage property;
- The tourism sector will participate in the sustainable human development within the heritage area.

The priority for action shall be to establish close working relationship between authorities, organizations and institutions dealing with culture and those dealing with tourism. The Tourism Master Plan shall be developed along with detailed five year Action Plans. The implementation shall be closely monitored. Clear indicators for each activity shall be formulated to allow for evaluation of progress. The Action Plan for the Tourism sector shall be integrated into the overall Action Plan and the monitoring should be done by the Monitoring Committee established for the implementation of the Integrated Management.



## ADDENDUM TO 3.2.4 PROVISIONS FOR TOURISM

**The following provisions will be considered in preparing the sector plan for tourism.**

*Concerning overall approach for tourism and sustainability:*

1. The Kathmandu Valley is a heritage site, a place where communities live and work, a sacred site, and only then a tourist destination;
2. Tourism will support the safeguarding of the heritage site;
3. Only activities that do not negatively impacted heritage shall be carried out;
4. Activities that enhance the protection of heritage shall be promoted;
5. Wherever possible the local community shall be prioritized to profit from tourism activities;
6. Long-term planning shall be carried out to ensure focus is not only on immediate gains;
7. The heritage site as a tourism product must ensure that there is a clear balance between the requirements and visions of the tourism sector and the need to safeguard the cultural heritage, the environment and the integrity of the local community;

*Concerning tourism accommodations, services and infrastructure*

8. Tourist accommodations within the monument zones, where allowed by the bylaws, will ensure that all the forms of tangible and intangible heritage is not negatively impacted.
9. The development of facilities and infrastructure for tourists within the heritage site will consider visitor satisfaction in respect to basic needs, experience as well as information. These shall however be restricted to facilities that are non-intrusive, reversible and
10. Within the heritage site any facilities that need to be built shall adhere to the legal framework particularly to the building bylaws regarding temporary structures. Special care shall be taken with service lines for supply of electricity and water and disposal of sewage, waste water and solid waste.
11. Any development projects that are not temporary or easily removable shall first have a Heritage Impact Assessment (HIA) carried out along with detailed sub-surface archaeological surveys linked to Archaeological Risk Maps (ARM). The project will be developed taking into account the outcome of the assessment and survey.

*Concerning tourism transportation and accessibility*

12. Transportation within the heritage site will be a critical issue in ensuring heritage is protected. The distribution of visitors throughout the site in sustainable numbers needs to be targeted.

13. Priority will be given to divert vehicular traffic from the monument zones, and only restricted routes and access will be allowed.

*Concerning tourist activities*

14. Tourist activities will ensure that they do not impact the heritage which includes the monuments, the subsurface archaeology as well as the cultural sentiments of the community. This will need to be based on detailed studied and discussions with community members.

15. All activities will be planned taking into account of the carrying capacity of each of the monuments and sites. In certain cases, it might require controlling the number of tourist at any one time and overall daily restrictions, possibly by charging extra fees to cover direct management expenses.

*Concerning involvement of local community*

16. Tourism will be promoted while ensuring that it supports the livelihood of the local community. Great care shall however be taken to ensure that the lives of the local community members are not unduly disrupted.

17. Tourism activities will consider the sentiments and values of the local community.

18. Tourism will support local activities such as production of handicrafts and local agricultural products.

*Concerning tourist during post-disaster rehabilitation*

19. Tourism will be promoted during post-disaster rehabilitation to ensure continued support to the livelihood of the community. Tourists will be encouraged to contribute to rehabilitation efforts.

20. Provisions will be made to allow visitors to observe the rehabilitation activities. This will include possible means of observing ongoing restoration work but also by being provided information on the rehabilitation process.

21. Visitor management during the rehabilitation phase must be specially managed to allow for the experience however ensuring safety for heritage and visitors. Signage concerning possible threats must be clearly provided.

## 3.3 MONITORING FRAMEWORK

### 3.3.1 ASSESSMENT, MONITORING AND REPORTING

The periodic assessment of management efforts needs to be carried out based on a monitoring framework with clear indicators and targets.

#### Periodic Assessment

The **Coordinative Working Committee** shall coordinate activities related to the implementation of the IMP. The CWC shall be chaired by the Department of Archaeology and be comprised of representatives of the local government with technical support from individual experts. The **Coordinative Working Committee Secretariat** shall be located at the Department of Archaeology.

Periodic Assessment shall be carried out by the CWC on the progress of implementing the IMP and the state of conservation of the monument zones.

The CWC shall have a regular meeting schedule; at least once every two months. The CWC shall ensure that the activities are being carried out as per the detailed Annual Action Plan. The CWC shall also develop strategies for obtaining necessary funds.

#### Site Monitoring and Reporting

The **Site Managers** shall be responsible for the regular monitoring of activities in the monument zones. A detailed **monitoring format** shall be developed to allow for effective collection of information.

A regular **reporting schedule** shall be prepared based on the CWC meetings. The information from the monitoring carried out by the respective Site Managers shall be presented to the CWC as notification or for necessary decisions.

For emergency cases, provisions shall be made for **emergency reporting** to the Coordinative Working Committee Secretariat.

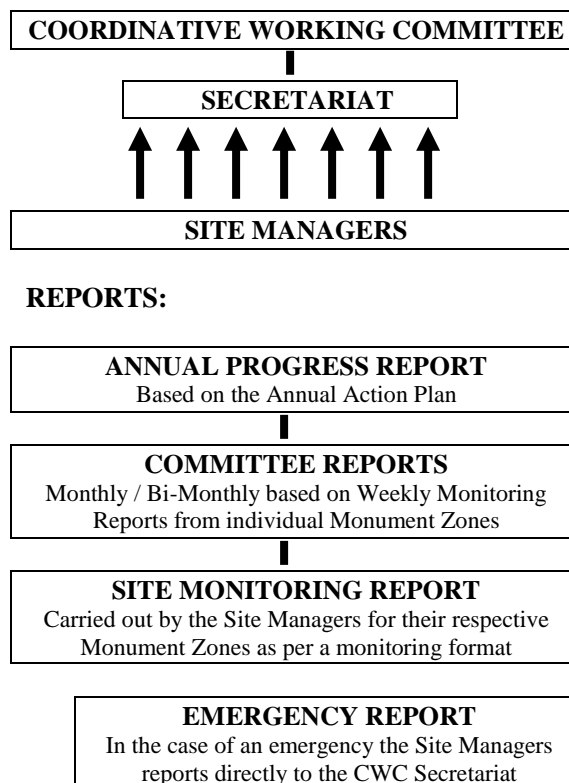
**Annual Progress Reports** shall be prepared in conjunction with the implementation of the Annual Action Plans.

#### Targets and Indicators

An overall schedule shall be prepared for the implementation of all the activities outlined in the Plan of Action. This shall be proposed within a five year period. The linkages and chronological order of the activities would need to be closely studied. An overall review of the issues and strategies shall take place after a five year period.

Considering the overall schedule of activities, the targets and indicators for each activity shall be defined in detail. The indicators in most cases shall be a document or legislation that has been acknowledged or passed by the concerned authorities, implementation of certain provisions, completion of certain specific actions or establishment of an institution, body or programme.

#### REPORTING PROCESS:



### 3.3.2 PRIORITIZED ATTRIBUTES FOR MONITORING

**The Department of Archaeology is responsible for the overall cultural heritage site, particularly the area within the boundaries. The buffer zone, though still a part of the cultural heritage site, will be monitored by the local government. Within this division the monitoring of attributes will be defined in principle, with the main cultural heritage attributes being the responsibility of the Department of Archaeology while related attributes and the context will be dealt with by the two relevant local government authorities and site managers.**

The main monitoring on cultural heritage will be carried out by the site managers and DOA. A system for secondary monitors such as local community members, visitors and vendors will be established.

#### Built Heritage

The built heritage includes the following identified physical attributes of the monument zones. The monitoring of the monuments requires some degree of expertise particularly in respect to structural assessments, however other aspects such as deterioration, plant growth and misuse can be monitored by anyone. The monitoring of built heritage has to be carried out systematically by the site managers, assisted by technical teams when required. Secondary monitors will be promoted.

#### Cultural Objects

Cultural objects, include those that are displaced and in museums or cultural artefacts that are in situ such as statues, inscriptions, ancient stone elements, and various forms of building ornamentation. These attributes require constant monitoring and are the responsibility of the site managers with support from the DOA. The objects that are in situ will be monitored by the site managers. There are however objects that are still being venerated by religious communities which would be monitored by the respective religious communities. They would report to the DOA if these have been affected or major threats are identified. The monitoring of the artefacts within the museum is the responsibility of the DOA together with the management of the museums. Secondary monitors will be promoted.

#### Intangible Heritage

Festivals, celebrations, processions, religious practices as well as the overall customs, belief system and way of life of the local communities are important attributes to the cultural heritage site. This will also include traditional crafts and skills. These attributes must be supported by the authorities; however, it is up to the communities to ensure their continued safeguarding practice. The monitoring of such intangible attributes is a difficult task, since many of these will constantly be adapted and changed. The monitoring of intangible heritage will need to focus on trends of change often caused by external influences that endanger the basic identity of the local communities. Such changes need to be monitored by the communities themselves, supported by the site managers.

#### The Context and Landscape

The urban and natural landscape that creates the cultural context of the monument zones will be monitored by the site managers with support from the local authorities and secondary monitors. The DOA will only be involved when activities directly threaten monuments, archaeology or cultural objects or have a major impact on the visual integrity of the cultural heritage site.

#### Sub-surface Archaeology

The monitoring of sub-surface archaeology is closely linked to establishing a risk map and ensuring that all activities within the areas of potential sub-surface archaeology is regulated. This is closely linked to the monitoring of the landscape which is mainly carried out by the site managers, assisted by secondary monitors.

### 3.3.3 MONITORING AND REPORTING SCHEDULE

**The Coordinative Working Committee is to meet on a monthly basis to monitor the implementation of the Annual Action Plan and the weekly site monitoring reports of the Site Managers.**

**On a yearly basis, work will be implemented as per the Annual Action Plan. The year is based on the Nepali Fiscal Year, which begins mid-July. During the last three months of each fiscal year, the Plan of Action is to be reviewed and the next Annual Action Plan prepared.**

**After every five years, as far as possible, a thorough review of the Integrated Management Plan is to be undertaken, allowing necessary amendments to be made.**

#### **Site Monitoring and Reporting**

**Weekly Site Monitoring** shall be carried out by the Site Manager by filling out a monitoring form. This form shall be filled out regularly, stating whether activities have taken place or not, whereby a detailed history of the site is documented.

**Monthly reporting** shall be done to the Coordinative Working Committee. Information shall be presented as notification or for necessary decisions.

**Emergency reporting** shall be done directly to the Coordinative Working Committee Secretariat at the Department of Archaeology.

**Annual Progress Reports** shall be prepared in conjunction with the implementation of the Annual Action Plans. The progress report shall explain whether targets have been achieved based on the predetermined indicators. The indicators in most cases shall be a document or legislation that has been acknowledged or passed by the concerned authorities, implementation of certain provisions, completion of certain specific actions or establishment of an institution, body or programme.

#### **Periodic Assessment**

Periodic Assessment shall be carried out by the Coordinative Working Committee on the progress of implementing the Integrated Management Plan and the state of conservation of the Monument Zones.

**Monthly Assessment** of ongoing activities shall be done at the regular Coordinative Working Committee meetings. This will be based on the reports of Site Managers of the individual Monument Zones. The monthly assessment shall also include a progress report on implementation of the Annual Action Plan.

**Annual Assessment** of implementation of the Action Plan shall be done in conjunction to preparation of the next annual Action Plan. The overall Plan of Action shall also be reviewed and revised as found necessary.

**Five-Year Assessment** of the components of the Integrated Management Plan shall be carried out. The Integrated Management Framework and Management Handbooks for the Monument Zones, including institutional, legal and economic frameworks shall be reviewed and if necessary amended.

**The entire Integrated Management Plan shall be reviewed and amended beginning every five years after adoption of any previous amendments. The Integrated Management Plan will need to incorporate the achievements and experiences of the previous five years and address the issues that are predominant at that given time. The Integrated Management Plan must remain flexible and adapt itself to ascertain the long-term objective of conserving the outstanding universal value of the Kathmandu Valley World Heritage property.**

Initial Environmental Examination, Annex XVIII

# Heritage Impact Assessment

January 2020

NEP: Kathmandu Valley Wastewater Management  
Project L-3000

Core area sewer network of Lalitpur Metropolitan City

Prepared by the Project Implementation Directorate, Kathmandu Upatyaka Khanepani Limited, Ministry of Water Supply, Government of Nepal for the Asian Development Bank



## ABBREVIATIONS

ADB	Asian Development Bank
AET	Archaeology Expert Team
BOQ	Bills of Quantities
CASSC	Community Awareness and Social Safeguard Consultant
DPR	Detailed Project Report
DSC	Design and Supervision Consultant
ERI	Electrical Resistivity Imaging
GPR	Ground Penetrating Radar
GoN	Government of Nepal
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
HMP	Heritage Management Plan
IEE	Initial Environmental Examination
KUKL	Kathmandu Upatyaka Khanepani Limited
KVPT	Kathmandu Valley Preservation Trust
KVWMP	Kathmandu Valley Wastewater Management Project
LMC	Lalitpur Metropolitan City
MASW	Multichannel Analysis of Surface Waves
PCR	Physical Cultural Resources
PDMMO	Patan Durbar Monument Maintenance Office
SEMP	Specific Environmental Management Plan
SPS	Safeguards Policy Statement
SN-03	Sewer Rehabilitation in the Core City Area of Lalitpur Metropolitan City
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHS	World Heritage Site

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## **EXECUTIVE SUMMARY**

### **Purpose of the Project**

The proposed sub-project Sewer Rehabilitation in the Core City Area of Lalitpur Metropolitan City (SN-03) is intended for the improvement and upgrading of the sewer network within the core area of Lalitpur Metropolitan City (LMC). SN-03 is a package under the larger Kathmandu Valley Wastewater Management Project (L-3000), financed by the Asian Development Bank (ADB).

The project proposes to replace existing sewer pipes and adding new larger diameter sewer pipes in the network, for a total of 2.8km of pipelines from the upper reach of Patan Durbar Square until reaching an existing sewer interceptor on the left bank of the Bagmati River. The project is a priority for the LMC to avoid flooding and inundation of Mahapal, Mangalbazar and Patan Durbar Square junction areas (all part of the LMC core area) especially during the rainy season.

This part of the LMC core area, which includes the Patan Durbar Square World Heritage Site has been flooding in every monsoon season due to poor storm water drainage. The existing sewer network dysfunction due to substantial ingress of storm water mixes with sewage during heavy storms, overwhelming the sewer networks and inundating the area. This causes negative impacts on residents, vehicular traffic, pedestrians, and tourists, and water-logging is causing foundation damage to Heritage buildings.

### **Heritage Impact Assessment**

ADB requires the consideration of physical culture resource issues in all aspects of its operations as per its Safeguard Policy Statement (SPS 2009). This initial environmental examination (IEE) has been prepared for the proposed infrastructure components of the project (rehabilitation and expansion of sewerage network). This IEE report was prepared to address the issue that might occur during the improvement and upgrading of existing sewerage network within the core area at LMC.

Given the project is working in a sensitive cultural heritage site, a Heritage Impact Assessment was required to supplement the IEE. The HIA:

- Analyzes the heritage assets within the project area
- Determines potential impacts on cultural heritage
- Informs an analysis of alternatives to reduce impacts
- Ensures that excavations in heritage areas are designed to provide better understanding of the areas in the case of archaeological chance finds
- Develops mitigation measures for the design, construction, and operation and maintenance phases for inclusion into the project Environmental Management Plan and bidding documents.
- Provides detailed mitigation measures to be included in the Contractor's Specific Environmental Management Plan (S-EMP)

## HIA Findings

Through detailed site investigations and literature review, the main findings from the HIA are:

- **The project is important to address the impacts of flooding on heritage assets.** During the monsoon, access to heritage sites is disrupted, floodwater is contaminated with sewage, and monuments themselves may be at risk due to waterlogging.
- **The SN-03 pipeline would not be the first time that the Patan Durbar Square core zone and buffer have been excavated.** Infrastructure services and underground utilities have been installed, with several excavations and site reinstatements over the years. While there have not been impacts on monuments and structures from past works, it is likely that subsurface archaeology has been damaged due to lack of proper excavation techniques and construction management.
- **Within Patan Durbar Square, impact on subsurface archaeology is the main risk.** Excavation for the pipeline is in an area with known archaeological assets. While the pipeline would pass through the monument zone, there is a wide working space and excavation would be unlikely to disturb historic structures and monuments.
- **Risks of damaging subsurface archaeology are minimal.** An extensive subsurface survey in key segments of the WHS core and buffer zone, including Patan Durbar Square, have found several segments where conditions could indicate archaeology, but in the WHS these are below the project's maximum excavation depth and the risk of disturbance is minimal. Mitigation measures are in place for these and other areas identified by the survey where potential archaeology is indicated.
- **Within the buffer zone, impact on the stability of heritage buildings is the main risk.** Streets where the pipeline would pass are narrower and some heritage structures located within the buffer zone have suffered earthquake damage and are in a fragile condition. A condition survey was undertaken, vibration limits set in risky areas, and budget set aside in case of accidental damages.
- **Intangible heritage, including rituals, sociocultural practices, and festival times, are key to consider.** Dates of key festivals have been noted and project management as well as contractors will be required to ensure safety, access, and lack of disruption during important times, as well as a smooth construction workflow.
- **The project is an opportunity to gain greater understanding of earlier architectural phases and settlements in Patan Durbar Square.** While many studies have been done on the architectural history, relatively little is known about the past settlements that lie underneath the project area. If done properly, the excavation can document the archaeology that other infrastructure alignments may have damaged or ignored.
- **The construction phase will need to adopt a staggered, tailored construction methodologies for working in heritage areas.** These methodologies will need to be reflected in the contract document's specifications and strictly monitored during implementation. Training for the contractor will be necessary as capacity is lacking among national firms.

## Mitigation Measures



The main recommendations and mitigation measures from the HIA which are elaborated in detailed in Section 6 and built into the contract documents include:

- A subsurface investigation to the lowest depth of pipes in high-risk areas was undertaken by specialized geophysical experts. The survey indicates zones where conditions suggest archaeology could be present, which guides specific locations where physical investigations must be undertaken prior to construction (e.g. test pits, trial trenches). For areas with potential archaeology that would not be disturbed by the project's excavation (i.e. zones are deeper than the project's maximum excavation depth), the Department of Archaeology (DoA) has been notified in case they wish to carry out their own investigation for research purposes.
- Suitably qualified and experienced archaeological supervision expertise must always be present on site for construction supervision, and a representative from DoA will be present at all times during construction in the WHS core zone. Conducting any work without the required supervision expertise present will result in penalties to the Contractor;
- A heritage/archaeological awareness training will be conducted with the Contractor and sub-contractors prior to starting works to address sensitivities involved, and the chance finds procedure; to be attended by all personnel involved in the project from management to laborers including from subcontractors;
- Construction specifications are included in the bidding documents, including only hand digging in sensitive areas, low-vibration methods of compaction and adherence to vibration limits, maintaining access to cultural and heritage sites for religious and socio-cultural purposes, and reinstatement of pavements with appropriate materials and techniques as directed by the DoA;
- Adoption of a clear chance finds procedure prior to the commencement of any works that includes protocols for both smaller movable relics/objects and immovable remains (such as building foundations/wells/etc.);
- While direct impacts to heritage structures in Patan Durbar Square is unlikely, there could be a risk to disrupting water supply to the Manga Hiti water spout during the monsoon season if pipes are further damaged. This can be avoided through careful excavation, and hand-digging is required in the WHS core zone.

## **Conclusion**

The HIA found that the SN-03 project would pose some risks to the heritage assets of the project area, most notably to sub-surface archaeology, fragile earthquake-damaged buildings, and disruption of religious and sociocultural practices in both the core monument zone and the buffer zone. However through additional study of sub-surface conditions it appears that archaeological risk is isolated and minimal given most zones with archaeological potential are below the maximum excavation depth. Those areas with potential interference will have mandatory trial trenches prior to excavation, under the supervision of an archaeologist. The HIA team noted significant commitment of PID and LMC to ensure that heritage aspects were fully integrated into the detailed designs, bidding documents, and EMP, and coordinated consultations with all levels of government to develop technical specifications and inputs to the design and mitigation measures. Implementation will be complex and challenging, but given the flooding problems that are causing impacts on both the communities and heritage assets the project is clearly important and a long-term solution is needed to protect the culturally and historically unique Lalitpur core area from damaging flooding and sewer overflows.



## **1. INTRODUCTION**

### **1.1. Overall project objective**

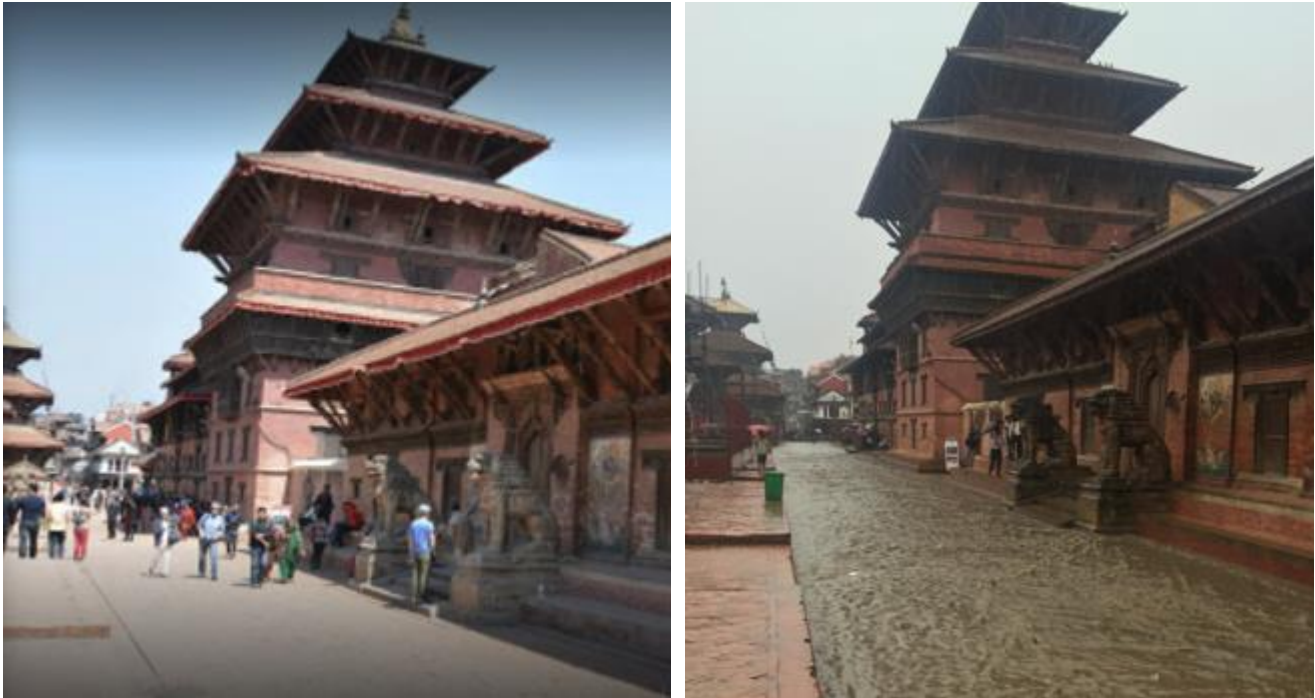
1. The Kathmandu Valley Wastewater Management Project (KVVMP) has been launched and funded by the Government of Nepal (GoN) and the Asian Development Bank (ADB) for improving the wastewater services in the Kathmandu Valley. The project is expected to maximize the efficiency and effectiveness of existing wastewater sector infrastructures and service provision provided or planned, to restore, establish and extend wastewater services in Kathmandu Upatyaka Khanepani Limited (KUKL) services in order to improve urban rivers and tributaries water quality and ecosystem.

### **1.2. SN-03 Sub-project**

2. The proposed sub-project Sewer Rehabilitation in the Core City Area of Lalitpur Metropolitan City (SN-03) is intended for the improvement and upgrading of the sewer network within the core area of Lalitpur Metropolitan City (LMC). The project comprises replacing existing sewer pipes and adding new larger diameter sewer pipes in the network, for a total of 2.8km of pipelines from the upper reach of Patan Durbar Square until reaching an existing sewer interceptor on the left bank of the Bagmati River. The specific objectives are:

- Improving, upgrading and expanding existing sewer network lines within the core area of Lalitpur Metropolitan City;
- Maximize the efficiency and effectiveness of existing sewerage system and service provision through restoration, establishment, and extension of sewerage services
- Convey storm water combining with sewer to enhance the walkways along the Patan Durbar square heritage site and adjoining Mahapal areas during rainy season

3. The project is a priority for the LMC to avoid flooding and inundation of Mahapal, Mangalbazar and Patan Durbar Square junction areas (all part of the LMC core area) especially during rainy season. This part of the LMC core area, which includes the Patan Durbar Square World Heritage Site (WHS), has been flooding in every monsoon season due to poor storm water drainage (see *Figure 1*). The existing sewer network dysfunction due to substantial ingress of storm water mixes with sewage during heavy storms, overwhelming the sewer networks and inundating the area. This causes negative impacts on residents, vehicular traffic, pedestrians, and tourists, and water-logging is causing foundation damage to heritage buildings.



*Figure 1: Patan Durbar Square in the dry season (left) and flooding after monsoon rains (right)*

4. Much of the project area lies within the buffer zone of the Patan Durbar Square WHS, and a 157-meter segment of the pipeline would pass directly through the WHS core zone. Due to the heritage site designation, sensitive heritage assets in the project area, and the desire by implementing agencies (including the LMC, KUKL and PID) to ensure that works are carried out with utmost care for these assets, the following Heritage Impact Assessment (HIA) was carried out in several phases during project preparation and fully integrated into the project design and bidding documents.

### **1.3. HIA Objectives and Scope**

5. The HIA forms a standalone but related assessment to the project Initial Environmental Examination (IEE), which has been carried out and an Environmental Management Plan (EMP) prepared. The HIA has provided inputs to the IEE and vice versa, and the general mitigation measures resulting from the HIA were integrated into the project EMP. Specific mitigation measures will be prepared by the Contractor in line with this HIA. The specific objectives of the HIA are to:

- Analyze the heritage assets within the project area, including built, subsurface, and intangible heritage;
- Determine potential impacts on those assets;
- Inform an analysis of alternatives to reduce impacts;
- Ensure that excavations in heritage areas are designed to provide better understanding of the areas in the case of archaeological chance finds;
- Develop mitigation measures for the design, construction, and operation and maintenance phases for inclusion into the project Environmental Management Plan and bidding documents;

- Provide detailed mitigation measures to be included in the Contractor's Specific Environmental Management Plan (S-EMP)

6. The HIA focuses on the Patan Durbar Square World Heritage Site, with particular attention on the core heritage zone but also considers the WHS buffer zone and any heritage assets outside the buffer zone.

#### 1.4. HIA methodology

##### Desk review

- Review of policy and legal requirements to ensure compliance
- Review of technical studies related to Patan Durbar Square, including archeological investigation conducted by Durham University and Department of Archaeology, and Patan Durbar Square Heritage Management Plan
- Literature review of all available and relevant printed books, reports (published and unpublished) and other reference materials on WHS of Patan (see references list in Annex 4)
- Review of feasibility study and detailed project report (DPR) by safeguard and heritage experts

##### Site visits and investigation

- Inventory of heritage buildings and visual inspection was conducted by engineers and safeguard specialists in June 2018
- Further detailed field inventory and site analysis conducted by heritage specialist, engineers and safeguards specialist in October/November 2018 (Figure 2).



*Figure 2: HIA team site visits, October 2018*

##### Coordination and Consultation (details in Section 8 and Annex 2)

- Department of Archaeology
- Kathmandu Valley Preservation Trust (KVPT)
- Patan Durbar Monument Maintenance Office (PDMMO) (representative organization for DoA)

- UNESCO
- Affected communities
- LMC
- Local leaders (e.g. ward chairpersons)

#### Impact assessment and mitigation measures

- Assessment of impacts on heritage buildings and monuments
- Subsurface survey to assess underground utilities and conditions that indicate potential for archaeological remains
- Development of mitigation measures
- Integration of mitigation measures into the project EMP
- Preparation of Sewer Network Details in World Heritage Area by the DSC, which provides specifications and methods for works in Patan Durbar Square. These specifications and methods were then included in the bidding documents.
- Inclusion of mitigation measures in BOQ and contractor requirements in the bidding documents.

### 1.5. Team

7. The HIA was prepared by a multi-disciplinary team, with strong coordination between engineering, safeguards, geophysical and heritage experts as well as coordination with the Department of Archaeology, LMC and PID. The following institutions and individuals played various roles:

#### DSC:

- Structural engineer
- Civil engineer
- Environmental specialist
- Social specialist
- Geophysical survey team (two geophysicists and three geophysical operators)

#### PID:

- Archaeologist and heritage specialist
- Engineer
- Environmental and social safeguards specialists

#### Lalitpur Metropolitan City

- Mayor
- Deputy Mayor
- LMC engineering team

## 2. LEGAL AND POLICY REQUIREMENTS RELATED TO CULTURAL HERITAGE

### 2.1. National Requirements

Ancient Monuments Preservation Act (1956): Patan Durbar Square has been declared a protected monument zone gazetted in 1996 under the Ancient Monument Preservation Act, 1956, providing the highest level of national protection. The boundary corresponds with the boundary of the UNESCO WHS.



With respect to activities such as construction taking place in heritage areas, the Ancient Monuments Preservation Rules 2046 (1989) state:

Sec. 4.1.1 Pursuant to Sub- section (5) of Section 3 of the Act, any person or Association willing to install telephone and electricity, to dig the land for drinking water and sewerage, to construct and repair the road, to shoot a film, cinema, to celebrate festival and fare, to dance or to park vehicles or to place the poster and photograph, shall have to submit an application to the Department, for its approval in format as prescribed in Schedule.

**HIA remarks:**

*The LMC sent a letter to the Department of Archaeology on 04 June 2018, and DoA granted approval of the project on 13 June 2018. See Annex 2 for a copy of the approval letter in Nepali and English.*

Sec. 4.3.2 If the Local Officer found any information of finding of any archaeological object in his working District he shall have to fill the description of such object in the form as prescribed in Schedule-4 within 35 days from the date of finding of such object, and, if possible, the photograph of such project also shall have to be sent to the Chief Archaeology Officer.

**HIA remarks:**

*The project EMP includes this as a mitigation measure, as well as immediate stoppage of works for any chance finds and supervision by a member of the Department of Archaeology for works in the core heritage area. There is no statutory requirement in Nepal to carry out an HIA or an approvals process, though the DoA has been informed and the report has been shared with DoA for review and comment.*

Management Handbook for Patan Durbar Square Monument Zone (2007) was prepared by the DOA and serves as the site's Heritage Management Plan (HMP). It includes the institutional, legal, and economic framework for the area, as well as building bylaws for the monument zone and buffer zone and development guidelines.

The HMP's development guidelines (Section 5.5.2) are applicable to the proposed SN-03 project. Installation of infrastructure and services are not prohibited in the monument zone, but the relevant requirements for construction within the WHS are outlined as follows in Table 1:

Table 1: HMP Development Guidelines

HMP Development Guidelines (Management Handbook for Patan Durbar Square Monument Zone Section 5.5.2)	Relevance to SN-03 Project	HIA Ref Section
<b>Identity:</b> The traditional identity of the public and semi-public spaces (squares, streets, courtyards etc.) must be preserved. The form, shape, boundaries and character of the public and semi-public spaces must not be altered; the traditional systems of streets and courtyard accesses must be preserved.	The project would not permanently alter the identity or access to public or semi-public spaces. In Patan Durbar Square, there would be temporary disruption of access during construction, but detours for pedestrians are accounted for in the	

	design and will be provided at all times.	
<b>Construction Sites:</b> Construction sites within the Monument Zone (MZ) must be properly secured to ascertain that no monument or historic building is damaged; provisions need to be made for the disposal of construction rubble and waste outside the heritage area.	Construction within the MZ will have hard barricading and will only take place in the road/walkway. Disposal sites for waste and rubble have been identified outside of the core zone.	Provisional sum included in BoQ for hard barricading. Construction materials to be stored/disposed in Dhobighat WWTP construction site in coordination with that contractor.
<b>Paving:</b> The public and semi-public spaces must have either their traditional paving or where the traditional paving has been lost, either brick or stone paving (whichever is more appropriate for the specific location). When laying new paving, the paving level should only be raised from its previous (original) level if it does not affect monuments and traditional buildings; the repair and reconstruction of pavements (also after installing underground services) must be done as far as possible by reusing original materials in order to maintain the authentic character. If new materials are used they have to be similar to the original; the regular cleaning of the paving must be done in a manner that is appropriate to the paving material.	DoA has provided specifications for paving stones in the core area. These specifications have been included in the bidding documents and BoQ.	See Section 6.4 and Section 20.6 of Specifications
<b>Aprons:</b> The apron shall be constructed on one's own land and in line with and adjusted to the level of neighboring houses. Aprons should be planned together with the rain water drainage system. Note should be taken on the plinth height as defined in the building by laws.	The project will be constructed in the roadway and therefore will not affect private building aprons.	N/A
<b>Surface Rain Water Drains:</b> Surface rain water drains should be provided for public, semi-public areas and around historic buildings. The drainage system should be designed considering maximum rainfall. The surface drains must be built to correspond with the surrounding paving. Rain water pipes from terraces and roofs must be concealed and must have an outlet within the plot.	The project drainage is subsurface. The combined sewer has been designed to accommodate maximum rainfall of 59mm/hr and a 2-year flood return period.	See Detailed Project Report
<b>Sewer Pipes:</b> Sewer pipes must be concealed below the ground: sewer pipes must be of sufficient size: provisions should be made to treat waste water before disposal into rivers. Septic tanks should only be considered if sewer lines are not possible: no soak pits should be allowed within the MZ area.	Sewer pipes under the project are all below ground and of sufficient size to accommodate dry season flows and monsoon stormwater (see previous point). No soak pits are included. Sewage and stormwater from the pipeline will join with the Bagmati interceptor sewer and be treated before discharge, except in extreme storm events when stormwater will overflow to the river.	See Section 3.1 and Detailed Project Report
<b>Water Supply:</b> Traditional water sources such as well and stone water conduits must be preserved. Water supply lines must be installed in a planned manner.	No water supply is included in the project. However the project could impact the Manga Hiti stone spout.	See Section 6.3.

Leaking pipes must be fixed immediately to ascertain that no damage is caused to nearby monuments. Connections to historic buildings should only be allowed once it has been ascertained not to cause any damage.	This has been considered in the HIA.	
<b>Traditional Use and Intangible Heritage:</b> Traditional functions and usage of public and semi-public spaces should be supported. Traditional rituals, processions and festivals that have been performed over the centuries in the public and semi-public spaces must in no way be hindered.	Rituals and festivals have been catalogued and will be factored into the Contractor's work program to avoid any disruption and ensure the program is not delayed.	See Section 4
<b>Water Bodies (ponds/rivers etc.):</b> Traditional ponds must be retained, repaired and restored. No lake, pond, tank, water reservoir, canal, rivers, rivulets, streams, natural drain, spring or water source or any other watercourse shall be permitted to be filled up. No piece of land which is located within 5 meters in any direction of the outside edge of the maximum recorded inundation level of such water courses shall be used as a site for building construction.	No traditional ponds would be affected by the project. While the pipeline may discharge into the Bagmati river during extreme storm events, most of the time stormwater and wastewater will be treated before discharge. No building construction will be financed.	N/A

**HIA Remarks:**

*The project needs to give careful consideration to all of the above-mentioned recommendations from the Patan Durbar Square HMP. The Management Handbook requirements for infrastructure and service provision were fully integrated into the project mitigation measures and construction specifications. As the project intends to improve drainage and sewerage capacity, it also contributes to meeting the handbook's objectives for improvement of the monument zone.*

Plan of Action for Patan Durbar Square Monument Zone (2007) is a working document prepared at the same time as the Management Handbook, which presents short- medium- and long-term activities for conservation of the site. Most relevant for the project, the Plan emphasizes that the Lalitpur municipality is the Site Manager for the WHS but at the time lacked capacity to fulfill this function. The Plan states that all activities within the Zone must be reported to the Site Manager (i.e. LMC).

**HIA remarks:**

*The Plan of Action is considered the Heritage Management Plan for Patan Durbar Square. The approvals, institutional framework, and mitigation measures presented in this HIA are consistent with the Plan of Action, namely that the LMC will co-manage the project together with the PID, and has approved of the project.*

## 2.2. UNESCO

8. Patan Durbar Square is included as one of seven monument zones in the overall Kathmandu Valley UNESCO World Heritage Site. The Kathmandu Valley WHS was established in 1979, placed on the List of World Heritage in Danger in 2003 largely due to persistent "uncontrolled development" that was affecting the urban landscape and "architectural fabric"

across the various sites in the Kathmandu Valley.<sup>1</sup> and after intensive planning and establishment of the Integrated Management Plan was removed from the danger List in 2007. The boundary of the monument zone and buffer zone was modified slightly in 2006, and approved by UNESCO in August of that year. UNESCO has encouraged Nepal to develop regulations for Heritage Impact Assessment (e.g. Decision 36COM 7B.66, 2012), but this to date has not been developed.

9. With respect to any compliance or approvals by UNESCO, Paragraph 172 of the *Operational Guidelines for Implementation of the World Heritage Convention* states that:

**Information received from States Parties and/or other sources:** The World Heritage Committee invites the States Parties to the Convention to inform the Committee, through the Secretariat, of their intention to undertake or to authorize in an area protected under the Convention major restorations or new constructions which may affect the Outstanding Universal Value of the property. Notice should be given as soon as possible (for instance, before drafting basic documents for specific projects) and before making any decisions that would be difficult to reverse, so that the Committee may assist in seeking appropriate solutions to ensure that the Outstanding Universal Value of the property is fully preserved.

**HIA remarks:**

*While UNESCO does not have an approval role, in line with the operational guidelines UNESCO was informed of the project on 06 July 2018 through an official letter sent by the Mayor of Lalitpur Metropolitan City and was sent the draft Detailed Project Report at that time and requested any comments. The Department of Archaeology Director General also informed the UNESCO Director General of the project through an official letter. All letters can be found in Annex 2. No comments were received by DoA, PID, or LMC.*

### 2.3. ADB Safeguards Policy Statement

10. The ADB Safeguard Policy Statement (SPS), 2009 defines physical cultural resources (PCRs) as: “Defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings and may be above or below ground or under water. Their cultural interest may be at the local, provincial, national, or international level.” (Footnote 13, SR1, ADB SPS 2009).

11. Ensuring compliance with the SPS on PCRs includes<sup>2</sup>:

- Avoiding significant damage to PCRs through appropriate siting and design,
- Identifying and assessing potential impacts on PCRs through field-based surveys as part of the environmental assessment (assessment should be by qualified and experienced experts)

<sup>1</sup> See Decisions adopted by the 27<sup>th</sup> session of the World Heritage Committee, 2003: <http://whc.unesco.org/archive/decrec03.htm#dec7-b-52>

<sup>2</sup> ADB Safeguard Policy Statement, para 45 - 49

- Consultation with affected communities and regulatory institutions, and incorporating their views
- Developing mitigation measures during the environmental planning process, including chance finds procedures
- Chance finds not to be disturbed until assessed by competent specialist and actions consistent with above requirements identified
- Not remove PCRs unless certain conditions are met.

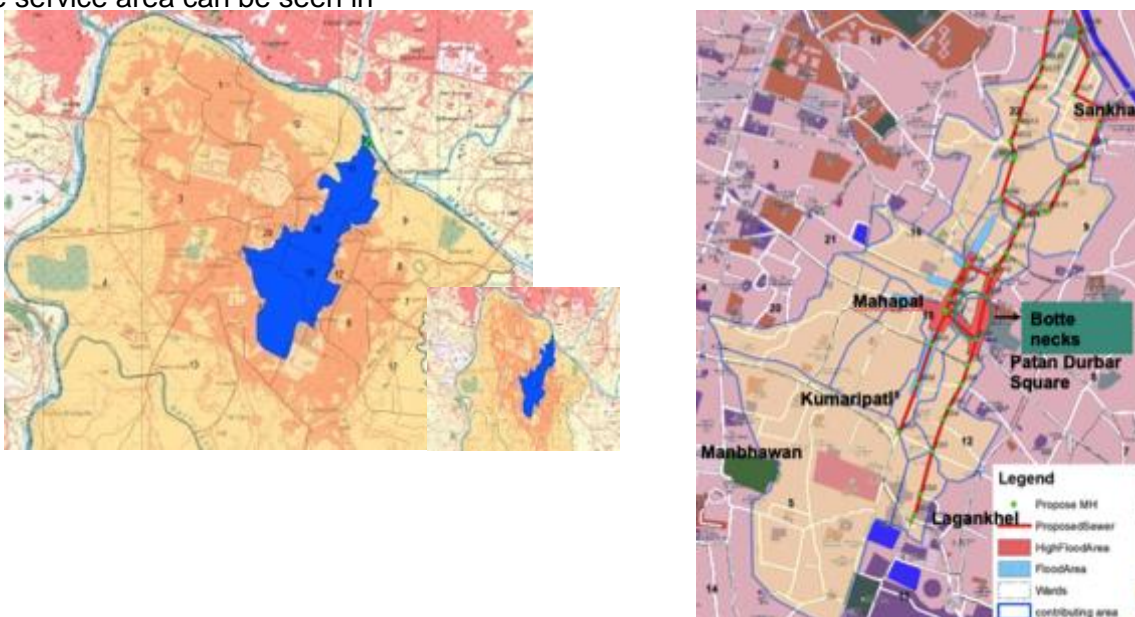
**HIA remarks:**

*The compliance steps listed above have been followed through the IEE and HIA process, and are summarized in both documents.*

### 3. OVERALL PROJECT DESCRIPTION

#### 3.1. Project service area and activities

12. The project will be implemented entirely in Lalitpur Metropolitan City (LMC), also known as Patan, which is located south of the Kathmandu Metropolitan City (*Figure 3*). Lalitpur is extremely rich in arts and architecture and boasts of the largest community of artisans in the Kathmandu Valley, especially metal and wood workers. It has a large number of sacred buildings, temples, pagodas, *Stupas* and *Shikharas*, monasteries, maaths and *Chaityas*. UNESCO has enlisted the conglomerate of the buildings in Patan Durbar Square as a World Heritage Site, one of the seven heritage sites in Kathmandu Valley, and a prime tourist destination within the Valley (*Figure 3*). The service area on the SN-03 package is the Lalitpur core city area, including seven wards<sup>3</sup>, and is bordered on the northeast by the Bagmati River. The service area can be seen in



13. Figure 4 below, shaded in blue (LMC is shaded in yellow).

<sup>3</sup> The project will service ward number 5, 9, 11, 12, 16, 19, and 20. Ward 19 would be fully serviced by the project and all others partially.



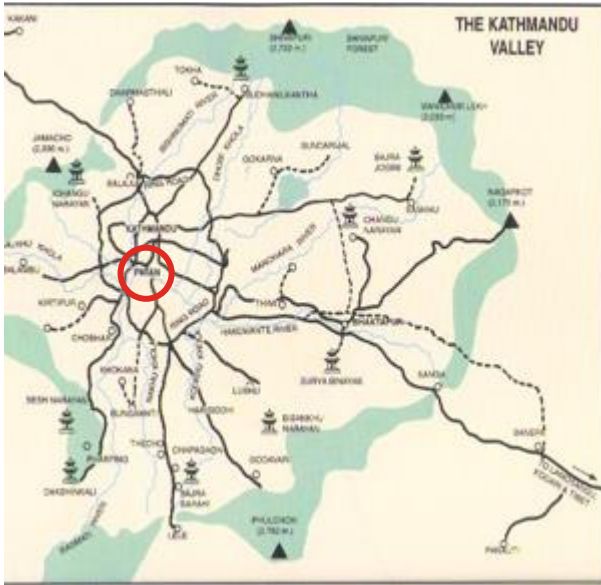


Figure 3: Map of Kathmandu Valley (left), Patan Durbar Square monument zone (right)

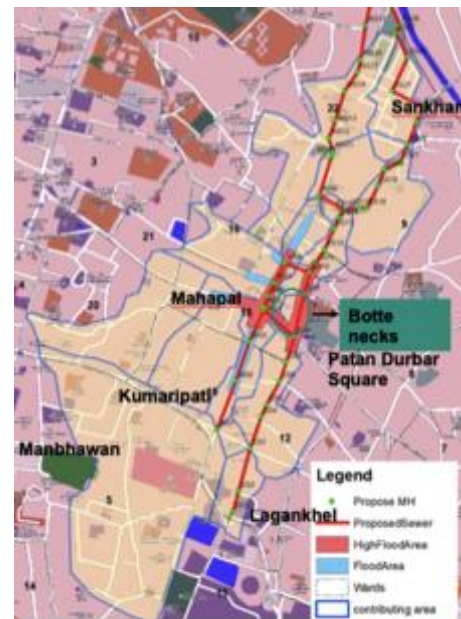
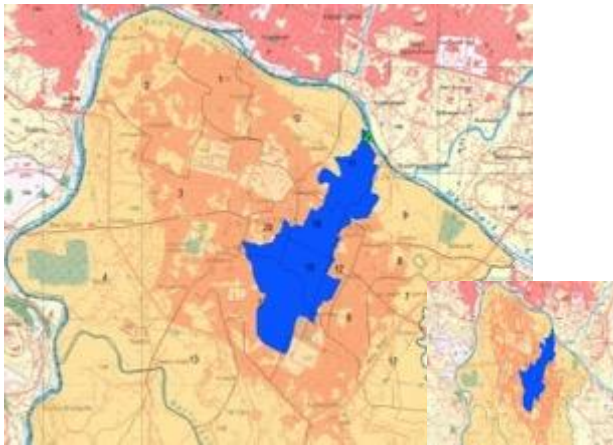


Figure 4: SN-03 service area: overall service area and topography (left), service area (shaded in yellow), flood area, and heritage core zone indicated (right)

14. The proposed project will carry sewage as well as the storm water from the higher reach of Lagankhel, pass through the narrow streets of MangalBazar, crosses in front of the Patan Durbar Square, collects the extra storm water from the surrounding area and flows down via Swotha to Shankamul sewage interceptor at the Bagmati River.



15. The proposed project includes the following specific activities within the Lalitpur core city area:

- Rehabilitation and construction of combined sewer network with total 2.8 km length with connection to the Shankamul sewage interceptor at the Bagmati River and overflow outfall at the Bagmati River;
- Installation of two types of pipe are proposed: Plastic (500 – 1000 mm diameter) and reinforced concrete (1400 mm diameter)
- Installation of manholes
- Excavation of trenches for rehabilitation of existing pipes and installation of new pipes, with trench depth ranging from 2.0 meters to 4.2 meters and width varies from 1.2 meters to 2.5 meters.

### 3.2. Pipeline route

16. A map of the project is provided below in Figure 5, which shows the alternative for the pipeline right-of-way that was selected (the assessment of alternatives can be found later in Section 5). The SN-03 project is designed in three segments:

- Line 1 (red color): Starts from the Lagankhel bus stand area to Sankhamul, and crosses through Patan Durbar Square WHS core zone. Much of the area from Lagankhel to Patan Durbar Square was recently closed to 4-wheel vehicular traffic by the LMC.
- Line 2 (pink color): Starts from Kumaripati, Iti tole and meets Line 1 at Sontha via; Iti tole, Ikhalukhu, Mahapal junction and Kwalkhu.
- Line 3 (brown color) is a connection between line 1 and 2 starting from the same starting point of Line 2 connecting Line 1 via Thabu lan



Figure 5: Proposed SN-03 sewer line

17. The routes for pipe alignment were classified into three basic typologies to develop construction methodologies that would be appropriate for the conditions and minimize impacts:

**Area 1**

The general routes where the road is wide 4.5 to 6 m or greater and space is available for accessing machines, and little risk of archaeological finds or fragile buildings



**Area 2**

The narrow road of width 3.5 to 4.5 m, low risk of archaeology or fragile buildings.



**Area 3**

The World Heritage Core Zone, any areas at high risk of archaeological finds, or areas with fragile buildings. (e.g. Patan Durbar Square)



18. The criteria for classifying segments into one of these three areas is outlined in Annex 1, which then choosing an appropriate excavation methodology based on risks to heritage assets and structural stability of buildings. These methodologies are included in the DPR and in Annex 1.

19. It should be noted that the rehabilitated SN-03 line will be connected with existing Bagmati interceptor sewer, which is present at Sankhmul within the UN Park, and ends at the Dhobighat waste water treatment plant. All sewage during the dry weather will be transported to the treatment plant for treatment and disposal. Thereafter, only during the rainy season when the volume of sewage is large and diluted by stormwater, some portion may be released to the Bagmati river through a combined sewer overflow.

20. Technical details on the sewer system design and specifications can be found in the Detailed Project Report (DPR) and Initial Environmental Examination (IEE).

### **3.3. Property connections**

21. Property connections will be installed for buildings in the buffer zone (Patan Durbar Square is unlikely to have any connections since there is an existing line running underneath the Palace itself which meets with the main line in the road past the square). These areas in the buffer zone already have existing sewer lines, manholes, and property connections, which will be upgraded by the SN-03 project.

22. Sewage will be temporarily re-routed during construction to mitigate any risk of leakage or contamination. The construction methodology for household connections is as follows:

- The work will be executed in a piecemeal approach by segments. Sewage re-routing will be done in segments of approximately 50-100 meters.

- First the existing sewerage from houses will be diverted to the downstream manhole of the main line (which will use a pumping system).
- A small manhole for each 3-5 houses will be constructed adjacent to buildings. The depth will not be too deep (1 to 1.5 m depth). Brick manholes are constructed with precast RCC cover and manhole cover.
- The connection pipe from the new small manhole to the main line will be installed.
- For each stretch when the small manhole and main lines are constructed completely, then the flow from the households will be connected and back filling work is done.

23. There is a low likelihood of damage to structures given no deep excavation occurs. The main risk is due to disconnection of continuous flowing sewage. However, the risk is minimised by the arrangement of temporary pipe gallery, pumping system and hard and soft barricading. Where possible, the existing sewerage system will not be disturbed.

24. Drawings for property connections can be found in the DPR Annex F.

### 3.4. Materials storage areas

25. For the temporary storage of construction materials, the exact locations will need to be agreed between the Contractor and the LMC. The DPR identified several potential sites, shown in Figure 6 below. Only one proposed area is within in the WHS core zone (Storage Area 1), which is small and not on the same plot as any monuments. The contractor camp would be located in UN Park, outside of the core or buffer zones of the WHS. The proposed sites below would only be used for materials.

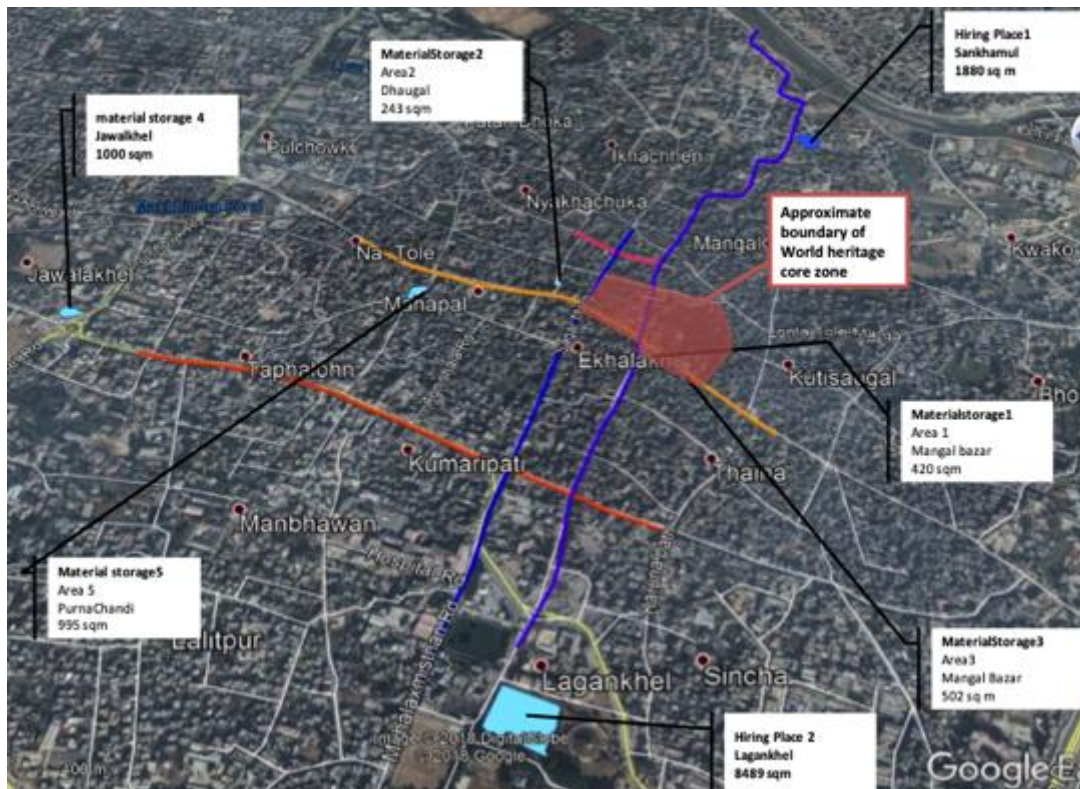


Figure 6: Potential materials storage areas



26. For solid waste and spoils, per the IEE PID shall identify an approved disposal site for excess spoils and wastes expected to be generated during construction activities. PID shall inform the winning contractor of this approved disposal site at any stage prior to construction activities, which will be included in the Contractor's S-EMP (proper disposal of waste and spoils is included in the BOQ, Part B1-7 and B1-4).

### 3.5. Flood Vulnerability

27. This core area of LMC (including the UNESCO heritage site) currently suffers from the lack of a properly functioning sewerage system, which also serves as the stormwater drainage network. During the monsoon season (July - September) the area experiences inundation when the existing sewer network clogs and becomes overwhelmed, which causes flash floods and water logging with sewage-contaminated stormwater. This recurring problem creates a major nuisance to local residents and tourists as roads can be rendered inaccessible and as well as an unhygienic situation with health risks to the community. As floodwater pools and stagnates, it is also impacting the foundations of heritage monuments and other fragile structures. Figure 7 shows flooding that occurred in in the central walkway of Patan Durbar Square's core area in recent years.

28. Given the impacts on liveability and the risks to Lalitpur's heritage assets that are urgent to mitigate, the LMC has made the project a priority. The SN-03 line would resolve inundation and flooding at Mahapal, MangalBazar, Patan Durbar Square and Kumaripati.



*Figure 7: Patan Durbar Square during the monsoon season (2017 – left, 2018 - right)*

### **3.6. Project Management and Coordination**

29. KUKL, which legally commenced operation in February 2008, established a Project Management Unit. The Government and ADB in April 2009 have restructured the unit into a Project Implementation Directorate (PID) to manage and implement ADB-assisted projects. The PID includes a Safeguards Unit to monitor and evaluate all social and environmental aspects of ADB projects, including physical cultural resources (PCR).

30. A Design and Supervision Consultant (DSC-06) has been contracted by PID to oversee construction works. DSC-06 also includes environmental and social safeguards officers. A Community Awareness and Social Safeguard Consultant (CASSC) has also been appointed by PID to assist with monitoring safeguard issues, especially public consultations and grievance handling through an established clear and grassroots process for addressing public complaints quickly.

31. While the project is relatively small in scale, it is technically and socially complex. To tackle the social issues the Lalitpur Mayor has agreed to establish and will Chair the Steering Committee, which will facilitate and solve all the local issues which will arise during the implementation. Ward chairpersons have been closely involved and have also committed their involvement in consultations and resolving grievances. Beside this LMC is co-financing this project in the tune of 20% of construction cost. The office for the management and supervision of the day to day works of SN-03 will be within the LMC complex and headed by a senior engineer from LMC.

## **4. HERITAGE SITUATION ANALYSIS**

### **4.1. History and Heritage Value**

32. Among the three cities of Kathmandu valley, Lalitpur municipality (aka Patan) is the most ancient city dating back some 2000 years and best known for its artistic heritage. It is probably one of the oldest Buddhist Cities in the world. The city is surrounded by 4 Stupas at 4 corners of Patan, one at each corner of its cardinal points. These stupas are said to have been built by the famous Emperor Ashoka, though this is unconfirmed – these stupas are some of the most elegant architectural treasures of which Patan prides itself. The LMC is full of Hindu temples and Buddhist monuments with bronze gateways, guardian deities and wooden carvings.





Figure 8: Ashoka pillar (left), example of traditional wood carving (right)

33. Lalitpur's heritage sites are concentrated in the Patan Durbar Square World Heritage Site, situated in the Mangal Bazar area. This square consists of what is said to be the best preserved Malla period palaces and temples, with the majority constructed in the 16<sup>th</sup> and 17<sup>th</sup> centuries (Figure 8). There are fine pagoda and Shikhara style temples, stone statues and unique artistic Newar architecture. This diversity of the mediaeval culture that allowed both Hinduism and Buddhism to flourish has left a rich legacy of impressive sightseeing.

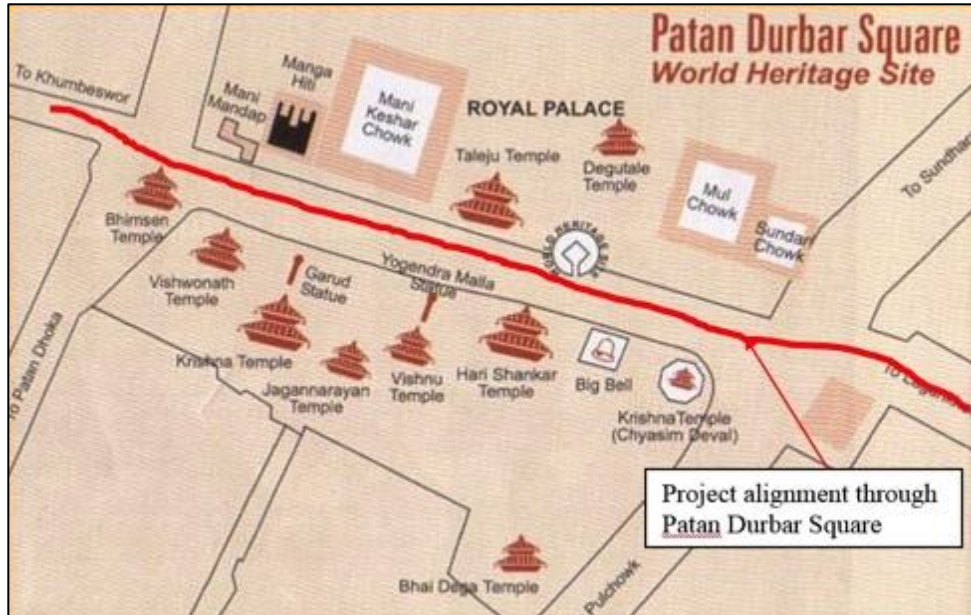


Figure 9: Map of Patan Durbar Square core area monuments with project right-of-way (red line)

34. The Durbar Square itself is a marvel of Newar architecture. The Square floor is tiled with red bricks that are modern in character, from approximately 20-25 years ago<sup>4</sup>. The main

<sup>4</sup> Discussion with Kathmandu Valley Preservation Trust, 05 February 2019.

temples are aligned opposite of the western face of the palace. The entrance of the temples faces east, towards the palace. There is also a bell situated in the alignment beside the main temples, and Square also holds old Newari residential houses.

35. The main attraction of Patan Durbar Square is the ancient Royal palace (Figure 9, Figure 10). It consists of three main courtyards (Mul chowk, Sundari Chowk and Mani Chowk, Narayan Chowk). The north-eastern corner of the Mul chowk is the 3 storied octagonal temple of Taleju Bhawani built by King Shree Niwas Malla in 1667. The Sundari Chowk holds in its centre a masterpiece of stone sculptures popularly known as Royal Bath, between central Mul chowk and Mani Keshab Narayan Choowk lies a temple of Degu Taleju looking out into the Main Square. The former royal palace complex is the centre of Patan's religious and social life and houses a museum containing an array of bronze statues and religious objects.



Figure 10: Patan Durbar Square core area palaces. Photo by HIA team (October 2018)

36. The project area comprises many temples, *patis* (rest houses), stupas, shrines, traditional houses, *jarunhitis* (traditional water tanks) and wells. On both sides of the project area there are monuments of national and local importance and the monuments around Patan Durbar Square are certainly world class World Heritage monuments.

37. The 7.8 Magnitude earthquake that struck Nepal and surrounding regions on the 25th April 2015, and a second 7.3 magnitude earthquake just 17 days later on May 12, 2015, greatly affected the LMC including heritage assets. Patan Durbar Square was one of many sites within the Kathmandu Valley WHS that was adversely affected, where many monuments were damaged and some collapsed. Twenty-eight heritage sites in the Patan Durbar Square area required reconstruction, and for many reconstruction is still underway. Outside of the WHS core area, many buildings in the project area and buffer zone were damaged that to this day remain fragile (Figure 11). Appendix IV of the IEE provides an inventory of 15 buildings in poor condition assessed by the structural engineer that could be impacted. None of these are within the core heritage zone.



*Figure 11: Earthquake-damaged buildings in the WHS buffer (top) and core monument zone (bottom). Photos by HIA Team (October 2018).*



38. The project area is a major source of intangible cultural heritage as well, given its importance as a site for major festivals celebrated by local people. The Rato Machhindranath Chariot festival is one of the main festivals of the Lalitpur District that is celebrated during the month of April/May (Figure 12). Similarly, Krishna Janmastami is another major festival celebrated during the month of August/September. The festival celebrates worshiping the Lord Krishna, and significant numbers of devotees visit Krishna Temple situated at Patan Darbar Square area. Other festivals include Bhimsen Jatra, Matiya Jatra, Gai Jatra, Janai Purnima. Additional details on festivals and intangible heritage are available in Section 4.6.



*Figure 12: Rato Machhindranath chariot festival in Patan Durbar Square (May 2017)*

#### **4.2. Works within the WHS and buffer zone**

39. As discussed above, Patan Durbar Square is included as one of seven monument zones in the overall Kathmandu Valley UNESCO World Heritage Site. The Kathmandu Valley WHS was established in 1979, placed on the List of World Heritage in Danger in 2003 and after intensive planning and establishment of the Integrated Management Plan was removed from the danger List in 2007. The boundary of the monument zone and buffer zone was modified slightly in 2006, and approved by UNESCO in August of that year.<sup>5</sup> Figure 13 shows the most recent boundary, with the WHS core zone indicated within a thick black line and the buffer zone in a dashed line.

<sup>5</sup> See <https://whc.unesco.org/archive/2006/whc06-30com-19e.pdf>

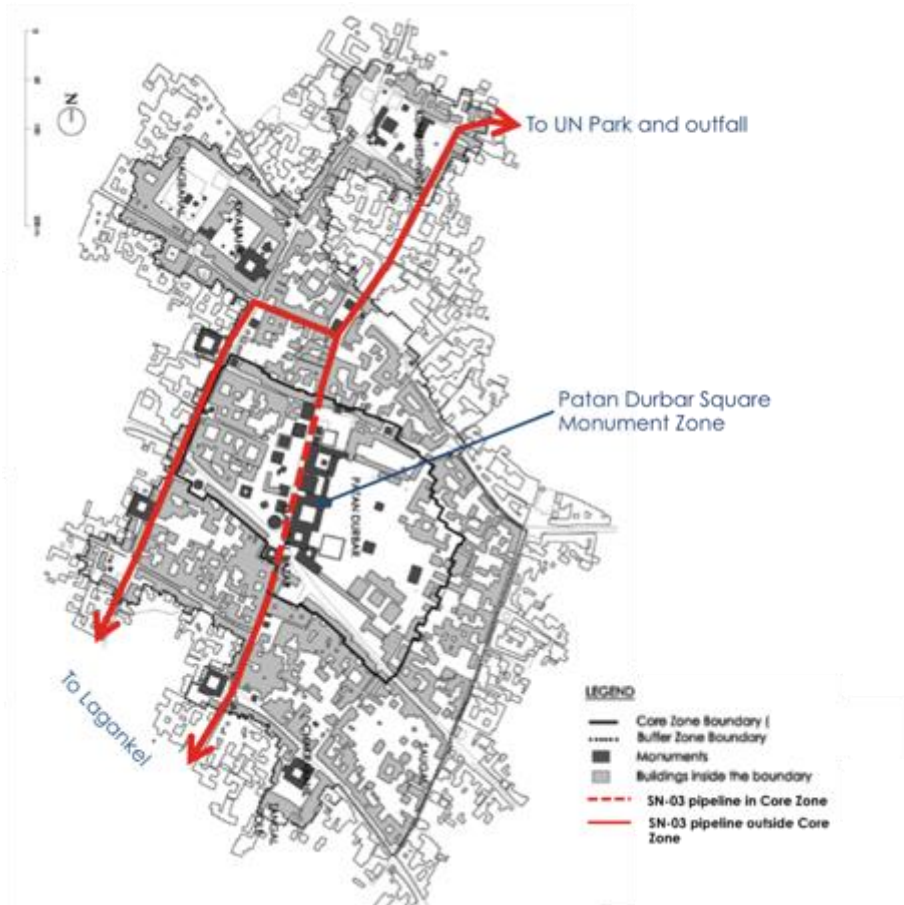


Figure 13: Patan Durbar Square WHS core and buffer zone as of 2006

40. As seen in Figure 13 above, the SN-03 pipeline would pass through portions of both the core zone and buffer zone of the WHS. 157.5 meters would impact the main public walkway in the Patan Durbar Square core zone, and 754 meters of pipe-laying would take place in the buffer zone. In the Patan Durbar Square core zone, the depth of the excavated trench would range from 2.6 – 3 meters deep, and the trench width (including barricading) would be approximately 2.9 meters.

#### 4.3. Existing infrastructure and utilities in Patan Durban Square

41. A survey of existing infrastructure services and utilities in Patan Durbar Square was carried out as part of the engineering design work. The proposed pipeline right-of-way through Patan Durbar Square (as well as roads in the buffer zone) has already been excavated several times in the past for the installation of various services and utilities. The following are findings of

a utilities investigation in the World Heritage core zone, which can be seen in **Error! Reference source not found.** below (the area of the sample study area is indicated in the photograph):

- Two telecom chambers exist just at the entrance of Heritage site on the side of Mangal Bazar. A Nepal Electricity Authority cable travels the length of the Patan Durbar Square walkway at a depth of 1.4 meters.
- Two water supply pipe lines are existing under the walkway: (i) 100 mm diameter pipe on the west edge (at 0.5 m depth) and (ii) 80 mm diameter GI pipe toward the middle of the walkway (at 1.4 m depth). The 80mm water supply pipeline will be cut during installation of sewer pipe as it lies in the trench excavation right of way. It will be reinstalled after sewer is laid.
- Two concrete sewer pipes exist on either side of the walkway, including manholes (Figure 14). On the western edge, the 300mm pipe is at a depth of 3m, and on the east edge a 600mm pipe is at a depth of 1.2m. These pipelines, are insufficient for handling wastewater and stormwater drainage, hence the need for a larger pipeline.

*Figure 14: Existing sewer manhole cover in Patan Durbar Square*

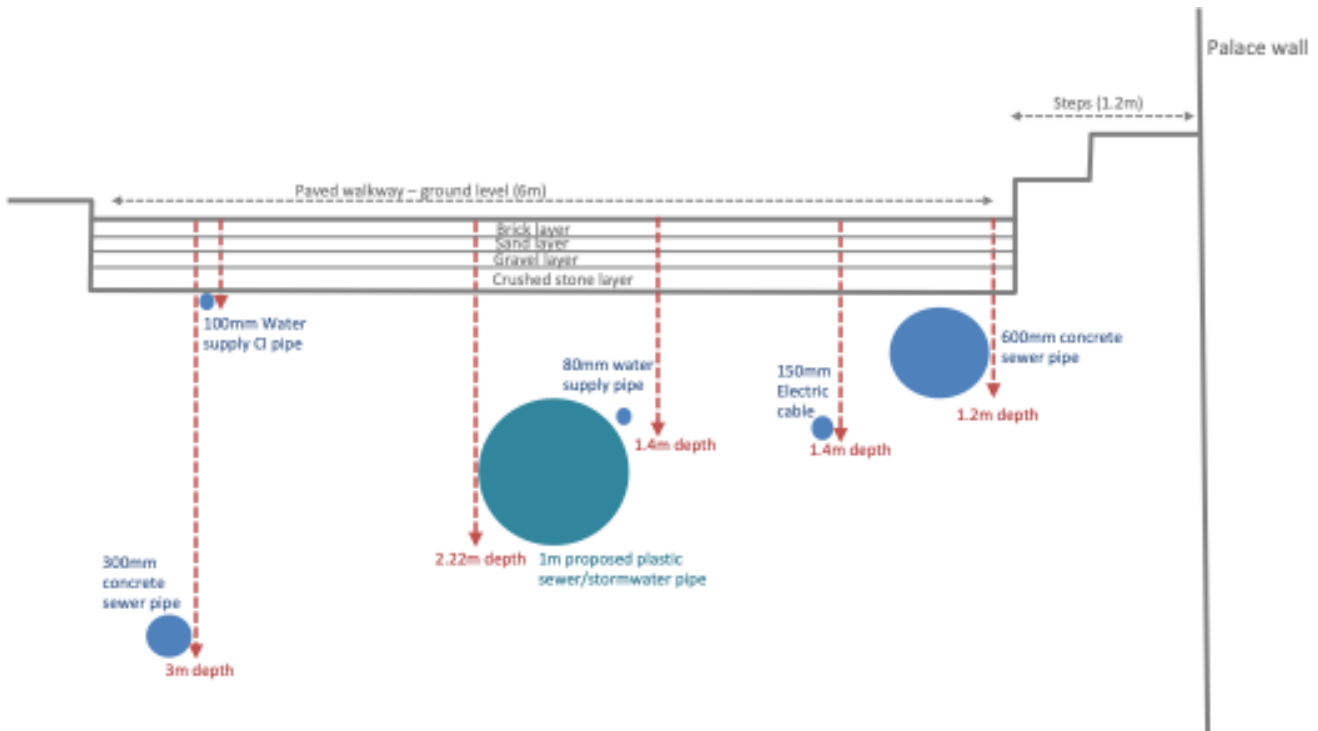


42. It can be noted from the services and utility survey, site observations, and research that:
- One previously dug trench is deeper than that proposed by the SN-03 pipeline
  - The site has been excavated and reinstated at least twice for other pipelines and utilities
  - Each excavation properly reinstated the site and installed manholes that are consistent with the character of the area
  - No monumental buildings were damaged during these excavations
  - Damage to sub-surface archaeology from previous utilities' construction may have occurred, but there is no documentation to indicate actual damage and if damaged occurred the extent is unknown.<sup>6</sup>

*Figure 15: Cross-section of existing infrastructure (blue dots) and proposed pipe (green dot)*

<sup>6</sup> Coningham, R.A.E., Acharya, K.P., Davis, C.E., Kunwar, R.B., Tremblay, J.C., Simpson, I.A. 4 and Schmidt, A. Preliminary Results of Post-Disaster Archaeological Investigations at the Char Narayan Temple and within Patan's Durbar Square, Kathmandu Valley UNESCO World Heritage Property (Nepal), *Ancient Nepal* 191-192, p. 52-71. 2016.





43. Note that Figure 15 above is a cross-section at chainage 0+675m (in front of Patan Museum on the Mangal Bazaar side of the square, see photo above). Levels are reflective of this cross-section –the trench reaches a maximum depth of 3 meters in Patan Durbar Square toward the north end of the square, but at this particular section the depth is 2.22m.

#### 4.4. Architecture and Structures

44. A detailed field study of the site’s architectural assets was carried out in June 2018 as part of the project detailed design in order to investigate all temples, buildings, and sites of cultural and historical significance in the project area and inform the design work accordingly. GPS coordinates were taken of each site, and qualities (tangible and intangible) were noted, including uses by the community, specific times of worship and visits to temples, and

importance during festivals. This assessment was deepened in October/November 2018 by the HIA team, including engineers, safeguard specialist, and archaeology/heritage expert. The full inventory can be found in Annex 5 The inventory is a comprehensive assessment of all heritage assets in the core and buffer zone, and was used to identify which assets could potentially be impacted by the project.

45. The assessment found that few above ground assets would be impacted. The main findings were:

- The water supply from the Manga Hiti water spout could be impacted if the conveyance pipes are damaged during excavation, though the location of these ancient conduits are unknown.
- While historic above ground structures and monuments are unlikely to be impacted by construction, Patan Durbar Square is an important social gathering space in the day and evenings – people tend to rest and congregate outside buildings on stairs and verandas.
- Four smaller shrines at ground level in the buffer zone that would not be directly affected by excavation, but are close to trenches so could risk accidental damages (Figure 16).

*Figure 16: Roadside shrines in buffer zone*



*Chainage: 0+000  
Location: Etichowk*



*Chainage: 0+860  
Location: Swotha*



*Chainage: 0+525  
Location: Haugal*



*Chainage: 0+850  
Location: Swotha*

## 4.5. Archaeology

46. Patan Durbar Square is a site that developed over time – the current layout of open space and standing monuments only developed in the past few centuries, but its history and civilizations are much older and have been covered over time. Therefore, understanding the risks to archaeology, or “subsurface heritage” is a critical element of the HIA and protecting the heritage of Patan Durbar Square.

### Previous Investigation

47. Extensive fieldwork in the project area was carried out in 2016 by Durham University which indicated the presence of archaeological remains in the project area. The comprehensive study by Durham University in 2016<sup>7</sup> using Ground Penetrating Radar (GPR) along the SN-03 right of way through the WHS as well as sample excavations was used in the HIA to assess the presence and risks to archaeological remains in the area. The sample excavations were not directly in the SN-03 right-of-way, but within several meters of it in front of the Char Narayan temple. The Durham University study was part of a post-disaster archaeological assessment after the 2015 earthquakes and focused on studying the foundation of the collapsed Char Narayan Temple.

48. The GPR survey undertaken in the Durham study provides a useful assessment of the potential archaeology and chance finds that could be affected. The GPR was taken to a depth of 1.3 meters along the main pedestrian walkway that would be excavated for the SN-03 pipeline. The extent of the survey can be seen in Figure 17, where the red line indicates the proposed SN-03 pipeline – as can be seen here, the majority of the area for pipe-laying works in the core WHS areas has been surveyed. While the excavated trench through Patan Durbar Square would be deeper than the GPR was able to reach (2.6-3.0 meter depth vs 1.3 meter depth of GPR survey), the survey does provide a sufficient indication of areas with greater risk of chance finds.

*Figure 17: 2016 Ground Penetrating Radar Survey with SN-03 right of way (adapted from Durham University study), in Patan Durbar Square walkway*

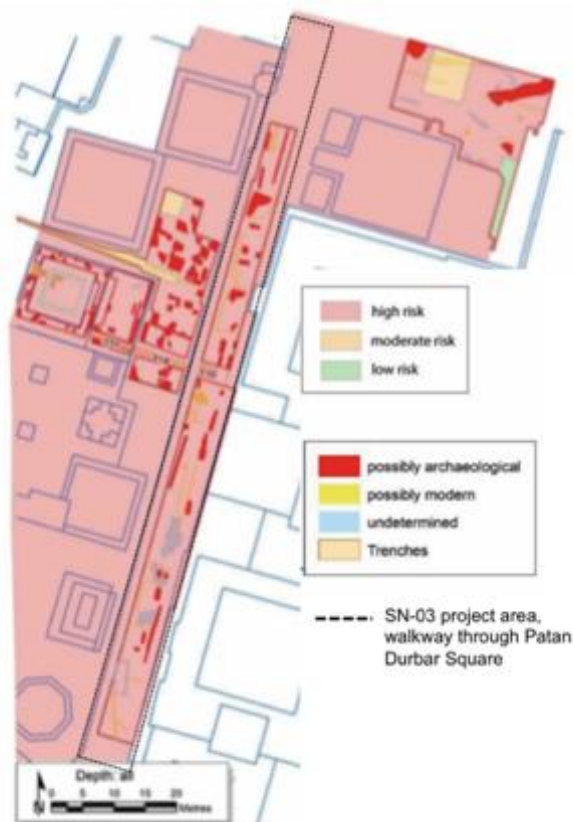
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<sup>7</sup> Coningham, R.A.E., Acharya, K.P., Davis, C.E., Kunwar, R.B., Tremblay, J.C., Simpson, I.A. 4 and Schmidt, A. Preliminary Results of Post-Disaster Archaeological Investigations at the Char Narayan Temple and within Patan's Durbar Square, Kathmandu Valley UNESCO World Heritage Property (Nepal), *Ancient Nepal* 191-192, p. 52-71. 2016.



49. Based on the GPR, an archaeological “risk map” was developed by researchers (Figure 18) which indicates that most of the Patan Durbar Square area is “high risk” for discovering archaeology (the pink shaded area) – the term “high risk” meaning that important archaeological remains are likely in this area that have significance for understanding the development not only of the site, but also the wider Kathmandu Valley and beyond. Moreover, the red polygons in **Error! Reference source not found.** also show where the GPR indicates anomolous shapes that could be archaeological – such as building foundations. Only the area within the black dotted line is of relevance to the SN-03 project as all other areas would remain undisturbed by the project. However within that SN-03 area are a number of potential archaeological sites, indicating that the trench excavation must be done carefully, and if archaeology is found then employ systematic recording and handling of materials, masonry, soils, artefacts, and other discoveries. It should be noted that the GPR survey and analysis does not confirm the presence of archeological remains, but is only used to indicate where extra caution should be taken during excavation.

Figure 18: Archaeological Risk Map, Durham University (2016)



50. Importantly, the GPR survey indicated the existing pipelines for sewerage, telecommunications and water supply outlined in above (indicated in yellow lines and polygons in Figure 18 **Error! Reference source not found.**). These trench excavations were likely undertaken in a way that cut through archaeological remains and may have caused damage. The study did not recommend suspending the installation of public services and earthquake reconstruction but did advise mobilizing archaeology teams in advance of works, and any future works should be excavated in a manner that protects this subsurface heritage. This recommendation has been taken on by the project.

51. Test excavations indicated that the top layer of bricks paving the Patan Durbar Square are modern, but may cover earlier layers of brick paving and cobblestones (Figure 19). Chance finds of relics are also possible, such as the terracotta plaque of Ganesh that was likely a piece of an oil lamp that was uncovered (Figure 19). Other finds included terracotta beads, slag, copper Pasupati coin, worked stone, and several terracotta oil lamps. It is likely that these types of chance finds, which could also include broken ceramic vessels, building materials and relics are the result of backfilling the area with the rubble of past earthquakes over which the current Durbar Square monuments stand.



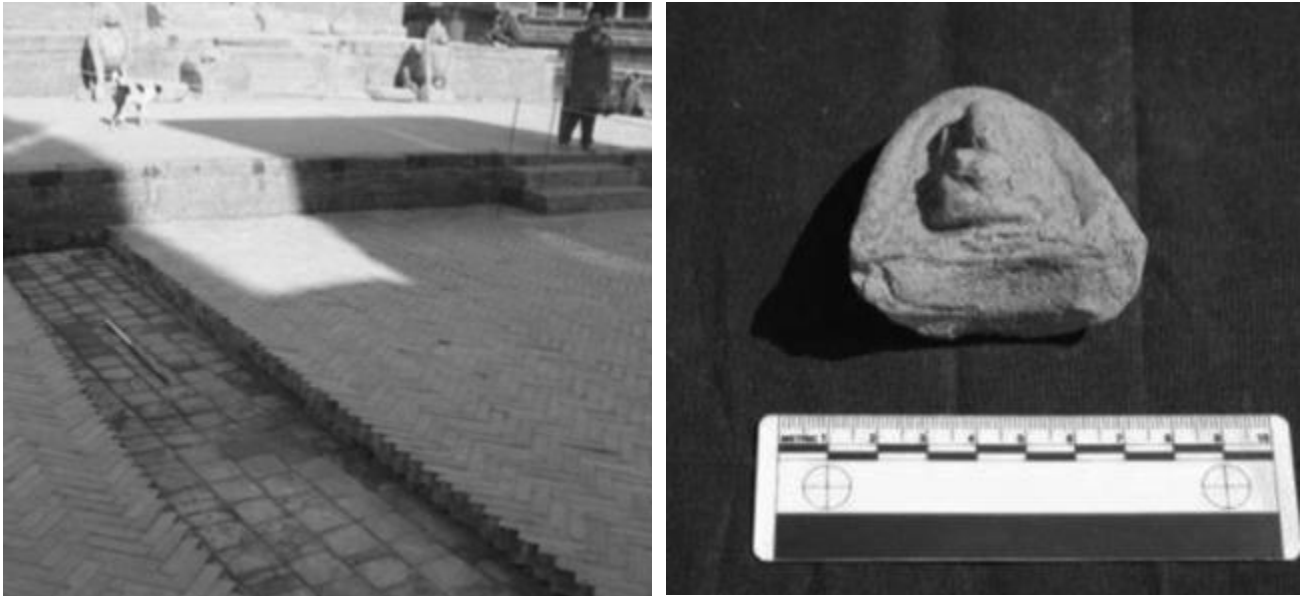


Figure 19: Brick paving and subsurface layer from excavated trench (left), terracotta plaque of Ganesh (right)

52. These findings have proved the potentiality of discovering some such archaeological objects from core area and possibly from other areas. The complicated archaeological sequence and evidence of multiple phases of activity highlights the vulnerability of the subsurface archaeological heritage across Patan Durbar Square and the necessity for archaeological investigation and interventions prior to any development or reconstruction work.

#### Geophysical Survey for SN-03

53. As the previous investigation undertaken by Durham University found the possibility of archaeological risks, a more in-depth geophysical study was conducted as part of this HIA in June and August 2019. Given the soil properties present in the project area and excavation depth, specialist consultants advised that Ground Penetrating Radar was not sufficient and instead three surveys were conducted: Electrical Resistivity Imaging (ERI), Multichannel Analysis of Surface Waves (MASW) and Ground Penetrating Radar (GPR). It is important to note that any subsurface survey cannot definitively state *what* is present underground, but can only indicate zones where material properties differ relative to the surrounding material (an “anomaly”). The ERI survey measures material resistivity, or how conductive the material is (e.g. moisture content). The MASW survey is a measure of material density, and can indicate zones where material is more or less dense than the surroundings (e.g. stone vs soil, or potential voids/chambers in cases of lower density). The GPR survey was most appropriate to indicate where pipes and cables were located, whereas the density and resistivity of the ERI and MASW surveys combined gave a better indication of potential archaeology.

54. The survey area is indicated in Figure 20, which was determined based on the boundary of the WHS but also extended to pipeline lengths in the buffer zone. The survey was in five segments, indicated in the map. Survey team in the field is shown in Figure 21.

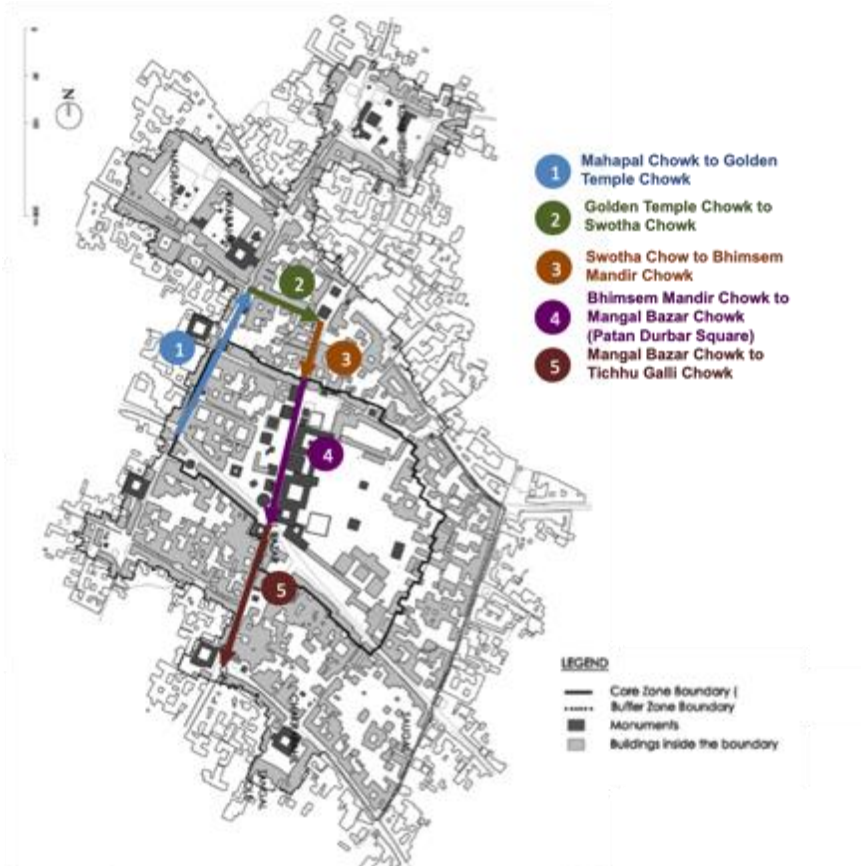


Figure 20: Subsurface Survey Area



Figure 21: Subsurface survey being carried out, June and August 2019

55. The maximum excavation depth for the SN-03 project in the subsurface survey area is 3m, though to be conservative the surveys were analyzed up to 5m depth to identify “anomalies” where conditions indicate potential archaeology. The results are summarized in one-meter depth slices, shown in Figure 22, where anomalies at each depth are indicated according to the density and resistivity properties.

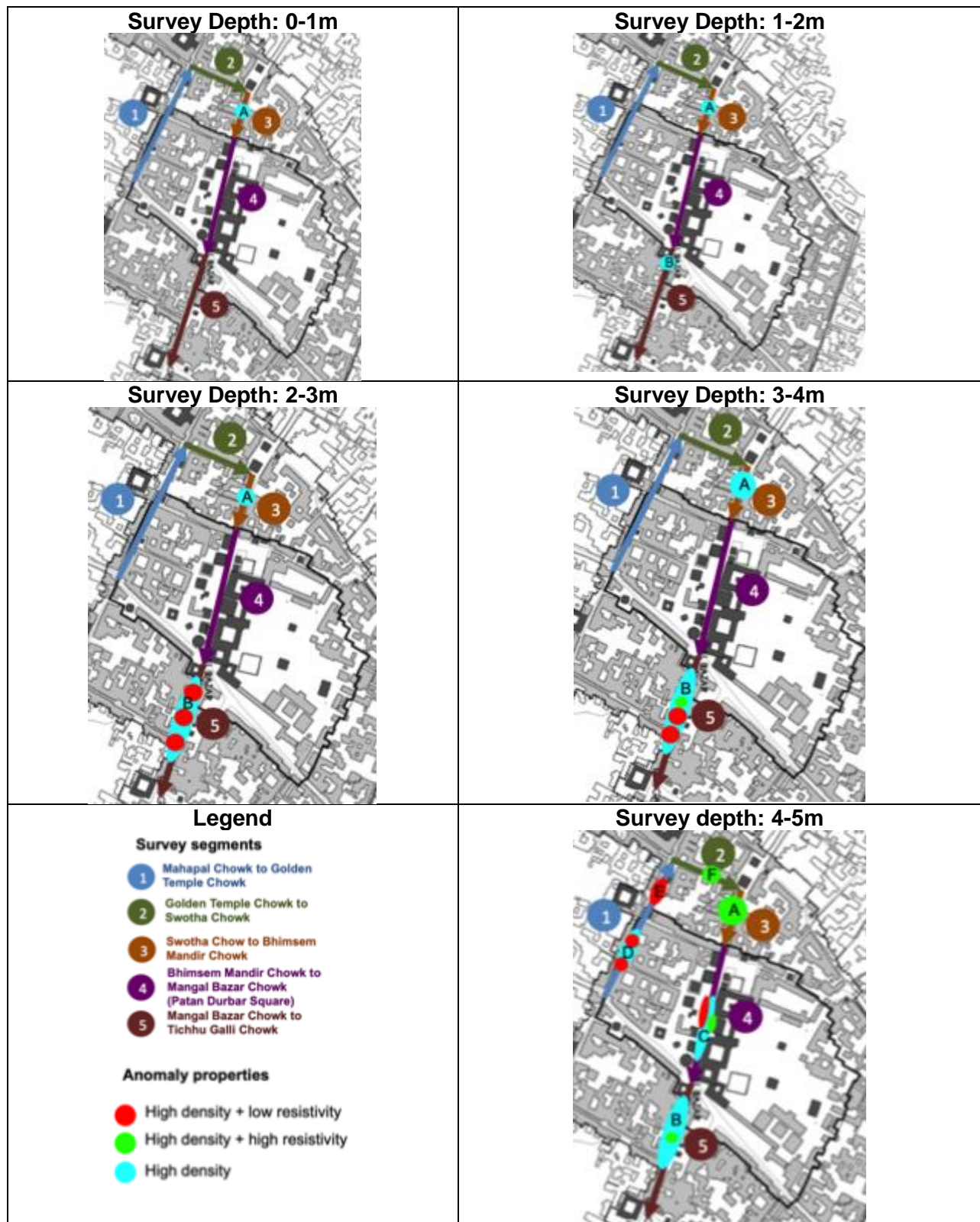


Figure 22: Subsurface survey findings by depth slice

56. The survey found six anomaly zones (Zones A-F) which were then cross-referenced with the maximum excavation depth in each segment – the survey findings according to the material properties of each anomaly area by depth slice are summarized in Table 2.

Table 2: Findings by anomaly zone and depth slice

	Depth to be disturbed by excavation
	Depth not disturbed by excavation

Zone	Segment	0-1 m	1-2 m	2-3m	3-4m	4-5m
A	<b>3: Swotha to Bhimsen Mandir</b>	High density anomaly of 8m length on east side.	High density anomaly of 8m length on east side.	High density anomaly of 8m length on east side.	High density anomaly of 35m length on east side.	High density and high resistivity anomaly of 35m length on east side.
	<b>Max excavation: 2.8-3.5m</b>					
B	<b>5: Mangal Bazar to Tichhu Galli</b>	No anomalies detected	High density anomaly of 7m length on west side.	High density anomaly of 75m length on right and left side.	High density anomaly of 75m length on west and east side.	High density anomaly of 51m length on west side and two shorter high density segments on east side (4 and 12m).
	<b>Max excavation: 2.5 – 3.0m</b>			Three smaller anomalies of low resistivity found along this same high-density anomaly area (7, 12 and 5m length) on the east side	Three smaller anomalies of low resistivity found along this same high-density anomaly area (7, 12 and 5m length) on the east side.  One 4m long anomaly of high resistivity found also within the high density area also on the east side.	One 34m segment of low resistivity found along west side overlapping with high density area.  One high resistivity anomaly of 5m length found within the high density area on the east side.
C	<b>4. Bhimsen to Mangal Bazar</b>	No anomalies detected	No anomalies detected	No anomalies detected	No anomalies detected	High density anomaly of 50m length starting 30m from Mangal Bazar running north. While the high density area is on both sides. It looks longer and continuous on the west side.
	<b>(Patan Durbar Square)</b> <b>Max excavation: 2.5 – 3.2m</b>					Within the high density anomaly

Zone	Segment	0-1 m	1-2 m	2-3m	3-4m	4-5m
						there is one low resistivity segment on the west side (31 m length). A low resistivity segment parallel with this on the east side has been observed.
D	1. Mahapal to Golden Temple (south side)  Max excavation: 2.5 – 3.0	No anomalies detected	No anomalies detected	No anomalies detected	No anomalies detected	High density anomaly of 7m length including west and east sides.  Two overlapping low resistivity segments of 6 and 12m on the west side.
E	1. Mahapal to Golden Temple (north side)  Max excavation: 2.5 – 3.0m	No anomalies detected	No anomalies detected	No anomalies detected	No anomalies detected	Low resistivity area of 142m length on west side. High density anomaly overlaps with this area for 23m.
F	2. Golden Temple to Swotha  Max excavation: 2.5 – 3.0m	No anomalies detected	No anomalies detected	No anomalies detected	No anomalies detected	High density-high resistivity area of 8m length on south side.

57. Following the analysis of material properties by depth slice, the findings for each anomaly zone were assessed to interpret what these properties could mean in terms of potential archaeology as well as considerations for the SN-03 project given the excavation depth and other physical characteristics of the anomaly area. These findings along with mitigation measures are presented in Table 3.



Table 3: Summary of findings, risks and mitigation measures by anomaly zone

Anomaly Zone	Summary of Survey Findings	Interpretation	Considerations	Mitigation Measures
<b>A</b>  <b>Segment 3: Swotha to Bhimsen Mandir</b>  <b>Maximum excavation depth: 2.8-3.5m</b>	<ul style="list-style-type: none"> <li>8m long high density area is found at a shallow depth of 0-3m</li> <li>At 3-5m depth, a longer high density anomaly of 35m found in the same segment</li> <li>At 4-5m depth anomaly is both high density and high resistivity</li> <li>Anomaly areas are within the buffer zone of WHS</li> </ul>	<ul style="list-style-type: none"> <li>High density property indicates that material is of high compactness compared to the surrounding.</li> <li>The deeper high density &amp; high resistivity area may be compacted soil &amp; may also indicate the presence of foundation wall or stone or some other material different than the surrounding.</li> </ul>	<ul style="list-style-type: none"> <li>35m long high density area where anomaly would be affected by the excavation up to a depth of 3.5m. The high resistivity area would not be impacted as it is below the maximum excavation depth.</li> <li>No important heritage buildings are found along the length of the high density anomaly area.</li> <li>It is likely that the high density anomaly is compacted soil, and less likely stone or other materials that could indicate archaeological objects.</li> <li>While the likelihood of negative impacts is low, given the shallow depth of the anomaly area caution should be exercised.</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor will be instructed to dig a trial trench in the anomaly area by hand prior to the planned excavation work to investigate the high density area.</li> <li>Trial trench digging will be under supervision of Archaeological Expert Team (AET)</li> <li>AET will issue an opinion to verify if excavation can proceed or if further investigation is required prior to proceeding depending on results.</li> </ul>
<b>B</b>  <b>Segment 5: Mangal Bazar to Tichhu Galli</b>  <b>Maximum excavation depth: 2.5-3.0</b>	<ul style="list-style-type: none"> <li>At 1-2m depth one small high density area found.</li> <li>Between 2-5m depth 75m south of Mangal Bazar is a continuous area with several anomalies, including high density, high resistivity and low resistivity areas.</li> <li>Small part of anomaly area to the north lies on the edge of WHS core zone, rest is in buffer zone.</li> </ul>	<ul style="list-style-type: none"> <li>High density property indicates that material is likely the same as surrounding area but more highly compacted.</li> <li>The low resistivity areas within this could indicate pockets where material has higher moisture content.</li> <li>A deeper high resistivity pocket could be brick wall or stone or some other material different than the surrounding.</li> </ul>	<ul style="list-style-type: none"> <li>75m of high density area with pockets of low resistivity would be affected by excavation starting at 2m.</li> <li>High resistivity area would not be impacted by the excavation as it is deeper than the maximum excavation depth.</li> <li>A small temple/courtyard exists at Tichhu Galli, but location is about 6-8 meters from the road so unlikely to be affected. No heritage structures are found in this segment.</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor will be instructed to dig a trial trench in the anomaly area by hand prior to the planned excavation work to investigate the high density area.</li> <li>Trial trench digging will be under supervision of Archaeological Expert Team (AET)</li> <li>AET will issue an opinion to verify if excavation can proceed or if further investigation is required prior to proceeding depending on results.</li> </ul>
<b>C</b>  <b>Segment 4: Bhimsen to</b>	<ul style="list-style-type: none"> <li>No anomalies found until a depth of 4m</li> <li>Between 4-5m, a 50m high density segment found, which includes an</li> </ul>	<ul style="list-style-type: none"> <li>A deeper high density layer of 50m length may be a material with high compactness relative to the</li> </ul>	<ul style="list-style-type: none"> <li>All anomalies found are at least 800mm below the maximum excavation, therefore would not be affected by the project. All digging</li> </ul>	<ul style="list-style-type: none"> <li>While the SN-03 project would not directly affect the anomaly areas, given the uncertainty of what these areas could be PID</li> </ul>

Anomaly Zone	Summary of Survey Findings	Interpretation	Considerations	Mitigation Measures
<b>Mangal Bazar (Patan Durbar Square)</b>  <b>Maximum excavation depth: 2.5-3.2m</b>	area with low resistivity and a parallel area with high resistivity <ul style="list-style-type: none"> <li>Entire anomaly area is within WHS core zone.</li> </ul>	surrounding and the localized low and high resistivity could most likely be due to the presence of localized moisture pockets.	and compaction in this segment is already required to be done by manual methods given it is in the WHS core zone. <ul style="list-style-type: none"> <li>This segment has already been excavated at least three times for construction of earlier utilities unrelated to this project, but at a maximum depth of 3m – anomalies are deeper thus may not have been disturbed before. And not likely to be disturbed by this project as well.</li> </ul>	will notify the Department of Archaeology and relevant research institutions of the findings in case they choose to undertake an archaeological investigation. <ul style="list-style-type: none"> <li>Investigation should be conducted before October 2020.</li> </ul>
<b>D</b>  <b>Segment 1: Mahapal to Golden Temple (south side)</b>  <b>Maximum excavation depth: 2.5 – 3.0m</b>	<ul style="list-style-type: none"> <li>No anomalies found until a depth of 4m.</li> <li>From 4-5m depth two low resistivity/high density areas found.</li> <li>Anomaly area lies on western edge of WHS core zone.</li> </ul>	<ul style="list-style-type: none"> <li>A deeper high density layer may be a material with high compactness relative to the surrounding and the localized low and high resistivity could most likely be due to the presence of localized moisture pockets.</li> </ul>	<ul style="list-style-type: none"> <li>All anomalies found are at least 1m below the maximum excavation, therefore would not be affected by the project.</li> </ul>	<ul style="list-style-type: none"> <li>While the SN-03 project would not directly affect the anomaly areas, given the uncertainty of what these areas could be PID will notify the Department of Archaeology and relevant research institutions of the findings in case they choose to undertake an archaeological investigation.</li> <li>Investigation should be conducted before October 2020.</li> </ul>
<b>E</b>  <b>Segment 1: Mahapal to Golden Temple (north side)</b>  <b>Maximum excavation depth: 2.5 – 3.0</b>	<ul style="list-style-type: none"> <li>No anomalies found until a depth of 4m.</li> <li>From 4-5m depth a long low resistivity segment found which includes a smaller high density segment.</li> <li>Anomaly area within WHS buffer zone.</li> </ul>	<ul style="list-style-type: none"> <li>A deeper low resistivity layer could be due to presence of moist clay and localized high density area may indicate the presence of more compacted zone relative to the surrounding.</li> </ul>	<ul style="list-style-type: none"> <li>All anomalies found are at least 1m below the maximum excavation, therefore would not be affected by the project.</li> </ul>	<ul style="list-style-type: none"> <li>While the SN-03 project would not directly affect the anomaly areas, given the uncertainty of what these areas could be PID will notify the Department of Archaeology and relevant research institutions of the findings in case they choose to undertake an archaeological investigation.</li> <li>Investigation should be conducted before October 2020.</li> </ul>
<b>F</b>  <b>Segment 2: Golden</b>	<ul style="list-style-type: none"> <li>No anomalies found until a depth of 4m.</li> <li>From 4-5m depth a small high density-high resistivity segment</li> </ul>	<ul style="list-style-type: none"> <li>The presence of deeper high density high resistivity may indicate the presence of more compacted area of</li> </ul>	<ul style="list-style-type: none"> <li>All anomalies found are at least 1m below the maximum excavation, therefore would not be affected by the project.</li> </ul>	<ul style="list-style-type: none"> <li>While the SN-03 project would not directly affect the anomaly areas, given the uncertainty of what these areas could be PID</li> </ul>

Anomaly Zone	Summary of Survey Findings	Interpretation	Considerations	Mitigation Measures
<b>Temple to Swotha</b>  <b>Maximum excavation depth: 2.5 – 3.0m</b>	found. • Anomaly area within WHS buffer zone.	non-metallic nature which could be local brick wall, stone or any compacted material pocket different than the surrounding.		will notify the Department of Archaeology and relevant research institutions of the findings in case they choose to undertake an archaeological investigation. • Investigation should be conducted before October 2020.

58. The subsurface survey found that:

- Most anomaly zones are deeper than the project's maximum excavation depth. Zones A and B would be directly affected by the project, whereas zones C, D, E and F are deeper.
- Where anomaly zones would be disturbed by the excavation, trial trenching will be done by the Contractor under the supervision of an Archaeological Expert Team (AET), prior to the onset of excavation for pipe-laying. As construction will start at the north end (outlet) of the pipeline.
- Where anomaly zones are at a greater depth than the maximum excavation of the project, PID will not take responsibility for further investigation as this would entail deep excavation and is outside the project scope. However PID has informed the Department of Archaeology of these areas and the potential for archaeological findings. DoA could then undertake their own investigation as required.
- In Zone C, the Patan Durbar Square core zone, anomalies are detected at a depth of 4m (maximum project excavation is 3m). All excavation work is already required to be undertaken using hand digging in the core zone, thus it is highly unlikely that, if the anomaly area was indeed archaeology, any damage would occur due to the project. Given the anomaly depth, any further investigation should be done at the behest of the archaeological authorities, and is outside the scope of the SN-03 project.
- PID expects that the pipelaying in the anomaly zones would not take place until at least six months after the contractor mobilizes, thus there is sufficient time for the contractor to carry out the trial trenches prior to construction in Zones A and B and, if archaeology is present, follow the chance finds procedures outlined in Annex 3. Similarly, if DoA decides to undertake investigations of Zones C, D, E, and/or F, there is time to do so prior to construction.

59. Relevant mitigation measures in line with these findings are included in Section 6.

#### 4.6. Intangible heritage

60. In addition to monuments, architecture and archaeology, intangible heritage is an important factor to consider in terms of the potential impacts of the SN-03 project. For this particular site, the intangible heritage is tightly linked with physical sites – as was noted in site visits and discussions, many temples and other sites are actively used for daily, weekly and periodic worship, rituals, and festivals. In addition to considerations listed above, **Error! Reference source not found.** also outlines the major festivals and segments of the SN-03 alignment that must consider these times in order to grant safe and clear access to important sites so as not to interfere or disrupt them.

*Table 4: Festivals and affected portions of SN-03 alignment*

Sn.	Name of festival	Affected Months		Affected alignment
		Nepali	English	
1	Rato Macchindranath Jatra	Baisakh	April/ May	Pulchowk-Gabahal-Sundhara-Lagankhel-Iti – Kumaripati-Jawlakhel
2	Krishna Asthami	Shrawan/ Bhadra	August/ September	Inside Mangalbazar

Sn.	Name of festival	Affected Months		Affected alignment
		Nepali	English	
3	Bhimshen Jatra	Shrawan	July/August	Mangalbazar-Sundhara-Okhu bahal- Tangal- Kumbeswori-Mangalbazar
4	Matiya Jatra	Shrawan	July/August	People visit whole Patan area for puja organized by Gabahal (Patan)
5	Gai Jatra	Shrawan-Bhadra	August	Throughout the alignment
6	Janaipurnima	Shrawan-Bhadra	August	Patan Darbar Square -Baglamukhi

Source: Project Field Survey, June 2018

#### 4.7. Conclusions from the heritage situation analysis

61. The heritage situation analysis conducted for the HIA informed the scope and method of the impact assessment and design of mitigation measures. The main conclusions of the analysis are:

- **The project is important to address the impacts of flooding on heritage assets.** During the monsoon, access to heritage sites is disrupted, floodwater is contaminated with sewage, and monuments themselves may be at risk due to waterlogging.
- **SN-03 would not be the first time the Patan Durbar Square core zone and buffer have been excavated.** Infrastructure services and underground utilities have been installed, with several excavations and site reinstatements over the years. While there have not been impacts on monuments and structures from past works, it is possible that subsurface archaeology has been damaged due to lack of proper excavation techniques and construction management. However this has not been confirmed.
- **Within Patan Durbar Square, impacts on subsurface archaeology is the main risk, but the HIA finds the risk is minimal.** Excavation for the pipeline is in an area with known archaeological assets, but the subsurface survey found that anomaly areas indicating the possibility of archaeology are only found at a depth more than 1m below the maximum excavation depth of the project. While the pipeline would pass through the monument zone, there is a wide working space and excavation would be unlikely to disturb historic structures and monuments.
- **Other archaeological risks:** The subsurface survey found six zones with properties that could indicate archaeology. Only two of these lie within the excavation depth of the project, and the other four are deeper and would not be disturbed. Mitigation measures are built into the project for both types of zones: those that are directly affected require trial trenching prior to pipe-laying, and DoA will be informed of those not directly affected in case the Department wishes to undertake their own investigation.
- **Within the buffer zone, impacts on the stability of heritage buildings is the main risk.** Streets where the pipeline would pass are narrower and some heritage structures located within the buffer zone have suffered earthquake damage and are in a fragile condition.
- **Intangible heritage, including rituals, sociocultural practices, and festival times, are key to consider.** The project implementation needs to assess these impacts to ensure safety, access, and lack of disruption during important times, as well as a smooth construction workflow.



- **The project is an opportunity to gain greater understanding of earlier architectural phases and settlements in Patan Durbar Square.** While many studies have been done on the architectural history, relatively little is known about the past settlements that lie underneath the project area. If done properly, the excavation can document the archaeology that other infrastructure alignments may have damaged or ignored. The subsurface survey carried out for this project provides the most detailed information to date on the conditions and properties of the Patan Durbar Square World Heritage Site, which can guide additional investigations by government and other researchers.
- **The construction phase will adopt a staggered, tailored construction methodologies for working in heritage areas.** These methodologies are reflected in the contract document's specifications and will be strictly monitored during implementation by an Archaeology Expert Team. Training for the contractor will be necessary as capacity is lacking among national firms.

## 5. COMPARISON OF DESIGN ALTERNATIVES

### 5.1. Alternatives assessment

62. The project area presents a number of design complexities and sensitivities, including heritage assets, natural flow paths, narrow streets and road conditions, fragile/earthquake-damaged buildings, and street vendors. The design team assessed several design alternatives in order to minimize social, environmental and heritage impacts but ensure a technically-sound and financially feasible solution to sewage and storm water management. The preferred option was selected after frequent site visits, stakeholder meetings, and expert discussions.

63. Given the complexities, especially of the possibility of impacting a World Heritage Site, options to not undertake the project, and to avoid Patan Durbar Square were assessed:

**Without-project alternative:** Continue to use existing combined sewer system as-is with some cleaning and maintenance.

→ **Result:** The drainage catchment area is shaped as a valley and the contributing area for the wastewater is large. However, the capacities of existing pipes are small. Bottlenecks exist in many places along the sewer lines. This option was rejected because hydraulically, division of flow is necessary when the volume of flow becomes too big.

**Avoid Patan Durbar Square completely:** Design an alignment that either uses larger pipes along narrower roads to the northwest and/or bypasses the square to the southeast.

→ **Result:** The option to use a larger pipe on Patko road to the northwest (Line 2 in the selected design option) was deemed to be risky because a larger capacity pipe of 1.4m diameter would be needed and the road width is only 4-4.5m. Many of the buildings along this road are in weak condition, so the necessary trench depth for a pipe of that size would require nearly the entire road width and risk damaging building foundations. Bypassing to the southeast was not possible due to the uphill gradient and sections of very narrow roads without the capacity to accommodate the required pipe sizes.

Once these options were decided to be unacceptable, four additional design alternatives are briefly summarized below:

#### Option 1

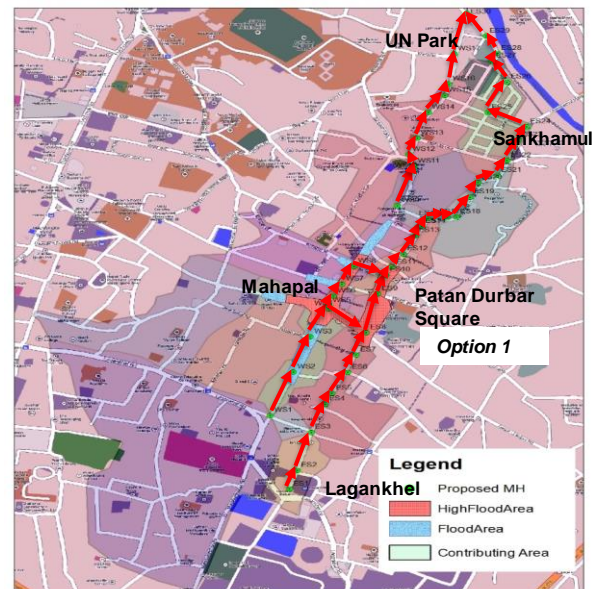
Lagankhel Baglamukhi- Sankhamul road

##### Pros

Wider road  
Does not pass religiously important religious sites (e.g. Baglamuki temple)

##### Cons

Increase ground surface elevation up to 1.5 m at Gahiti- gachhen road  
Deeper excavation would be needed for northwest segment to accommodate the necessary pipe size.



#### Option 2

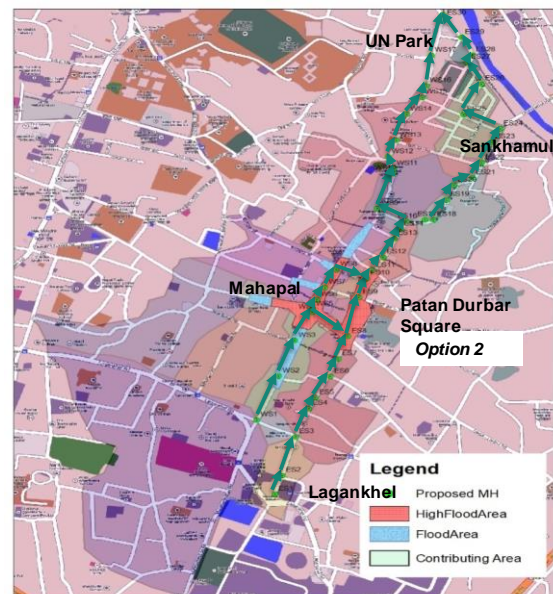
Along Khwalkhu road north of Baglamukhi- Chakupat- UN park

##### Pros

Sufficient gradient at Khwalkhu road north of Baglamukhi-

##### Cons

Narrow road (approx. 3m wide), could complicate excavation since excavation would take up nearly entire road width.  
Deeper excavation would be needed for northwest segment to accommodate the necessary size of pipe.



### Option 3

Dhaugal- Ikhachhen- chakupat- UN park PLUS  
Option 1 or 2

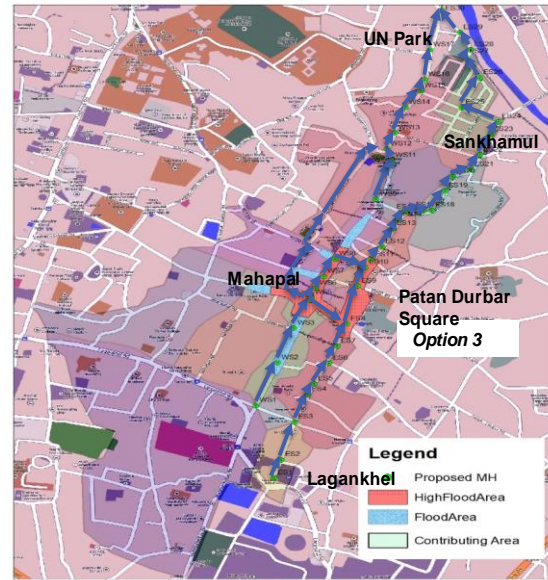
#### Pros

Division of flow to three smaller flow at Mahapal  
Pipe sizes will be smaller

#### Cons

Passes through Nagbahal (possibility of social issues, including damage to the Nagbhal Hiti stone spout, monuments, and narrow roads of 2.5m at two points)

Additional length of sewer about 755 m



### Option 4

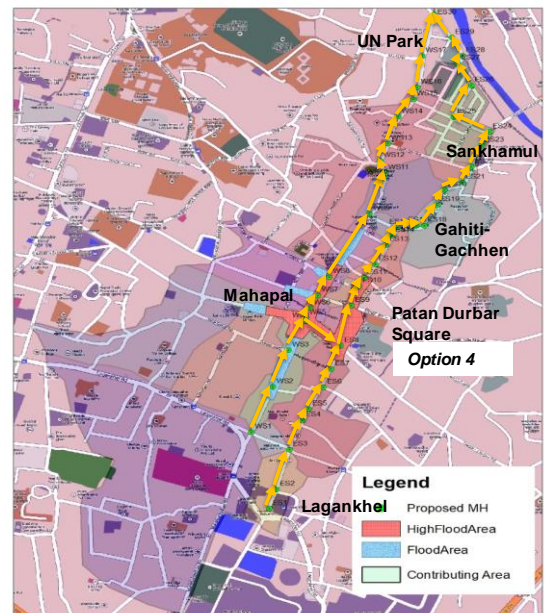
Along Khwalkhu road

#### Pros

Sufficient gradient  
Shorter path for flow travel  
Reduce load to sewer along

#### Cons

Possibility of social problems, as would pass nearby Baglamukhi temple and historic stone water spouts in narrow lanes..



## Selected option

Similar to Option 1: follows natural path of water, has less social issues, and wider roads relative to other options reducing risks of working in narrow roads.



## 6. POTENTIAL IMPACTS ON HERITAGE RESOURCES AND MITIGATION MEASURES

64. Impacts were assessed on the World Heritage Site as well as the buffer zone and areas outside the buffer zone. During the mobilization and construction phases, the main activities which would be most likely to have adverse impacts on heritage resources are:

- Removal of road/footpath surfaces
- Excavation of trenches
- Barricading of roads and footpaths
- Stockpiling of spoils materials
- Backfilling of trenches and reinstatement of surfaces

65. Impacts were assessed based on these activities, and are presented below in **Error! Reference source not found.** Actions to be taken during the mobilization phase to ensure readiness of all actors, as well as impacts on specific sites that must be considered, are also included in this section.

### 6.1. Pre-Construction and Project Readiness

66. Being able to mitigate construction-related impacts starts with ensuring that all parties are prepared during the pre-construction phase. The following steps will be taken and the findings reviewed and cleared prior to starting any works. If the findings identify significant impacts then the proposed design may need to be entirely revised:

- A subsurface investigation by geophysical experts was undertaken by specialist consultants subcontracted by the DSC prior to signing the construction contract. The survey findings are summarized in Section 4.5.
- An Archaeology Expert Team (AET) has been formed, composed of a DSC archaeologist (to be hired), DoA representative (appointed by the Director General in writing), Contractor's archaeologist (required in the staff qualifications), and an independent expert (see Annex 2 for composition of the team and roles). Suitably qualified and experienced archaeological supervision expertise must always be present on site for construction supervision, and a representative from DoA will be present at all times during construction in the WHS core zone, digging of trial trenches, and any other areas found to be sensitive. The conduction of any works by the contractor without the required expertise present will be strictly penalized;
- PID will lead, in coordination with DSC-06 and DoA, preparation and facilitation of a training program for the selected Contractor and staff on expectations for working in heritage areas, possible chance finds, and procedures to be attended by all management personnel and laborers involved in the project including from subcontractors.
- Strict penalties will be applied to individuals, subcontractor and Contractor for conduction of works not following procedure or without the required expertise present.
- PID will identify laborers who have been trained by Durham University in archaeological excavation after the earthquake, attempt to locate them, and provide contact information to the selected contractor. DoA is expected to have this information.
- Contractor will prepare a site-specific Environmental Management Plan (S-EMP) that includes detailed method statements for all mitigation measures in the HIA and EMP, which must be approved by DSC-06 and PID, and cleared with ADB.



- Before excavating the site the total documentation of the adjacent buildings structural integrity, vibration limits, heritage values and the heritage assets of the site including subsurface archaeology should be prepared, such as photography and drawings. This may require the services of archaeologists, geotechnical and structural engineers, some draftsmen and an experienced photographer. The team of archaeologists (DSC-06, PID, DoA) will decide the modalities and schedule of their work.
- The contractor, together with PID, will coordinate with DoA or PDMMO to designate an on-site representative during the entire duration of the project.
- Prior to initiating works, the Archaeology Expert Team (PID, DSC, DoA) will inspect the site and assess contractor readiness. Works may only commence after written approval of the archaeologists.

## 6.2. General Construction-Related Negative Impacts and Mitigation Measures

67. The following potential impacts ( were assessed for the Patan Durbar Square core monument zone (“Core Zone”) and the surrounding buffer (“Buffer Zone”). These mitigation measures are integrated into the overall project Environmental Management Plan. The same mitigation measures apply to the operational phase in case of any excavation is needed to repair leaks, clear blockages, etc.

*Table 5: Potential impacts on heritage resources and mitigation measures*

Potential impact	Zone	Description of impacts	Mitigation Measures
Reinstatement of existing road/footpath surfaces incompatible with existing condition.	Core/buffer zone	<ul style="list-style-type: none"> <li>Road surfaces and footpaths will need to be removed temporarily for trench excavation.</li> <li>Only the WHS core zone is noted to be paved with red bricks that are important for aesthetic value of the heritage area. Other zones are either asphalt or modern flagstones.</li> <li>The existing red paving bricks in the core zone are modern as well and materials/capacity exist to replace any damaged bricks that cannot be preserved during site reinstatement.</li> <li>The area has been excavated and properly reinstated several times before for installation of other utilities, thus impacts are not considered irreversible.</li> </ul>	<ul style="list-style-type: none"> <li>Any historic paving stones (e.g. more than 100 years according to DoA) shall be unearthed without affecting its shape and size and properly stored during the time of excavation in a location designated by DoA and, unless DoA advises otherwise, will be reinstated after completion in its original form satisfying the requirement of DOA and any other recommendations from the subsurface investigation.</li> <li>Specifications included in the bidding documents for bricks and flagstones consistent with the current paving style (see Section 6.4). DoA will closely supervise to ensure the specifications provided are followed. If not, the DoA will advise the DSC to stop work until rectified.</li> <li>Cast-iron manhole cover designs are specified in the DPR and construction specifications to be consistent with current manhole covers.</li> <li>The contractor should have paving materials (e.g. bricks and flagstones) on-hand before commencing the project to ensure sites are properly reinstated without delay.</li> </ul>
Damage to structures and archaeology due to	Core and buffer zone	<ul style="list-style-type: none"> <li>Excavation along the core area from Lagankhel to Mangalbazar could impact older building which are</li> </ul>	<ul style="list-style-type: none"> <li>A geotechnical expert will survey the area and set vibration limits prior to construction. These limits will be included in the contractor’s specific EMP (S-</li> </ul>

Potential impact	Zone	Description of impacts	Mitigation Measures
excavation and vibration		<p>already damaged significantly by the 2015 earthquakes.</p> <ul style="list-style-type: none"> <li>• Foundations of monuments within the core zone could be damaged if the excavated trench along the heritage area is filled with rain water.</li> <li>• Vibration from compaction could irreparable damage both monuments in the core zone and monuments/damaged/fragile buildings in the buffer zone</li> <li>• Vibration from heavy machinery could irreparable damage both monuments in the core zone and monuments/damaged/fragile buildings in the buffer zone</li> <li>• Excavation could damage dilapidated traditional houses, and/or shrines located at ground level.</li> </ul>	<p>EMP) and method statements. The expert will remain on board to monitor buildings during the construction phase.</p> <ul style="list-style-type: none"> <li>• A provisional sum is included in the BoQ for shoring and bracing of old buildings to mitigate additional structural damage. Any accidental damages will be repaired at the contractor's cost under the supervision of the DSC and PDMMO.</li> <li>• The contractor will immediately cease all operation if the archaeologist or site engineers observe or suspect any structural damage to monuments or cultural objects (e.g. cracks).</li> <li>• No vibrating machinery allowed in the Core Zone, only hand digging and compaction is allowed unless low-vibration machinery deemed absolutely necessary.</li> <li>• Excavation work along the Patan Durbar Square will be carried out in presence of a representative from Department of Archaeology. Allowances for the DoA representative will be covered by the Contractor – this is included in a provisional sum in the bidding documents.</li> <li>• Manual excavation (Patan Darbar Square, 157.5 m) should be carried out under supervision of DOA. Manual excavation is required in other areas where roads are narrow and buildings dilapidated.</li> <li>• Excavation should take care not to damage shrines located at ground level (see Figure 16 for locations).</li> <li>• The contractor's work program will factor in stoppage of work during the rainy season.</li> <li>• Excavation work will be carried out in piecemeal approach: For the WHS Core Zone, no more than 10 m excavated at one time. For the buffer zone, 8 – 25 meters may be excavated at one time.</li> <li>• All excavated trenches will be backfilled properly according to the methods in Annex 1 and light</li> </ul>

Potential impact	Zone	Description of impacts	Mitigation Measures
			<p>hand-held compactors will be permitted to get quality compaction so as to have an even smooth top surface.</p> <ul style="list-style-type: none"> <li>Excavated trench must have adequate shoring, which will be inspected by the DSC structural engineer. All trenches along a given segment will be rehabilitated prior to further excavation.</li> <li>Plastic pipes to be used in core area and parts of buffer zone which can be carried by hand in order to reduce the impact of heavy machinery.</li> </ul>
Chance finds of immovable subsurface archaeology (e.g. walls, foundations, wells)	Core and buffer zone	<ul style="list-style-type: none"> <li>Site analysis indicates that archaeological remains may be present beneath the pipeline right of way, such as historic building foundations.</li> <li>Excavation could cause irreparable damage to archaeology if heavy machinery or poor construction practices (even by hand) are used.</li> <li>A subsurface investigation found that risks of encountering archaeology in Patan Durbar Square are unlikely, though there is potential archaeology more than 1m below the maximum excavation depth of the project.</li> <li>Two zones were identified where subsurface properties indicate archaeology could be present within the project's excavation depth.</li> <li>Four zones were identified (including Patan Durbar Square) where properties indicate archaeology could be present, but at a depth below the project's maximum excavation.</li> </ul>	<ul style="list-style-type: none"> <li>Excavation work will be carried out in piecemeal approach, with 10 meter trench maximum in Core Zone and 8 to 25 meter in buffer zone.</li> <li>Excavation work along the Patan Durbar Square and will be carried out in presence of a representative from department of archaeology. The Contractor will be responsible for covering the cost.</li> <li>In Zones A and B (indicated in the subsurface survey), trial trenching using hand-digging must be done prior to project excavation, under the supervision of the AET.</li> <li>The Department of Archaeology will carry out any additional investigation of zones where properties indicate archaeology could be present, but is below the maximum excavation depth of the project.</li> <li>Excavation in Patan Durbar Square will be carried out during the daytime hours to ensure visibility of any chance finds. Other areas may also require day works to ensure visibility and safe handling of any chance finds. This will be determined by the subsurface investigation. In order to reduce the amount of disturbance in the area, once pipes are installed site reinstatement can continue during night hours.</li> <li>The contractor will be required to include a qualified</li> </ul>

Potential impact	Zone	Description of impacts	Mitigation Measures
			<p>archaeologist on their team, who must have at least 10 years of field experience.</p> <ul style="list-style-type: none"> <li>Only laborers trained in excavation in historic areas should be employed, and if unavailable laborers must be trained prior to commencement of works as part of project kickoff meetings.</li> <li>A GPR survey has been done for Patan Durbar Square core zone, but a subsurface investigation will be undertaken to maximum pipeline depth for the entire right of way (if possible) prior to construction in order to identify any other areas in the buffer zone with potential sub-surface archaeology. This study, including a risk map and any physical investigations, must be completed at least 30 days before excavation of a certain area.</li> <li>Chance finds procedures as described in Annex 1 will be followed.</li> </ul>
Chance finds of smaller/movable artifacts	All zones	<ul style="list-style-type: none"> <li>In addition to potential archaeological finds, chance finds of smaller relics and artifacts are likely in all zones given the long history of settlements in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Chance finds procedures are outlined in Annex 1 and included in the EMP and bidding documents.</li> </ul>
Damage or theft of archaeological finds	All zones	<ul style="list-style-type: none"> <li>Damage or theft of these artifacts could occur if not properly managed, causing a loss of heritage value and missed opportunity for better understanding of the area's history.</li> <li>The presence of archaeological remains on site can raise particular security issues.</li> </ul>	<ul style="list-style-type: none"> <li>Archaeologists engaged in works on site should be provided with secure, lockable, office and storage accommodation.</li> <li>If the site is well publicized while work is still ongoing, or if it becomes known that valuable finds have been made, site managers or in-charges may be advised to consider additional security measures to discourage unauthorized entry to the site (e.g. hiring security guards)</li> <li>Any unauthorized removal of archaeological materials will result in immediate dismissal from job duties and be subject to fines by DoA.</li> </ul>
Disruption to	All zones	<ul style="list-style-type: none"> <li>The project area lies in the center of</li> </ul>	<ul style="list-style-type: none"> <li>A maximum of 10m trench in the Core Zone and 8-</li> </ul>



Potential impact	Zone	Description of impacts	Mitigation Measures
pedestrians, tourists, and local people in heritage areas		<p>the city in tourist area as well as in business hub. The density of the people traversing there is high.</p> <ul style="list-style-type: none"> <li>Construction would restrict access to certain areas along the right-of-way, including the pedestrian pathway through Patan Durbar Square which is heavily traversed by tourists and local residents making use of heritage resources for leisure and cultural purposes.</li> <li>If spoils, bricks and other materials are stockpiled on site this will further disrupt access and be a nuisance or potentially dangerous for pedestrians and road users.</li> </ul>	<p>25 m in other areas will be excavated and will be backfilled within same day.</p> <ul style="list-style-type: none"> <li>All excavated trench section will have hard safety barricade</li> <li>Erection of safety signage boards, project information boards, prohibiting unauthorized person</li> <li>Excavated materials shall be handled properly; which shall be loaded to dump truck and shall be taken to temporary disposal site, which will be agreed between the Contractor and LMC prior to construction. The excavated material shall not be stored along the excavated trench.</li> <li>During the day when construction has halted, metal plates will be placed across open trenches to provide for safe pedestrian and vehicular access (where vehicles allowed).</li> <li>Take care to minimize business disruptions and provide alternative access to businesses.</li> <li>The contractor should be fully equipped (manpower, materials, equipment) prior to starting works in order to avoid delays and minimize disruptions.</li> </ul>
Disruption of traffic conditions	All zones	<ul style="list-style-type: none"> <li>The project area lies in the center of the city in tourist area as well as in business hub. The density of the people traversing there is high.</li> <li>Trench works will affect traffic conditions in the core area and outside.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor to prepare Traffic Management Plan</li> <li>Ensure that Traffic Management Plan carefully considers heritage areas, considering the easy flow of the traffic and always try to give some alternatives.</li> </ul>
Disruption of festivals and social/religious rituals and functions.	All zones	<ul style="list-style-type: none"> <li>All zones include sites that are important for festival times and periodic social/religious/cultural practices.</li> <li>Construction activities could restrict access to these sites.</li> <li>Construction delays are possible due</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor's work plan must consider annual and periodic (daily/weekly/monthly) rituals and other practices. This plan should be consulted with local representatives to ensure that all activities are captured.</li> <li>Safe access road/paths for local devotees will be provided for them to reach temples when access is</li> </ul>

Potential impact	Zone	Description of impacts	Mitigation Measures
		to festival times.	<p>restricted.</p> <ul style="list-style-type: none"> <li>An alternative should always be made ready in case a road is needed for marriage procession, ambulance, funeral etc.</li> </ul>
Visual impact on heritage resources during construction	Core zone	<ul style="list-style-type: none"> <li>Patan Durban Square's temples and monuments are a major tourist attraction due to their unique visual qualities and beauty.</li> <li>Construction activities and barricades will be present in the core zone, which will temporarily impact the visual qualities.</li> </ul>	<ul style="list-style-type: none"> <li>To the extent possible, work sites should maintain a tidy environment.</li> <li>A piecemeal approach will be taken to works such that a maximum 25m stretch will be barricaded at one time in the buffer and 10m in the core zone.</li> <li>Attractive signage should be placed at the worksite, explaining that the project is a temporary disruption that is intended to improve sanitary and flooding conditions (in Nepali, English and other relevant languages for typical tourists)</li> </ul>
Improper disposal of surplus materials/spoils	Core/buffer	<ul style="list-style-type: none"> <li>Haphazard disposal of spoil materials may create dust nuisance, disturbances to the existing drainage lines, and changes to the existing land use practices.</li> </ul>	<ul style="list-style-type: none"> <li>All the excavated spoil and construction materials shall be removed completely from the construction area to avoid dust that may generated with the plying of vehicle along backfilled trench.</li> <li>The surplus excavated material shall be disposed off at designated and stabilized sites set after coordination with Lalitpur Municipality at haulage distance approx. 10 km, in an environmentally friendly manner.</li> <li>Storing excavated material, whether temporarily or permanently, shall be subject to prior approval. Where required, drains shall be constructed to prevent the undesirable accumulation of water in or around spoil dumps.</li> </ul>

### 6.3. Potential Impacts on Specific Sites

68. In conducting the site investigation, the HIA team examined potential impacts on specific structures and sites. Because all excavation would occur in existing road rights-of-way, no heritage buildings or structures would be directly impacted (with the possible exception of some small shrines along the roadway, though these are outside of the trench width – see Figure 16). However indirect impacts are possible, most notably on the Manga Hiti water spout and more generally on structures that were damaged in the 2015 earthquake.

#### Manga Hiti Water Spout

69. The Manga Hiti water spout, located in the Patan Durbar Square core monument zone, is one of the very few ancient water conduits in the Kathmandu Valley that are still running, and also one of the best examples of stone water spouts in the Valley. It has provided water to local people since Lichchavi period (c. 400 – 750 C.E.), and continues to do so during the monsoon months. Prior to the 2015 earthquake water ran continuously, however the earthquake likely damaged the pipes such that water only flows during rains. The location of the pipes and route are currently unknown, but it is thought that at least in Durbar Square the pipes likely run underneath the Patan Museum complex.

70. The canal of Manga Hiti comes from the west side of the water spout near Manimandapa, and likely originates from Lagankhel open space. In many waterspouts of Patan the water is brought through the royal canal from Tikabhairbh, some 10 km away. While the pipe locations are not known, care must be taken not to damage any water conduits during excavation from the SN-03 starting point in Lagankhel itself (see Figure 5 for location of Lagankhel). The excavation in this area is one of the most crucial areas to excavate carefully, as it seems that the source of the canal may be the ground water collected in the open area of Lagankhel and surroundings. Most probably the canal has been passing from Lagankhel through I-Baha-Bahi; therefore, to be on the safe side from Lagankhel itself a very careful excavation is necessary without hampering the canal. By any means the canal should be kept intact, and the water duct should not be disturbed so as to mitigate any impact on water supply to the Manga Hiti site.

71. The general mitigation measures for excavation in **Error! Reference source not found.** will be adequate to mitigate impacts on Manga Hiti, including hand-digging in sensitive areas and constant supervision by archaeologists and engineers.

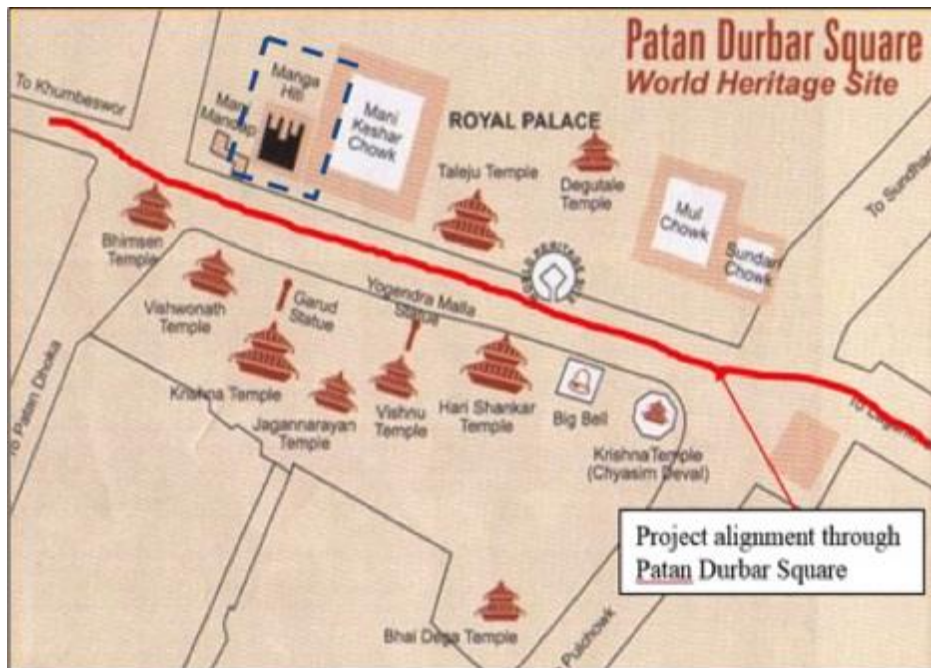


Figure 23: Manga Hiti site in WHS core zone with pipeline alignment (top – see blue dashed box); Manga Hiti water spout (bottom). Photo taken by HIA team, October 2018.

## Earthquake-damaged structures

72. Some traditional houses like Rajopadhaya Agam Ghar or Sacred House (also known as Patuko Agam Ghar) and major monuments such as Bhimsen Temple of Durbar Square are badly damaged by the earthquake (2015) and remain under reconstruction. In these areas excavation should be conducted very carefully and should be ready to mitigate any impacts. Special precaution should be taken before excavation, in line with the mitigation measures

presented in **Error! Reference source not found..** An initial survey to identify vulnerable structures has already been carried out, and prior to any construction a geotechnical expert will carry out a more detailed survey to establish vibration limits for works near these buildings. These limits will be included in the contractor's site-specific environmental management plan, and a geotechnical expert is included in the DSC for structural monitoring during the construction phase.



Figure 24: Earthquake-damaged traditional Newari house (left); Earthquake damage and reconstruction of monuments in WHS monument zone (right). Photos taken by HIA team, October 2018.

73. Additionally, the LMC ward offices of Wards 12 and 14 recently declared a segment of the buffer zone and SN-03 right-of-way to be free from 4-wheel motor vehicle traffic on the Mangal Bazaar side of Patan Durbar Square. This was done largely because of the narrow roads and high pedestrian traffic during daytime trading hours, but will also help to reduce overall vibration stress in an area with several vulnerable buildings.



Figure 25: Public notice of car-free area near Mangal Bazaar (February 2018)

## 6.4. DoA Requirements

74. In the consultation process with the DoA as part of the HIA, the Department provided a No Objection to the project (see Annex 2), but provided the following requirements are met as outlined in Table 6. Table 6 also shows how adherence to the DoA requirements were integrated into the design and bidding documents.

Table 6: DoA Requirements

S.No.	Particulars	Section in DPR	Specification	BOQ item No.
<b>DoA Recommendation for pavement</b>				
1	Dachhi aapa (machine made bricks) should be used for pavement (as existing ones)	section 5.1.14 "Reinstatement of pavement"	Section 20.6	Part C " Miscellaneous items", Work No. C1 " Dismantling and reinstatement road surface", C-2
2	The bedding for edge soling can be applied on lime surki sand mortar (1:1:3)	section 5.1.14 "Reinstatement of pavement"	Section 20.7	Part C " Miscellaneous items", Work No. C1 " Dismantling and reinstatement road surface", C-3
<b>DoA recommendation for supervision</b>				
3	DOA Allowance	section 7.4 "Environment Management Plan (EMP) with Mitigation Measures"		Part A " General Item", Work No. A4 " Provisional sum", G

## 6.5. Potential Positive Impacts

75. Reduced flooding is the most notable direct positive impact of the project on the heritage core and buffer zones. Given the potential risks of flooding on building foundations, as well as the creation of poor sanitary conditions by contaminated floodwater on one of the Kathmandu Valley's premier heritage tourism and religious sites, the project should benefit the area in terms of heritage protection and accessibility during the monsoon.

76. Should archaeological remains and other chance finds be uncovered during excavations, there is also an indirect positive impact in gaining a greater understanding of past history of the Patan Durbar Square area. Enhancing this opportunity and mitigating negative impacts on archaeology will require proper excavation techniques and technical expertise on the PID, contractor, and supervision consultant teams.



## 6.6. Overall Assessment of Impacts

77. **Significance of Impacts:** The HIA found that the impacts are temporary, and limited to the construction phase. The main impacts found through the HIA center on maintaining an easy flow of traffic management, regulation of trade and commerce, and peaceful continuation of traditions of local people. Damage to subsurface archaeology and fragile buildings is also a main concern. However the subsurface survey found that potential archaeology in the WHS is below the project's maximum excavation depth, and two zones of potential archaeology in the buffer zone will be investigated under the supervision of an archaeologist prior to construction. Based on the findings of the HIA and related studies, it is anticipated that the potential impacts can be mitigated with good, low-impact construction practices in risk areas and heightened supervision with qualified archaeologists and heritage experts.

78. **Impact on Outstanding Universal Value:** It is highly unlikely that the Outstanding Universal Value (OUV) of the Patan Durbar Square World Heritage Site would be threatened by the project activities. This was concurred by DoA in a letter to UNESCO dated 08 August 2018 (see Annex 2). Monuments are highly unlikely to be impacted by the construction activities, and in fact are expected to benefit due to reduced flooding and water-ponding during the monsoon season. The project would not construct any visible modern structures that would hinder the OUV of Patan Durbar Square.

## 7. HIA IMPLEMENTATION ACTION PLAN

79. Management of the impacts on heritage resources are intended to be specific, practical, and operations-oriented. Where capacity on these issues is lacking, the project will build in measures for training.

80. The HIA team determined that a standalone Heritage Management Plan (HMP) was not appropriate for this project, given the impacts are temporary, and the project objective is the installation of infrastructure rather than supporting cultural heritage management or assets. An HMP by nature is a plan for short- medium- and long term management of overall heritage sites, which is not the objective of the SN-03 project.

81. Because impacts are temporary and related to construction, it was deemed to be more appropriate and effective to fully integrate heritage issues into the project safeguard compliance, engineering designs, procurement, and supervision, as well as develop a simple implementation action plan for doing so as well as enhancing capacity and supervision for works in a sensitive heritage zone.

### 7.1. Project management-level actions

- PID (through a firm subcontracted through the DSC) has undertaken a subsurface investigation. Further physical investigation will be undertaken according to the findings, discussed earlier.
- PID (through a consultant subcontracted through the DSC) will contract a geotechnical engineer to set vibration limits in sensitive areas (e.g. heritage areas and near fragile buildings) and building monitoring. This will be carried out prior to any construction, and the vibration limits will be included in the contractor's EMP and method statements.

- PID to retain an on-call heritage specialist consultant with background in archaeology and strong knowledge of archaeology and cultural heritage in Nepal.
- Mitigation measures have been integrated into the project Environmental Management Plan and contractor will include method statements in their site-specific EMP.
- PID will develop a contractor training program (together with DSC-06 and DoA). DoA has already signaled that they are willing to be involved in the training. As part of this training program, Ward chairs and LMC to be trained on heritage issues and oversight (potentially together with Contractor or as separate training)

## **7.2. Construction specifications and bidding documents**

- The DSC has included specifications for all relevant mitigation measures in the bidding documents, including recommendations and specifications provided by DoA.
- These specifications were reviewed by the PID heritage specialist and ADB
- Specifications were costed in the BOQ on a unit basis where relevant and at times on a lump-sum basis.
- A penalty of 1% of IPC will be issued to the contractor in case of non-compliance with safeguards, including mitigation measures for heritage impacts
- The DSC developed specifications included in the “Carrying out sewer works in World Heritage Sites”, which is included in the bidding documents.

## **7.3. Contractor requirements**

- The contractor qualifications includes an archaeologist, who must be present on site. The Archaeologist should have a degree in archaeology with extensive field experience, knowledge of archaeological investigations and excavation, and at least 10 years of relevant experience.
- Preferred experience in heritage sites.
- Where possible, use laborers that have been trained in archaeological excavation. Durham University previously trained 150 laborers in these techniques, and where possible these workers should be used.
- The selected Contractor will be required to undergo a heritage management training before any works are done. PID will lead in preparing this training, together with DSC-06 and DOA.
- Prior to starting works, the contractor will prepare a S-EMP that includes detailed method statements for the mitigation measures identified in the HIA and EMP, to be reviewed and approved by DSC-06 and PID and cleared by ADB.

## **7.4. Supervision and oversight**

- **PID** is responsible for overall supervision of the works.
- **DSC-06** is responsible for day-to-day field monitoring, ensuring the Contractor’s strict adherence to the HIA, IEE, EMP and S-EMP, and liaising with authorities in case of chance finds or any other issues.
- **DoA** will provide a representative archaeologist to be present during excavation works, who will be on-hand in case of any chance finds or other issues.
- **LMC** will lead the whole implementation process as well as obtain all approval on archaeological aspects from relevant authority and undertake all required approval with other utilities agencies such as Nepal Electricity Authority, Nepal Telecom, KUKL including the traffic Police (see Memorandum of Agreement in Annex 2 – section VII and VIII).

- **Ward Chairperson** a Coordination Committee will be formed under the respective ward Chairperson for facilitation of the works and coordination with local people.
- **Police:** PID to coordinate as needed with the police.

## 7.5. Implementation Budget Estimates

82. Costs borne by the contractor were not estimated here as these form part of the BOQ and are aggregated with other safety measures, construction materials, and environmental and social mitigation measures. The following cost estimates as outlined in Table 7 by the PID and LMC as part of their oversight. The total cost for ensuring project readiness and supervision is approximately 46,10,000 Nepal Rupees (about \$40,500).

*Table 7: HIA Budget Estimates*

	Amount (Rs)	Responsible	Phase
<b>A. Supervision</b>			
Department of Archeology oversight	3,60,000	Contractor	Construction
PID Archaeologist/heritage expert	18,00,000	PID/DSC	Construction
<b>Subtotal A</b>	<b>21,60,000</b>		
<b>B. Training</b>			
1-day training for LMC and ward officials	1,00,000	PID/DSC	Mobilization
At least 2-day training for contractor and laborers	1,00,000	PID/DSC	Mobilization
<b>Subtotal B</b>	<b>2,00,000</b>		
<b>C. Other</b>			
Subsurface investigation	22,50,000	PID/DSC	Mobilization
<b>Subtotal C</b>	<b>22,50,000</b>		
<b>Total (A+B+C)</b>	<b>46,10,000</b>		

## 8. STAKEHOLDER ENGAGEMENT AND PROJECT APPROVALS

### 8.1. Consultations

83. As part of the feasibility studies and HIA, an extensive consultation program with key stakeholders was carried out, in line with the requirements pertaining to environment and social considerations of ADB. The tools used for consultations were stakeholder workshops and meetings, interviews, structured questionnaires, and focus group discussions (FGD). These consultations provided inputs for identification of the felt needs of the communities, and the relevant stakeholders.

84. Consultations were undertaken with key stakeholders about the project information; potential impacts and mitigation measures were assessed and discussed with stakeholders. The consultations helped in identifying the felt needs/concerns and priorities of the stakeholders. While precautions were recommended, no stakeholders raised objections to the project.

85. Table 8 provides a summary of consultations and discussions held with stakeholders for the overall design, IEE, and HIA, which were done in an integrated fashion. More details on these meetings can be found in Annex XIII of the IEE:

*Table 8: Stakeholder Consultations*

Sn	Date	Institution	Total	Male	Fem	Topic, Issue & decision
1	2075.2.10	LMC	34	29	5	Presentation on DPR at LMC to different stakeholders
2	2075.2.23	LMC			2	Coordination meeting with different government agency
3	2075.03.11	Ward 5	11	7	4	Information dissemination of the project. Coordination with ward committee and local community members
4	2075.3.12	Ward 12	21	6	15	Information dissemination of the project. Coordination with ward committee and local community members
5	2075.3.12	Ward 19	15	11	4	Information dissemination of the project. Coordination with ward committee and local community members
6	2075.3.15	Ward 11	16	14	2	Information dissemination of the project. Coordination with ward committee and local community members
7	2075.3.15	Ward 9	28	23	5	Information dissemination of the project. Coordination with ward committee and local community members
8	2075.3.15	Ward 16	19	14	5	Information dissemination of the project. Coordination with ward committee and local community members
9	2075.11.1	KVPT (Country Director)	1	1		Discussion of project; KVPT was positive about project.
10	2075.11.1	PDMMO (Chief)	1	1		PDMMO Chief joined site visits, PDMMO was positive about project.

## 8.1. Notices and Approvals

86. The PID has followed the applicable legal procedures and guidelines for undertaking works in a WHS. **Error! Reference source not found.** below summarizes notices and approvals granted during the project design – full letters can be reviewed in Annex 2.

*Table 9: Chronology of Notices and Approvals*

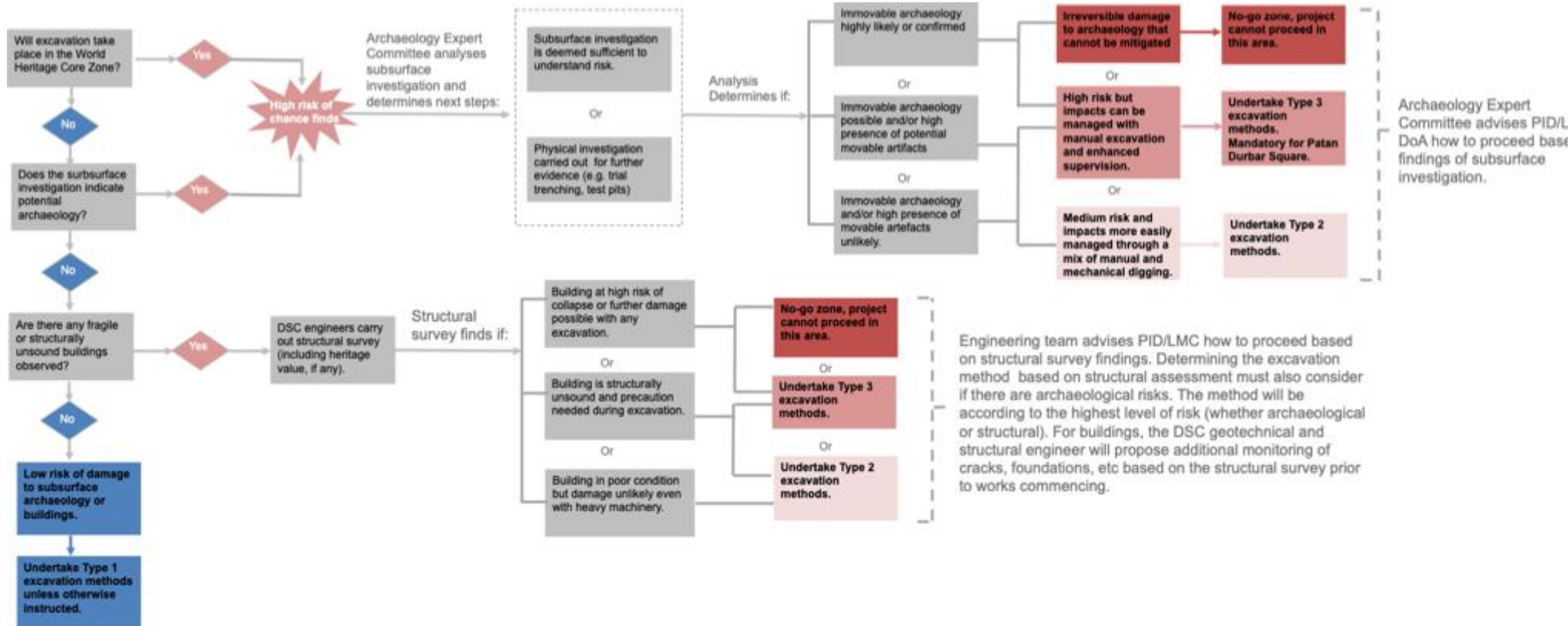
Date	From	To	Purpose
04 June 2018	Lalitpur Municipality	Department of Archaeology	Project notification, description (including drawings) and request for permission to carry out project.
13 June 2018	Department of Archaeology	Lalitpur Municipality	No objection to project granted and commitment of DoA personnel to supervise.
06 July 2018	LMC Mayor	UNESCO Chief	Project notification, description, rationale, request for feedback.
06 Aug 2018	LMC/PID		Signed Memorandum of Agreement between PID and LMC to identify roles and responsibilities for project management. See Sections IV and VII in particular.
08 Aug 2018	DoA Director General	UNESCO Director General	Inform UNESCO of the project; statement that project would not impact OUV of WHS.

## 9. CONCLUSIONS AND RECOMMENDATIONS

87. The HIA found that the SN-03 project could pose some risks to the heritage assets of the project area, most notably to sub-surface archaeology, fragile earthquake-damaged buildings, and disruption of religious and sociocultural practices in both the core monument zone and the buffer zone. However the HIA finds that the risks are temporary during construction and manageable so long as the mitigation measures are strictly followed and there is strong supervision by the DSC and PID. The team noted significant commitment of PID and LMC to ensure that heritage aspects were fully integrated into the DPR, bidding documents, and EMP, and coordinated consultations with all levels of government to develop technical specifications and inputs to the design and mitigation measures. Implementation will be complex and challenging, but given the flooding problems that is causing impacts on both the communities and heritage assets the project is clearly important and a long-term solution is needed to protect the culturally and historically unique Lalitpur core area from damaging flooding and sewer overflows.

## Annex 1: Determining Appropriate Excavation Method

Before any excavation, the DSC must determine the method appropriate to the level of risk in a given area. Prior to construction, a sub-surface investigation will be carried out by the DSC to survey where along the project right-of-way archaeological remains might be present. This will then guide updating the construction methodology. The following chart guides the process to determine the method, which are divided into the following three types of areas according to the DPR Annex for Sewer Network Details at World Heritage Site.





**Excavation in all areas:**

- Materials from excavated trench will be transported and stacked to the nearest open space to be decided by the Engineer-in-Charge or the place allocated by Contractor, around 1 km from the Patan Durbar square. For loading and unloading, small tippers will be used. This excavated material shall be brought back to the site of work for filling the trench. Shoring sheeting and bracing will be carried out as described in section 4.4.
- In case the presence of water is likely to create unstable soil conditions, a well point system erected on both sides of the trench shall be employed to drain the immediate area of the sewer trench prior to excavation operation. A well point system consists of a series of perforated pipes driven into the water bearing strata on both sides of a sewer trench and connected with a header pipe and vacuum pump. If excavation is deeper than necessary, the same shall be fitted and stabilized before laying the sewer.
- The proposed excavation at any one time shall be limited to such lengths, which does not cause inconvenience to surrounding inhabitants and road traffic. All excavations left unattended shall be adequately protected with approved fencing and barricades and with flashing lights where required.
- Before excavation pumps and convey pipes have to be arranged to convey sewage from upstream to downstream manholes. At least two pumps of sufficient capacity and head and 100 mm flexible pipes should be used.
- Bypass way of at least 1 m for people will be provided with proper barricades and placing chequered plates supported on channels.
- Any archaeological artifacts identified during trench excavation will follow the Procedures for Archaeological Chance Finds included in the Heritage Impact Assessment.

**Area Type 1 Excavation method**

- The excavation of trenches for pipelines shall be done mechanically using appropriate equipment and some portion by manually.
- The excavation of trench will be carried out for every 15 to 25 m for at least two DWC pipe can be installed.
- Excavation will be carried out during the night time as far as possible.
- Vibration limit will be set by Engineer following geotechnical survey, and Contractor to include in S-EMP and method statements.
- Any archaeological artifacts identified during trench excavation will follow the Procedures for Archaeological Chance Finds.

**Area Type 2 Excavation method**

- The excavation of trenches for pipelines shall be done half mechanically and half manually using appropriate equipment.
- Small equipment and vehicle will be used especially small JCBs for excavation, small tipper trucks, compactor vibration machine etc.
- Hand ramming is proposed for compaction and small vibration machine is allowed in these areas but must not exceed vibration limits per geotechnical survey.
- Vibration limit will be set by Engineer following geotechnical survey, and Contractor to include in S-EMP and method statements.
- The excavation of trench will be carried out for every 8 to 25 m for at least one DWC pipe to be installed.
- Excavation will be carried out during the night time as far as possible.

**Area Type 3 Excavation method**

- The excavation of trenches for pipelines shall be done full manually using appropriate equipment.
- Hand ramming or small vibration machine where unavoidable is allowed in these areas, and must not exceed vibration limits.
- Vibration limit will be set by Engineer following geotechnical survey, and Contractor to include in S-EMP and method statements.
- The excavation of trench will be carried out for every 8 to 10 m for at least one DWC pipe to be installed.
- Excavation will be carried out only during day to more easily identify chance finds. Pipe installation and site reinstatement may proceed at night time if required.
- Equipment and heavy machines will not be used for trench excavation or compaction within the heritage site.
- Excavation work will be carried out in piece meal approach.
- Excavation work along the Patan Durbar Square will be carried out in presence of a representative from DoA. No excavation work will be executed in absence of representative from the Department.

## Annex 2: Archaeology Expert Team

The HIA recommended that the project establish an Archaeology Expert Team (AET) that is composed of archaeological experts from each of the key implementers and institutions involved in the project.

### **The main objectives of the AET are:**

- To provide expert advice and guidance on all archeological matters related to the project activities
- To ensure responsive coordination and decision-making in the event of chance finds, in order to ensure that the project is not unnecessarily delayed and thereby disruptive to the community and/or causing additional financial cost
- Serve as a decision-making body to advise on appropriate methods for archiving, excavation, handling, and further study of any chance finds
- To promote a best practice example of undertaking infrastructure works in a sensitive heritage and archaeological zone in the Kathmandu Valley.

The AET will be composed of the following members, who will undertake the following tasks:

### **Department of Archaeology**

*The AET representative will be an expert appointed by the DoA Director General*

- DoA representative will convene and chair the team meetings
- DoA representative will be present to supervise all excavation in the WHS core zone, and in any location outside the core zone where there are chance finds
- DoA representative will be the first point of contact to inspect the site in the event of chance finds
- Provide secure storage space for chance finds (either DoA premises or Patan Museum, depending on the find)
- Sign off on handover report
- Administer fines/penalties in the case of any unauthorized removal or theft of archaeological remains

### **DSC Archaeologist**

*The Archaeologist should have a degree in archaeology with extensive field experience, knowledge of archaeological investigations and excavation, and at least 10 years of relevant experience.*

- The DSC Archaeologist will serve as the AET Secretary
- Recommends approval of contractor's method statements to the Engineer
- Supervises excavation in case of chance finds of immovable heritage
- Takes meeting minutes
- Reviews Contractor's claims for works stoppage, rescue archaeology, etc. (to be approved by the Engineer)
- Drafts Archaeology Action Plan based on AET decision for immovable objects or other chance finds where action plan is required.
- Reviews Contractor's records and archives and
- Develops training curricula for Contractor kickoff and coordinates with relevant agencies to be involved in training (e.g. DoA, Patan Museum, KVPT)
- Plans/leads toolbox talks on archaeology topics as needed

- Assist contractor with sourcing laborers trained in archaeology

### **Contractor's Archaeologist**

*The Archaeologist should have a degree in archaeology with extensive field experience, knowledge of archaeological investigations and excavation, and at least 10 years of relevant experience.*

- Drafts method statements for excavation, handling, archiving, etc in the event of chance finds
- Ensure that photographs and video are taken
- Ensure that laborers are aware and follow the excavation and handling procedures
- Leads archiving finds and reporting
- Facilitates official handover of chance finds to DoA

### **Independent Expert**

*The Independent Expert should have at least 20 years of experience with archaeology and cultural heritage in Nepal, and deep understanding of policy, institutions, and procedures governing archaeology and cultural heritage.*

- Attend meetings
- Provide independent expert advice on action plan in the event of chance finds
- Be involved as requested field supervision, further study of chance finds, etc.

### **Annex 3: Chance Finds Procedures**

The SN-03 Heritage Impact Assessment (HIA) found that there is high likelihood of chance finds of archaeological artifacts especially in the Patan Durbar Square core zone and possibly in other parts of the project area.

Excavation of trenches could uncover movable artefacts, for example smaller relics, idols, and building fragments, or immovable archaeology such as building foundations, walls, or wells. Care must be taken in the excavation in order to identify chance finds before any damage occurs. These methods are outlined in the construction specifications.

The following procedures outline the protocol for all project actors to follow in the case that movable or immovable objects are discovered during construction of the project. These procedures provide a guideline, but ultimately any steps taken will depend on the situation and will be up to the discretion of the DSC's engineer with concurrence of DoA following the SPS requirements.

The procedures are structured as the following:

- Attachment A. Chance Finds Procedure for Movable Finds**
- Attachment B: Chance Finds Procedure for Immovable Finds**
- Attachment C: Standard Archiving and Removal Guidelines**

## Attachment A. Chance Finds Procedure for Movable Finds

<b>Step 1</b>	<b>Discovery and Reporting Find of Movable Object(s)</b>
1.1	Potential artifact uncovered during excavation
1.2	Laborer notifies site supervisor in charge
1.3	Site supervisor stops work in that segment immediately
1.4	Site supervisor notifies DSC/DoA immediately after stopping work
<b>Step 2</b>	<b>Expert inspection and recommend action</b>
2.1	DoA/DSC inspect site immediately after notification
2.2	Based on inspection, DoA determines if AET meeting is necessary based on significance/complexity of find (e.g. ceramic fragment vs. large sculpture)
	<i>If AET required to meet, proceed to Step 3</i>
	<i>If AET <b>not</b> required to meet, proceed to Step 4</i>
<b>Step 3</b>	<b>Convene Archaeology Expert Team (AET)</b>
3.1	AET convenes at the site of archaeological finds within 24 hours at a time set by DoA
3.2	AET investigates the site and holds briefing meeting after site visit at DoA's premises
3.3	AET recommends either following Standard Archiving and Removal Guidelines, or agrees on any additional requirements depending on the type of find.
3.4	DSC archaeologist drafts meeting minutes signed by all members present
<b>Step 4</b>	<b>Archiving and Removal of Artifacts</b>
4.1	Contractor archaeologist drafts any necessary method statements for excavation, handling, and/or removal of objects
4.1	DSC approves method statements once the Archaeologist and Engineer are satisfied
4.1	DSC with concurrence of DoA authorizes Contractor to proceed with removal of artifacts following Standard Archiving and Removal Guidelines (see Attachment C), with any additional requirements determined by the AET (if meeting took place).
4.2	Archiving and removal are supervised by DSC archaeologist and DoA representative, providing field assistance as necessary
4.3	DSC authorizes work to resume with concurrence of DoA representative
<b>Step 5</b>	<b>Reporting</b>
5.1	Reporting procedures to be followed in the Standard Archiving and Removal Guidelines (Attachment C)

## Attachment B: Chance Finds Procedure for Immovable Finds

<b>Step 1</b>	<b>Discovery and Reporting Find of Immovable Object(s)</b>
1.1	Potential artifact uncovered during excavation
1.2	Laborer notifies site supervisor in charge
1.3	Site supervisor stops work in that segment immediately
1.4	Site supervisor notifies DSC/DoA immediately after stopping work
<b>Step 2</b>	<b>Expert inspection and recommend action</b>
2.1	DoA/DSC inspect site immediately after notification
2.2	Based on inspection, DoA/DSC determine if find is archaeology and, if so, convenes AET meeting
	<i>If AET required to meet, proceed to Step 3</i>
	<i>If AET not required to meet, DSC authorizes work to resume with concurrence of DoA</i>
<b>Step 3</b>	<b>Convene Archaeology Expert Team (AET)</b>
3.1	AET convenes at the site of archaeological finds within 24 hours at a time set by DoA
3.2	AET investigates the site and holds briefing meeting after site visit at DoA's premises
3.3	AET develops an Archaeological Action Plan within 48 hours. The Plan should decide on the following options and will provide detailed procedures as needed depending on the find (in addition to the Standard Archiving and Removal Guidelines):
A	Leave archaeology intact and avoid area <ul style="list-style-type: none"> <li>For cases where finds are significant and highly unique, and construction would cause irreparable harm to archaeology. The subsurface investigation conducted prior to works should identify any significant archaeology prior to excavation, however significant finds could still be possible.</li> <li>Alternative route must be found</li> <li>Site is archived then covered and reinstated unless a plan for immediate further study is agreed.</li> </ul>
B	Remove remains temporarily and restore following pipeline installation <ul style="list-style-type: none"> <li>Most likely for any finds above the installed pipe</li> <li>Agreement must be reached on temporary storage site (either Patan Museum or DoA premises, depending on type of find).</li> <li>Agree on any further study to be done while remains are removed</li> <li>Determine if method statement need to be prepared for excavation, handling, and/or reinstating remains</li> </ul>
C	Remove remains permanently and archive <ul style="list-style-type: none"> <li>Most likely for any finds that would be bisected by the installed pipe</li> <li>Agreement must be reached on temporary storage site during removal and archiving (either Patan Museum or DoA premises, depending on type of find).</li> <li>Agree on any method statements needed for excavation, handling, etc.</li> <li>Action Plan should include next steps for reaching an agreement on permanent location/curation of removed assets, which may not be possible until the excavation has taken place.</li> </ul>
D	Other option (or combination of the above) as determined by the AET
3.4	DSC archaeologist drafts meeting minutes signed by all members present
	<i>If decision B, C, and D taken, proceed to Step 4</i>
<b>Step 4</b>	<b>Archiving and Removal of Artifacts</b>
4.1	DSC holds site meeting with Contractor to brief them on Archaeology Action Plan. DSC prepares meeting minutes.
4.1	Contractor archaeologist drafts any necessary method statements for excavation, handling, and/or removal of objects
4.1	DSC approves method statements once the Archaeologist and Engineer are satisfied
	DSC authorizes Contractor to proceed with implementing Archaeology Action Plan. Standard Archiving and Removal Guidelines must be followed (see Attachment C), with any additional requirements determined by the AET's Action Plan.
4.2	Archiving and removal are supervised by DSC archaeologist and DoA representative, providing field assistance as necessary
<b>Step 5</b>	<b>Reporting</b>
5.1	Reporting procedures to be followed in the Standard Archiving and Removal Guidelines (Attachment C)



## Attachment C: Standard Archiving and Removal Guidelines

These guidelines should be followed by the Contractor and/or other field archaeologists designated to assist in the archiving and removal of archaeological chance finds. Note that authorization to proceed with the removal of any artifacts must be granted by the DSC with concurrence of DoA per the Chance Finds Procedures. These procedures are a minimum guideline, and may be supplemented by additional procedures, methods, or specifications as agreed by the Archaeology Expert Team, DoA, and/or DSC archaeologist.

<b>1</b>	<b>Documentation in Situ</b>
1.1	Before proceeding with any removal, the find(s) should be photographed by the Contractor at the site of discovery including time/date stamps.
1.2	The Contractor takes GPS points at the point of discovery
1.3	Depending on find, measurements and drawings may also be taken in situ (e.g. for immovable objects)
1.3	The DoA and AET may recommend that the Contractor carry out additional environmental sampling (e.g. soil samples)
<b>2</b>	<b>Excavation</b>
2.1	Excavation may only proceed at the instruction of the DSC archaeologist (through the Engineer), with the concurrence of DoA
2.2	Excavation must be in the presence of a DoA representative and the DSC archaeologist
2.3	Excavation in any area with chance finds must be done using manual digging
2.4	Depending on the find, the Contractor engineer will propose method statements for excavation which must be approved by the DSC archaeologist
2.5	The Contractor and DSC should document excavation with photographs and video
2.6	Excavation should follow any additional procedures as required by the AET
<b>3</b>	<b>Handling, Transport, and Storage</b>
3.1	Upon investigation DoA or the AET (depending on the type of find) will determine if finds will be temporarily stored at the DoA Lalitpur branch office or the Patan Museum. This will be communicated to the Contractor before removal.
3.2	Once removed, smaller objects may only be handled by a qualified archaeologist until official handover to DoA. Larger and/or more complex objects (e.g. foundations) may be handled by laborers under close supervision and instruction of the Contractor/DSC/DoA archaeologist.
3.3	Objects must be stored in a secure, clean, lockable space.
3.4	Any unauthorized removal of archaeological materials will result in immediate dismissal from job duties and be subject to fines by DoA.
<b>4</b>	<b>Cleaning</b>
4.1	The excavated finds should be properly cleaned with water, except: <ul style="list-style-type: none"> <li>i. if the finds are identified for scientific analysis by the DoA or AET;</li> <li>ii. metal &amp; organic objects (e.g. bone, wood, leather, textile objects and etc.) should not be cleaned with water.</li> </ul> The Contractor is advised to consult another member of the AET if in doubt.
<b>5</b>	<b>Marking</b>
5.1	The excavated finds should be cleaned before marking object number. <sup>[SEP]</sup>
5.2	Each find should be marked with site code, context number and find number, etc. <sup>[SEP]</sup>
5.3	For the finds which are too small, organic objects (e.g. bone, wood, leather, textile objects and etc.) or have unstable surface, object number should not be marked on the object directly. These finds should be bagged separately and attached with a label containing information about the site code, context number, find number and <sup>[SEP]</sup> description of find. <sup>[SEP]</sup>
<b>6</b>	<b>Documentation post-removal</b>
6.1	The Contractor's archaeologist is responsible for documenting chance finds post-removal, unless otherwise agreed with the DSC.
6.2	After cleaning, smaller finds should be photographed on all sides on a plain white background, with date/time reference.
6.3	Measurements should be taken and recorded, and any drawings as needed.
<b>7</b>	<b>Labeling and bagging (if necessary)</b>
7.1	Two labels should be provided for each bag which contains finds, one is adhered on the surface of the bag while the other is kept inside the bag for easy reference. <sup>[SEP]</sup>
7.2	The label inside the bag should be kept separately with a smaller plastic bag so that the label can be kept much longer. <sup>[SEP]</sup>

7.3	Information about the site code, context number, test-pit number, object number (or bag number) and description of finds should be written clearly on the label. <sup>[11]</sup> <sub>[SEP]</sub>
7.4	Finds under the same context should be bagged together. If those finds, however, have been categorized according to their typology, materials or characteristics, separate bagging is required.
<b>8</b>	<b>Reporting and Handover Procedure</b>
8.1	<p>All records should be handed over to the DoA, PID, LMC and DSC as a single organized archive within 7 days of completion of the removal. The Contractor should ensure:</p> <ul style="list-style-type: none"> <li>• All the field records should be submitted together with indexes. <sup>[11]</sup><sub>[SEP]</sub></li> <li>• Any video footage should be submitted together with index describing the content <sup>[11]</sup><sub>[SEP]</sub> of the video footage. <sup>[11]</sup><sub>[SEP]</sub></li> <li>• All photographs should be <sup>[11]</sup><sub>[SEP]</sub> submitted together with photo register. <sup>[11]</sup><sub>[SEP]</sub></li> <li>• Any GPS/GIS maps should be handed over as coordinates and/or shapefiles</li> </ul> <p><b>Field records</b> include but are not limited to field diary, site record for trench excavation, context recording sheet, special finds recording sheet, soil sample and/or other environmental samples recording sheet, map (including GPS points, GIS shapefile), survey sheet, photograph/audio-visual records, etc. <sup>[11]</sup><sub>[SEP]</sub></p> <p><b>Finds processing records</b> include conservation record, measured drawings and photographs, laboratory reports, etc. <sup>[11]</sup><sub>[SEP]</sub></p>
8.2	The contractor prepares two copies of a handover letter that lists all the aforementioned records, and handover details to DoA and copied to the PID, LMC, and DSC.
8.3	A representative of the DoA should be present when records and physical assets are handed over. The Contractor representative should sign both copies of the letter, and the DoA representative should countersign. One copy will remain with the Contractor, and one with DoA, and the Contractor to provide scanned copies to PID, LMC, and DSC.
8.4	DSC archaeologist reviews the materials submitted by the Contractor and drafts a chance finds report, which is annexed to the monthly progress report sent to the Employer. This report is sent to the DoA Chief Archaeology Officer, PID, and LMC within 35 days of the find (per Ancient Monuments Preservation Act).

**Letter sent from LMC to Department of Archaeology, 04 June 2018**



ललितपुर महानगरपालिका  
ललितपुर महानगरपालिका

नगर कार्यपालिकाको कार्यालय  
पुल्चोक, ललितपुर, जे. प्रदेश, नेपाल

→ 4. 11 6320  
208100k



KUKL/PID  
 Regd No. 6395  
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☐ DPCE ☐ DPCE  
☐ JMA 2000 ☐ JMA 2000  
☐ Account Section ☐ Other Section ☐ Other  
 To  
 For  
 66  
 File No. 208  
 Adm.  
 Information  
 Division  
☐ Call center in

श्री पाटन दरबार हैरचाह कार्यालय,  
मंगलबजार, पाटन दरवार क्षेत्र ।

विषय: पाटन दरबार क्षेत्र सिविल निर्माण होने Combined Sewer line को लागि सहमति प्रदान गरि दिने सम्बन्धमा ।

उपरोक्त विषयमा यस महानगरपालिका अन्तर्गतको पाटन दरबार क्षेत्र भित्र प्रत्येक वर्षादमा हुने Flooding एक अर्जित समस्याको रूपमा रही आएको छ ।

हस्त उक्त समस्याको समाधानको लागि यस महानगरपालिकाको अगुवाइमा आयोजना कार्यन्वयन निर्देशनालय (PID) ललितपुर महानगरपालिकाको संयुक्त लगानी तथा सहभागितामा त्यस क्षेत्रमा एउटा वृहत् Combined Sewer netwo को निर्माण कार्य तुरुन्तै सञ्चालन हुने भएको छ ।

यस Sewer Network बाट दरबार क्षेत्र मा प्रत्येक वर्षादेमा उत्पन्न हुने Flooding को अन्त भई त्यस क्षेत्रमा रहेा पुरातात्विक महत्त्वका विभिन्न मठ/मन्दिर/दरबार समेतलाई थप Value add गर्ने छ । उक्त क्षेत्रमा निर्माण हुने ढल लागि सम्पूर्ण रूपले त्यहाँ अवस्थित रहेका अन्य पुरातात्विक संरचनालाई कुनै प्रकारको भौतिक क्षति नहोस भई त्यसको अधिकतम ध्यान दिइएको छ । निर्माण कार्यहरू सकेसम्म रात्रि तथा त्यहाँ बाट निस्केको Spoils लाई सो राति हटाई पुनः आर्को दिन बिहान देखि Traffic सुचारु रूपले सञ्चालनमा आउने व्यवस्था समेत गरिएको छ । निर्मा कार्य, त्यस कार्यालयको प्रतिनिधिको रहरवरमा गरिनेछ । साथै निर्माणको दौरान, त्यस कार्यालयको अन्य कुनै विशे निर्देशन भए सो समेतको पालना हुनेछ ।

यस कार्यको महत्व तथा Urgencyलाई विचार गरि सो क्षेत्रमा निर्माण गर्न अनुमति प्रदान गरि दिनु हुन अनुरोध छ ।  
पुनरथः उक्त कार्यको Estimate को Relevant Section तथा आवश्यक नक्सा यसै साथ राखि त्यहाँको अध्ययनको लागि पठाइएको छ ।

5

रुद्र गौतम  
(सहाशाखाध्यक्ष)

रुद्र गौतम  
(महाशाखा प्रमु  
पूर्वाधार तथा निर्माण महाशा

**बोधार्थः**

१. प्रमुख ज्यु. ल. पु. म. न. पा.
२. **आयोजना निर्देशक**  
आयोजना कार्यान्वयन निर्देशनालय,  
अनामनगर, काठमाडौं ।
३. **सहायक**  
के. यु. के. एल. त्रिपुरेश्वर, काठमाडौं

23/11/2019

**English translation of above letter:**

Subject: Requesting of approval for the construction of Combined Sewer line

Flooding is one of the major issue along the Patan Durbar Square Area in every rainy season.

In the leadership of LMC, PID and LMC's joint investment and participation has intended to solve the problem with the implementation of significant Combined sewer network will be operated soon.

This sewer network project will add value of all temples and cultural structures within the area together with Patan Durbar (Palace) which has archaeological and historical significance. A due attention has been given to avoid any sort of significant impact upon physical archaeological structures with the construction of sewer lines.

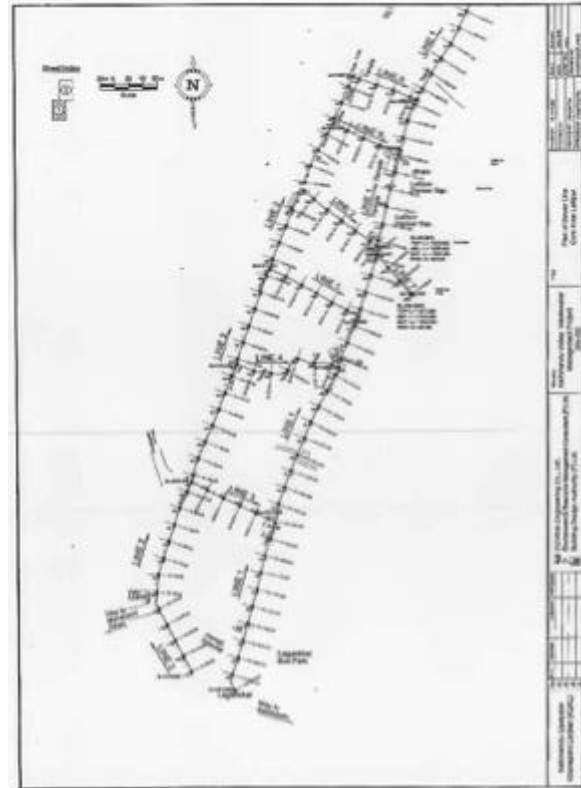
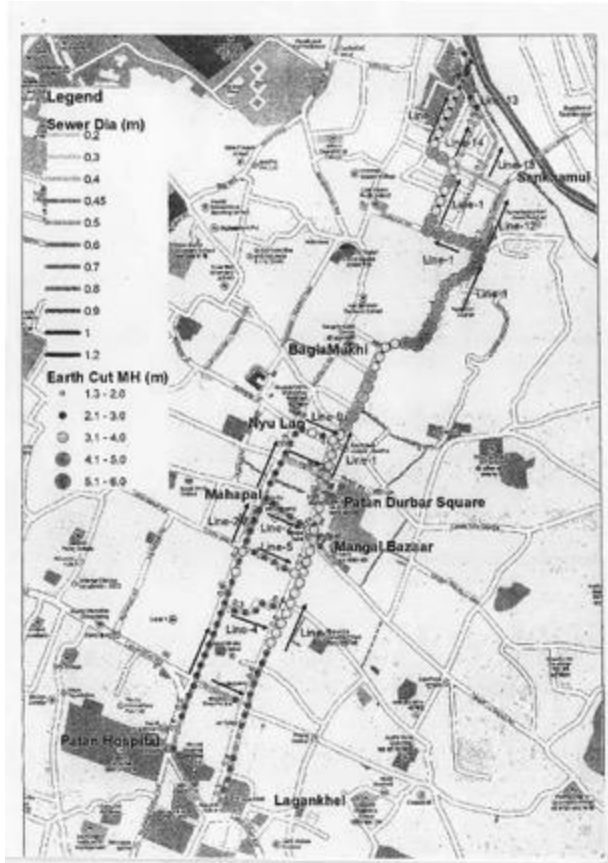
Construction activity will be under taken during the night time and excavated spoil will be disposed safely and proper management has been taken care for the smooth operation of traffic following day. Construction activity will be carried out in presence of your representative. Further, your instruction will be followed during the time of excavation and construction.

We would like to request you to provide permit to carry out construction activity within the area considering importance and urgency. Ultimately, the estimate of relevant section and required maps are attached with this letter for your reference.

Rudra Gautam  
Unit Chief,  
Infrastructure and construction unit

CC:  
Mayor, LMC  
KUKL-PID,  
Anamnagar

Attachments to above letter from LMC to DoA:



Response letter from DoA to LMC, dated 13 June 2018

नेपाल सरकार  
संस्कृति, पर्यटन तथा नागरिक उड्डयन मन्त्रालय  
**पुरातत्व विभाग**  
(विश्व सम्पदा संरक्षण शाखा)

E-mail: info@doa.gov.np  
website: www.doa.gov.np  
फ्याक्स: ९७७-१-४२६२८४६  
अभिलेखालय भवन  
रामशाहपथ, काठमाडौं

श्री ललितपुर महानगरपालिका  
नगरपालिकाको कार्यालय,  
पुल्चोक, ललितपुर।  
२०७५ - २३०४

**विषय :- Combined Sewer Line (ढल निकास)का लागि सहमति सम्बन्धमा।**

प्रस्तुत सम्बन्धमा तहाँ ललितपुर महानगरपालिका, नगरपालिका कार्यालयको मिति २०७५।०२।२० च.नं.७३२०, ०७४।०७५को पत्र प्राप्त भई व्यहोरा अवगत भयो। सो सम्बन्धमा विश्व सम्पदा सुचीमा सुचीकृत पाटन दरवार संरक्षित स्मारक परिसरमा वर्षातको पानीबाट हुने ढलको समस्यालाई समाधान गर्नको लागि Combined Sewer Line (ढल निकास) को लागि सहमती माग भई आएको सम्बन्धमा उक्त कार्य गर्दा दैनिक कृयाकलापमा कुनै असर नहुने गरी रात्रीको समयमा गर्ने तथा सो कार्य गर्दा स्मारक संरक्षण तथा दरवार हेरचाह कार्यालय, पाटनका प्रतिनिधिको अनिवार्य उपस्थितीमा गर्ने गरी (साथै उक्त अतिरिक्त समयमा खटिने कर्मचारीलाई सोही परियोजनाबाट नै उपयुक्त सुबिधा उपलब्ध गराउने गरी) समन्वयात्मक रुपमा कार्यगर्न मिति २०७५।०२।३० को निर्णयानुसार सहमती प्रदान गरिएको व्यहोरा जानकारीका लागि अनुरोध गर्दछु।

(सुभद्रा भट्टराई)  
पुरातत्व अधिकृत

बोधार्थ  
श्री पुरातत्व शाखा, पुरातत्व विभाग  
श्री स्मारक संरक्षण तथा दरवार हेरचाह कार्यालय, मंगलबजार, पाटन।




**Translation of the above approval letter from Department of Archaeology written to LMC**

Subject: Regarding combine sewer line

In reference to the above subject, we are aware of Lalitpur Metropolitan City letter ref; 7320, 074/075 dated 2075/02/21 (4 June 2018). In this regard, it is to inform you that based upon LMC's decision dated 2075/02/30 (13 June 2018) we approve for the implementation of combined sewer line within the vicinity of protected monument site, Patan Durbar Square listed in World Heritage to management sewer problem occurring during rainy season due to surface runoff; and DOA is agreed to provide approval for the implementation of construction works during night time without disturbance to daily activity and a representative from Monument Conservation and Palace Watch Office, Patan shall be present mandatorily (adequate incentive shall make available from the project for the extra time spend by the DOA personnel) during excavation.

**Letter sent from Mayor of LMC to UNESCO Chief, 06 July 2018 to seek inputs on design**

	<h1>Lalitpur Metropolitan City</h1> <h2>Office of the Municipal Executive</h2>
Ref. No: 8211	Pulchowk, Lalitpur District No. 3, Nepal
	
To,	Date:- July 6, 2018
The Chief	
UNESCO World Heritage.	
Sanepa, Lalitpur.	
Subject: <u>-Advice and suggestion for flood remedial measures for Patan Durbar Square</u>	
Dear Sir,	
<p>As you well know that on every monsoon the Patan Durbar Square area gets flooded resulting in creation of an unhygienic condition for a considerable time. The importance of this culturally rich World Heritage Site needs not to be mentioned to you. By this yearly flooding, the area not only loses important visitors but the people living in that area faces great hardship. The continuous water logging year after year may also cause some negative effect in the foundation of the neighbouring structures as well.</p>	
<p>One of the major and foremost issues raised by the residents of Lalitpur Metropolitan on all occasion has been this yearly flooding of this area and they have sought a permanent solution to this problem.</p>	
<p>After my assumption as Mayor of this Metropolitan, I have given top priority to this issue and in finding ways; Project Implementation Directorate of KUKL has extended their support in resolving this problem. We have agreed jointly fund the project which will solve this flooding problem. The detailed project report is in the final stage of the preparation, and several rounds of consultations have been concluded with all related stakeholders and local communities. Part of the proposed sewer line (225 meters) passes in front of the Patan Durbar Square, where the surface water of the durbar area as well as the storm water forms the upper portion will be conveyed down to the Bagmati River and interceptor sewer in the UN Park area at Jwagal. The project details were also discussed with the concerned Officials of Department of Archaeology, after which they have provided us the No Objection Letter stating to proceed ahead with certain prerequisites to be maintained before, during and after the project completion.</p>	
<div style="text-align: right;"></div>	
Tel: 977-01-5522563, Fax : 977-01-5553986 Website: lalitpurn.gov.np	



# Lalitpur Metropolitan City

## Office of the Municipal Executive

Pulchowk, Lalitpur, Province No. 3, Nepal



Once completed, this sewerage will not only add value to the Patan Durbar Square surrounding but will also support the underground foundation of the old structures by stopping the entrance of the flood water beneath.

This project is being financially supported by Government of Nepal Grants and Asian Development Bank loan. The loan period expires by mid of 2020 so we are expediting and facilitating in the project preparation so as that this can be implemented within the project period.

The sub project office will be headed by a Senior Engineer from Lalitpur Metropolitan City (LMC) and will be located within the LMC premises.

Since this core durbar square also fall within the UNESCO Heritage Area, so we are also seeking for your support and advice in archaeological matters during all the phases of the project. Your expert advice will not only add value to this project but provide a feeling of confidence in the real execution as well.

Thus, we request you to provide us your timely feedback on this matter. For your purview we are sending along the necessary portion of the DPR which will provide you some insight of the project. For further details and enquires you may contact Senior Divisional Engineer Mr. Bipul Kumar Lal Das (mobile no:-9861531633) of PID.

Yours truly,

Chirl Babu Maharjan

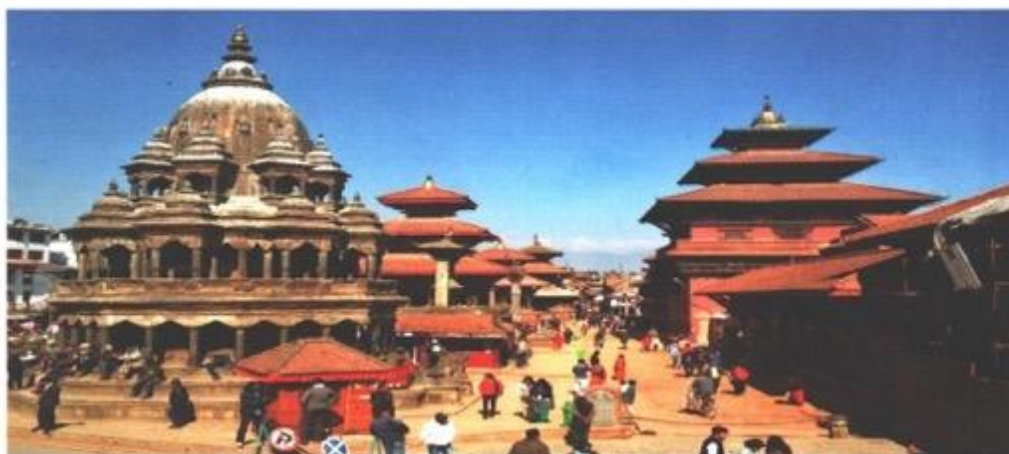
Mayor

Lalitpur Metropolitan City  
Mayor

Lalitpur Metropolitan City

cc: Project director, KUKL PID

MEMORANDUM OF AGREEMENT (MOA)  
between  
LALITPUR METROPOLITAN CITY(LMC)  
and  
PROJECT IMPLEMENTATION  
DIRECTORATE(PID), KUKL



for  
CONSTRUCTION of  
COMBINED SEWER NETWORK  
REHABILITATION IN CORE AREA of PATAN



6<sup>th</sup> August 2018  
21<sup>st</sup> Shrawan 2075



## I. PARTIES

The parties of this Memorandum of Agreement (MOA) are the LALITPUR METROPOLITAN CITY (LMC), hereinafter referenced as Contracting Agency 1 "(CA1)" and PROJECT IMPLEMENTATION DIRECTORATE (PID), KUKL, hereinafter referenced as Contracting Agency 2 "(CA2)".

## II. DESCRIPTION OF WORKS

A Combined Sewer Network and Rehabilitation of approximate length of 2.8 KM will be constructed in core area of LMC spreading over Wards - 5, 9, 11, 12, 15, 16 & 19. The engineers' estimate is NPR 484,971,750/- (In Words Nepalese Rupees Four Hundred Eighty-Four Million Nine Hundred Seventy-One Thousand Seven Hundred Fifty) in US\$ 4,416,865/-including contingency and VAT. The cost estimate includes the cost for reallocation and reinstatement of utilities (does not include upgradation cost) such as electrical cables and poles, telephone cables, water supply pipelines and the cost for archaeological reinstatement and environmental mitigation measures as agreed with individual utility owner during the stake holders' meeting. A section of the Project passing a National Heritage Site, extra cost has been incorporated to carry out the work as per the Department of Archaeology guidelines and instructions. The Construction Supervision Engineer's (CSE) office will also be within the CEO office and logistic support for both the offices will be maintained through CSE office provision as built within the contract.

## III. PURPOSE

The purpose of this MOA is specifically to identify the scope of the service to be provided, authorise individual or agency responsible as a decision maker or the owner in the agreement, as well as commitment for financial and human resources that are required for the execution of the work. This MOA will clearly identify the roles and responsibilities of each party as they relate in providing the consolidated **CONSTRUCTION OF COMBINED SEWER NETWORK REHABILITATION IN CORE AREA OF PATAN** that both CA1 and CA2 will jointly execute the Project.



#### IV. ADMINISTRATIVE SET UP

1. CA1 and CA2 are legislatively established as separate agencies with distinct appropriations.
2. A Construction Execution Office (CEO) will be established under LMC control, till the project completion period, for the preparation of projects documents and implementation of the project including monitoring, coordination and contract administration. CEO will be **headed by a Senior Engineer in LMC**. It will also include required number of engineer and administrative staff to be seconded by PID, a full time Safeguard Officer and other support staff as necessary. A TOR and manpower requisite for CEO will be prepared separately. Organogram of CEO office is attached.
3. A Steering Committee (SC) will be formed with **LMC Mayor as Chair of the Committee**. Other members of the SC are ED-Kathmandu Valley Water Supply Management Board (KVWSMB), PD-PID, GM-KUKL, Infra-Structure Division Chief (LMC), and the CEO Head (Member Secretary). Ward Chairpersons and others may be invited in the SC meeting as invitees as decided by the Chair.
4. A Coordination Committee will be formed under the Ward Chairperson for facilitation of the works and coordination with local people in social issues.

#### V. CONTRACTING AGENCIES JOINT RESPONSIBILITIES

1. It was agreed that the **LMC** will bear **20%** and **PID** will bear **80%** of the project cost. LMC will execute this project as multiple year basis.
2. LMC will make the payment of the IPCs for its portion (20%) and PID will make the payment for its portion (80%).
3. Both the parties will be responsible for management of necessary financing on their part including audit of the expenditure.
4. Any other issues not covered in the above MOA shall be resolved amicably with mutual consultation and agreement between LMC and PID in good faith of the Project.





#### **VI. PID'S RESPONSIBILITIES**

1. All the Logistics and Manpower as mentioned in the appendix for CEO operation including one vehicle with driver and fuel will be provided by PID.
2. The Detailed Design and Drawings, preparation of bidding documents, cost estimates and Social Safeguard and Environment related documents will be prepared by PID through its Design and Supervision Consultant (DSC).
3. PID will process all the procurement related activities including evaluation and approval of bids. CEO head will represent LMC in Bid Evaluation process as a member.
4. Construction Supervision and Contract Administration will be carried out by DSC appointed under PID and the CEO.
5. DSC within the PID will also report to CEO about the progress, issues and submit the Interim Payment Certificates (IPCs) of the contractor to CEO with recommendation. CEO shall also guide and monitor the DSC for construction matters on a day to day basis.
6. All the necessary reporting and coordination with ADB will be carried out by PID.

#### **VII. CEO'S RESPONSIBILITIES**

1. CEO with support from LMC will ensure compliance to environmental and social safeguard requirements. LMC will obtain required approval on archaeological aspects from relevant authority and will undertake all required coordination with other utility agencies such as Nepal Electricity Authority, Nepal Telecommunication Co., KUKL including Traffic Police.
2. CEO will check the IPCs of the contractor forwarded from the DSC and will forward with recommendation one copy to LMC and one copy to PID for the payment.

#### **VIII. LMC RESPONSIBILITIES**

1. LMC will lead the whole implementation process and PID will support in technical, procurement and contractual matters.
2. LMC will provide necessary space for establishment of CEO under LMC control.
3. Contract will be jointly signed by PID and LMC.
4. LMC will make the payment of the IPCs for its portion (20%)



5. LMC will obtain required approval on archaeological aspects from relevant authority and will undertake all required coordination with other utility agencies such as Nepal Electricity Authority, Nepal Telecom, KUKL including Traffic Police.

#### IX. EFFECTIVE DATE AND SIGNATURE

This MOA shall be effective upon the signature of authorised officials of CA1 and CA2. It shall remain valid until the completion of the Project unless cancelled in its entirety by either party in accordance with the applicable clauses contained herein. The terms may be reviewed annually as necessary. The MOA is automatically renewed unless written notice to modify the agreement is given by either party within 60 days of the new fiscal year. The MOA can be terminated anytime by either party with written notice 60 days in advance of termination date.

  
(Signature)

**Chiri Babu Maharjan**  
Mayor, LMC

Witnesses:



1. Ms. Gita Satyal


Deputy Mayor, LMC



2. Mr. Hari Pd Dahal

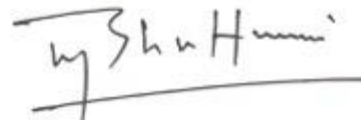
Chief Administrative Officer



  
(Signature)

**Er. Tires Prasad Khatri**  
Project Director

Witnesses:



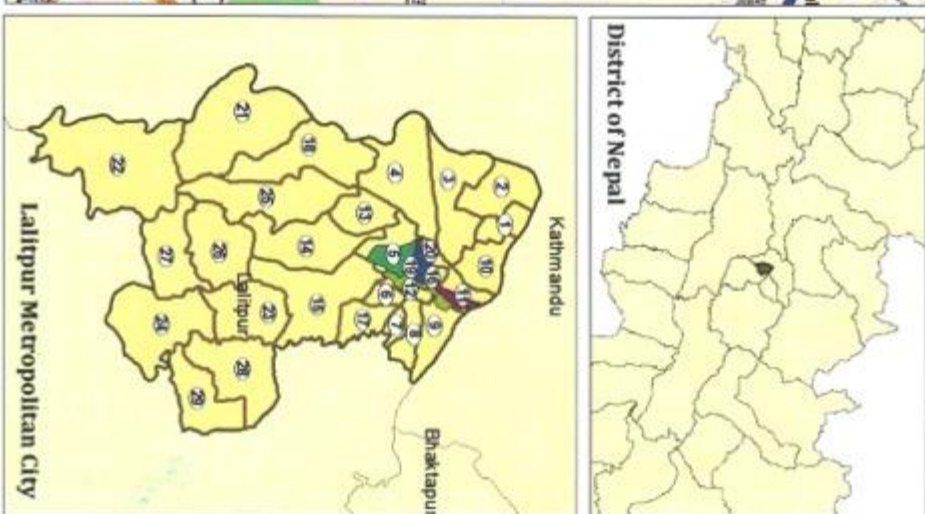
1. Mr. Mahesh Bhattarai

GM, KUKL



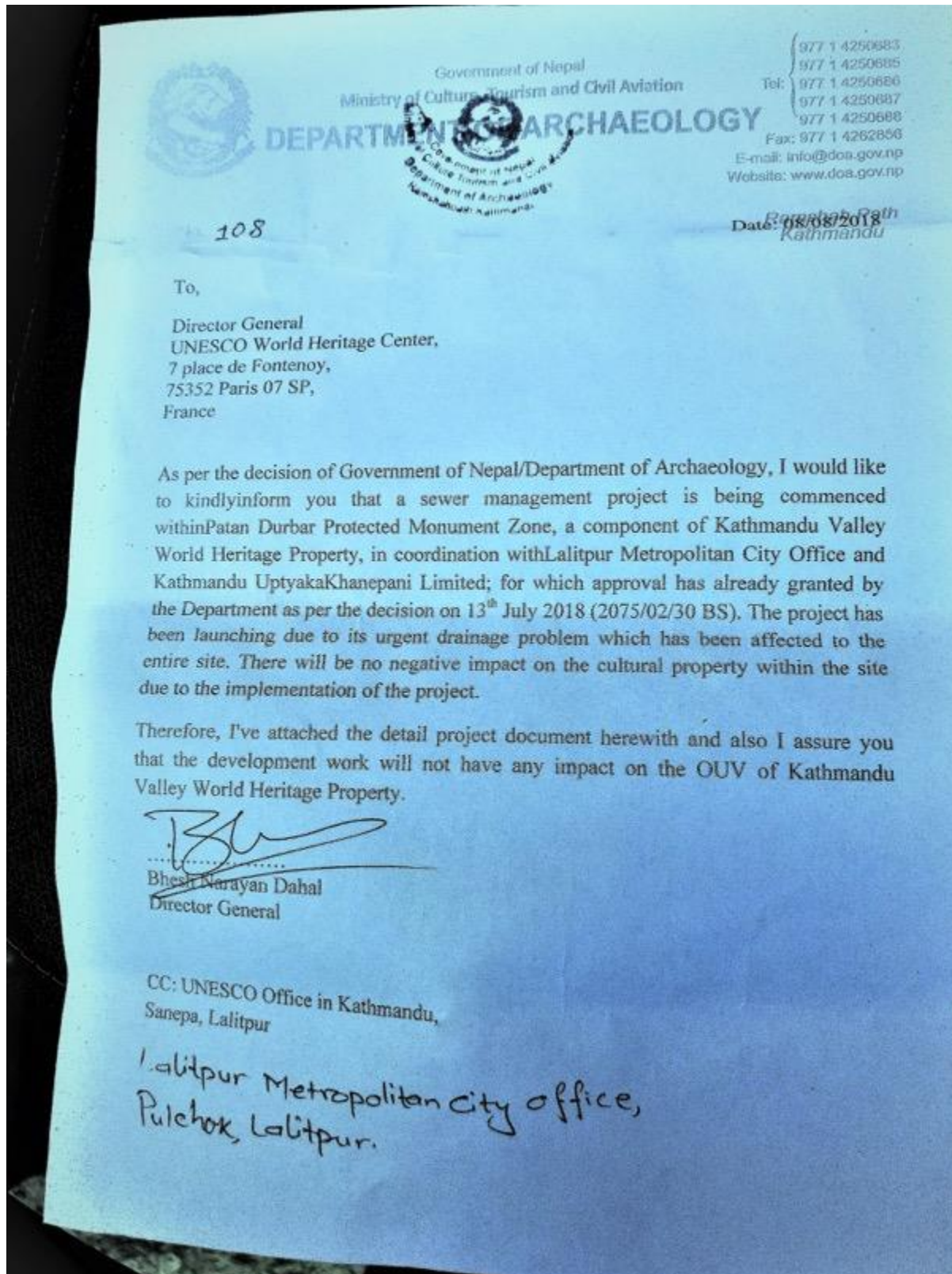
2. Mr. Surat Bam

PM, KVVWMP





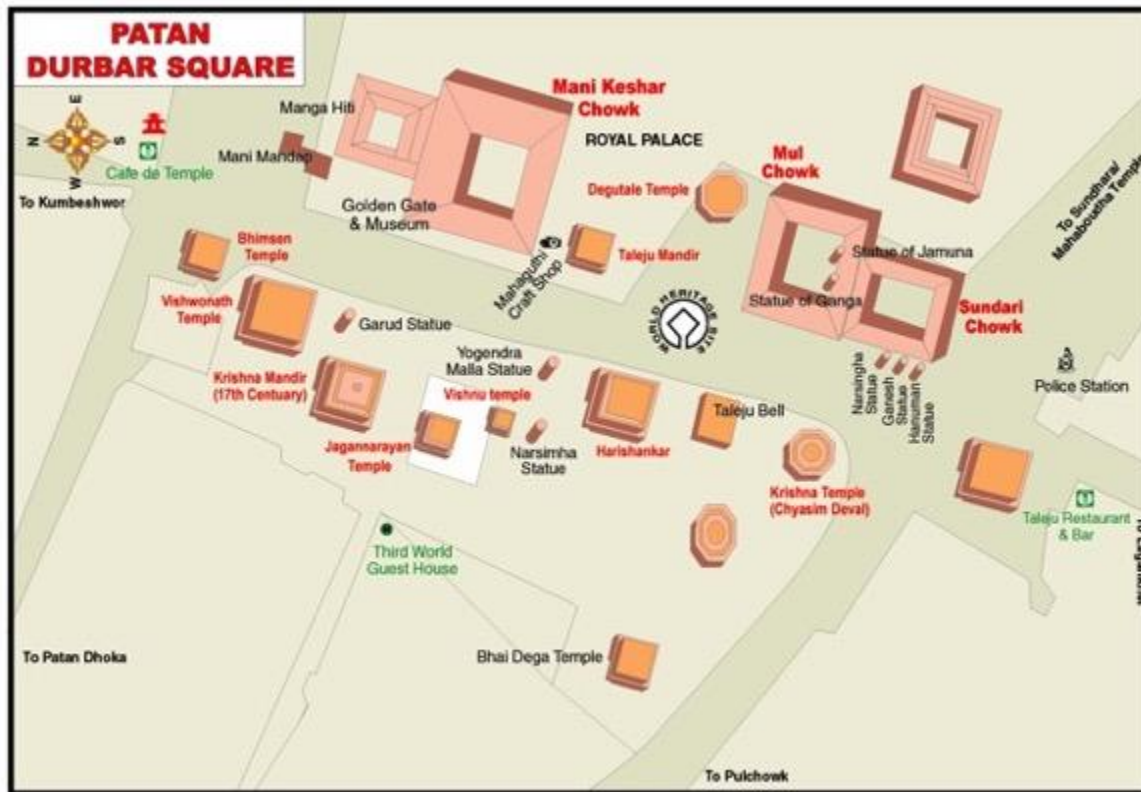
Letter sent from Department of Archaeology to UNESCO Director General, 08 Aug 2018





## Annex 5: Site Visit Field Inventory



The project area is a short trek from Haugal to Mangal Bazar (157 meters), Bhimsen temple to Swotha Garuda (100m), Kumveshwar to Gahiti (101m), Ikhalakhu Mahapal to Swotha Chowk (403m). The Core Zone is from Mangal Bazar to Bhimsenthan (207m). The HIA team observed the whole area by slowly and carefully walking the right-of-way in the core and buffer areas of the Patan Durbar Square World Heritage Site. The visit included an engineer, safeguard specialist, and heritage expert/archaeologist. The site was visited in July 2018, 28 October 2018, 01 November 2018, and 25 November 28. The Chief of Patan Durbar Monument Maintenance Office (PDMMO) Mr. Kaji Man Pakurel also attended the site visit on 01 November.




The following table presents an inventory of heritage assets in the WHS core and buffer areas. This inventory, which is comprehensive of the entire core and buffer area, does not imply that these structures would be potentially impacted by the project. The map below of the core area is included for reference.







#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
<b>Assets in the Core Monument Zone</b>						
1	Laxmi Narayan	17 <sup>th</sup> Century	Shikhara	Image of Hara Gauri is very rare.	Local devotees worship at the temple daily.	
2	Sundari Chowk	16 <sup>th</sup> / 17 <sup>th</sup> centuries	Palace courtyard	Residence of Malla Kings with a famous gold gilded copper water spout with Garuda Lakshmi Narayan in the courtyard.	<p>Considered as one of the most beautiful courtyard of Malla period.</p> <p>Building to the far right in the image.</p> <p>Outside steps used by local people for resting and socializing.</p>	
3	Krishna Temple also famous as Chyasim Deval	AD 1723	Shikhara	Built by Yogmati , daughter of King Yog Narendra Malla.	Vaishnava	





#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
4	Ghanta	AD1736 (NS.857)		Ceremonial Bell erected by Queen of King Bishnu Malla Chandra Laxmi.		
5	Mul chowk	AD1666	Palace Courtyard	Main Ceremonial courtyard with the temple of Taleju.	Hindu  Building in middle, to the left of Sundari Chowk.  Outside steps used by local people for resting and socializing.	
6	Hari Shankar	17 <sup>th</sup> Century	Three-storey traditional Nepali temple			
7	Pillar statue of King Yog Narendra Malla		Pillar statue			
8	Narsingha Temple	AD 1590	Shikhara	Built by Purandarasimha, the ruling feudal lord of Patan	Narasimha Vaishnava	
9	Degu Talle	AD 1662	Three-storey brick temple Traditional Nepali temple		Taleju Bhawani	

#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
10	Char Narayan Temple	AD1565		Very unique of Malla Architecture .Probably this is one of the oldest surviving temples in the Durbar Square. Built by King Purandarasinha	Destroyed by the earthquake of 2015- Under restoration.	
11	Mani Keshar Narayan Chowk	17 <sup>th</sup> Century	Palace Courtyard with golden door and window	King Sri Niwas Malla gave royal patronage to this courtyard and made it residential quarters of the royalty.	Outside steps used by local people for resting and socializing.	
12	Krishna Mandir	AD 1637	Shikhara	Built by King Siddhinarasingh Malla The most remarkable building in stone ever made in the valley. Built by King Siddhinarasingh Malla.	World Class Monument Pilgrims visit the temple mainly in the <i>Krihna Astamii</i> Festival	
13	Vishwonath Temple	1626		Built by King Siddhinarasingh Malla		

#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
14	Mani Gufa (Cave)	17 <sup>th</sup> Century (AD1662)	Small one storey structure with lime plaster in front of Manihiti in octagonal shape.		Tantric shrine	Located same site as Mani Hiti, opposite the road.
15	Mani Hiti or Manga Hiti	Built probably during Lichchavi period	One of the very few ancient water conduits still running. Also one of the best examples of stone water spouts in the Valley.		It is providing water to local people since Lichchavi period.	
16	Mani Mandap or Jewel Pavilion of Patan with 16 pillars	17 <sup>th</sup> Century			Very Sensitive structure for the people of Patan.  Heavily used by pedestrians and local people for resting and socializing.	
17	Bhimsen Temple  Pillar statue with Lion on the top.	AD1681	Three-storey temple in rectangular shape.  Siva and Ganesh Temple on the back side of Bhimsen temple  Sarasowti Pati with open veranda and carved pillars on the north of Bhimsen Temple.	Built by King Srinivasa Malla	Big festival in the month of Shrawan.  Sensitive area with cluster of monuments around.	
18	Matangi Pitha	17 <sup>th</sup> Century	Situated on the		Very important and	

#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
	Non-iconic deities		road level		sensitive to the local people	
19	Dilapidated Rana period house with wooden balcony					
20	Radha Krishna temple	nd	Three storey traditional temple	Destroyed by the earthquake of 2015	Under reconstruction.	
21	Radha Krishna temple	Built by Kritilaksmi Singh, Malla Period.	Originally built in Shikhara style.	After the earthquake of 1934 it was given a dome roof.  During Teej, Krishna Astamai and Janai Purnima	A small Ganesh shrine is attached in the main temple. Facing south.	
22	Traditional House with beautiful carvings	Rana period		During Teej, Krishna Astamai and Janai Purnima		
23	Stupa and a Jaru	Malla period			Jaru or jarunhiti is a traditional water tank for drinking purpose. Generally constructed on the road side.	
24	Swatha Narayan Mandir	Probably in 1706	Small two-storey traditional temple	Very popular in the locality.	Under reconstruction.	
25	Ikhlahku Pati	Rana period		Nice carved pillars	Such open rest houses are rare.	
26	Group of temple of Ikhlahku Tole	Malla period	Shikhara		Very rich area on cultural properties.	
27	Temples in the	Malla period	Shikhara temples			

#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
	courtyard of Ikhalakhu tole		and a traditional temple			
28	Jarun Hiti	Malla period		One of the most beautiful and intact jurun in the Valley.		
29	I-Baha Bahi	AD1427	Traditional Mahayana Buddhist Monastery	Renovated in AD 1996		
30	Traditional House Near I-BahaBahi	Shah/Rana period			Such houses with rich wood carvings are rare.	
31	Uma Maheshwar temple	Rana period	Copper roof one storey in Dome shape		Bells, Bull and some other icons around.	
32	Narayan temple	Shikhara or Bell shape	Rana period			
33	Dalsi Mahadev shrine	Below road level		Shiva family	Worshipped by local people. Sensitive.	
34	Small Pati	Modern				
35	Ganesh Temple	Rana period	two storey		Upper roof is of copper. Nearby is a small one storey Narayan temple.	
36	Ganesh Temple	Malla period	One storey	Highly decorated temple	Revered by people of Patan.	
37	Jarun On the back side of	Malla Period		With murals	Situated on the road side of Haugal tole.	

#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
	Ganesh temple					
38	Haughal Bahal	Lichchavi and Malla periods		Stone sculptures of Matika, stupas and many other old sculptures inside the courtyard.		
39	Uma Maheshwar temple	Rana period	Bell shaped Shikhara		Little inside road level on the main market place.	
40	Narayan temple				On the road side.	
41	Shiva Temple	Malla period	Stone one storey Temple			
<b>Heritage Assets in the Patan Durbar Square Buffer Zone</b>						
42	Newa Chhen	Rana Period	Richly decorated traditional house	Beautiful woodcarvings.	.Awarded by UNESCO	
43	Jarunhiti	Malla period		Drinking water reservoir for the pedestrians. Made of stone.	Not functioning.	
44	Small two storey traditional temple of Narayan on the back side of Newa Chhen.	17 <sup>th</sup> Century				
45	Krishna Temple (Kobaha)	AD1680	Shikhara	After the earthquake of 1934 it was restored with dome roof.		
46	Jarunhiti	Probably Lichchavi period			Not functioning	
47	Temple of Chamunda Mai (Gahiti)	New	Copper roof			
48	Stupa with the Image of Avalokiteshwar	Malla Period		Such Stupa is rare and unique	A Well and Shiva Linga with Bull.	



#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
49	Yampi Mahavihar (Ehi Bahi)	AD1672			Also known as Sunayasri Mahavihar.	
50	Shrine of Pigha Deo	nd		non-iconic deities	worshipped by local people	
51	Ehi Bahi Stupa	3 <sup>rd</sup> Century BC	Ashokan Chaitya	One of the five stupas believed to have been built by Mourya Emperor Ashok	World Class Monument.	
52	Saithu Ganesh Mandir or Dhvakasi Ganesh	AD1681	Two storey traditional temple	Every Tuesday early in the morning Hindu pilgrims visit the temple	Very popular among the people of Patan.	
53	Gahiti	Malla period	Stone water spout		Not functioning.	
54	Stupa of Siku Bahi and a long Dabu or open platform	Malla period		Such open Dabali or platform is very few in the Valley.		
55	Chopo Ganesh	AD1745	Three storey traditional temple	Very revered by local people.	In this temple complex there are two early Malla period stupas, Umamaheshwar sculptures of Lichchavi period.	
56	A small temple with copper roof and some other small temples behind the platform					
57	Two stucco small temples with Bhimsen and eyes.				Erected on both sides of the road.	

#	Heritage Site	Date	Style	Heritage Value	Remarks	Image
58	A small shrine of Kwalakhu Harisidhi Bhairav on the road.				Behind this small temple there is a Pati or rest house.	
59	Uma Maheshwar temple	17 <sup>th</sup> century	Traditional two storey temple	Local people perform <i>Krishna Pooja, Ganesh Pooja</i> . The main festival celebrated is <i>Janai Purnima, Shiva Raatri, and Matya Jaatra</i>	A stupa is on the right side of the temple. Also a traditional house.  Located 50m from proposed alignment.	
60	Bhagwati temple on stone	Malla period	Shikhara	One of the few stone temples of the valley.	Also known as Harishankar temple of Patuko tole.	
61	Lakshmi Narayan temple	Malla period	Two-storey traditional temple.	Rich in wood carvings. One of the earliest stone inscriptions found in the Valley.	A small temple with non-iconic deities and an inscription of Lichchavi period on the road level.	
62	Agam Ghar of Rajopadhaya Priests	Early Rana period	Traditional house	Rich in wood carvings.	It is in dilapidated condition after the earthquake of 2915. Sensitive. Need immediate restoration.	
63	Jarunhiti	Malla period				
64	Small Ganesh temple with copper roof.	Shah/Rana period		Nice wood carvings on struts.	On the road level. Revered by local people. Very sensitive.	
65	Jarunhiti (Mahapal)	Malla period				
66	Mahalaxmi Shrine	nd		non-iconic deities	On the road level. Worshipped by local people. Sensitive.  Near Lagankhel.	

## Annex 6: References

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# Establishing Heritage Impact Assessment (HIA) in Nepal

## PART ONE: FORMATS



Kai Weise  
President ICOMOS Nepal  
Submitted on 15 September 2015

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## 1. Introduction and summary

### **Proposal for the establishment of an official Heritage Impact Assessment procedure in Nepal**

*Heritage Impact Assessment (HIA) can be a strategic means of ensuring that development and conservation activities in and around heritage properties do not cause an unacceptable degree of negatively impact. For HIA to be an effective tool, it must have legal justification and be integrated in official procedures. This proposal provides an overview of the how HIA can be established as an official procedure in Nepal. This would additionally require the formats and procedures for carrying out HIA.*

#### **Justification**

There are no standard procedures for assessing the impact of development and conservation works on cultural heritage. Till present, this task has been dealt with by a component of an Environmental Impact Assessment (EIA). This has not been satisfactory particularly since the EIA procedure is not linked to the governance system of heritage. To address this disparity HIA has been promoted particularly by the World Heritage Committee and the advisory bodies ICOMOS and ICCROM. The HIA procedure once established would of course not only cater to World Heritage, but can be used as standard procedure for all identified cultural heritage sites.

#### **Legislative basis**

HIA needs to be embedded in the legislation of the Department of Archaeology. This means that in the sixth amendment of the Ancient Monument Preservation Act (AMPA 1956), the provision for HIA needs to be included. The Act would only mention the establishment of HIA, leaving the details to be formulated separately. This would give the Department of Archaeology the authority to demand HIA wherever found necessary and defined by respective regulations.

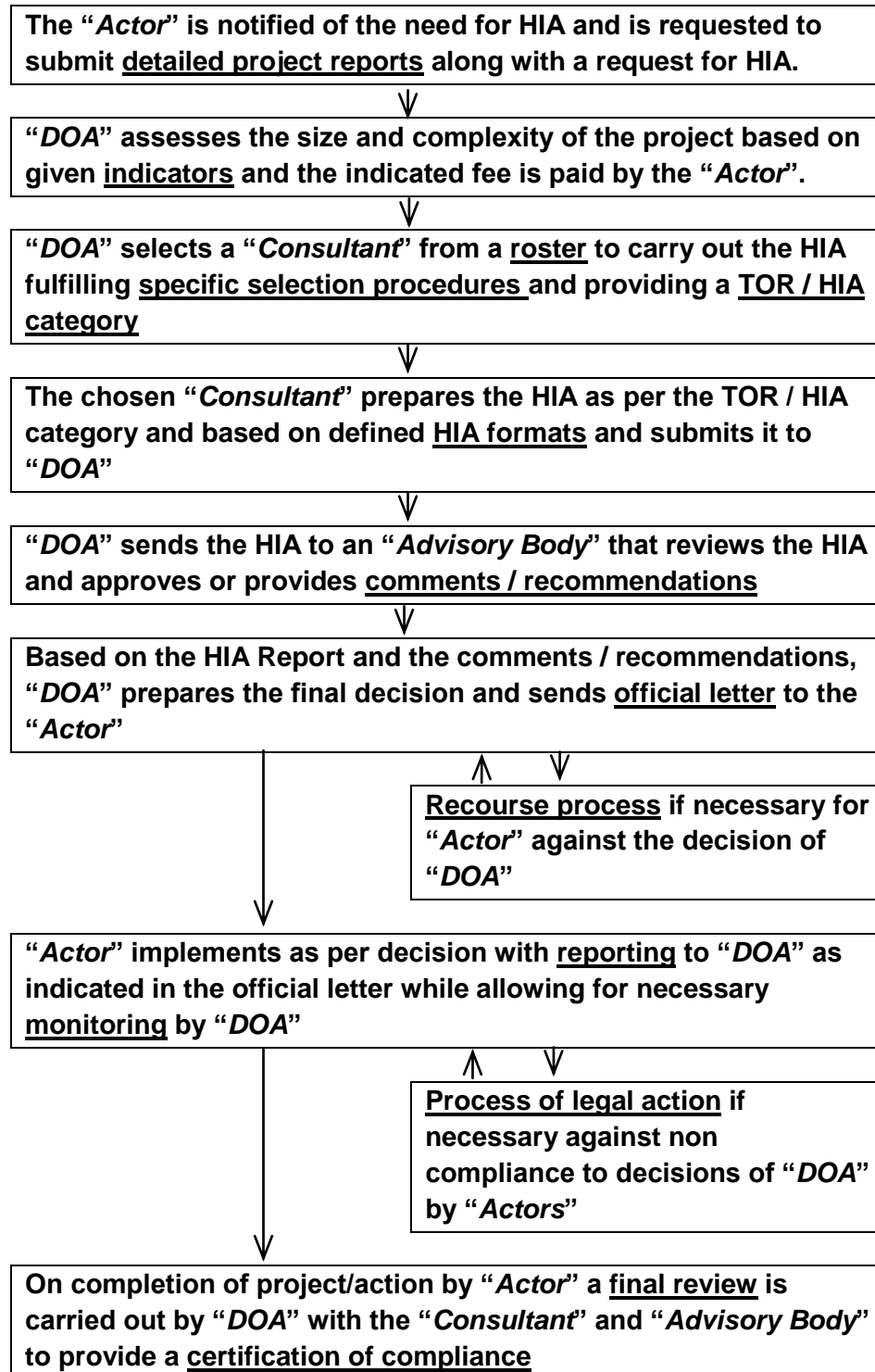
#### **Regulations for HIA**

The HIA procedure needs to be clearly defined within a set of regulations adopted by the Department of Archaeology. The regulations would identify under what circumstances HIA would be applied, as well as clarifying the format and process of implementation.

This proposal intends on providing recommendations for the detailed regulations for HIA to be established in Nepal.

## Process of implementation

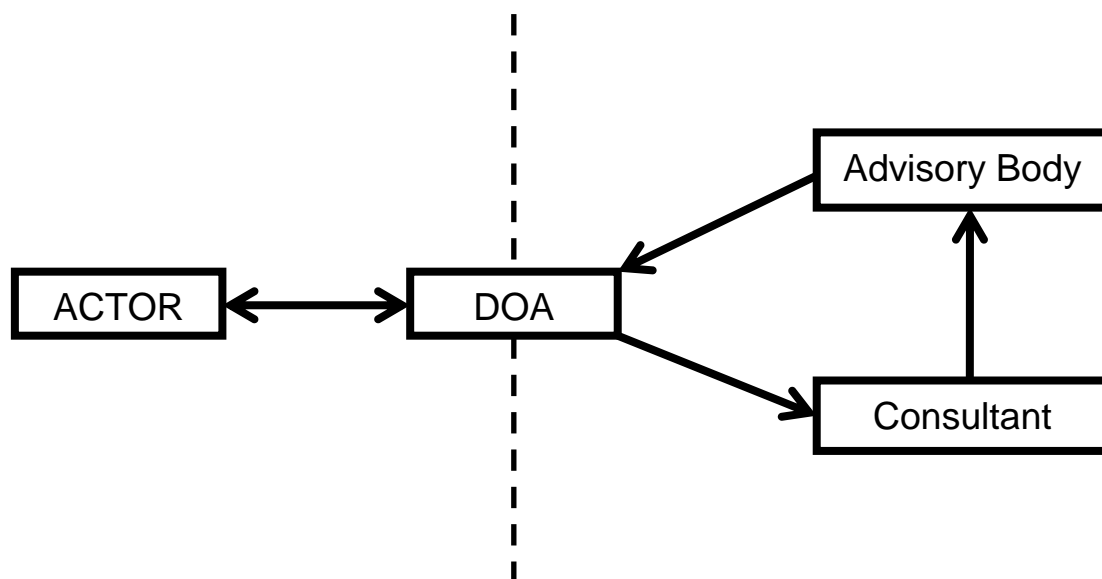
Once the need for HIA has been identified, a clear process needs to be followed which is integrated into the system of governance and justified by legislation.





## Involved parties:

Actor	the person or legal body that carries out actions that could impact heritage
DOA	Department of Archaeology (Focal Authority) under the Ministry responsible for Culture
Consultant	professional with adequate experience and training to carry out HIA to be listed in a roster prepared by DOA
Advisory Body	a body of experts to advise the authorities on HIA which could be represented by ICOMOS Nepal



Separation must be guaranteed between those intending to carry out a certain action which might impact heritage and those assessing the possible impact. The coordination would be done by the Department of Archaeology as the official focal point and authority for the process.

## Objective of the Heritage Impact Assessment (HIA)

The HIA procedure is being established with the following objectives to safeguard heritage in the broad categories of heritage sites, monuments, historic buildings and cultural objects:

1. To provide a permit system to control impact of proposed projects and activities on heritage.
2. To mitigate the impact of past or ongoing projects or activities through assessments and recommendations for rectification.
3. To plan measures to control risk of future projects or activities that could potentially impact heritage.

## 2. Formats

For the establishment of a Heritage Impact Assessment in Nepal the following formats will be required. Draft formats are being provided in this report. These would still need to be discussed with experts and site managers. Only after several trial runs on practical Heritage Impact Assessments can these be finalized and adopted as standard formats.

### **Required Formats**

- **Detailed Project Report and Request Letter (*Actor*)**
- **Project Indicators (DOA)**
- **Consultant Roster (DOA)**
- **TOR for HIA preparation (DOA)**
- **HIA categories / format (Consultant)**
- **Format for comments / recommendations (Advisory Body)**
- **Official Letter (DOA)**
- **Certification of compliance (DOA)**

## 2.1 Detailed Project Report and Request Letter (Actor)

The actor, whether a private person, institution, government agency or international organization, planning on carrying out any activity that would possibly impact heritage shall be required to submit a detailed project report and request letter.

### Detailed Project Report (DPR)

The report shall include all relevant information required to assess the impact of the project on the heritage. This would mean include the following considerations:

- (i) **The report shall have detailed explanations of all project components and activities** to allow for heritage to be safeguarded as per the three objectives of the HIA procedure. The detailed report shall provide all legal justification such as land ownership papers and other permissions.
- (ii) **Activities linked to direct impact:** All project activities and project components need to be indentified and documented, especially those that have direct impact on heritage. These could have physical impact, but could also have social, economic, chemical or other categories of impact on heritage.
- (iii) **Activities linked to indirect impact:** All project activities and project components that could lead to indirect impact on heritage need to be identified and documented. These could be linked to activities that are indirectly generated out of the primary activities that would have impact later on.
- (iv) **Activities linked to impact over time:** All project activities and project components shall be documented that would take place during preparation, implementation or during future operations.
- (v) **Activities linked to impact over location:** All activities and project components would need to be provided with reference to their exact location relevant to the heritage.

### Request Letter

The actor shall submit with the Detailed Project Report a request letter addressed to the Department of Archaeology. The letter shall follow the format with the contents as defined below.

- (i) Addressed to Director General, Department of Archaeology
- (ii) Subject of the letter shall be "Request for Heritage Impact Assessment for (Project / Activity Title)".
- (iii) Short description of and reason for project / activity
- (iv) Request statement for HIA
- (v) Agreement to pay standard expenses for getting HIA done
- (vi) Agreement to follow standard procedures for HIA
- (vii) Signature of authorized person with certification

## 2.2 Project Indicators (DOA)

The project / activity report that is submitted by the Actor will need to be first assessed first for its legitimacy. Once that is ascertained, then the project / activity will be assessed for its scale and complexity in respect to preparing the HIA.

The project indicators are the required considerations for assessing scale and complexity of the project / activity to determine the timeframe and cost for the preparation of the HIA:

- A. The HIA would generally have three components: (cost based on scope)
  - (i) Assessment of proposed project / activity and recommendations for providing permit or for modifications
  - (ii) Assessment of past projects and interventions and recommendation for rectification
  - (iii) Assessment of future threats and recommendation for planning mechanisms
- B. Complexity (cost based on required expertise and team members)
  - (i) Simple project / activity in a simple context requiring straightforward assessment without any specialized experience or expertise.
  - (ii) Requiring higher level of expertise but in standard fields of cultural heritage such as architecture, archaeology.
  - (iii) Requirement in additional specialized fields which could be in technical or social fields.
- C. Scale (cost based on size of the project and required time for assessment)
  - (i) Individual activity –activities other than major construction which could include temporary structures
  - (ii) Small project – individual buildings or interventions
  - (iii) Large project – larger complexes, roads, etc.
  - (iv) Special circumstances
- D. Location (rough calculations done as per cost to reach site including time)
  - (i) Kathmandu Valley
  - (ii) Accessible by flight
  - (iii) Accessible by road plus up to half day walk
  - (iv) Accessible by walking (max 7 days)
  - (v) Very remote accessible by helicopter or walking more than a week

The calculations for time and cost shall be done based on the considerations as stated above. Standards shall be developed for each of these points to ensure that they correspond to the actual costs. These calculations shall be shown to the Actor when requesting payment for implementing the HIA.

## 2.3 Consultant Roster (DOA)

Once the project indicators have been defined and the Actor has paid the cost for the implementation of the HIA, the Department of Archaeology will choose the Consultant who will carry out the HIA. This requires a consultant roster of appropriate consultants who are capable of carrying out the HIA as per the project indicators (especially in respect to the complexity and the required expertise).

The Consultant Roster and choice of contractor shall be done considering:

### A. Eligibility

Individuals or companies that have experience in working on heritage conservation are eligible to register. The registration shall however be reviewed by the relevant office in the Department of Archaeology.

### B. Registration Form

Candidates shall register by filling out a registration form with a detailed curriculum vitae / company profile attached with information relevant to heritage conservation and the preparation of HIAs. Legal registrations along with PAN and/or VAT registrations shall be submitted.

The registration form shall be prepared to include names, photos, contact details, short explanation on expertise and experience.

### C. Categorization based on expertise and capacity

The consultant (expert individuals or companies) once registered shall be categorized based on type of expertise, capacity and experience.

### D. Choice of consultant for specific

When choosing the consultant for any specific HIA, the requirements in respect to expertise, capacity and experience shall be considered. Should any specific expertise be required, this will be negotiated with the consultant before finalizing the TOR and signing the contract. The consultant shall not have any conflict of interest when carry out the HIA.

### E. Required training

All consultants shall attend at least one training course every year to be allowed to renew their registration. Training courses on HIA shall be provided twice a year by the Department of Archaeology. Such training course would need to be closely linked to the gathered experience in implementing HIA in Nepal and taking into account international trends in HIA.

### F. Removal of consultant from roster

Consultants shall be removed from the roster should they not perform as per the TOR and contract, not join the required training, carry out a HIA despite conflict of interest or be involved in any inappropriate activity for personal gain.

## 2.4 TOR for HIA preparation (DOA)

As per the Project Indicators and with the choice of consultant, a contract shall be signed between the Department of Archaeology and the consultant to carry out the Heritage Impact Assessment. The consultant TOR shall contain at least the following points. (The TOR can be standardized with parts that would need to be filled as per the specific conditions of the project / activity)

A. Short description of project

What type of project / activity with short description as per Detailed Project Report and Request Letter from the Actor.

B. Scope of work

The TOR shall indicate the scope of the assignment in respect to the three possible components responding to the objectives of the HIA process. These would be whether the HIA would need to assess

- proposed project / activity and recommend permit or modification;
- assess past projects and recommend interventions for rectification;
- assess future threats and recommend planning mechanisms

C. Complexity of project / activity

The TOR shall indicate the complexity of the project based on the requirement of experts and the organization of the team members. The categorization will be based on the following categories used to calculate the remuneration.

- Simple project / activity in a simple context without specialized expertise.
- Requiring higher level of expertise but in standard fields of cultural heritage
- Requirement in additional specialized fields such as technical or social fields

D. Scale of project / activity

The TOR shall indicate the scale of the project which can be categorized depending on the size but also the extent of the intervention.

- Individual activity –activities other than major construction
- Small project – individual buildings or interventions
- Large project – larger complexes, roads, etc.
- Special circumstances requiring detailed investigation.

E. Location

Categorization based on ease of access to the location

- Kathmandu Valley
- Accessible by flight
- Accessible by road plus up to half day walk
- Accessible by walking (max 7 days)
- Very remote accessible by helicopter or walking more than a week

F. Standard Conditions of Contract

- Time frame
- Remuneration and mode of payment
- Standard contract requirements



## **2.5 HIA categories / format (Consultant)**

The HIA categories are based on the three objectives of the HIA procedure. These would be:

### **1. proposed project / activity and recommend permit or modification**

The project / activity that the actor is proposing to carry out near a heritage site, monument, historic building or cultural object must be assessed in respect to its possible impact. According to the assessment a recommendation is formulated by the consultant for action to be taken by the Department of Archaeology.

The assessment outcome should either provide a recommendation to allow for the project / action to be carried out (with justification) or if not, detailed recommendations for modifications to the project / activity need to be provided. The Department of Archaeology will need to be able to either allow the project / activity to move ahead as proposed or then should provide specific recommendations to be adopted by the Actor to be allowed to continue.

### **2. assess past projects and recommend interventions for rectification**

Should there be previous projects / activities that have been carried out in the same area impacting the same heritage site, monument, historic building or cultural object, the Consultant shall assess the impact of these. These might be directly linked to the proposed project or might only be linked by location, but all that which is impacting the specific heritage must be assessed.

Should there be any impact caused by these previous projects / activities, recommendations need to be provided by the Consultant to the Department of Archaeology on what kind of interventions would be required for the rectification. These rectifications might not have anything to do with the Actor which would then require a different approach and means of rectification.

### **3. assess future threats and recommend planning mechanisms**

The assessment of a proposed project / activity in a given heritage site, monument, historic building or cultural object would be the right opportunity to assess future threats and begin putting in planning mechanisms.

If existing plans or management systems have been established, these can be assessed in respect to their effectiveness. If there are not plans in place, proposed interim measures need to be provided. These would include at least basic buffer zones and control mechanisms for threats that could be implemented by local authorities.

Any assessment can consist of any one, two or all the components depending on the circumstances.

## **2.6 Format for comments / recommendations (Advisory Body)**

The HIA report that is submitted by the Consultant shall be reviewed by the Advisory Body. The advisory body shall ensure that the basic requirements of the TOR have been fulfilled while reviewing the overall assessment in respect to the three components.

The Advisory Body shall carry out a desk review and only if there are major conflicting issues will someone be sent to assess the site.

The main points that the Advisory Body will check:

### **1. Overall process and content**

The Advisory Body shall check the process of preparing the HIA report by the Consultant which would also include legal and ethical issues. The Advisory Body shall check the content of the HIA report prepared by the Consultant based on the TOR and discussions.

### **2. The assessment and recommendations for each HIA category**

The Advisory Body shall check the assessments carried out by the Consultant, especially whether they are correct and acceptable within the prevalent understanding of conservation practice. Closely linked to this is also the checking of the relevance of the recommendations made by the Consultant.

The Advisory Body shall provide a note and recommendation which will include the outcome of their review of the Consultant Report. The points that would make up the Advisory Body note and recommendation:

#### **1. Note on process and content**

The Advisory Body shall provide notes to the Department of Archaeology on the process and content of the Consultants preparation of the HIA. This would include the assessment of legal and ethical issues.

#### **2. Note on assessment and recommendations**

The Advisory Body shall provide notes to the Department of Archaeology on the assessments done by the Consultants and particularly comment on the recommendations. This would especially focus on whether the assessments and recommendations are based on the prevalent understanding of conservation.

#### **3. Recommendation on Consultants report**

The Advisory Body may recommend the adoption of the Consultant report, the adoption with amendments, the return of the report to the Consultant for further clarifications and detailing or the total rejection of the Consultant report.

## **2.7 Official Letter (DOA)**

The Department of Archaeology will determine the outcome of the HIA based on the Consultant's report and the Advisory Bodies recommendations. Once this process has been finalized the Department of Archaeology will formulate and send to the Actor a letter with the final decision. This letter would be a legal document that would be legally binding.

The Official Letter that is sent by the Department of Archaeology to the Actor shall contain at least the following points:

### **1. Final Decision**

The Department of Archaeology shall formulate the final decision as a response to the application for a HIA submitted by the Actor. The final decision can be in short any of the following three options:

- (i) acceptance of proposal as submitted
- (ii) acceptance of proposal but with amendments
- (iii) rejection of proposal

### **2. Justification**

The Department of Archaeology shall provide a justification to the decisions that has been taken. This would need to be linked to appropriate legal provisions as well as the assessment carried out by the consultant and review by the advisory body.

### **3. If applicable required amendments to the project**

If applicable, the Department of Archaeology shall provide detailed information on the required amendments to the project which shall be binding if the Actor would want to continue with the project / activity.

### **4. Notes on related decisions on rectifications and planning**

The Department of Archaeology shall provide information related to the assessment and rectification of past projects and activities as well as planning recommendations to safeguard the site from potential threats. This information will become part of the overall guiding principles for the implementation of the proposed project.

### **5. Validity of decision**

The Department of Archaeology shall provide exact dates for the validity of the decision, which means the project / activity would need to be completed and be ready for final assessment by a given date of expiry of permission.

## **2.8 Certification of compliance (DOA)**

On completion of the project / activity or latest by the final date of expiry of the permission the Department of Archaeology shall assess the project. This assessment shall be carried out in consultation with the Consultant and the Advisory Body in the presence of the Actor.

The requirements that need to be fulfilled for issuance of the Certificate of Compliance are as follows:

### **1. Final Decision**

Compliance to final decision as stated in the Official Letter sent by DOA which could be either (i) acceptance of proposal as submitted; (ii) acceptance of proposal but with amendments or (iii) rejection of proposal.

### **2. If applicable required amendments to the project**

Compliance to required amendments to the project where relevant as stated in the Official Letter sent by DOA

### **3. Notes on related decisions on rectifications and planning**

Compliance to related rectifications and planning provisions defined in the Official Letter sent by DOA

### **4. Validity of decision**

Compliance to timeframe as defined in the Official Letter sent by DOA

Should the assessment of the project / activity show that there was no or not sufficient compliance, legal steps would need to be taken to rectify the situation. In the meantime if any cultural heritage is irreversibly affected, more severe consequence must be ascertained.

# **Annex**

## **Contents:**

- A. ICOMOS guidelines**
- B. WHITR-AP HIA Report Template**
- C. HIA Hong Kong**
- D. Example Heritage Impact Assessment: Pashupati Electrical Crematorium**

## A. ICOMOS guidelines

Guidance on Heritage Impact Assessments for Cultural World Heritage Properties

A publication of the International Council on Monuments and Sites

January 2011

ICOMOS, 49-51 rue de la Fédération 75015 Paris, France

In collaboration with the World Heritage Centre

### **Guidance on Heritage Impact Assessments for Cultural World Heritage Properties**

#### **Purpose**

**To offer guidance on the process of commissioning HERITAGE IMPACT ASSESSMENTS (HIAs) for World Heritage (WH) properties in order to evaluate effectively the impact of potential development on the Outstanding Universal Value (OUV) of properties.**

The guidance is addressed at managers, developers, consultants and decision-makers and is also intended to be relevant to the World Heritage Committee and States Parties.

The concept of OUV underpins the whole World Heritage Convention and all activities associated with properties inscribed on the List. The World Heritage Convention, for the protection of World's Cultural & Natural Heritage, which came into being in 1972, recognises properties of '**Outstanding Universal Value**' which are part of the "world heritage of mankind as a whole" and deserve "protection and transmission to future generations". Such properties are recognised through inscription on the World Heritage list by the World Heritage Committee, which consists of representatives from 21 States Parties.

Their OUV is fixed by the World Heritage Committee at the time of inscription and since 2007 has been encapsulated in a Statement of OUV. **OUV thus defines the thinking at the time of inscription and is non-negotiable.**

The World Heritage Convention is ratified by States Parties, who agree to conserve properties on their territories that are seen to be of OUV, and thus contribute towards protecting the shared heritage of humanity. This means that OUV needs to be sustained over time through the protection of attributes that are seen to convey OUV.

**World Heritage sites are thus single heritage assets with an international value that has been clearly articulated. Not everything within them contributes to OUV, but those attributes that do must be appropriately protected.**

**This guidance sets out a methodology to allow HIAs to respond to the needs of World Heritage sites, through considering them as discrete entities and evaluating impact on the attributes of OUV in a systematic and coherent way.**

The Guidance was developed following an international workshop organised by ICOMOS in Paris in September 2009.



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- 7 Deliver an evaluation that is helpful to States Parties, the Advisory Bodies and the World Heritage Committee, and relevant to the World Heritage context in general and specific properties in particular

Appendix 1: Heritage Impact Assessment Process

Appendix 2: Scoping Report Contents

Appendix 3A: Example Guide for assessing value of heritage assets

Appendix 3B: Example Guide for assessing magnitude of impact

Appendix 3C: Example Inventory Entry

Appendix 4: Heritage Impact Report Contents

## 1 Background

In recent years the UNESCO World Heritage Committee has addressed considerable numbers of State of Conservation Reports related to threats to World Heritage properties from various forms of large-scale development. These developments include roads, bridges, tall buildings, “box” buildings (e.g. malls), inappropriate, acontextual or insensitive developments, renewals, demolitions and new infrastructure typologies like wind farms, as well as land-use policy changes and large scale urban frameworks. The Committee has also examined threats from excessive or inappropriate tourism. Many of these projects have had the potential to impact adversely on the appearance, skyline, key views and other different attributes that contribute to Outstanding Universal Value (OUV).

In order for the ICOMOS and the Committee to evaluate satisfactorily these potential threats, there is a need to be specific about the impacts of proposed changes on OUV. While heritage impact assessment exists in many countries, these seem less reliably used in the World Heritage context.

Where formal evaluations are undertaken, many of these make use of procedures for environmental impact assessment (EIA). Whilst there is merit at looking at the experience of EIA, this is not likely to be immediately useful without some adaptation. EIA frequently disaggregates all the possible cultural heritage attributes and assesses impact on them separately, through discrete receptors such as protected buildings, archaeological sites, and specified view-points with their view cones, without applying the lens of OUV to the overall ensemble of attributes. A more global approach to the site is required, one directly linked to the expression of the site's OUV.

EIA therefore often produces disappointing results when applied to cultural World Heritage properties as the assessment of impacts is not clearly and directly tied to the attributes of OUV. Cumulative impacts and incremental changes (adverse) may also more easily pass undetected. The recent work done to assess the impacts of the proposed bridge on the World Heritage site of the Middle Rhine Valley is an example of this problem.

Currently, there are limited formal tools for identifying receptors and for assessing impact and few examples of excellence for Heritage Impact Assessment (HIA) undertaken for cultural WH properties. However, progress in 3D virtual representations and digital tools open new means to operate HIA.

#### **a) World Heritage context within which HIA are undertaken**

World Heritage properties need to be seen as single entities that manifest OUV. Their OUV is reflected in a range of attributes, and in order to sustain OUV it is those attributes that need to be protected. Thus the HIA process needs to consider the impact of any proposed project or change on those attributes, both individually and collectively, rather than on a standard range of receptors.

The development of Statements of OUV (SoOUV) for all World Heritage properties, a requirement set out in the Operational Guidelines for the implementation of the World Heritage Convention (UNESCO, 2008) paragraph 154-5, should assist through setting out clearly the attributes that reflect OUV and the links between them. The examination of integrity and authenticity is also a useful starting point.

In terms of assessing the effect of any impact on OUV, concepts such as 'limits of acceptable change' and 'absorption capacity' are being discussed, although there is no consensus yet on the usefulness of these concepts, or on how to operationalise them. There is also no consensus on how to revive heritage value that has been eroded.

Numerous visual assessment tools have been adapted to the assessment of impacts of proposed developments on the OUV of various World Heritage properties, especially those located within dynamic urban contexts, but so far these have rarely been linked to a more in-depth assessment of impact on all the attributes of OUV. There are also new tools on recording and mapping intangible heritage and multiple layers of attributes that have not been exploited for use in WH properties.

World Heritage properties are very diverse, as are the potential impacts. Although development of new tools is potentially useful, for the foreseeable future, impact assessment processes need to be able to access a variety of existing tools, without relying entirely on any one of them.

The 2nd cycle of the World Heritage Periodic Reporting should provide ICOMOS with a new data set relevant to this issue. The goal to have SoOUVs for all World Heritage properties by 2012 will also be an important underpinning of the guidance provided by ICOMOS.

#### **b) The diverse regulatory, planning and management contexts**

Neither EIA nor HIA are mandated in many countries and there is often no national regulatory framework within which they can operate.

The capacity of heritage authorities varies globally and some are not strong within the national government structures. In some countries there are strong environmental systems that provide a basis for EIA, but the heritage elements (including World Heritage) are underdeveloped or non-existent. In others, HIA are undertaken but the identified “triggers” for their use are often basic (usually in the form of lists of activities) or age.

This guidance aims to support the use and influence of HIAs, even where there are few legal structures that support the EIA/HIA processes.

Industry codes of practice should be influential in ensuring that HIA processes occur, and that the methods employed meet internationally-recognised standards of practice.

However, in many countries specific sectors considered to be of national interest are permitted to override EIA or HIA requirements.

Management plans for WH properties are potentially very important. They should be well anchored in planning arrangements at national, regional and local levels, and although embedded in national systems of protection in different ways, could be utilised more to define how change will be assessed. The sustainable development of WH properties is extremely important, including the protection of OUV elements. If the management plan is sufficiently robust and has undergone a thorough consultation process in its development, it should be possible to implement cooperative approaches to potential problems within the framework of the plan.

Potential threats should be anticipated in the management system in a property specific way – not “one size fits all”. Conservation policies embedded in the management system may also be used as a measure to assess potential adverse impacts.

A large number of World Heritage properties do not have a well-functioning management system (for some even where there is a management plan). This is an underlying issue for many properties selected for State of Conservation reporting.

#### **c) Tools, resources and capacities needed to undertake a HIA**

State of the art techniques are possible in many countries, but in many others, the levels of skills, knowledge and resources are quite basic. This guidance attempts to be applicable to all situations.

The skills required to do a HIA, using modern IT based and highly technical tools are only held by a limited number of people. These can be very helpful, particularly in complex situations, but HIA should not depend on them. On the other hand, diffusion of new HIA tools should be encouraged when their efficiency is proven.

In some cases, the level of analysis undertaken is very deep and expensive to produce but the outcome is difficult to understand and to operationalise. A key issue is identifying the optimum resources to get the job done, and not requiring more than is necessary.

Training of managers and staff at World Heritage properties and in the approvals agencies of all levels of government within a country will be important in order to ensure that the commissioning process for HIA is appropriate and that full and effective use is made of the output.

The backgrounds and professional skills of those who conduct HIA are diverse, but training and capacity-building will often be needed. Single professionals cannot always do a total HIA – there is most often a need to bring together an HIA team with the specific analytical skills needed for a particular project or site. A number of professional environmental management institutions provide archiving and other tools. In some circumstance opportunities for partnerships could be explored.

Although proposals for WH nominations should make sure adequate data and documentation are in place, and that realistic and relevant monitoring arrangements are in use, there is often a lack of baseline documentation.

Good documentation does not require a Geographic Information System (GIS), although this has been a powerful and useful tool where it is available. All approaches need to be systematic and follow rational guidelines.

## **2 Suggested procedures for Heritage Impact Assessment**

### **2-1 Introduction**

2-1-1 This section is intended to help to States Parties, heritage managers and decision-makers or others in managing their WH properties in circumstances where some form of change may affect the Outstanding Universal Value (OUV) of those sites. Change may be adverse or beneficial, but both need to be assessed as objectively as possible, against the stated OUV as reference point.

2-1-2 The guidance is a tool to encourage managers and decision-makers to think about key aspects of heritage management and to make decisions based on evidence within the framework of the 1972 World Heritage Convention. It is also designed to encourage potential developers or other agents of change to consider key factors at an appropriate time and at an appropriate level of detail. Heritage Impact Assessments (HIAs) may also be useful in the general management of cultural WH properties by collating information at a given point in time.

2-1-3 There are many ways of assessing impact on heritage assets, some formalised in law, some very technical and sophisticated, others less so. This guidance sets down some

principles and options. But whatever route is chosen, the assessment must be “fit-for-purpose” – suitable for the WH property and for the changes proposed, and suitable to the local environment. It must provide the evidence on which decisions can be made in a clear, transparent and practicable way.

2-1-4 In any proposal for change there will be many factors to be considered. Balanced and justifiable decisions about change depend upon understanding who values a place and why they do so. This leads to a clear statement of a place's significance and with it the ability to understand the impact of the proposed change on that significance.

2-1-5 In the case of WH properties, their international significance is established at the time of inscription and defined as their Outstanding Universal Value (OUV). States Parties undertake to retain and guard this OUV through protecting and conserving the attributes that convey OUV. The Statement of Outstanding Universal Value (SoOUV) which sets out why a property is deemed to have OUV and what the attributes are that convey OUV will be central to the HIA. Every reasonable effort should be made to eliminate or minimise adverse impacts on significant places. Ultimately, however, it may be necessary to balance the public benefit of the proposed change against the harm to the place. It is therefore also important to know who benefits from the proposed change and for what reasons. In such cases the weight given to heritage values should be proportionate to the significance of the place and the impact of the change upon it. WH properties de facto are seen to have global value and thus logically have a higher significance than national or local heritage value.

2-1-6 Where change may affect the OUV of a WH property, consideration of the cultural [and/or natural] heritage attributes should be central to planning any proposal and should be presented early on in any general assessment (such as an Environmental Impact Assessment - EIA). Managers and decisionmakers should consider whether the heritage conservation needs should be given greater weight than competing uses and developments. A key consideration is the threat or risk to the WH status and this should be clearly addressed in the HIA report.

2-1-7 Where statutory environmental impact assessments apply, the cultural heritage sections must take account of this ICOMOS guidance where the EIA relates to a WH property. An HIA undertaken as part of an EIA in these circumstances is not additional to normal EIA requirements, but uses a different methodology which clearly focuses on OUV and attributes that convey that OUV. The HIA should be summarised early on in the Environmental Statement, and the full technical HIA report should be included as a technical appendix. The requirements should be made clear at the planning or scoping stage. ICOMOS and the World Heritage Centre will encourage States Parties to ensure that HIAs in line with this guidance are undertaken in line with best practice. Where cultural heritage sections of EIAs clearly do not focus on the attributes of OUV, they would not meet desired standards in managing change at WH properties.

## **2-2 Understanding what needs to be undertaken before starting an HIA**

2-2-1 The assessment process is in essence very simple:

- . What is the heritage at risk and why is it important – how does it contribute to OUV?
- . How will change or a development proposal impact on OUV?

. How can these effects be avoided, reduced, rehabilitated or compensated?

2-2-2 The overall process is summarised in Appendix 1, but key elements include early and continued consultation with all relevant parties and agreement on the scope and expectations of the HIA before work commences. It is also important to identify possible negative impacts very early on in the process, in order to inform both the development design and the planning process in a pro-active rather than reactive manner.

2-2-3 The basis for management and decision making is a good understanding of the WH property, its significance and OUV, its attributes and its context. The Management Plan will often be the important first step in building an ability to have clear and effective impact assessments. Establishment of baseline data about the WH property and its condition is critical.

2-2-4 The starting point for any heritage assessment, once an initial development proposal or change of use is identified, should be to set out the scope of work necessary for an HIA which will provide the evidence for decisionmaking. Early consultation with relevant parties, including any affected community, is important. The HIA may also be useful in collating information about WH properties not otherwise easily accessible. HIA is a useful cooperative tool for all stakeholders.

2-2-5 A Scoping Report (or HIA brief) should be agreed with all relevant parties – the State Party, regional or local government, heritage advisors or managers, local communities or others as necessary. The scoping report should make it clear what is to be done, why and how, when and what are the expected outputs. It is important to include an agreed calendar between all stakeholders and the development programme (Appendix 2)

2-2-6 The Scoping Report should provide an outline description of the WH property and set out its OUV. It should have an outline of the proposed change or development including the need for change or development, a summary of the conditions present on the site and its environs, details of any alternative development being considered, an outline methodology and terms of reference for the HIA. The methodology should include organisations or people to be consulted, determining, for example, who are stakeholders and who is part of a heritage community related to the site, details of the baseline information to be collected including methods and appropriate study areas, likely sensitive heritage receptors and proposed survey and assessment methodology. It is also important at this stage to identify whether the proposed development is within a WH property or within a buffer zone or within the setting of the property but outside both. A Scoping Report should be used to flag large or critical impacts – the full HIA Report can then assess any positive reaction in terms of the altered development.

2-2-7 The Scoping Report should also give (as far as is practicable) a clear indication of what knowledge exists about the site and where lacunae exist – how good is the information base and what level of confidence may be placed on the assessment. This should be followed through in the actual assessment itself.

2-2-8 It is not only big developments that need an assessment of impact. WH properties may also be vulnerable to changes of policy which could have significant consequences – for example changes in land use and urban planning policies. Tourism infrastructure and



increased visits may have unintended consequences. Major archaeological excavations could also adversely affect the OUV of properties, though possibly compensating by the gaining of knowledge.

2-2-9 It is also important at this stage to ensure that organisations or individuals undertaking the HIA are suitably qualified and experienced, and that their expertise matches the demands of the site, its material and intangible content, its OUV and the nature and extent of the proposed changes. Single professionals can rarely do a total HIA, and the composition of the HIA team - heritage professionals and all other necessary competences - is crucial: the team will need specific analytical skills for a particular project or site. Opportunities for partnerships could be explored. This may also bring benefits in terms of developing capacity for HIA, and in developing and sharing best practice.

### **3 Data and documentation**

3-1 There are no agreed minimum standards for inventories, data review or condition surveys, though it may in due course be useful to define these. Such matters need to be proportionate to the property and its management needs. It is desirable that the HIA documentation stage is as comprehensive as possible, including developing an archive.

3-2 For WH properties the core documentation is the Statement of OUV and the identification of attributes that convey OUV. Hence this guidance concentrates on identifying impact on attributes that convey that OUV. However, the HIA should collect and collate information on all aspects and attributes of the cultural heritage within the agreed study area, so that the historical development of the property, its context, setting and where appropriate other values (for example national and local) can be fully understood.

3-3 It is useful, if not essential, to document and manage the collection of data. Assessment processes can be very lengthy and data sources may require periodic “refreshment”. When data sources are in a state of flux or the timetable for assessment is lengthy, it may be necessary to agree a “data freeze” so that the HIA team can compare like with like information.

3-4 Inventories should be included in the HIA reports, as tables or gazetteers in appendices to the main text. Underpinning archives of material and information collected should be retained for future use and properly referenced, including location and accessibility. Good documentation does not require sophisticated techniques such as GIS or complex databases; it needs a common sense, systematic and consistent approach which is suitable to the needs of the property.

3-5 In more complex cases, more sophisticated approaches could be considered. However, the use of databases and GIS, or 3D-modelling, changes the way in which HIAs are undertaken. The systems allow assessment to be a far more iterative process, and as a result HIA can be more effectively fed back into the design processes. But this also allows for more “what if” scenarios to be requested of the HIA team. The scoping report would need to set down the principles for this iteration so that the HIA team can work effectively.

#### **4 Methods and approaches appropriate to the property - optimising available tools, techniques and resources**

4-1 The collection of information during HIA should consider all potential sources of data. Techniques will include desk study or historical research, and site visits to check condition, authenticity and integrity, sensitive viewpoints and so on. They may include terrain modelling, or inter-visibility modelling to predict impacts on heritage assets. It is necessary to capture and explain in clear text evidence of both tangible and intangible heritage attributes, and wherever possible to relate the latter to the physical features which embody them.

4-2 Field studies are also generally essential to ensure that the HIA is robust. Techniques should be linked to the development proposal and could include nonintrusive evaluation or field testing by topographic survey, geophysical survey, virtual 3D scale models or more intrusive methods such as artefact collection, scientific survey, test pitting or trial trenching. In some circumstances the collection of oral histories or evidence may also be valid and useful.

4-3 The data collection must enable the heritage attributes to be quantified and characterised, and allow their vulnerability to proposed changes to be established. It is also necessary to look at the interrelationship/s between discrete heritage resources, in order to understand the whole. There is often a relationship between a material aspect and an intangible aspect which must be brought to the fore.

4-4 Collection of information during the HIA is an iterative process which can often lead to the emergence of alternatives and options for the development proposal.

4-5 Understanding the full meaning of the OUV of a WH property (and other values of heritage) is a crucial part of the HIA process. The evaluation of the overall significance of the effect (overall impact) is a function of the heritage value and assessment of scale of changes and impact.

4-6 When describing WH properties, it is essential to start by describing the attributes of OUV. This is the “baseline data” against which impacts must be measured, and includes both tangible and intangible aspects. A statement of condition may be useful for each key attribute of OUV.

4-7 However, while the SoOUV is an essential starting point, sometimes they are not detailed enough in terms of attributes to be directly useful to impact assessment work. Each property will need to be assessed and where necessary, the attributes may need to be more specifically defined during the HIA process.

4-8 Such definition of attributes should not seek to re-define the SoOUV, but to describe the attributes in a way which assists decision-making on the proposed change. It should be noted that OUV is defined at the time a WH property is inscribed on the WH List and cannot be changed without a re-nomination which goes through a full evaluation process.

4-9 The production of location or themed maps or plan views is almost always needed to demonstrate the findings and issues raised. Spatial rendering is useful to show the disposition of attributes, the relationships between the attributes (which may be processes), and the associations attributes have such as visual, historical, religious, communal, aesthetic

or evidential. It is necessary to link the attributes back to the components of the SoOUV in a clear and readable manner, which does not oversimplify but retains cultural or other complexities in synoptic statements or diagrams. HIA teams should, however, be wary of too much reliance on maps, as our human experience of places is in 3D – ground-truthing is always required to check spatial relationships.

4-10 One option for assessing value is set out in Appendix 3A. In this system the value of heritage attributes is assessed in relation to statutory designations, international or national, and priorities or recommendations set out in national research agendas, and ascribed values. Professional judgement is then used to determine the importance of the resource. Whilst this method should be used as objectively as possible, qualitative assessment using professional judgement is inevitably involved. The value of the asset may be defined using the following grading scale: . Very High . High . Medium . Low . Negligible . Unknown

4-11 In the HIA Report there should be a clear and comprehensive text description of individual and/or groups of heritage attributes, which sets out their individual and/or collective condition, importance, inter-relationships and sensitivity, and possibly also an indication of capacity for change. This should be accompanied by appropriate mapping to aid the reader. All heritage elements should be included, but the components contributing to the WH property's OUV will be particularly relevant and may merit a further detailed section. A detailed inventory should be included in supporting appendices or reports so that the reader may check the assessment of each element. An example is included in Appendix 3C.

## **5 A defensible system for assessing/evaluating impact**

5-1 Effects on cultural heritage attributes from development or other changes may be adverse or beneficial. It is necessary to identify all changes on all attributes, especially those attributes which give the property its OUV, on which this guidance concentrates. It is also important to identify the scale or severity of a specific change or impact on a specific attribute – as this combination is what defines the significance of the impact, otherwise called “significance of effect”.

5-2 There is sometimes a tendency to see impacts as primarily visual. While visual impacts are often very sensitive, a broad approach is needed as outlined in the ICOMOS Xi'an Declaration. Impacts take many forms – they may be direct and indirect; cumulative, temporary and permanent, reversible or irreversible, visual, physical, social and cultural, even economic. Impacts may arise as a consequence of construction or operation of the proposed development. Each needs to be considered for its relevance to the HIA.

5-3 Direct impacts are those that arise as a primary consequence of the proposed development or change of use. Direct impacts can result in the physical loss of part or all of an attribute, and/or changes to its setting - the surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape. In the process of identifying direct impacts care must be taken of the development technique of gaining approvals by just avoiding direct impact - impacts which just “miss” physical resources can be just as negative to a single resource, a pattern, ensemble, setting, spirit of place etc.

5-4 Direct impacts resulting in physical loss are usually permanent and irreversible; they normally occur as a consequence of construction and are usually confined within the development footprint. The scale or magnitude of these impacts will depend on the proportion of the attribute affected, and whether its key characteristics or relation to OUV would be affected.

5-5 Direct impacts that affect the setting of an attribute may occur as a consequence of construction or operation of the development scheme and may have an effect Guidance on some distance from the development. Assessment of impacts on setting refers to perceptible visual and aural (noise) effects that can be appreciated at a given time. Such impacts may be temporary or permanent, reversible or irreversible depending on the extent to which the cause of the impact can be removed. Impacts may also be transient where occurrence is sporadic or of limited duration, for example, related to hours of operation or the frequency of passage of vehicles.

5-6 Indirect impacts occur as a secondary consequence of construction or operation of the development, and can result in physical loss or changes to the setting of an asset beyond the development footprint. For example, construction of related infrastructure such as roads or powerlines that are required to support the development. Facilitated impacts should also be considered which may be further actions (including by third parties) which are made possible or facilitated by the development.

5-7 Scale or severity of impacts or changes can be judged taking into account their direct and indirect effects and whether they are temporary or permanent, reversible or irreversible. The cumulative effect of separate impacts should also be considered. The scale or severity of impact can be ranked without regard to the value of the asset as: . No change . Negligible change . Minor change . Moderate change . Major change

5-8 The significance of the effect of change – i.e. the overall impact - on an attribute is a function of the importance of the attribute and the scale of change. This can be summarized for each attribute described using the following descriptors. As change or impacts may be adverse or beneficial, there is a nine-point scale with “neutral” as its centre point: . Major beneficial . Moderate beneficial . Minor beneficial . Negligible beneficial . Neutral . Negligible adverse . Minor adverse . Moderate adverse . Major adverse

VALUE OF HERITAGE ASSET	SCALE & SEVERITY OF CHANGE/IMPACT				
	No Change	Negligible change	Minor change	Moderate change	Major change
For WH properties Very High – attributes which convey OUV	SIGNIFICANCE OF EFFECT OR OVERALL IMPACT (EITHER ADVERSE OR BENEFICIAL)				
	Neutral	Slight	Moderate/ Large	Large/very Large	Very Large

For other heritage assets or attributes	SIGNIFICANCE OF IMPACT (EITHER ADVERSE OR BENEFICIAL)				
	Neutral	Slight	Moderate/ Large	Large/very Large	Very Large
<b>Very High</b>	Neutral	Slight	Moderate/ Large	Large/very Large	Very Large
<b>High</b>	Neutral	Slight	Moderate/ Slight	Moderate/ Large	Large/Very Large
<b>Medium</b>	Neutral	Neutral/Slight	Slight	Moderate	Moderate/ Large
<b>Low</b>	Neutral	Neutral/Slight	Neutral/Slight	Slight	Slight/ Moderate
<b>Negligible</b>	Neutral	Neutral	Neutral/Slight	Neutral/Slight	Slight

5-9 For example:

. Total demolition of a key building which is the main conveyance of OUV for a WH property to make way for a new road would be a major adverse effect or overall major adverse impact.

. Removal of a later road from the immediate vicinity of a key building which conveys OUV and which is not directly related to its OUV attributes would be a major beneficial effect or overall impact.

5-10 The table above is a summary to aid assessment of impact. The HIA Report will need to show the assessment for each OUV attribute – for example in a simple table - and demonstrate how the results for each individual or collective heritage attribute have been obtained. This should include qualitative as well as quantitative evaluation.

5-11 Proposals should be tested against existing policy frameworks and the management plan for the property and surrounding area. The compatibility of the scale, pattern, use, etc should be tested according to the attributes of the property that convey OUV and other assets. Issues such as sight lines, architectural type, volumes and surface appearances, settlement form, functional uses and persistence through time etc might be relevant. In all this, it is necessary to match the attributes of the development to the attributes of the site, so that development is complementary and even enhancing to the property.

5-12 Changes arising from developments must also be assessed for their impact on integrity and authenticity. The property should have baseline statements regarding integrity and authenticity at the time of inscription, or at the time the retrospective SoOUV was undertaken [paragraphs 79-88 in Operational Guidelines]. The relationship between attributes of OUV, authenticity and integrity needs to be understood and needs to be shown to be understood in the HIA report. Authenticity relates to the way attributes convey OUV and integrity relates to whether all the attributes that convey OUV are extant within the property and not eroded or under threat.

5-13 Benefits and dis-benefits – or adverse effects - must be very carefully considered. There are a range of benefits and dis-benefits, and the question of who receives the benefits (or misses out through the benefits) is important. Often the property itself and the associated communities do not receive the benefits flowing from development. Financial consequences of the assessment are also important and often directly influence decisions. The analysis must reveal rather than disguise these complexities. The conservation of the property should be counted within the benefits of a project, so that projects that are supportive of conservation can be weighted more than those that do not.

## **6 Can impacts be avoided, reduced, rehabilitated or compensated – mitigation?**

6-1 Impact assessment is an iterative process. Results of data collection and evaluation should be fed back into the design process for the development, or proposals for change or for archaeological investigation.

6-2 Conservation is about managing sustainable change. Every reasonable effort should be made to avoid, eliminate or minimise adverse impacts on attributes that convey OUV and other significant places. Ultimately, however, it may be necessary to balance the public benefit of the proposed change against the harm to the place. In the case of WH properties this balance is crucial.

6-3 HIA should include proposed principles and where possible proposed methods to mitigate or offset the effects of a development proposal or other agent of change. This should include consideration of other options for the development including site selection/location, timing, duration and design. The HIA should indicate fully how the mitigation is acceptable in the context of sustaining OUV, including the authenticity and integrity of the WH property. Available guidance in the Operational Guidelines on periodic reporting should be consulted to help this process.

6-4 It may be appropriate to undertake further consultation at this stage before finalising the HIA.

## **7 Deliver an evaluation that is helpful to States Parties, the Advisory Bodies and the World Heritage Committee, and relevant to the World Heritage context in general and specific properties in particular**

7-1 Appendix 4 sets out a guide to the contents of an HIA report. It is a matter of expert judgement, following suitable consultation and scoping to define exact requirements.

7-2 The HIA report should provide the evidence on which decisions can be made in a clear, transparent and practicable way. The level of detail needed will depend on the site and proposed changes. The Statement of OUV will be central to the evaluation of the impacts and risk to the property.

7-3 The HIA report will need to show

- . A comprehensive understanding of the WH property and its OUV, authenticity and integrity, condition, context (including other heritage attributes) and interrelationships;



- . An understanding of the range of impacts arising from the development or other proposal for change;
- . An objective evaluation of those impacts (beneficial and adverse) on the heritage elements and in particular on the site's OUV, integrity and authenticity;
- . An assessment of the risk posed to the retention of OUV and the likelihood that the property may be in potential or actual danger;
- . A statement of heritage benefits which may arise from proposals including better knowledge and understanding and awareness-raising;
- . Clear guidelines as to how impact can be mitigated or avoided;
- . Supporting evidence in the form of a suitably detailed inventory of attributes of OUV and other heritage assets, impacts, survey or scientific studies, illustrations and photographs.

7-4 The HIA Report will need to have a non-technical summary clearly setting out all relevant matters, a detailed text description and analysis and a text summary of the results of the evaluation of impact accompanied by tables to assist the reader.

## Appendix 1: Heritage Impact Assessment Process

Stages of HIA
Initial development and design
Early consultation
Identify and recruit suitable organisations to undertake works
Establish study area
Establish scope of work
Collect data
Collate data
Characterise the heritage resource, especially in identifying attributes that convey OUV
Model and assess impacts, direct and indirect
Draft mitigation – avoid, reduce, rehabilitate or compensate
Draft report
Consultation
Moderate the assessment results and mitigation
Final reporting and illustration – to inform decisions
Mitigation
Dissemination of results and knowledge gained

## Appendix 2: Scoping Report Contents

At the outset of any proposed impact assessment it is desirable to agree the scope of the work needed so that the work is 'fit-for-purpose' and will enable decision to be made. Early consultation is essential.

The scope should be agreed with all relevant parties, including the State Party, regional or local government or its agencies, any statutory consultees and local community representatives and the public. In some cases it may be also desirable to consult with the WHC or its advisors, ICOMOS or IUCN.

The “developer” is responsible for producing the scoping report. Its contents should include

- . An outline description of the proposed change or development, providing as much detail as is available at the time of writing;
- . A summary of the conditions present on the site and its environs, based on information collated to that point in time;
- . The Statement of Outstanding Universal Value . Details of how alternatives to changes are being considered;
- . Outline methodology and terms of reference for the HIA as a whole;
- . The organisations/people consulted and to be consulted further;
- . A topic by topic assessment of the key impacts of the development; this should include:
  - details (as known) of the baseline conditions;
  - consideration of the potential effects of the development where overall impacts or effects are not considered to be significant, a justification of why they should be “scoped out” of the HIA;
  - where overall impacts are considered to be potentially significant, details of the baseline information to be collected (including methods and appropriate study areas), likely sensitive heritage receptors in particular those related to attributes of OUV and proposed survey and assessment methodology.
- . A negotiated calendar covering the whole process, including deadlines for reporting and consultation.

### **Appendix 3A: Example Guide for Assessing Value of Heritage Assets**

HIAs for WH properties will need to consider their international heritage value and also other local or national values, and priorities or recommendations set out in national research agendas. They may also need to consider other international values which are reflected in, for example, international natural heritage designations.

Professional judgement is used to determine the importance of the resource. The value of the asset may be defined using the following grading scale: . Very High . High . Medium . Low . Negligible . Unknown potential. The following table is not intended to be exhaustive.

### **Appendix 3A: Example Guide for Assessing Value of Heritage Assets**

HIAs for WH properties will need to consider their international heritage value and also other local or national values, and priorities or recommendations set out in national research agendas. They may also need to consider other international values which are reflected in, for example, international natural heritage designations.

Professional judgement is used to determine the importance of the resource. The value of the asset may be defined using the following grading scale:

☐ Very High, ☐ High, ☐ Medium, ☐ Low, ☐ Negligible, ☐ Unknown potential.

The following table is not intended to be exhaustive

Grading	Archaeology	Built heritage or Historic Urban Landscape	Historic landscape	Intangible Cultural Heritage or Associations
Very High	Sites of acknowledged international importance inscribed as WH property.	Sites or structures of acknowledged international importance inscribed as of universal importance as WH property.	Landscapes of acknowledged international importance inscribed as WH property.	Areas associated with Intangible Cultural heritage activities as evidenced by the national register.
	Individual attributes that convey OUV of the WH property.	Individual attributes that convey OUV of the WH property.	Individual attributes that convey OUV of the WH property.	Associations with particular innovations, technical or scientific developments or movements of global significance.
	Assets that can contribute significantly to acknowledged international research objectives.	Other buildings or urban landscapes of recognised international importance.	Historic landscapes of international value, whether designated or not.	Associations with particular individuals of global importance
			Extremely well-preserved historic landscapes with exceptional coherence, time-depth, or other critical factors.	
High	Nationally-designated Archaeological Monuments protected by the State Party's laws	Nationally-designated structures with standing remains.	Nationally-designated historic landscape of outstanding interest.	Nationally-designated areas or activities associated with globally-important Intangible Cultural Heritage activities .
	Undesignated sites of the quality and importance to be designated.	Other buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade.	Undesignated landscapes of outstanding interest.	Associations with particular innovations, technical or scientific developments or movements of national significance
	Assets that can contribute significantly to acknowledged national research objectives.	Conservation Areas containing very Important buildings.	Undesignated landscapes of high quality and importance, and of demonstrable national value.	Associations with particular individuals of national importance
		Undesignated structures of clear national importance.	Well preserved historic landscapes, exhibiting considerable coherence, time-depth or other critical factors.	

<b>Medium</b>	Designated or undesignated assets that can contribute significantly to regional research objectives.	Designated buildings. Historic (unlisted) buildings that can be shown to have exceptional qualities or historical associations.  Conservation Areas containing buildings that contribute significantly to its historic character.  Historic townscapes or built-up areas with important historic integrity in their buildings, or built settings.	Designated special historic landscapes.  Undesignated historic landscapes that would justify special historic landscape designation.  Landscapes of regional value.  Averagely well preserved historic landscapes with reasonable coherence, time-depth or other critical factors.	Areas associated with Intangible Cultural heritage activities as evidenced by local registers.  Associations with particular innovations or developments of regional or local significance.  Associations with particular individuals of regional importance
<b>Low</b>	Designated or undesignated assets of local importance.  Assets compromised by poor preservation and/or poor survival of contextual associations.  Assets of limited value, but with potential to contribute to local research objectives.	"Locally Listed" buildings.  Historic (unlisted) buildings of modest quality in their fabric or historical associations.  Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings.	Robust undesignated historic landscapes.  Historic landscapes with importance to local interest groups.  Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.	Intangible Cultural heritage activities of local significance  Associations with particular individuals of local importance  Poor survival of physical areas in which activities occur or are associated
<b>Negligible</b>	Assets with little or no surviving archaeological interest.	Buildings or urban landscapes of no architectural or historical merit; buildings of an intrusive character.	Landscapes little or no significant historical interest.	Few associations or ICH vestiges surviving
<b>Unknown potential</b>	The importance of the asset has not been ascertained.	Buildings with some hidden (i.e. inaccessible) potential for historic significance.	n/a	Little is known or recorded about ICH of the area

## Appendix 3B: Example Guide for assessing magnitude of impact

Impact Grading	Archaeological attributes	Built heritage or Historic Urban Landscape attributes	Historic landscape attributes	Intangible Cultural Heritage attributes or Associations
<b>Major</b>	<p>Changes to attributes that convey OUV of WH properties</p> <p>Most or all key archaeological materials, including those that contribute to OUV such that the resource is totally altered.</p> <p>Comprehensive changes to setting.</p>	<p>Change to key historic building elements that contribute to OUV,, such that the resource is totally altered.</p> <p>Comprehensive changes to the setting.</p>	<p>Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit and loss of OUV.</p>	<p>Major changes to area that affect the ICH activities or associations or visual links and cultural appreciation.</p>
<b>Moderate</b>	<p>Changes to many key archaeological materials, such that the resource is clearly modified.</p> <p>Considerable changes to setting that affect the character of the asset.</p>	<p>Changes to many key historic building elements, such that the resource is significantly modified.</p> <p>Changes to the setting of an historic building, such that it is significantly modified.</p>	<p>Change to many key historic landscape elements, parcels or components; visual change to many key aspects of the historic landscape; noticeable differences in noise or sound quality; considerable changes to use or access; resulting in moderate changes to historic landscape character.</p>	<p>Considerable changes to area that affect the ICH activities or associations or visual links and cultural appreciation.</p>
<b>Minor</b>	<p>Changes to key archaeological materials, such that the resource is slightly altered.</p> <p>Slight changes to setting.</p>	<p>Change to key historic building elements, such that the asset is slightly different.</p> <p>Change to setting of an historic building, such that it is noticeably changed.</p>	<p>Change to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; limited changes to noise levels or sound quality; slight changes to use or access; resulting in limited change to historic landscape character.</p>	<p>Changes to area that affect the ICH activities or associations or visual links and cultural appreciation.</p>
<b>Negligible</b>	<p>Very minor changes to key archaeological materials, or setting.</p>	<p>Slight changes to historic building elements or setting that hardly affect it.</p>	<p>Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.</p>	<p>Very minor changes to area that affect the ICH activities or associations or visual links and cultural appreciation.</p>
<b>No change</b>	<p>No change.</p>	<p>No change to fabric or setting.</p>	<p>No change to elements, parcels or components; no visual or audible changes; no changes in amenity or community factors.</p>	<p>No change</p>

### Appendix 3C: Example Inventory Entry

The following list gives a suggested set of data fields which could be used in supporting tables or inventories which collate information on an individual or group of heritage assets.

Unique Identity number

Asset name

Location (map reference)

Type of asset (burial mound, church, fort, landscape, ICH etc)

Date

Statutory designation (e.g. on national or local register, WHS)

Brief description

Condition

Authenticity

Integrity

Inter-relationships (list)

Sensitivity

Importance (Very high, high,

Development magnitude of impact – construction (Major, Moderate, Minor, Negligible, No change)

Development significance of effect – construction (Major beneficial, Moderate beneficial, Minor beneficial, Negligible beneficial; No Change, Negligible adverse, Minor adverse, Moderate adverse, Major adverse)

Operational magnitude of impact (as above)

Operational significance of effect

### Appendix 4: Heritage Impact Report Contents

The HIA Report should provide the evidence on which decisions can be made in a clear, transparent and practicable way. The level of detail needed will depend on the site and proposed changes. The Statement of OUV will be central to the evaluation of the impacts and risk to the site.

The report should include:

- ☐ the proper name of the WH property,
- ☐ its geographical coordinates,
- ☐ the date of inscription,
- ☐ the date of the HIA report,
- ☐ the name of the organization or entities responsible for preparing the HIA report,
- ☐ for whom it was prepared, and
- ☐ a statement on whether the report has been externally assessed or peer-reviewed.

Outline report contents

- 1 Non-technical summary – must contain all key points and be useable alone.
- 2 Contents
- 3 Introduction
- 4 Methodology
  - ☐ Data sources
  - ☐ Published works



- ☐ Unpublished reports
  - ☐ Databases
  - ☐ Field Surveys
  - ☐ Impact Assessment Methodology
  - ☐ Scope of Assessment
  - ☐ Evaluation of Heritage Resource
  - ☐ Assessment of Scale of Specific Impact and Change
  - ☐ Evaluation of Overall Impact
  - ☐ Definition of the Assessment Area
- 5 Site history and description –
- Key in this section will be the Statement of OUV, and a description of the attributes which convey OUV and which contribute to the Statements of authenticity and integrity. This section should also include any nationally or locally designated sites, monuments or structures as well as non-designated sites. It should set out the historical development of the study area, and describe its character, such as the historic landscape, including field patterns, boundaries and extant historic elements of the landscape and cultural heritage. It should describe the condition of the whole and of individual attributes and components, physical characteristics, sensitive viewpoints and intangible associations which may relate to attributes. This should focus on areas affected in particular but must include a description of the whole.
- 6 Description of changes or developments proposed
- 7 Assessment and evaluation of overall impact of the proposed changes
- This part should set out an assessment of specific changes and impacts on the attributes of OUV and other heritage assets. It should include a description and assessment of the direct or indirect impacts, including physical impacts, visual, or noise, on individual heritage attributes, assets or elements and associations, and on the whole. Impact on OUV should be evaluated through assessment of impact on the attributes which convey the OUV of the site. It should consider all impacts on all attributes; professional judgement is required in presenting the information in an appropriate form to assist decision-making.
- It should also include an evaluation of the overall significance of effect – overall impact - of the proposals for development or change on individual attributes and the whole WH property. This may also need to include an assessment of how the changes may impact on the perception of the site locally, nationally and internationally. I
- 8 Measures to avoid, to reduce or to compensate for impacts - Mitigation Measures Such measures include both general and site or asset-specific measures and cover
- ☐ those needed before the development or change proceeds (such as archaeological excavation),
  - ☐ those needed during construction or change (such as a watching brief or physical protection of assets) and
  - ☐ any post-construction measures during the operation of any proposed change or development (such as interpretation or access measures, awareness-building, education, reconstruction proposals),
  - ☐ proposals to disseminate information, knowledge or understanding gained by the HIA and any detailed desk, field or scientific studies.
- 9 Summary and Conclusions, including

- ☐ A clear statement on effects on the Outstanding Universal Value of the WHS, its integrity and authenticity,
  - ☐ The risk to the Inscription of the site as a WH property,
  - ☐ Any beneficial effects, including better knowledge and understanding and awareness-raising.
- 10 Bibliography
  - 11 Glossary of terms used
  - 12 Acknowledgements and authorship
  - 13 Illustrations and photographs showing for example
    - ☐ Location and extent of sites, including buffer zones
    - ☐ Any study area defined
    - ☐ Development or proposals for change
    - ☐ Visual or inter-visibility analyses
    - ☐ Mitigation measures
    - ☐ Key sites and views
  - 14 Appendices with detailed data, for example
    - ☐ Tables of individual sites or elements, summary description and summary of impacts
    - ☐ Desk studies
    - ☐ Field study reports (such as geophysical survey, trial evaluation, excavation)
    - ☐ Scientific studies
    - ☐ List of consultees and consultation responses
    - ☐ The scoping statement or project brief.

## B. WHITR-AP HIA Report Template

WHITRAP, Shanghai – ICCROM –  
World Cultural Heritage Old Town Lijiang Protection and Management Bureau

### International Training Course on Heritage Impact Assessment

Lijiang, China  
October 15 – 24, 2012

## HIA Report Template

### COVER AND INSIDE PAGES

Title  
Name and identification reference of the heritage resource  
Name of the organization or entities responsible for preparing the HIA report  
For whom it was prepared  
Date of the HIA report  
A statement of whether the report has been externally assessed or peer-reviewed

### EXECUTIVE SUMMARY

Non-technical summary containing all key points and useable as a stand-alone document

### CONTENTS

LISTS OF FIGURES/ TABLES/ DIAGRAMS

LIST OF ABBREVIATIONS / ACRONYMS

GLOSSARY OF TERMS USED

ACRONYMS

ACKNOWLEDGEMENTS AND AUTHORSHIP

### 1. INTRODUCTION

Background to the HIA  
Response to development proposal / response to a disaster / request from an Authority  
Mandate and Terms of Reference  
Aims of HIA as defined in Brief  
Scope of HIA

- Spatial boundaries of HIA
- Range of Heritage to be assessed
- Any limitations or restrictions imposed by the brief

Basic information re: Heritage  
Proper name of the property or heritage resource  
Geographical coordinates  
Date of inscription / listing / where relevant

### 2. METHODOLOGY

Introduction  
Framework guiding the methodology (national guidelines, ICOMOS Guidelines etc.)

Flow chart

Description of steps/ tasks carried out as part of the HIA

Data collection / Baseline

Data made available by the commissioning authority

Desk-Based Research

- Data Sources
- Published works
- Unpublished works
- Databases

Assessment Visit(s)

Additional data collection: surveys, interviews, field work

Significance Assessment

Whether based on an existing Statement of OUV or of Significance or developed as part of the HIA

Impact Assessment

Identification of sources of impacts

Identification of potential impacts

Assessment of Impacts

- On overall OUV / Values and Significance
- On individual attributes

Mitigation Design

- Option modeling
- Evaluating Options
- Mitigation
- Monitoring Plan

### 3. LEGISLATION, GUIDELINES AND STANDARDS

Legislation and Statutory Requirements

National

State / Local

UNESCO WHC Statutory documents

Heritage Guidelines and Standards

National

State / Local

UNESCO and Adv Body Guidelines and Charters

### 4. DESCRIPTION AND ASSESSMENT OF SIGNIFICANCE OF THE CULTURAL HERITAGE RESOURCE

Background to the Heritage

Setting

- Physical background:
  - Geology and landform setting
  - Ecological context (flora and fauna, water and drainage, climate etc.)
- Historical development of the study area
- Demographic background
- Traditional land use

Status of Protection of the Heritage

Past and present conservation and management context

- Formal context (Antiquities Legislation etc.)
- Non-Formal context (traditional management and protection)

Previous interventions  
Previous HIA studies or related studies

Description of the heritage resource and its attributes

If World Heritage: Assessment of Significance

- Statement of OUV/ Retrospective SOUV / augmented for specific focus
- Full text of Criteria, Integrity and Authenticity appended
- Character Defining Attributes

If not World Heritage but other determined significance

- Statement of Significance
- Full text of determination appended
- Character Defining Attributes

If significance is determined as part of this HIA

- Statement of Significance
- Full text of determination and an account of the determination process appended
- Character Defining Attributes

Baseline Conditions and Existing Impacts

Condition of the whole

Baseline conditions and existing impacts for individual attributes and components, eg.:

- Landscape
- Archaeological sites
- Built Heritage
- Living Heritage
- Current uses and community value

Summary assessment of Existing Impacts

## 5. DESCRIPTION OF THE PROPOSED CHANGES

Description of Interventions and Development Proposed

Nature of the proposal

- Scope of the intervention or proposal
- Rationale given for the proposed intervention
- Detailed plans
- Extent and nature of works
- Resulting changes
- User requirements

Adherence to existing regulations, guidelines and standards

Management proposals

- Management proposals during construction
- Management proposals during operation

## 6. ASSESSMENT AND EVALUATION OF IMPACTS OF PROPOSED CHANGES

Identification of Factors /Sources potentially impacting the heritage and its attributes

- During pre-implementation/ planning phase

- During works / construction / implementation
- During operation of the project
- During de-commissioning of the project (as relevant)

Heritage attributes affected by identified sources

Identification of which attributes of the heritage are potentially impacted including tangible and intangible heritage

Level of importance in terms of its function as character defining attribute

Types of Potential Impact:

On individual attributes

(may require separate assessments for Built, Archaeological, Landscape and Living Heritage assets etc.)

Direct impacts and Indirect impacts

Measure of and reversibility

On overall OUV/Significance

Direct impacts and Indirect impacts

Assessment of the severity (level and duration)

- On individual attributes  
(may require separate assessments for Built, Archaeological, Landscape and Living Heritage assets)
- On overall OUV / Significance

Evaluation of the overall significance of effect – overall impact – of the proposal and advisory

May include evaluation of how the changes may impact on the perception of the site locally, nationally and internationally

Non-conformity with heritage standards

Heritage loss and deterioration

Social impacts resulting from change

Summation (*Triage*: Relevance and for which impact)

## 7. MITIGATION RECOMMENDATIONS

Overarching Mitigation for the heritage as a whole

- Scheduling of the mitigation
- Identification of the responsible party

Attribute specific Mitigation

- Scheduling of the mitigation
- Identification of the responsible party

Further Investigations and studies required to implement the mitigation recommendations

Discussion of effectiveness of proposed mitigation and beneficiation



## 8. MONITORING RECOMMENDATIONS

Overarching Monitoring for the heritage as a whole

- Scheduling of the monitoring
- Identification of the responsible party
- Indicators to be used for monitoring

Attribute specific Monitoring

Scheduling of the monitoring

- Identification of the responsible party
- Indicators to be used for monitoring

## 9. EVALUATION SYNTHESIS AND ADVISORY

Introduction

Re-stating the context of the Heritage Impact Assessment

Revisiting the Heritage Impact Assessment methodology

Conclusions

Summary of impacts

Summary of Mitigation and Monitoring

The implications of in-action

Statement of effects on OUV, Integrity and Authenticity and focused significance

Risk to protection status

Beneficial effects forthcoming from this HIA

Dissemination of information, knowledge or understanding gained by the HIA and any detailed desk, field or scientific studies

Concluding advisory statement of the acceptability of the proposed project or change in terms of its potential impacts on heritage.

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### APPENDICES

Desk studies

Field study reports

Scientific studies

List of consultees and consultation responses

Scoping statement / project brief

### ILLUSTRATIONS

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Site maps including buffer zones

Plans of proposed development or change

Visual and/or inter-visibility analyses

Mitigation measures

Key sites and views

Matrices

## C. HIA Hong Kong

<http://www.epd.gov.hk/eia/register/study/latest/figure/esb1442006Appendixb.htm>

### **Criteria for Cultural Heritage Impact Assessment**

#### 1 Baseline Study

##### 1.1 A baseline study shall be conducted:

- a. to compile a comprehensive inventory of archaeological sites (including marine archaeological sites), historic buildings and structures within the proposed project area, which include:
  - (i) all sites of archaeological interest (including marine archaeological sites);
  - (ii) all pre-1950 buildings and structures;
  - (iii) selected post-1950 buildings and structures of high architectural and historical significance and interest; and
  - (iv) landscape features include sites of historical events or providing a significant historical record or a setting for buildings or monuments of architectural or archaeological importance, historic field patterns, tracks and fish ponds and cultural element such as fung shui woodlands and clan grave.
- b. To identify the direct and indirect impacts on the site of cultural heritage at the planning stage in order to avoid causing any negative effects. The impacts include the direct loss, destruction or disturbance of an element of cultural heritage, impact in its settings causing impinge on its character through inappropriate sitting or design, potential damage to the physical fabric of archaeological remains, historic buildings or historic landscapes through air pollution, change of water-table, vibration, recreation pressure and ecological damage by the development. The impacts listed are merely to illustrate the range of potential impacts and not intended to be exhaustive.

##### 1.2 The baseline study shall also include a desk-top study and a field survey.

##### 1.3 Desk-top Research

- 1.3.1 Desk-top searches should be conducted to analyse, collect and collate extant information. They include:
  - a. Search of the list of declared monuments protected by the Antiquities and monuments Ordinance (Chapter 53).
  - b. Search of the list of deemed monuments through the Antiquities and Monuments Office (AMO) of the Leisure and Cultural Services Department.
  - c. Search of the list of sites of cultural heritage identified by the AMO.
  - d. Search of publications on local historical, architectural, anthropological, archaeological and other cultural studies, such as, Journals of the Royal Asiatic Society (Hong Kong Branch), Journals of the Hong Kong archaeological society, Antiquities and Monuments Office Monograph Series and so forth.

- e. Search of other unpublished papers, records, archival and historical documents through public libraries, archives, and the tertiary institutions, such as the Hong Kong Collection and libraries of the Department of Architecture of the University of Hong Kong and the Chinese University of Hong Kong, Public Records Office, photographic library of the Information Services Department and so forth.
- f. Search of any other unpublished archaeological investigation and excavation reports kept by the AMO.
- g. Search of historical documents in the Public Records Office, the Land Registry, District Lands Office, District Office and the Hong Kong Museum of History and so forth.
- h. Search of cartographic and pictorial documents. Maps of the recent past searched in the Maps and Aerial Photo Library of the Lands Department.
- i. Study of existing Geotechnical information (for archaeological desk-top research).
- j. Discussion with local informants.

#### 1.4 Field Evaluation

1.4.1 The potential value of the development site with regard to the cultural heritage could be established easily where the site is well-documented. However, it does not mean that the site is devoid of interest if it lacks information. In these instances, a site visit combined with discussions with appropriate individuals or organizations should be conducted by those with expertise in the area of cultural heritage to clarify the position.

#### 1.4.2 Historic buildings and structures survey

- a. Field scan of all the historic buildings and structures within the project area.
- b. Photographic recording of each historic building or structure including the exterior (the elevations of all faces of the building premises, the roof, close up for the special architectural details) and the interior (special architectural details), if possible, as well as the surroundings of each historic building or structure.
- c. Interview with local elders and other informants on the local historical, architectural, anthropological and other cultural information related to the historic buildings and structures.
- d. Architectural appraisal of the historic buildings and structures.

#### 1.4.3 Archaeological Survey

A detailed archaeological field evaluation programme should be designed to assess the archaeological potential of the project area. The programme should clearly elaborate the strategy and methodology adopted, including what particular question(s) can be resolved, how the archaeological data will be collected and recorded, how the evidence will be analyzed and interpreted and how the archaeological finds and results will be organized and made available. Effective field techniques should also be demonstrated in the programme such as the following (but not limited to):

- a. Definition of areas of natural land undisturbed in the recent past.
- b. Field scan of the natural land undisturbed in the recent past in detail with special attention paid to areas of exposed soil which were searched for artifacts.
- c. Conduct systematic auger survey/shovel testing at 20m interval to establish the horizontal spread of cultural materials deposits.
- d. Excavation of test pits to establish the vertical sequence of cultural materials. The hand digging of 1 x 1 m or 1.5 x 1.5 m test pits to determine the presence or absence of deeper archaeological deposits and their cultural history.

1.4.4 If the field evaluation identifies any additional sites of cultural heritage within the study area which are of potential historic or archaeological importance and not recorded by AMO, the office should be reported as soon as possible. The historic and archaeological value of the items will be further assessed by the AMO.

## 1.5 The Report of Baseline Study

1.5.1 The study report should have concrete evidence to show that the process of the above desk-to and field survey has been satisfactorily completed. This should take the form of a detailed inventory of the sites of cultural heritage supported by full description of their cultural significance. The description should contain detailed geographical, historical, archaeological, architectural, anthropological, ethnographic and other cultural data supplemented with illustrations below and photographic and cartographic records.

### 1.5.2 Historic Buildings and Structures

- a. A map in 1:1000scale showing the boundary of each historic building or structure.
- b. Photographic records of each historic building or structure.
- c. Detailed record of each historic building or structure including its construction year, previous and present uses, architectural characteristics, as well as legends, historic persons and events, and cultural activities associated with the structure.

### 1.5.3 Archaeological Sites

- a. A map showing the boundary of each archaeological site as supported and delineated by field walking, augering and test-pitting;
- b. Drawing of stratigraphic section of test-pits excavated which shows the cultural sequence of a site.

1.5.4 A fully bibliography and the source of information consulted should be provided to assist the evaluation of the quality of the evidence. It is expected that the study and result are up to an internationally accepted academic and professional standard.

## 2 Impact Assessment

2.1 Culture heritage impact assessment must be undertaken to identify the impacts of the sites of cultural heritage which will be affected by the proposed development

subject to the result of desktop research and field evaluation. The prediction of impacts and an evaluation of their significance must be undertaken by an expert in cultural heritage. During the assessment, both the direct impacts such as loss or damage of important features as well as indirect impacts such as change of water table levels which may affect the preservation of the archaeological and built heritage in situ should be stated. A detailed description and plans should be provided to elaborate to what extent the site of cultural heritage will be affected.

- 2.2 Preservation in totality must be taken as the first priority. Please refer to paragraph 4.3.1(c), item 2 of Annex 10, items 2.6 to 2.9 of Annex 19 and other relevant parts of the Technical Memorandum on Environmental Impact Assessment Process for the detailed requirements of the impact assessment.

### 3 Mitigation Measures

- 3.1 It is always a good practice to recognize the site or monument early in the planning stage and site selection process, and to avoid it, i.e. preserve it in-situ, or leaving a buffer zone around the site. Built heritage, sites and landscapes are to be in favour of preservation unless it can be shown that there is a need for a particular development which is of paramount importance and outweighs the significance of the heritage feature.
- 3.2 If avoidance of the cultural heritage is not possible, amelioration can be achieved by reduction of the potential impacts and the preservation of heritage features, such as physically relocating it. Measures like amendments of the sitting, screening and revision of the detailed design of the development are required to lessen its degree of exposure if it causes visual intrusion to the cultural heritage and affecting its character.
- 3.3 All the assessments should be conducted by an expert in cultural heritage and further evaluated and endorsed by the Antiquities and Monuments Office and the Antiquities Advisory Board.
- 3.4 Besides refer to paragraph 4.3.1(d), items 2.10 to 2.14 of Annex 19 and other relevant parts of the Technical Memorandum. Proposals for mitigation measures should be accompanied with a master layout plan together with all detailed treatment, elevations, and landscape plan. A rescue programme, when required, may involve preservation of the historic building or structure together with the relics inside, and its historic environment through relocation, detailed cartographic and photographic survey or preservation of an archaeological site "by record", i.e. through excavation to extract the maximum data as the very last resort.
- 3.5 The programme for implementation of agreed mitigation measures should be able to be implemented. It is to be clearly stated in the EIA report, as required in Annex 20 of the Technical Memorandum. In particular, item 6.7 of Annex 20 requires to define and list out clearly the proposed mitigation measures to be implemented, by whom, when, where, to what requirements and the various implementation responsibilities. A comprehensive plan and programme for the protection and conservation of the partially preserved Site of Cultural Heritage, if any, during the planning and design stage of the proposed project must be detailed.



**D. Example Heritage Impact Assessment:  
Pashupati Electrical Crematorium**

**HERITAGE IMPACT ASSESSMENT**

**CREMATORIUM**

**Pashupati Monument Zone**

*Coordinates of Project site: N27 42 23 E85 20 54*

World Heritage property:

**Kathmandu Valley**

Inscribed in 1979

Boundary modifications 2006



11 JANUARY 2013

Prepared by:

Kai Weise, Manjari Shakya and Manindra Shrestha



Weise Consulting Architects and Engineers Pvt. Ltd.

Prepared for:

Pashupati Area Development Trust



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## SUMMARY

The discussion on introducing an electric crematorium has been going on decades. The need and proposed location for the electrical crematorium was also clearly stated in the Master Plan for Pashupati which was finalized in 1996. Efforts were made by Pashupati Area Development Trust (PADT) in 2001. An on-line bidding process was carried out in February and March 2011. Construction officially began with the stone laying ceremony on 11 May 2011. The required official procedures were not fulfilled at the time of beginning construction. The site managers however did find it necessary to inform the World Heritage Centre and though late, the assessment of this project's impact on the World Heritage property was carried out. It must be noted that most development works carried out within the Pashupati area have not fulfilled such procedures.

The Heritage Impact Assessment for the Electrical Crematorium Project in Pashupati Monument Zone of Kathmandu Valley World Heritage property is the first such assessment done in Nepal. It will set an example for the preparation of future HIAs. It also shows the goodwill of the State Party to have such projects assessed. The methodology for carrying out the Heritage Impact Assessment is generally based on the ICOMOS document "Guidance on Heritage Impact Assessments for Cultural Heritage Properties". These procedures must be standardized and carried out at the beginning of any planning process. This should also be followed up with the required mitigation processes.

The assessment was carried out keeping in mind the Statement of Outstanding Universal Value. Kathmandu Valley was inscribed based on Criteria (iii), (iv) and (vi). This means that the seven monument ensembles represent an exceptional testimony to the traditional civilization of the Kathmandu Valley. The property is comprised of exceptional architectural typologies, ensembles and urban fabric illustrating the highly developed culture of the Valley, which reached an apogee between 1500 and 1800 AD. The property is tangibly associated with the unique coexistence and amalgamation of Hinduism and Buddhism with animist rituals and Tantrism. The symbolic and artistic values are manifested in the ornamentation of the buildings, the urban structure and often the surrounding natural environment, which are closely associated with legends, rituals and festivals.

Initially proposed boundaries did not include the areas along the southern boundary near the Ring Road. This stretch of land which was already encroached upon with inappropriate buildings was placed in the Buffer Zone. This area which includes the site of the crematorium was included within the boundary during the minor boundary modification carried out in 2006. In the meantime this area has been cleared of the inappropriate buildings.

Within the Pashupati monument zone, there are various other issues that must be considered beyond the crematorium. These issues have not been directly addressed in this Heritage Impact Assessment; however the impact of these development activities and possible neglect must also be addressed immediately. These include the illegal road through *Sleshmantak Ban*, the garden / park development on the west of the main temple, the community hall under construction adjacent to the electrical crematorium and other development activities planned within the Master Plan and ad hoc decisions by the site managers and government authorities.

### **Overall Evaluation and Mitigation Measures**

**The procedures were not correctly followed.** The procedures were not carried out in time to influence the outcome of the planning from the early stages. In this specific case, there does not seem to have been any major drawback due to this, however the recommended mitigation measures must be accounted for. The project falls within a Master Plan area. The Master Plan itself has not been assessed for its impact on the World Heritage property. This needs to be rectified to ensure that further development work within the monument zone area does not impact the Outstanding Universal Value of the property. The removal of the uncontrolled buildings within the Areas designated as B11 and B12 is a commendable activity carried out by the site managers with the support of the State Party. Clearly the development that is planned by the site management must first go through clear procedures to ensure its appropriateness and that it does not impact the outstanding universal value of the property. The procedures which include Heritage Impact Assessments must be fulfilled for all development projects and as per Article 172 of the “Operational Guidelines for the Implementation of the World Heritage Convention” the World Heritage Committee must be informed of such plans.

**The location and function is considered appropriate.** The function of having an electrical crematorium along the Ghats of the Bagmati is considered to be appropriate to ensure the continued functioning of the site as a place for cremation while ensuring the protection of the environment. The acceptance of the electrical crematorium by the community might become an issue. How further traditional wood pyre cremations will be allowed parallel to the use of the electrical crematorium is something the management might need to look into. Once the electrical crematorium is built, it must be used effectively and there must be a clear reduction in pollution and use of wood.

**The building is conceptually acceptable needs a few modifications.** The building that is to house the crematorium is designed as per the bylaws developed during the preparation of the Integrated Management Plan for the monument zones of the Kathmandu Valley World Heritage property which was adopted by the cabinet of the Government of Nepal in 2007. Further detailing of the project must continue to follow all the articles of the bylaws, including the development guidelines provided in the Management Handbook. The design does however seem to present too much ornamentation for a building that should not dominate the historic context. The building could be screened off using appropriate forms of vegetation.

**The chimney is not acceptable for the long term.** The chimney does not follow the bylaws, will have a visual impact and would be a wrong precedent for developments within the World Heritage boundaries. It is a requirement to control the pollution of the crematorium. It can only be allowed if it is considered a component that is reversible and clear procedures are put in place to ensure the removal of the chimney in the foreseeable future. When such technology is available, all means shall be put to disposal to remove the chimney and replace it with a less intrusive option. The chimney itself must be made to be as least intrusive as possible by taking into account colour, texture, finishes, etc.

## ASSESSMENT SHEET

### OVERALL ASSESSMENT FUNCTION AND NECESSITY

The requirement of an electrical crematorium has been discussed over the past few decades and previous trials in a different location have failed. Considering the pollution and large quantity of wood that is used in the traditional method of cremation, it is hardly sustainable with the growing number of cremations being carried out in Pashupati. To allow for the sustainable functioning of Pashupati as a place of cremation, the additional option of the electrical crematorium has been considered essential. The impact on the environment must be minimized while the traditional rituals linked to the last rites must be maintained. The physical facilities established to carry out the cremations must not have any direct detrimental effect on the monuments on the property, the visual impact must be kept to a minimum and must be built as per the prevalent building codes and development guidelines established under the Integrated Management Framework of 2007.

### ASSESSMENT OF INDIVIDUAL COMPONENTS

Component	Acceptable	Conditional	Mitigation Measures	Rejected
The Electric Crematorium Building		X	Must follow bylaws as per the IMP	
The Chimney (H = 30 m)		X	Must be considered reversible and temporary	
Plaza / Ghats towards river		X	Must follow development guidelines as per the IMP	
Entrance and access		X	Entrance from Ring Road must be kept simple	
Landscaping		X	Landscaping must help minimize visual impact	

### ASSESSMENT OF LOCATION

Description	Assessment
The proposed location for the electrical crematorium is considered to be the most appropriate taking into account that it is aligned with the traditional burning <i>Ghats</i> however as far away from the main temple as possible.	OK

### COMMENTS ON PROCEDURES

Procedures were not followed since construction began without obtaining the required local construction permissions. Steps have been put in place to rectify the situation in this particular case. The national authorities and site managers have come to understand that such assessments need to become part of the initial planning process.

### ADDITIONAL COMMENTS CONCERNING OVERALL CONTEXT

It must be noted that this is the first “Heritage Impact Assessment” carried out in this format which will become an example for future assessments carried out in Nepal. Such procedures must become standardized and made officially mandatory. There are many other on-going cases that require Heritage Impact Assessments within Pashupati Monument Zone, within the Kathmandu Valley World Heritage property, as well as other properties within Nepal.



# 1 INTRODUCTION

The discussion on introducing an electric crematorium has been going on for a very long time. An earlier attempt was supposedly undertaken in Teku in the 1970s; the building was built and the equipment was supplied but then abandoned. The need and proposed location for the electrical crematorium was also clearly stated in the Master Plan for Pashupati which was finalized in 1996. Efforts were made by Pashupati Area Development Trust (PADT) in 2001 and it has been in the news regularly since 2009. However the recent process was carried out with an on-line bidding process between 7 February and 9 March 2011. Construction officially began with the stone laying ceremony carried out Friday 11 May 2011 by Honourable Khagendra Prasad Prasai, Minister for Federal Affairs, Constituent Assembly, Parliamentary Affairs and Culture.

The required official procedures were not fulfilled at the time of beginning construction. The site managers however did find it necessary to inform the World Heritage Centre and though late, the assessment of this project's impact on the World Heritage property was carried out. (It must be noted that most development works carried out within the Pashupati area have not fulfilled such procedures.)

The Heritage Impact Assessment for the Electrical Crematorium Project in Pashupati Monument Zone of Kathmandu Valley World Heritage property is the first such assessment done in Nepal. It will set an example for the preparation of future HIAs. It also shows the goodwill of the State Party to have such projects assessed. These procedures must be standardized and carried out at the beginning of any planning process. This should also be followed up with the required mitigation processes.



*Google Image of Pashupati Monument Zone showing site of the crematorium along with other activities such as the illegal road through the forest to the east*

## DECISION OF THE WORLD HERITAGE COMMITTEE 36 SESSION IN 2012

### Decisions **36COM 7B.66**

Kathmandu Valley (Nepal) (C 121)

The World Heritage Committee,

1. Having examined Document WHC-12/36.COM/7B.Add,
2. Recalling Decision **35 COM 7B.75**, adopted at its 35th session (UNESCO, 2011),
3. Takes note of the results of the November 2011 joint World Heritage Centre/ICOMOS reactive monitoring mission to the property;
4. **Welcomes the cancellation of the tunnel road construction;**
5. **Urges the State Party to propose an alternative new route by determining a trajectory which passes around and outside the property boundary and to mitigate urgently the road construction work at Pashupati Monument Zone through a scheme of ecological restoration;**
6. Requests the State Party to implement the recommendations of the November 2011 mission with regard to the development of an urban transport strategy, strengthened development control, including regulation for **heritage impact assessment**, a disaster risk management plan and improved systems of coordination and communication between government departments and other stakeholders;
7. Encourages the State Party to take measures to ensure adherence to **international conservation standards** for major conservation projects and to mobilize funding and grant aid for these projects;
8. Also requests the State Party's to consider all ways to mitigate the impact of the inappropriate new structure adjacent to the Pujari Math of Bhaktapur site, and to minimise the presence of the Army within the property to levels necessary for security;
9. Considers that the State Party decision to **review the Integrated Management Plan** provides an opportunity to implement the recommendations of the 2011 mission;
10. Further requests the State Party to submit to the World Heritage Centre detailed information, **including independently prepared heritage impact assessments, for proposed developments for the revised new road, the airport extension or any other major scheme of development, conservation or reconstruction**, in particular for the Bhaidegah Temple **in accordance with Paragraph 172 of the Operational Guidelines**, for review by the Advisory Bodies;
11. Requests furthermore the State Party to submit to the World Heritage Centre, by **1 February 2013**, 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 37th session in 2013.

#### **Paragraph 172 of the Operational Guidelines**

##### **Information received from States Parties and/or other sources**

172. The World Heritage Committee invites the States Parties to the Convention to inform the Committee, through the Secretariat, of their intention to undertake or to authorize in an area protected under the Convention major restorations or new constructions which may affect the Outstanding Universal Value of the property. Notice should be given as soon as possible (for instance, before drafting basic documents for specific projects) and before making any decisions that would be difficult to reverse, so that the Committee may assist in seeking appropriate solutions to ensure that the Outstanding Universal Value of the property is fully preserved.

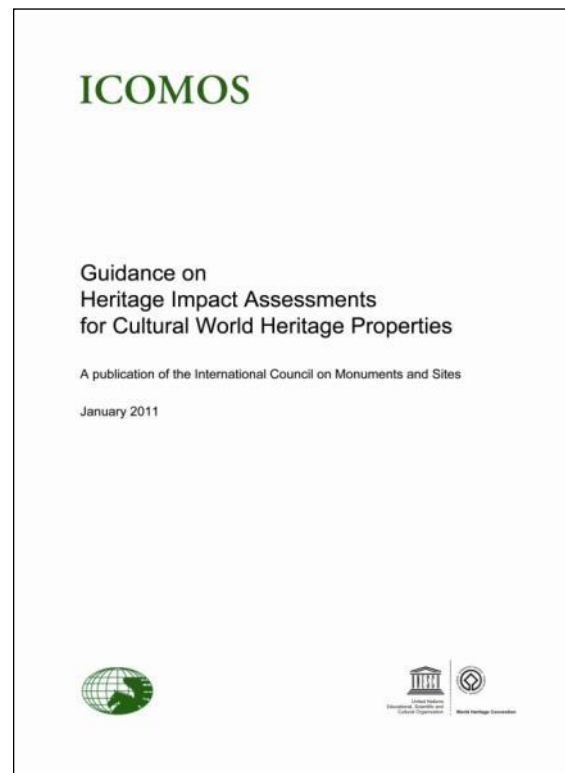


## 2. METHODOLOGY

The methodology for carrying out the Heritage Impact Assessment is generally based on the ICOMOS document “Guidance on Heritage Impact Assessments for Cultural Heritage Properties”.

### Content of Report

The “Table of Contents” was derived from these guidelines and was in principle considered to be appropriate. Only minor changes were made. The following suggested sections were not included in the report. The “Summary and Conclusions” seemed superfluous since there is a summary at the front of the report and the conclusions are already clearly defined under the sections “Assessment and Evaluation” and “Mitigation Measures”. The glossary of terms used was also considered superfluous since the terms needed to be defined within the text of the report. Illustrations and photographs were also considered more appropriate within the text in the appropriate location instead of in a separate section.



The assessment process is in essence very simple: (ICOMOS Guidance Article 2-2-1)

- What is the heritage at risk and why is it important – how does it contribute to OUV?
- How will change or a development proposal impact on OUV?
- How can these effects be avoided, reduced, rehabilitated or compensated?

### Process (Stages of HIA)

#### *Initial consultation and scope of work*

The need for a Heritage Impact Assessment was identified in consultation with the World Heritage Centre. Since this was the first HIA being carried out in Nepal and there were various other complicated issues to be dealt with, it was considered appropriate to focus the HIA only on the Electrical Crematorium Building. This meant that other issues that need to be addressed would be identified, but not assessed and evaluated within this report.

#### *Setting an example and choice of consultant*

This being the first HIA being undertaken in Nepal and since there was no examples of HIA available, it was considered essential that this report sets a standard. The standard should be such that it is possible to carry out the HIA without it becoming too complicated and extensive. The consultant that was chosen to carry out the HIA has been involved since 2003 in facilitating the preparation of the Integrated Management Plan of the Kathmandu Valley and was involved in the redefinition of the boundaries. This allowed for easy access to all relevant documents concerning Pashupati Monument Zone. A contract was signed (Refer Annex 6 for TOR).

Contract 1 October 2012 to 28 January 2013

Interaction program 17 December 2012

Draft submission 26 December 2012

Presentation of Final Draft 02 January 2013

### ***Collection of information and community interaction***

Information on Kathmandu Valley World Heritage property and more specifically on Pashupati Monument Zone was collected by the consultant. Information on the ongoing planning and development activities was provided by the site managers. Questionnaires were also prepared to collect information from various stakeholders such as visitors, those working on the site, the management and generally the public. An interaction program was also organized with the relevant authorities and representatives of stakeholders.

### ***Assessment and evaluation***

The assessment and evaluation was done based on analysing the information that was collected and the responses of the stakeholders. An initial trial was done in trying to use some form of grading the impact, however the charts provided in the ICOMOS guidance seemed difficult to use. It was also not quite clear what a certain “scale and severity of change or impact” and “significance of impact” would actually mean in practical terms.

For the present a much simpler approach was employed: whether the “activity” was overall and in its components acceptable or not. The “acceptability” is linked to the Statement of Outstanding Universal Value as well as consideration of other supporting attributes. This then led to the need to decide on what components of the “activity” needed to be stopped or improved.

### ***Submission of Draft and Final Reports***

Being an independent assessment the process of presenting the draft and final reports was to notify the responsible authorities on the process and not to discuss the actual outcome of the evaluation. Discussions on the possible mitigation measures is however an important component of handing over the assessment report. This ensures that the site managers are aware of the required actions to mitigate the impact of the activities on the heritage property.

### 3. SITE HISTORY AND DESCRIPTION

#### 3.1 STATEMENT OF OUTSTANDING UNIVERSAL VALUE

*The Statement of Outstanding Universal Value was prepared in retrospective during the Second Cycle of Periodic Reporting and was finalized in 2011. It must be noted that the statement is prepared for the entire Kathmandu Valley property which includes seven monument zones.*

##### **Brief synthesis**

Located in the foothills of the Himalayas, the Kathmandu Valley World Heritage property is inscribed as seven Monument Zones. These monument zones are the Durbar squares or urban centres with their palaces, temples and public spaces of the three cities of Kathmandu (Hanuman Dhoka), Patan and Bhaktapur, and the religious ensembles of Swayambhu, Bauddhanath, Pashupati and Changu Narayan. The religious ensemble of Swayambhu includes the oldest Buddhist monument (a *stupa*) in the Valley; that of Bauddhanath includes the largest *stupa* in Nepal; Pashupati has an extensive Hindu temple precinct, and Changu Narayan comprises traditional Newari settlement, and a Hindu temple complex with one of the earliest inscriptions in the Valley from the fifth century AD. The unique tiered temples are mostly made of fired brick with mud mortar and timber structures. The roofs are covered with small overlapping terracotta tiles, with gilded brass ornamentation. The windows, doorways and roof struts have rich decorative carvings. The *stupas* have simple but powerful forms with massive, whitewashed hemispheres supporting gilded cubes with the all-seeing eternal Buddha eyes.

As Buddhism and Hinduism developed and changed over the centuries throughout Asia, both religions prospered in Nepal and produced a powerful artistic and architectural fusion beginning at least from the 5th century AD, but truly coming into its own in the three hundred year period between 1500 and 1800 AD. These monuments were defined by the outstanding cultural traditions of the Newars, manifested in their unique urban settlements, buildings and structures with intricate ornamentation displaying outstanding craftsmanship in brick, stone, timber and bronze that are some of the most highly developed in the world.

**Criterion (iii):** The seven monument ensembles represent an exceptional testimony to the traditional civilization of the Kathmandu Valley. The cultural traditions of the multi ethnic people who settled in this remote Himalayan valley over the past two millennia, referred to as the Newars, is manifested in the unique urban society which boasts of one of the most highly developed craftsmanship of brick, stone, timber and bronze in the world. The coexistence and amalgamation of Hinduism and Buddhism with animist rituals and Tantrism is considered unique.

**Criterion (iv):** The property is comprised of exceptional architectural typologies, ensembles and urban fabric illustrating the highly developed culture of the Valley, which reached an apogee between 1500 and 1800 AD. The exquisite examples of palace complexes, ensembles of temples and *stupas* are unique to the Kathmandu Valley.

**Criterion (vi):** The property is tangibly associated with the unique coexistence and amalgamation of Hinduism and Buddhism with animist rituals and Tantrism. The symbolic and artistic values are manifested in the ornamentation of the buildings, the urban structure

and often the surrounding natural environment, which are closely associated with legends, rituals and festivals.

### **Integrity**

All the attributes that express the outstanding universal value of the Kathmandu Valley are represented through the seven monument zones established with the boundary modification accepted by the World Heritage Committee in 2006. These encompass the seven historic ensembles and their distinct contexts. The majority of listed buildings are in good condition and the threat of urban development is being controlled through the Integrated Management Plan. However the property continues to be vulnerable to encroaching development, in particular new infrastructure.

### **Authenticity**

The authenticity of the property is retained through the unique form, design, material and substance of the monuments, displaying a highly developed traditional craftsmanship and situated within a traditional urban or natural setting. Even though the Kathmandu Valley has undergone immense urbanization, the authenticity of the historic ensembles as well as much of the traditional urban fabric within the boundaries has been retained.

### **Protection and management requirements**

The designated property has been declared a protected monument zone under the Ancient Monument Preservation Act, 1956, providing the highest level of national protection. The property has been managed by the coordinative action of tiers of central government, local government and non-governmental organizations within the responsibilities and authorities clearly enumerated in the Integrated Management Plan for the Kathmandu World Heritage Property adopted in 2007.

The implementation of the Integrated Management Plan will be reviewed in five-year cycles allowing necessary amendments and augmentation to address changing circumstances. A critical component that will be addressed is disaster risk management for the property.





### 3.2 PASHUPATI MONUMENT ZONE

*This text is from the request for minor modification submitted by the State Party in 2006.*

**Name:** Pashupati Monument Zone

**Site Manager:**

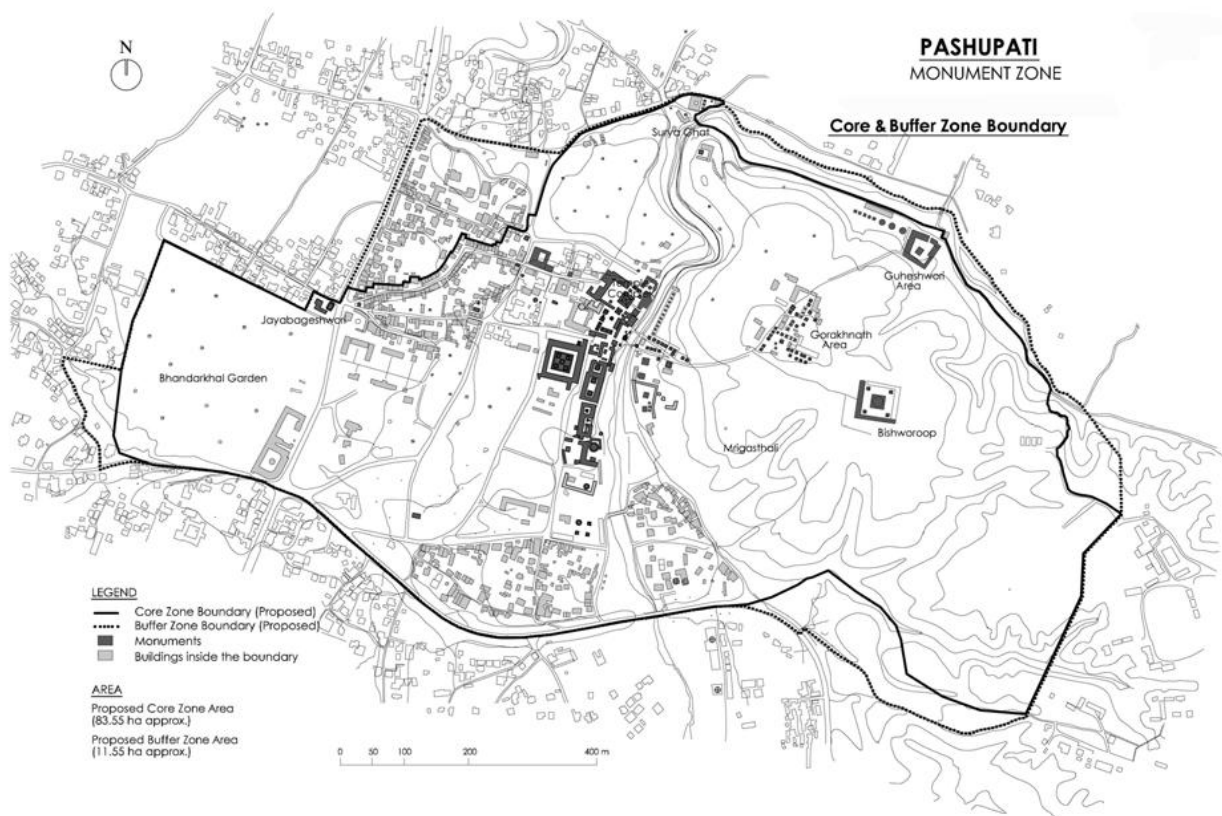
Culture Heritage and Tourism Department, Kathmandu Metropolitan City and Pashupati Area Development Trust and the Department of Archaeology

**Boundaries and Buffer Zone:**

The boundary for Pashupati Monument Zone encompasses the area covered by the listed monuments; most notably the Pashupatinath temple, with inclusion of the surrounding context of religious facilities along the sacred Bagmati River, the Mrigasthali hillock to the east and the ancient settlement of Deopatan to the west.

The **boundary** has been realigned to exclude a part of urban fabric along the north-west periphery of the original 1979 boundary, whereas it is extended to include the Bhandarkhal Garden which is an integral part having religious link with activities of Pashupatinath temple. *Total Area within Boundary: 83.55 ha approx*

The **Buffer Zone** encompasses a strip of land of varying depth around the Monument Zone with no additional buffer area along the Ring Road and Bhandarkhal Garden boundary. The boundary corresponds to the area gazetted in 1998. The buffer zone falls within the jurisdiction of Pashupati Area Development Trust that is looking into the rectification of the recent inappropriate development inside the area.



### 3.3 CONTRIBUTION OF PASHUPATI MONUMENT ZONE TO OUV

*This text is from the Management Handbook for Pashupati Monument zone prepared as part of the Integrated Management Plan.*

#### **Values**

Criterion (iii): The architectural values of the Pashupati Monument Zone lie in the exceptional architectural typologies and ensembles of the temples and shrines, within their unique natural contexts. The monuments and structures, with their intricate ornamentation, display craftsmanship in brick, timber and bronze that are some of the most highly developed in the world.

Criterion (iv): The historic values of the Pashupati Monument Zone lie in the unique society that developed out of the cultural traditions of the multi-ethnic people who settled in this remote Himalayan valley over the past two millennia, which reached an apogee between 1500 and 1800 AD. The architectural typologies and ensembles reflect the unique coexistence and amalgamation of Hinduism and Buddhism with animist rituals and Tantrism.

Criterion (vi): The natural environment surrounding the monuments is closely associated with legends, rituals and festivals.

#### **Attributes**

The values of the Pashupati Monument Zone are supported and expressed by the attributes that have been defined below:

- The unique architectural style of the temples and other monuments that are defined by their form, scale, structure and materials;
- The highly developed craftsmanship of the structures and ornamentation;
- The distinct natural environment that create the context within which the monuments are situated;
- The traditions and functions that bind the monuments to their distinct context, in particularly the beliefs, legends, rituals and festivals.

#### **Authenticity**

The authenticity of the Pashupati Monument Zone is retained through the unique form, design, material and substance of the monuments, displaying a highly developed traditional craftsmanship and situated within a traditional and natural setting, which have however throughout history gone through the process of cyclical renewal.

#### **Integrity**

The integrity of the Pashupati Monument Zone is retained by means of the clearly defined Monument Zone boundaries encompassing the elements that contribute to the outstanding universal value, which are guaranteed maintenance and protected by means of the Integrated Management Plan.

#### **Sustainable Development**

Sustainable Development must be pursued within the Pashupati Monument Zone. This means that conservation of cultural and natural heritage must go hand-in-hand with social and economic development, taking into account the needs of future generations.



### 3.4 DESCRIPTION OF PASHUPATI

*This text is from the Nomination Dossier submitted by the State Party in 1979*

Pashupati (V-MZ 5): The extended Hindu temple precinct of Pashupati is the largest and most important Hindu Shrine in the Kathmandu Valley. The temple dates back to the Lichchhavi period and has undergone repeated renovations and changes, mainly in the 17th and 19th centuries. It is located in the centre of the Valley and extends along both sides of the sacred Bagmati River which is the major religious feature of the site. Pashupati is a pilgrimage centre and includes not only many temples, votive shikharas, shrines, and Ghats for ritual bathing and cremation, but also a complete infrastructure: alms houses, rest houses and large open spaces and gardens to accommodate pilgrims. The principal temple is the large gilded double-roofed Shiva Pashupati temple constructed in 1696 and located on the Western bank of the Bagmati River and dedicated to Shiva Pashupati, Lord of the Animals, and special protector of the kingdom of Nepal. The inner courtyard of the main temple is open only to Hindus. Pashupati contains fourteen individual structures of outstanding importance. *For a detailed description of Pashupati and the individual structures listed below see Kathmandu Valley Protective Inventory, Volume 1, pages 142 to 149 (Annex 1).*

Structures:

- |   |   |
|---|---|
| 1. Pashupati and Vasuki (1696,1649)     | 2. Aryaghat (6 <sup>th</sup> c.)            |
| 3. Bachhareshwari (6 <sup>th</sup> c.)  | 4. Rajrajeshwari (1407)                     |
| 5. Panchadeval (19 <sup>th</sup> c.)    | 6. Banakali (6 <sup>th</sup> c.)            |
| 7. Jayabagewhwari (16 <sup>th</sup> c.) | 8. Bhubaneshwari (17 <sup>th</sup> c.)      |
| 9. Dakhinamurti (18 <sup>th</sup> c.)   | 10. Gauri Ghat (19 <sup>th</sup> c.)        |
| 11. Vishwarup (19 <sup>th</sup> c.)     | 12. Goraknath Shikara (18 <sup>th</sup> c.) |
| 13. Guyeshwari (17 <sup>th</sup> c.)    |   |



*This text is from the document prepared by PAHAR Nepal: Redefining the Monument Zones of the Kathmandu Valley World Heritage Sites; An Independent Survey & Evaluation Report on the Present Status of the KVVHS”, Kathmandu, Nepal (2004)*

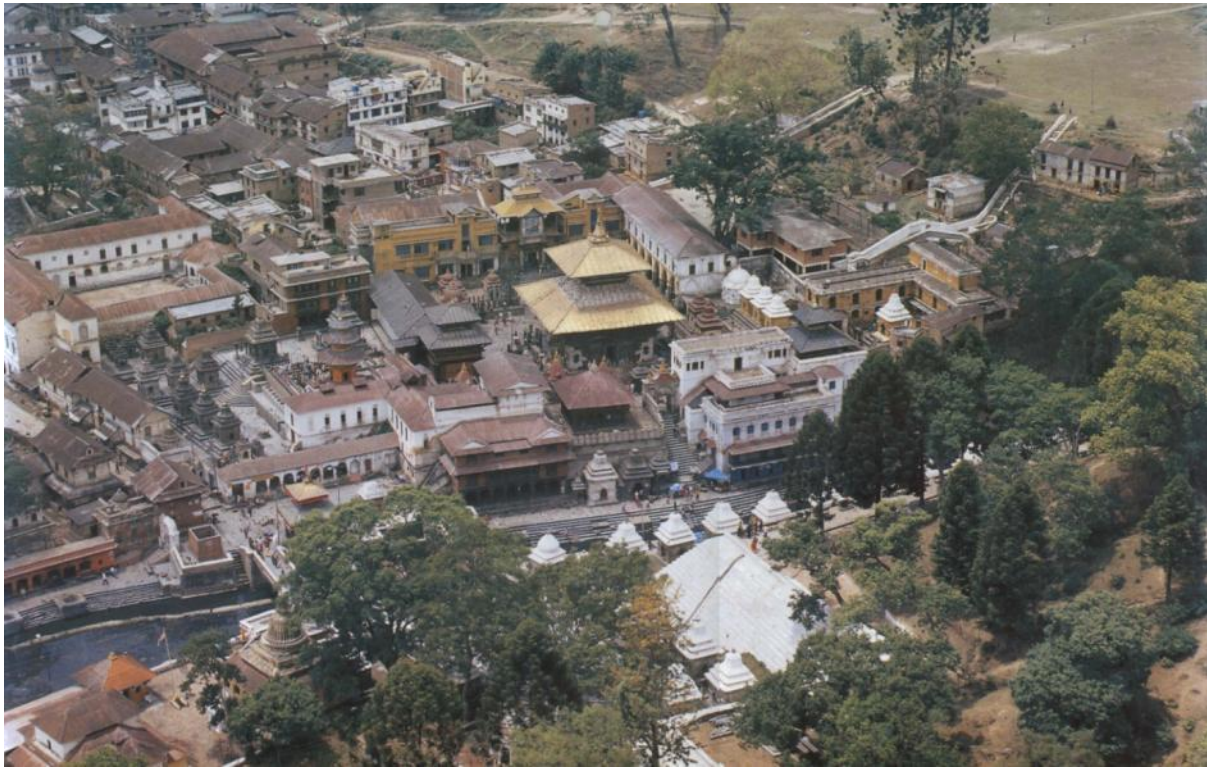
The temple of Pashupati, or Pashupatinath, is located in Deopatan, a little town 3 km north-east of Kathmandu. For Hindus, it is undoubtedly the holiest shrine in the entire country. The temple attracts thousands of pilgrims each year, and is well known beyond the valley and even beyond the borders of the country. In its vicinity, however, there are a number of other holy shrines which are no less important for the inhabitants of Deopatan itself. To the east there is the forested hill of Mrigasthali beyond which is the Tribhuvan Airport. To the north, there is Kailash plateau, often said to have been the site of the Licchavi capital, Managriha.

Deopatan is an elongated one-street settlement, in which old residential complexes and quarters are laid out along one of the roads coming from Kathmandu to Pashupati temple. Because Deopatan lay near the old trading route from India to Tibet, many travellers have donated gardens and parks. The park at Bhandarkhal in the west, was laid out under Pratap Malla (1641-1674), and enclosed by a wall under Ran Bahadur Shah (1777-1799). Deopatan was probably once surrounded by a town wall, but the only gate to survive is the western one, of which the current version dates from the late 19th century.

At the centre of Deopatan stands Pashupati temple. It is not certain when the shrine first came into being, but it is a historical fact that from a very early stage, Pashupati was a tutelary deity of almost all the rulers of the Kathmandu Valley. In 605 AD, Amshuverman, according to inscriptions, considered himself favoured by his worship of Pashupati. Pashupati was quick to establish its pre-eminent position, which was enhanced by the creation of imitations or substitutes of the temple, such as those of Bhaktapur (1480), Kathmandu (1562) and Benares (early 19th century). However, the first documented reference of Pashupati appears in the 'Gopalaraja Vamshavali', which says that Ananta Malla (1274-1307) had the temple renovated and its roof gilded. The temple acquired its present form under King Bhupalendra Malla in 1697 after the temple had been destroyed several times by humans or by natural calamities.

Pashupati has received rich donations repeatedly over the centuries. They have included the gilding and renovation of statues, the granting of extensive lands, and the donation of valuable attributes and paraphernalia. Girvan Yuddha Shah gave more than 2,000 ropanis (one ropani = 5,476 square feet or 508 square metres) of land to Pashupati. Another favourite custom was to give one's own weight in gold or silver as a donation to the temple. In the 18th and 19th centuries land donations usually kept pace with the endowment of religious buildings, rest houses, fountains and road-paving. Politically, Pashupati fell under the control of the Kantipur palace.

Pashupati Temple stands in the middle of an open courtyard. It is a square two-tiered pagoda temple built on a single-tier plinth, and it stands 23.6 metres above the ground. There are gilt and silver-plated doors on all sides, richly ornamented. Inside the temple there is a narrow circumambulatory passageway around the sanctum, and the sanctum itself contains a one metre high 'linga' with four faces. The struts under the roofs, dating from the late 17th century, depict wood-carved images of Shiva's family.



*Aerial View of Pashupatinath (Photo: Min Bajracharya – around mid-1990s)*

Pashupati is surrounded by many other old and important temples, shrines and statues. South of Pashupati temple is Chandeshvar, an inscribed Licchavi 'linga' from the 7th century. In the north, there is a temple of Brahma which probably dates from the 9th century. The temple of Vasuki, the King of the Nagas, is a small pagoda temple built by Pratap Malla in the north-east corner of the courtyard. Further to the south side is a round temple, Kotilingeshvar, which was also erected by Pratap Malla in 1654. The temple is established in the centre of many 'lingas'.

Pashupati Temple is a 'tirtha'(literally, 'ford' or holy crossroads). Thus, the banks of the Bagmati are laid out with many bathing spots ('Ghats'), built for the convenience of pilgrims. Renovating such stepped sites, furnishing them with rest-houses or roofing them over has always been regarded as meritorious. Arya Ghat, which in its present form was laid out under Chandra Shamsher (1901-1929), is of special ritual importance. It is where members of the royal family are cremated. Bhasmeshvar Ghat is the main cremation site.

Besides the Bagmati, artificially constructed bathing sites ('kunda'), particularly fountains in stepped recesses, play a role in temple ritual at Pashupati. One of the oldest is the Sundhara, or Lunhiti ('golden spring'), which was renovated in 1388 by Sthiti Malla. The largest 'linga' in Nepal, Virateshvar, stands on Rajarajeshvari Temple.

The 'linga' of the main shrine in Pashupati is only one of many in Deopatan. Usually these lingas are votive gifts erected in memory of deceased persons. From about the mid-18th century onward, the aristocracy began to place the votive 'lingas' within permanent structures. Several of Deopatan's largest buildings fall into this category - the prime examples are the Pancha Deval group, constructed by members of the Shah dynasty, a number of 'lingas' at Guhyeshvari Temple, and fifteen 'lingas' (the Pandra Shivalaya) erected between 1859 and 1869 on the east bank of the Bagmati in the aftermath of the Kot massacre. The majority of



these enclosed votive 'lingas' were built between 1848 and 1870 by the Ranas and Shahs, and are located on the hill of Mrigasthali. Jung Bahadur Rana, the first Rana prime minister, constructed the Vishvarupa temple complex in 1864 at Mrigasthali.



At Pashupati, splendid pagoda-shaped temples stand next to easily missed small shrines or unroofed seats ('pitha') of goddesses. Most of the sacred sites are simple votive 'lingas' ('shivalaya'), but there are also Shaiva deities (naturally in the majority) as well as Vaishnav and Buddhist gods. Although votive 'lingas' take up the major portion of the land set aside for religious buildings in Deopatan, many other shrines are more important in the eyes of the town's inhabitants.

Among these are gods belonging to Shiva's family, and shrines to Bhairav and Ganesh, some of whom are worshipped tantrically. Apart from Gauri and Gangamai, the goddesses who are worshipped tantrically, with blood sacrifices and alcohol, are the primary focus of attention in Deopatan. These nine goddesses are worshipped in the Vatsala Jatra, Deopatan's most significant town festival. Especially often worshipped is the two-storey pagoda temple of Vatsala south of Pashupati temple. In the Nepali month of Chaitra (March/April) it is the centre of a festival dedicated to the goddess Vatsala. Also of importance is the Jayavagishvari temple located to the west of Deopatan. This pagoda temple, erected by Nripendra Malla (1674-1680), is built over an old 'pitha' shrine. The Guhyeshvari Temple, built by Pratap Malla in 1654, stands at the north-east of the Mrigasthali forest. The Bhuvaneshvari temple is located between Gaushala and Pashupati temple.

The Shah Kings and Rana family contributed to the expansion of Deopatan over the past two centuries. Among these endowments are not only temples, but also rest-houses ('paati', 'sattal') such as the monumental Pancha Deval Sattal, endowed by Ran Bahadur Shah, and Chaughera Sattal at Gauri Ghat. Some of these rest-houses serve important functions during particular festivals and processions.

[Source: Michael Hutt - "Nepal, a Guide to the Art and Architecture of the Kathmandu Valley"]

### 3.5 CHRONOLOGY OF EVENTS REGARDING PASHUPATI MONUMENT ZONE

#### 1975 - 1977 Preparation of Master Plan for Kathmandu Valley

The introduction to the 2 volumes of the “Kathmandu Valley, The Preservation of Physical Environment and Cultural Heritage, Protective Inventory” (UNESCO / UNDP 1975), provides recommendations for a comprehensive approach to the preservation of the cultural and natural heritage of the valley. “The Master Plan for the Conservation of the Cultural Heritage in the Kathmandu Valley” which was completed in 1977 presented a broad approach to conserving not only the cultural heritage, but also the natural heritage of the Kathmandu Valley.

#### 1978 Nepal ratified the World Heritage Convention

#### 1979 Inscription of Kathmandu Valley in World Heritage list

The Kathmandu Valley was inscribed in the World Heritage List at the third session of the World Heritage Committee, in October 1979. Standing at the crossroads of the great civilizations of Asia, Kathmandu Valley's seven Hindu and Buddhist monuments, which also cover three residential and palace areas of the city of Kathmandu, Patan and Bhadgaon, are considered Nepalese art at its height, thus worthy to be proclaimed the area of "outstanding universal value". *(Note: During this time area B12 of Pashupati Monument zone lied outside the boundary of monument zone.)*

#### 1992 - 1993 Concern shown by World Heritage Committee

Already in 1992, the possibility of "in-danger" listing was contemplated by the World Heritage Committee and the concerned experts. Several UNESCO missions were sent since 1993 to evaluate the status of conservation of the Site, and recommended various measures and actions to ameliorate the situation. These missions examined the monument zone boundaries, studied the possibility of setting up buffer zones, assessed management capacities of the concerned authorities, and provided advice on the proposed amendments to the Ancient Monuments Preservation Act. The 1993 joint UNESCO/COMOS Mission sent the urgent signal for immediate remedial actions in the form of 16 recommendations. Later in 1998 another set of 55 time-bound recommendations were submitted to the Nepalese authorities concerned.

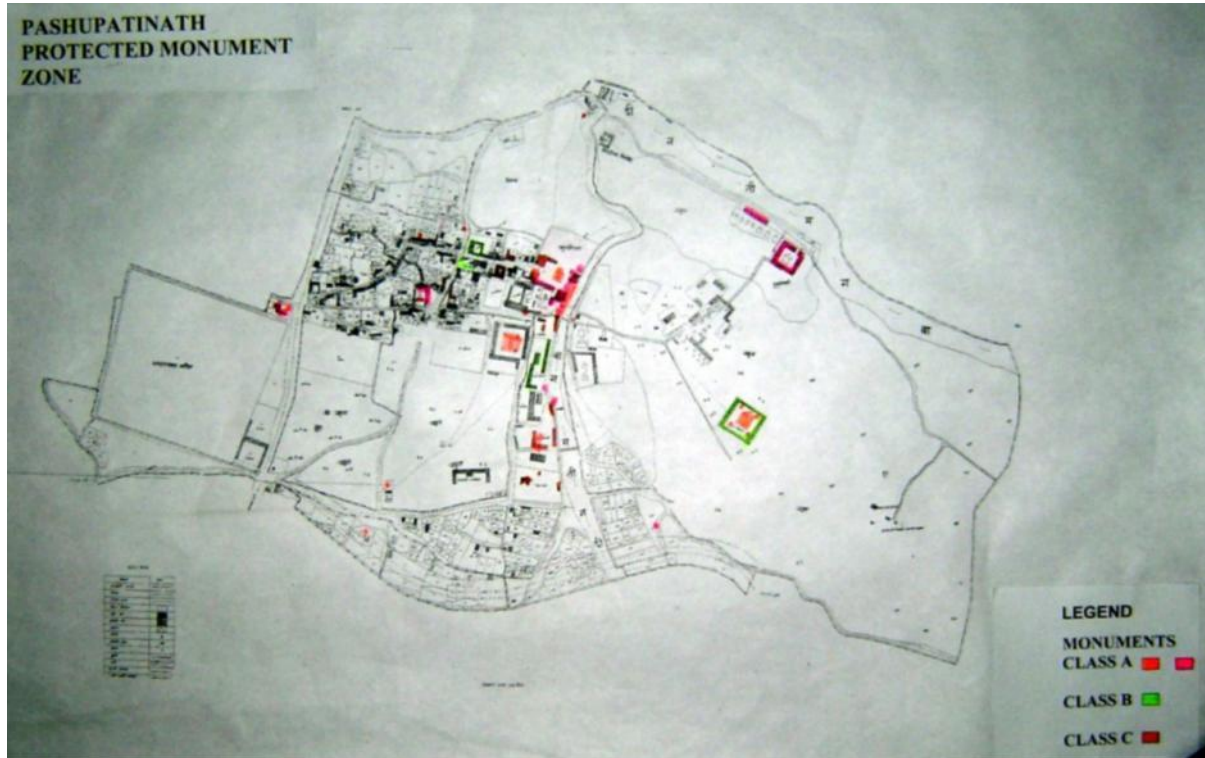
#### 1996 Preparation of Master plan by Pashupati Area Development Trust

The main aim of the PADT is the planned development of Pashupati Area, for which the clear concept of the overall development strategy of the area is necessary. The preservation and development of the region, its history, religions, cultures, art and crafts, and nature as well as the enhancement of this region as a site of pilgrimage are the main goals of the development plan. This area was developed with nine gates, nine gods, nine goddesses, nine tap-systems, nine lakes, nine courtyards, nine roads, and nine fields in ancient times and, coincidentally, it also has a community comprising of nine ethnic groups.



### **1998 Gazetting of Monument Zones**

The gazetting of Pashupati Monument Zone as a Protected Monument under the Ancient Monument Preservation Act was carried out only in 1998. The boundaries were not those submitted as the World Heritage boundary, but the boundary as per the recently prepared Master Plan.



### **2001 Closing of International Safeguarding Campaign**

The 2001 Evaluation Report on the International Safeguarding Campaign for the Kathmandu Valley 1979-2001 summarized various activities undertaken during the Campaign period echoed the same concerns over the rapid deterioration of the Kathmandu Valley World Heritage Site. During the first ten years, the work was almost entirely related to the restoration of individual monuments rather than the entire historic environment. As a result, while the monuments were largely intact, the immediate surrounding areas in the monument zones had to face enormous challenges of uncontrollable urban development compounded with expanding tourism related activities.

### **2003 Danger Listing**

Ever since 1993, the World Heritage Committee repeatedly expressed serious concerns over the status of Kathmandu Valley World Heritage Site. However, the situation did not improve, and examples of exceptional Newari architectural design exhibited in the royal city centers of Kathmandu, Patan and Bhaktapur had gradually disappeared. In 2003, at its twenty-seventh session, the World Heritage Committee decided that Kathmandu Valley was placed under the category of the "World Heritage in Danger".

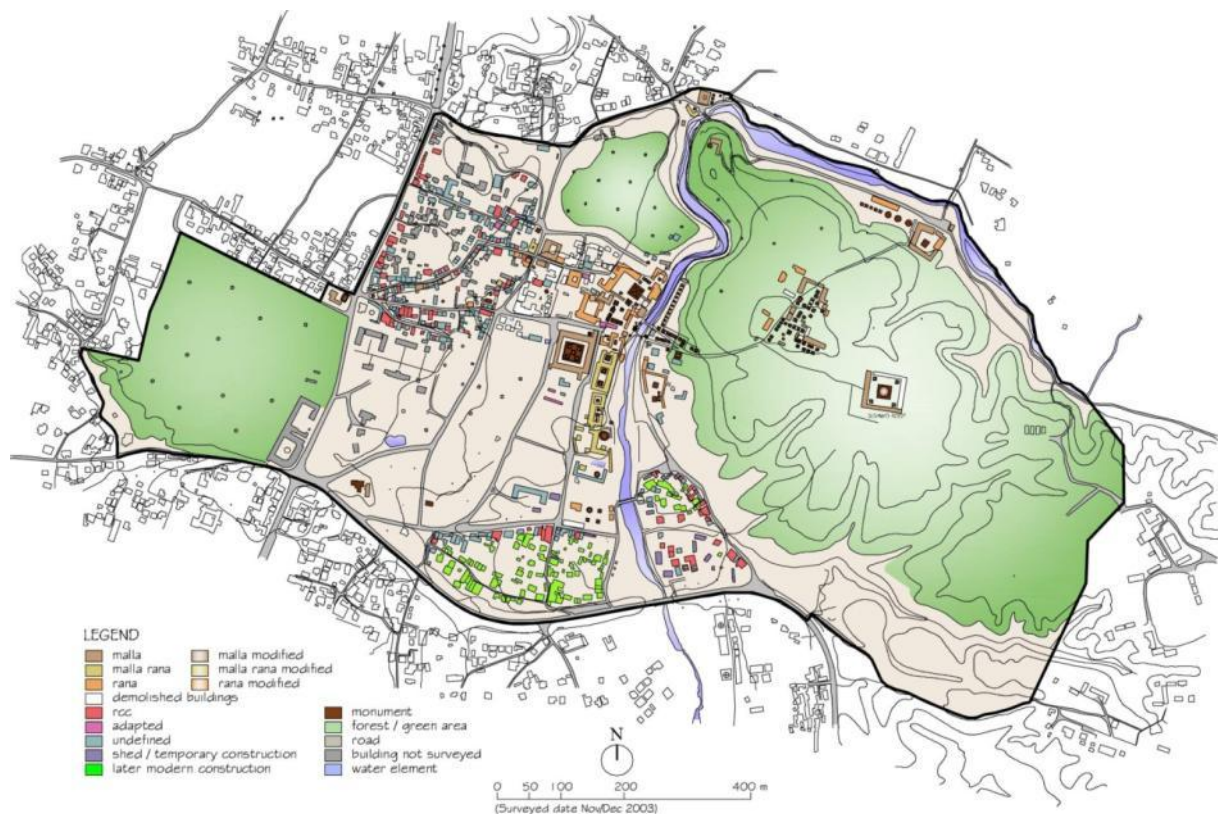
In response to the recommendation and decision taken at the 27th session of the World Heritage Committee in 2003 on Kathmandu Valley World Heritage Site in Danger, HMG/Nepal, notably the Department of Archaeology, and UNESCO - World Heritage Centre and Kathmandu Office - jointly organised an International Workshop (Kathmandu, 3-7 May 2004) to assess the remaining World Heritage value of the monument ensembles and



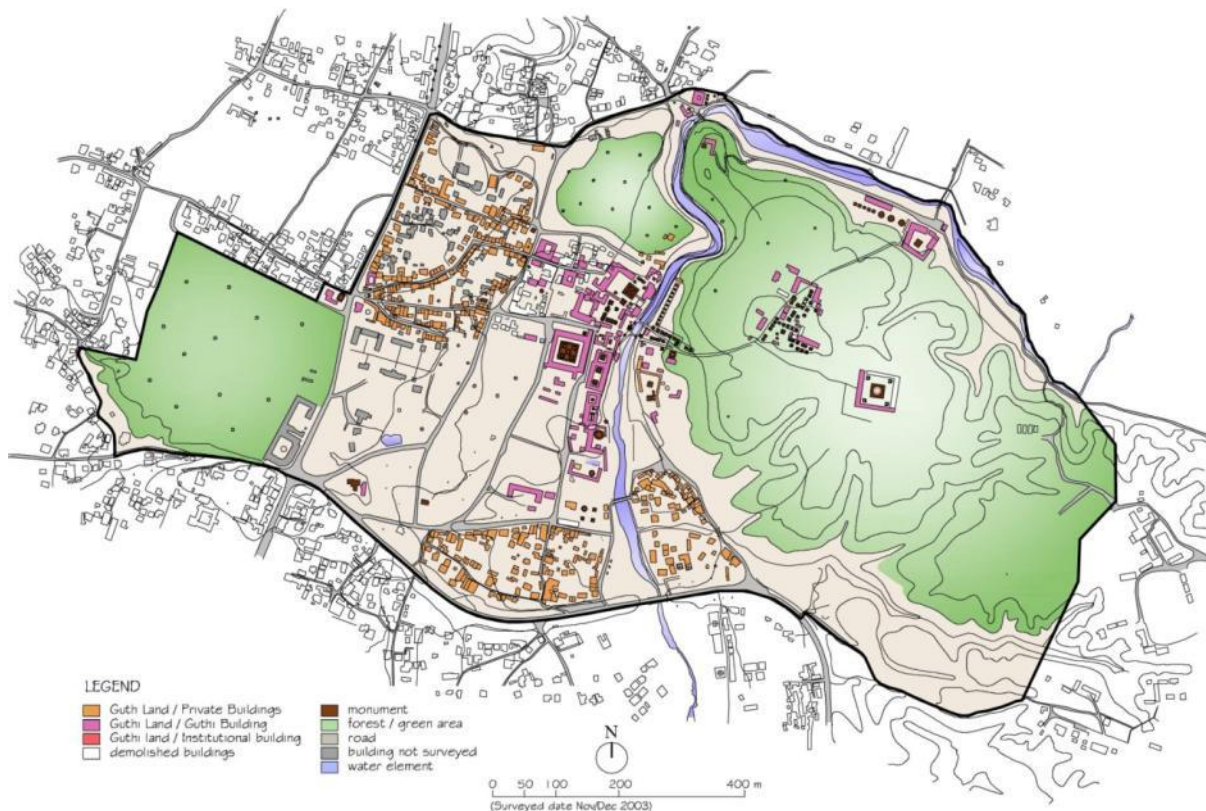
the vernacular fabric within the property, and to prepare a long-term management mechanism. The Workshop presented its conclusion on the redefinition of the Monument Zones, differentiating between the core and support zones; and a ten-year Action Plan for the Kathmandu Valley World Heritage Property in Danger.

### **2003 – 2004 PAHAR Nepal Study funded by German Embassy funded study**

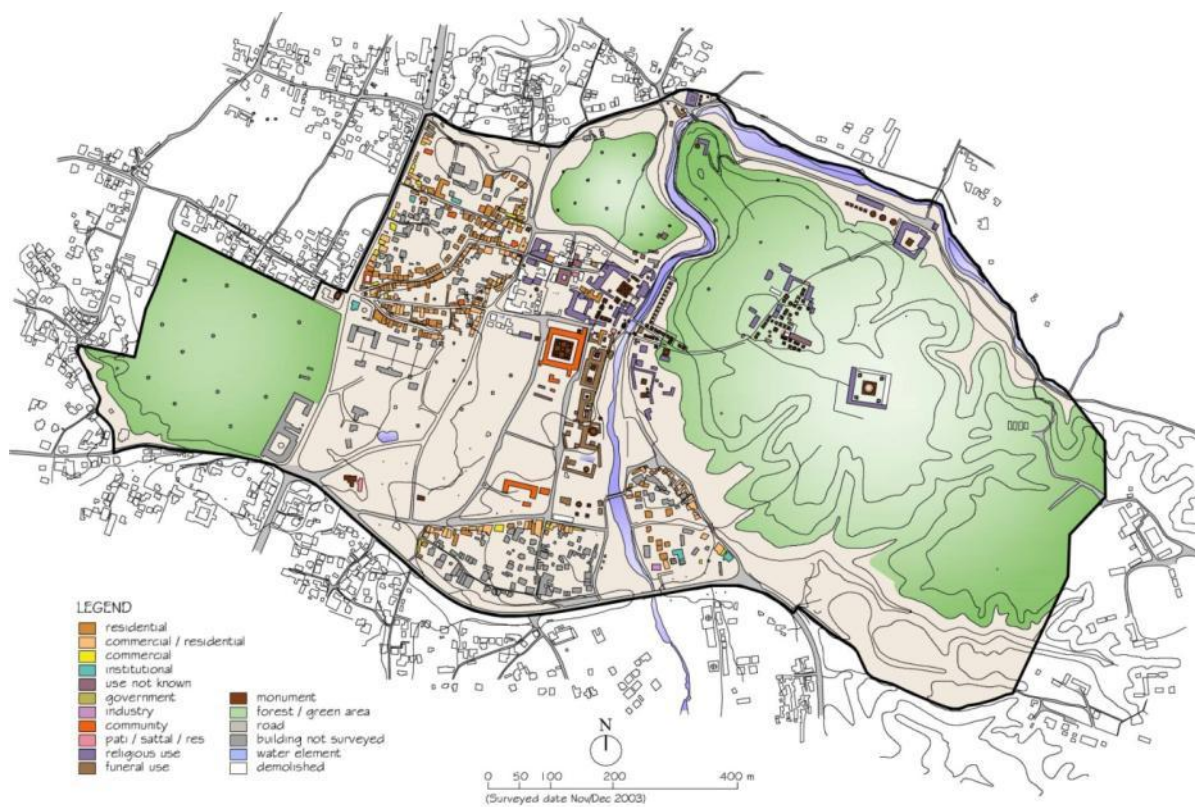
Study carried out by PAHAR led to the final report: “Redefining the Monument Zones of the Kathmandu Valley World Heritage Sites; An Independent Survey & Evaluation Report on the Present Status of the KVVHS”. The following maps show the outcome of surveys on building styles, building ownership and building usage respectively.



*Pashupati Monument Zone survey 2003 – Building Style*



*Pashupati Monument Zone survey 2003 – Building Ownership*



*Pashupati Monument Zone survey 2003 – Building Usage*



**2004 Technical Workshop May 2004 (WHC/DoA/UNESCO Kathmandu)**

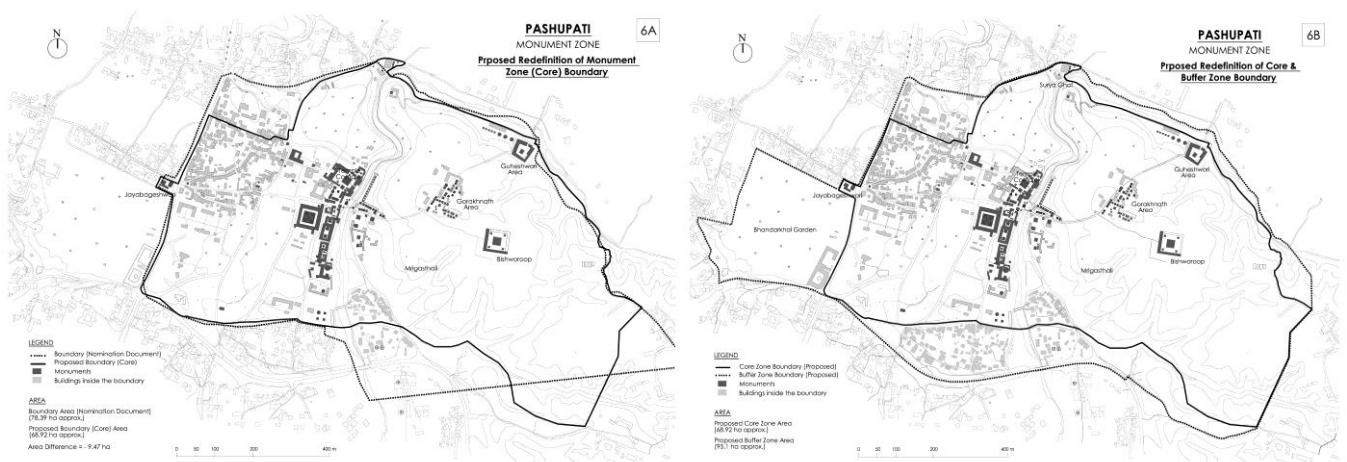
The Technical Workshop for the Conservation of the Kathmandu Valley World Heritage property in Danger was held in Kathmandu from 3rd to 7th May 2004, to assess the remaining World Heritage value of the monument ensembles and the vernacular fabric within the property, and to prepare a long-term management mechanism. The Workshop presented its conclusion on the redefinition of the Monument Zones, differentiating between the core and support (buffer) zones; and a ten-year Action Plan for the Kathmandu Valley World Heritage Property in Danger.

## 2005 - 2006    Redefinition of Monument zones

As a precondition for the removal of the property from the List of World Heritage in Danger, the State Party was recommended to legally redefine the core and support (buffer) zones of all Monument Zones based on the remaining outstanding universal value, accompanied with management mechanisms to adequately conserve the remaining World Heritage values of the property in the long-term. The State Party was also recommended to consider new criteria and an appropriate name.

The redefinition of the Monument Zone boundaries requires a clear understanding of the preconditions under which the property was inscribed. The Kathmandu Valley was inscribed on the List of World Heritage, when nomination procedures were far less comprehensive. Over the past 26 years, both the perception of a World Heritage property as well as the local conditions and factors affecting the property have undergone tremendous changes.

An initial report was prepared in 2005, however due to differences in approach this was not finalized in time for the Committee Session. This allowed for several further months of deliberations before finalizing the boundaries.



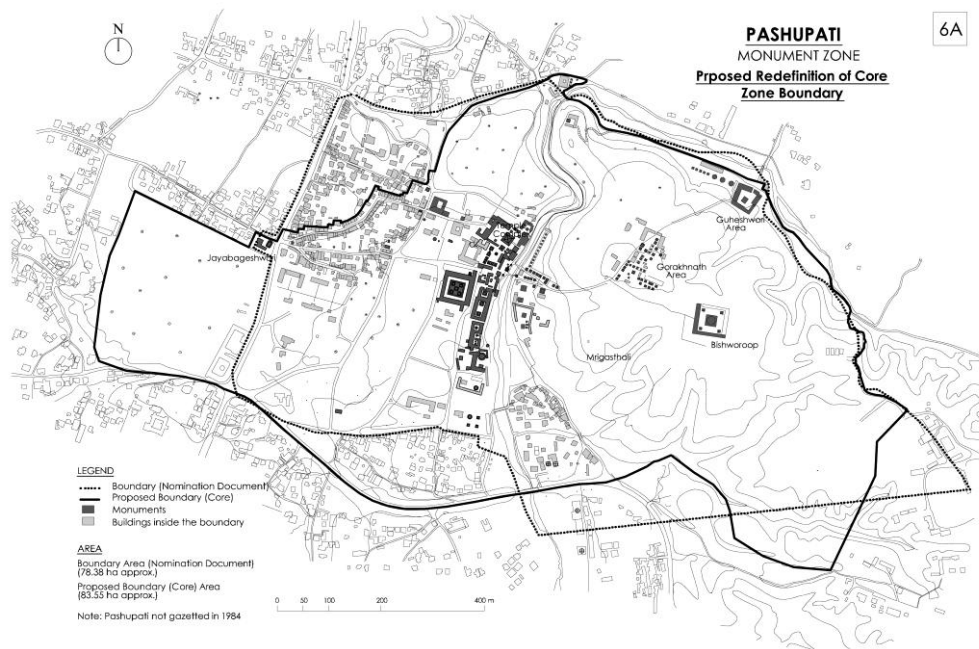
Initially proposed boundaries did not include the areas along the southern boundary near the Ring Road. This stretch of land which was already encroached upon with inappropriate buildings was placed in the Buffer Zone. This includes area B12, the location of the crematorium. However in a delegation from the Pashupati Area Development Trust visited the Department of Archaeology to request that these areas be included area B11 and B12 within the boundaries to ensure that the government allocates funds to expropriate the land and clear it from the inappropriate buildings. The proposal was accepted by the authorities and the maps were amended accordingly before final submission to the World Heritage Committee.

*Text from the request for minor modification submitted by the State Party in February 2006:*

## PASHUPATI MONUMENT ZONE

Boundary Areas: Nomination Document 1979: 78.38 ha; Proposed 2006: 83.55 ha

### ***Proposed Redefinition of Monument Zone Boundary (Core) Refer Map 6A***

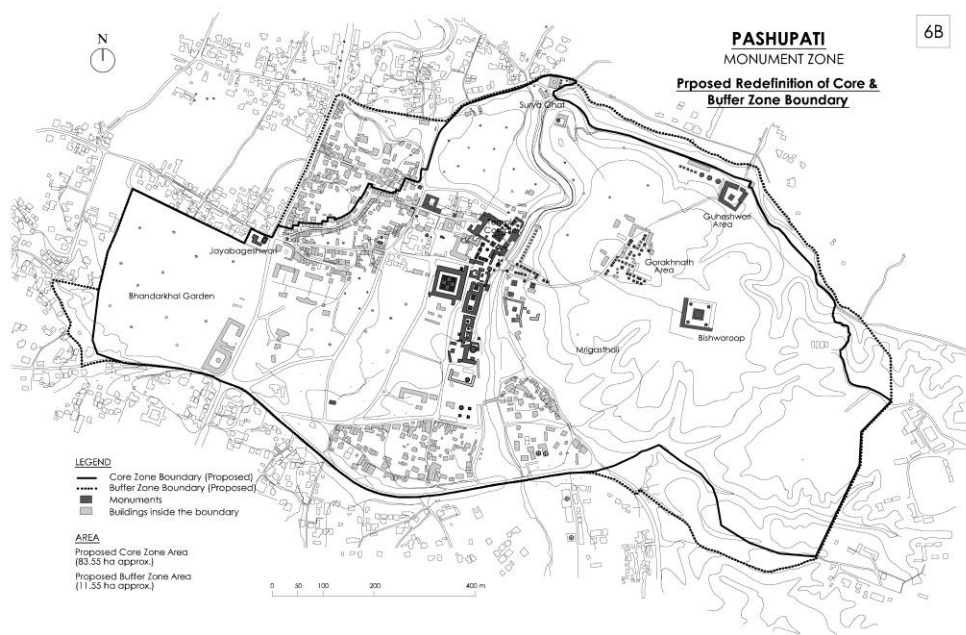


The proposed boundary clearly demarcates the largely forested area to the south-east, which in the nomination document is not clearly defined. The overall boundary has been realigned as per the present location of boundary features and to include the Bhandarkhal gardens to the west. The area along the Ring Road to the south has been included and is in the process of being purchased by the State Party to ensure

rectification. A block of land to the north-west has been excluded due to loss of value. Though certain change has taken place, the overall value of the MZ has been retained.

The proposed boundary corresponds in principle to the recommendations of the Technical Workshop May 2004 (WHC/DoA/UNESCO Kathmandu) and the ICOMOS / WHC Mission to Kathmandu Valley March 2005

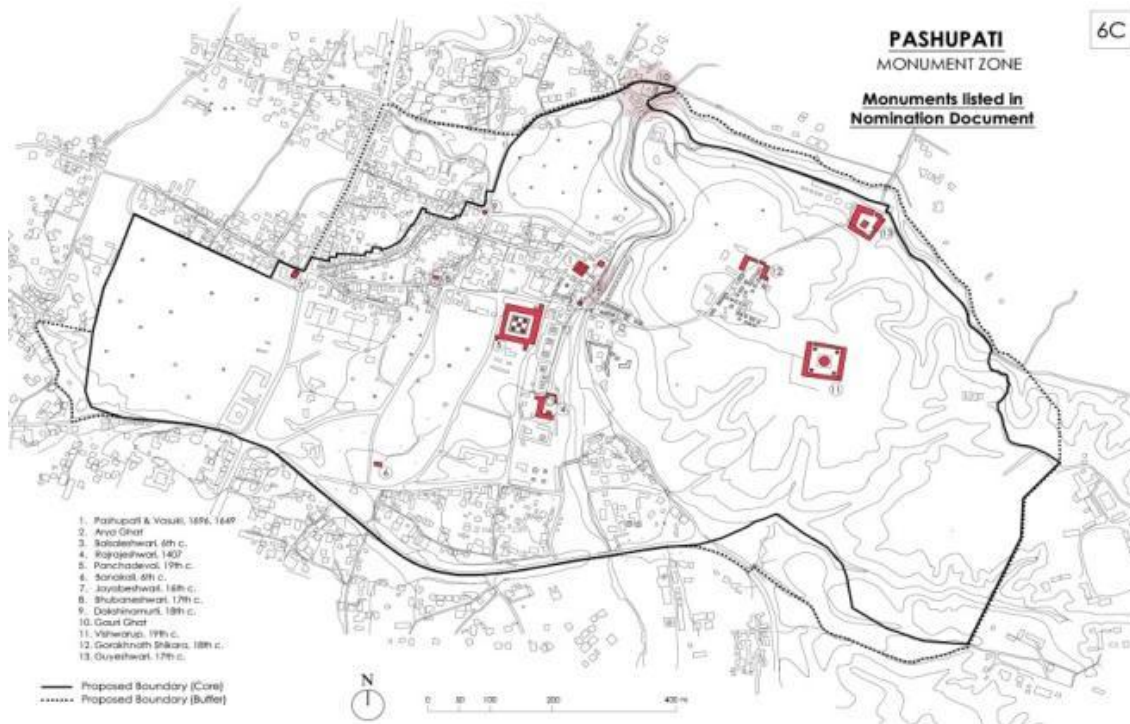
### ***Proposed Buffer Zone Refer Map 6B***



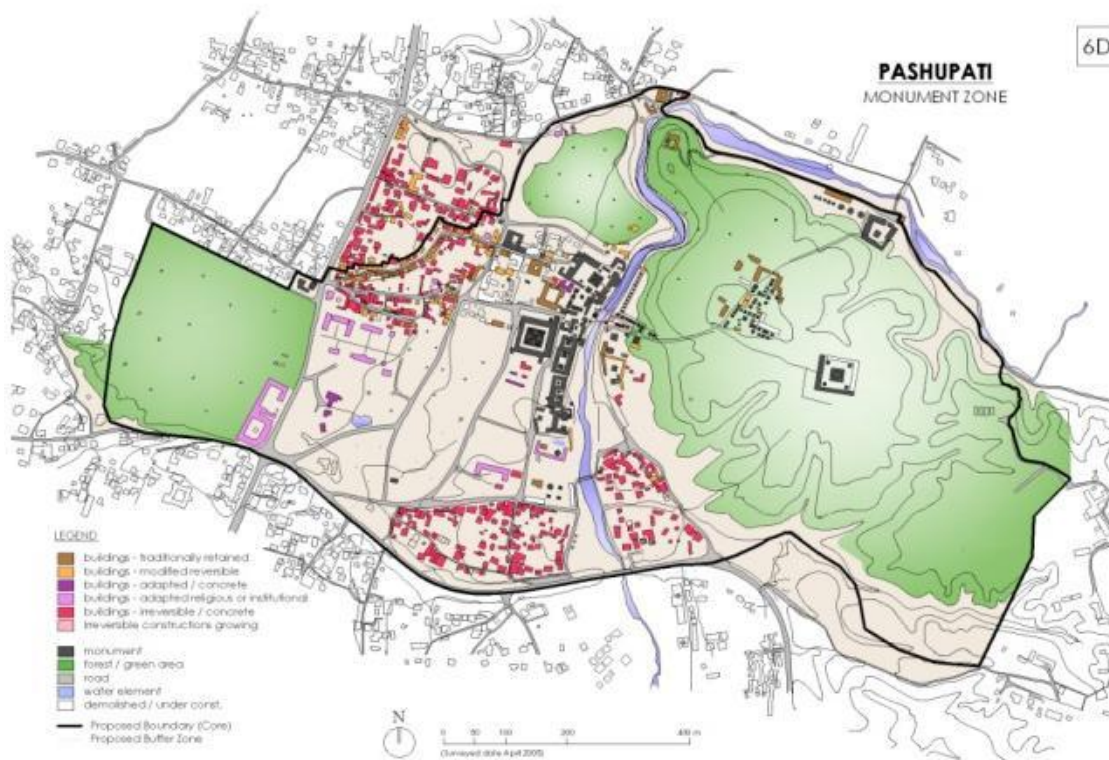
The proposed Buffer Zone encompasses a strip of land of varying depth around the MZ. This includes most of the area of the original MZ. It was not considered necessary to have additional buffer zones for the area along the ring road to the south and the forested area of Bhandarkhal gardens to the west. The buffer zone falls within the jurisdiction of the Pashupati Area Development Trust that



is looking into the rectification of the recent inappropriate development in this area. The proposed buffer zone corresponds in principle to the recommendations of the Technical Workshop May 2004 (WHC/DoA/UNESCO Kathmandu) and the ICOMOS / WHC Mission to Kathmandu Valley March 2005



Map 6C: Additional map indicating all monuments listed in the nomination document



Map 6D: Additional map indicating typology of buildings

Note: In Areas B11 and B12 along the southern boundaries the map clearly shows the inappropriate buildings which have now been removed.

## **2007 Management plan**

In 2007 the Integrated Management Framework document was adopted by the Cabinet of the Government of Nepal. Based on this commitment of the State Party, Kathmandu Valley was taken of the List of World Heritage in Danger.

The aim of the Management Plan is to develop a framework for the integration of the seven Monument Zones within a single management system, while taking into account each of their specific management requirements.

The Integrated Management Plan must be seen as a Road Map towards achieving the goal of conserving the outstanding universal value of the seven Monument Zones of the Kathmandu Valley. The Integrated Management Plan defines management structures and processes which have been developed through consensus of the concerned authorities. The establishment of these structures and the implementation of the processes is a prerequisite for the Kathmandu Valley property to remain on the List of World Heritage.

The Integrated Management Plan has been defined in a set of documents comprising of eight volumes; the Integrated Management Framework and Management Handbooks for each of the seven Monument Zones. In addition to these documents, there are eight sets of Working Documents; the Integrated Plan of Action and Plan of Action for each of the seven Monument Zones. These Working Documents are to be annually reviewed and revised.



### 3.6 THE PASHUPATI MASTER PLAN

#### Summary of Conceptual Master Plan for the Pashupati Area:

##### *1. Background*

Lord Pashupatinath temple is situated on Right Bank of the Bagmati which is about 5 km. to the north-east from the heart of Kathmandu. Pashupatinath is the guardian spirit and the holiest of all Shiva shrines in Nepal. It has attracted extreme faith and belief of the followers of Hinduism through ages down to this day. Lord Shiva is known by many different names. Pashupati is one of the great names. Pashu means all living beings and Pati means master. So, Pashupati means master of all living being of the Universe.

Since early times, Pashupati Area has become a site of pilgrimage and a centre of devotion for all Hindus. Increasingly, it has gained fame as a spiritual land, abounding in wisdom and religious activities. Religiously inclined donors have established different shrines, temples, and monasteries in this region to express their spirituality, generosity and their profound faith in the religion. Thus, Pashupati Area, which happens to be Lord Pashupati's holy ground, represents a trinity of action, devotion, and wisdom. All the temples that stand in this area bear testimony to this fact.

Pashupati Area, which is culturally, religiously, archaeologically, and naturally well endowed, is a heritage dear not only to Nepal and its inhabitants, but also to the world at large and, hence, worth preserving. All the shrines, temples, shelters, monasteries, and stupas that are located in this area need to be preserved in their prototypical ancient forms while the spiritual and natural environments around them need to be protected. Thus, to enhance the importance of this region as a site of pilgrimage, it is imperative that religious relics, artworks, cultures, and spirituality that are found here be preserved and improved upon through planning and necessary development. Keeping this close to heart, the Head of State His Majesty King Birendra Bir Bikram Shah Dev himself has declared the area called "cultural heritage site" and under the chairmanship of Her Majesty Queen Aishwarya Rajya Laxmi Devi Shah, the Pashupati Area Development Trust (PADT) has been established to work towards the preservation and betterment of the area.

The main aim of the PADT is the planned development of Pashupati Area, for which the clear concept of the overall development strategy of the area is necessary. The preservation and development of the region, its history, religions, cultures, art and crafts, and nature as well as the enhancement of this region as a site of pilgrimage are the main goals of the development plan. This area was developed with nine gates, nine gods, nine goddesses, nine tap-systems, nine lakes, nine courtyards, nine roads, and nine fields in ancient times and, coincidentally, it also has a community comprising of nine ethnic groups. At present, Pashupati Area is headed toward uncontrolled urbanization. The matter of gravest concern is the negative impact brought on by the newly built residential buildings and unregulated urbanization on the overall environment of the area as well as on its religions, cultures, and archaeological sites.

##### *2. Overview of the Master Plan*

The preservation and development of religious and cultural heritage is never an obstacle to a country's progress. In reality, it only adds to the glory and existence of the country without negatively affecting the economic progress brought about by this development activity. Hence, for the development of our most significant religio-cultural area we need long-term

and foresighted policies to protect the region's natural and archaeological heritage. There is no need at present to let the deterioration of religious and physical environments continue in our sacred area, or to let the 'negative externalities' take their tolls. It is not possible to preserve and develop any temple or any archaeological sites without taking into account the effect the surrounding environment has on them. Hence, it is necessary to focus one's attention on these sites, the surrounding environment and the physical reality. Any shrine in a state of ruin has as much of a negative impact on the region's environment as the shrine that's been destroyed through deterioration. For the protection of the sacred environment in the religious area, there is a need for an appropriate and safe "heritage area." Although this looks ambitious by today's standards, it will prove a blessing in the future. When looked at Pashupati Area from this basis, it is easy to see the rapid pace at which the natural and cultural environments are deteriorating, and the rapid pace at which uncontrolled urbanization is adversely impacting them. After assessing this situation, it is imperative that PADT come up with a master plan that can work as a guide both at the micro- and macro-levels, in both the short- and long-terms.

The presented conceptual proposal focuses mainly on the environmental rejuvenation of this area, as well as on its religious development, through which our ancient, religious, and cultural heritage can be appropriately preserved. In the proposed master plan, the area's present state and development of religio-cultural heritage are emphasized, while attention is given to the necessity and reality of their uniformity, and preservation.

### **3. Objectives:**

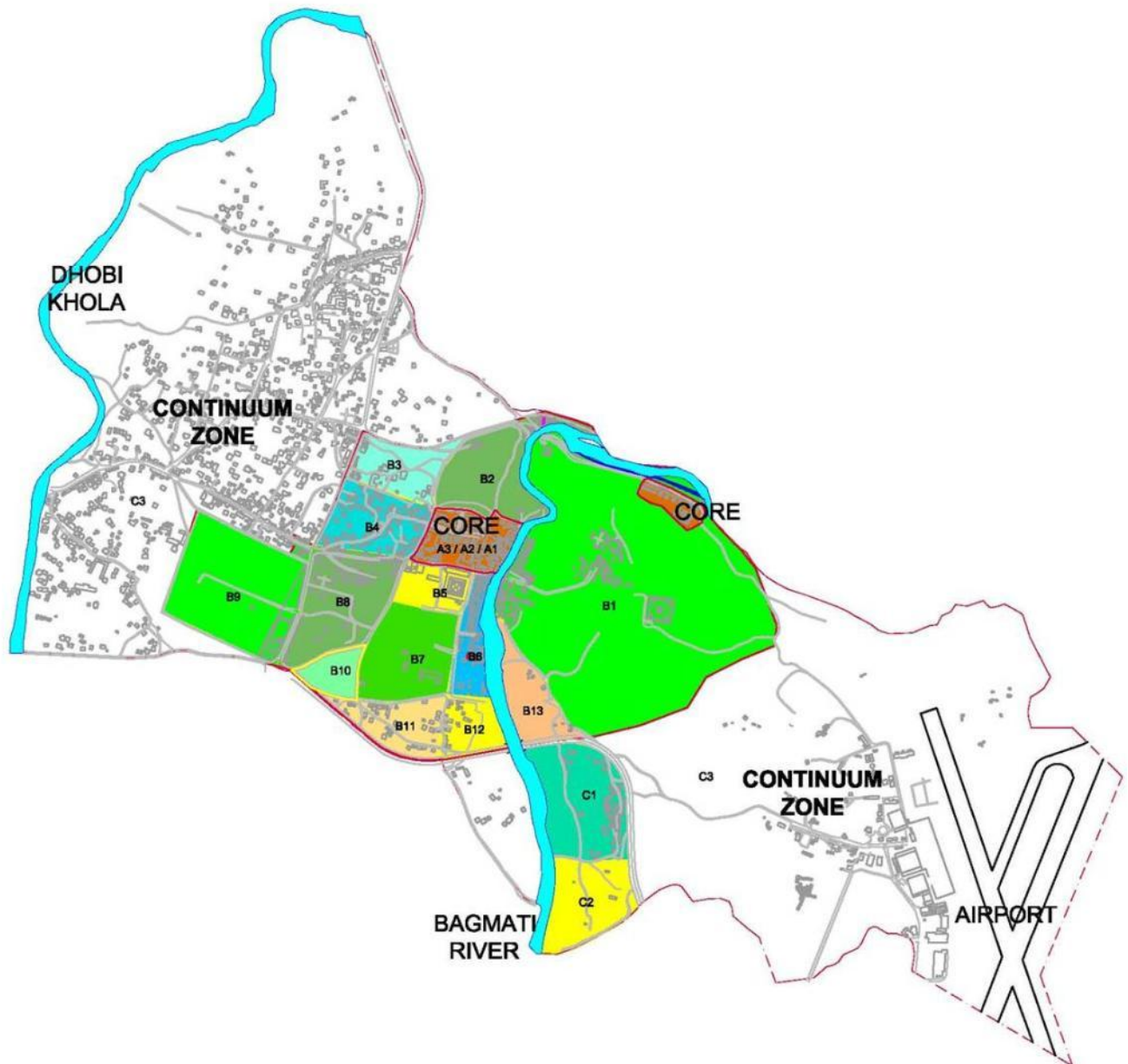
It is hoped that the proposed plan will achieve the following objectives:

1. Liveliness of the religious environment
2. Purification of the Bagmati River
3. Preservation of sites or shrines that are of socio-religious and archaeological significance
4. Encouragement to socio-religious activity
5. Development of physical infrastructure
6. Conservation of vegetation and wildlife
7. Conservation of botanical garden and land of religious significance
8. Well-organized resettlement
9. Control over unnecessary activity
10. Systematic and controlled development-construction
11. Organized disposal of both solid and liquid dirt and waste
12. Organized transportation system
13. Security
14. Beauty

### **4. Area Division:**

According to the proposed master plan, Pashupati Area is divided into various areas and sub areas, keeping in mind its long-term development as well the enhancement of its spiritual significance. The main divisions are as follows.

- A) Core Area
- B) Consonant Area
- C) Continuum Area



#### **4.1 Core Area**

Mainly Pashupati and Guheswori temples' main quadrangles as well as those areas, which are associated with these temples' religious, social and geographical forms, fall in this core area. While Pashupati Core Area is further divided into three subareas, Guheswori Area remains a whole. Guheswori Area is pressure-free from environmental perspective in comparison to Pashupati Core Area, which is subject to extreme pressure and encroachment. The approved Master Plan by the Government of Nepal clearly point out that this area should be free from commercial and residential activities.

#### **4.2 Consonant Area**

This area falls outside the core area. Countless temples that fall in this area project aesthetic charms and auras, and impart spiritual peace on worshippers just before they enter the core area. The steep geological structure to the west, the high plateau-like field to the north, and the rejuvenated Bankali Forest to the south give the sense of open space, which is such a luxury.

From the worshipper's point of view, this area which resembles an arch seems static and passive, although it is really alive and dynamic. This sub area becomes more meaningful and effective when viewed in conjunction with the core area. By acting as a buffer, the consonant area shields the core area from environmental externalities and pollutants. This sub area also serves as a strong shield for the holiest site.

#### **4.3 Continuum Area**

This is the remaining part of Pashupati Area that falls outside of the consonant area. In this area, there are very important temples, stupas, open fields, lakes, and traditional foot trails as well as countless Shiva "Lingas".

#### **Main Development Schemes:**

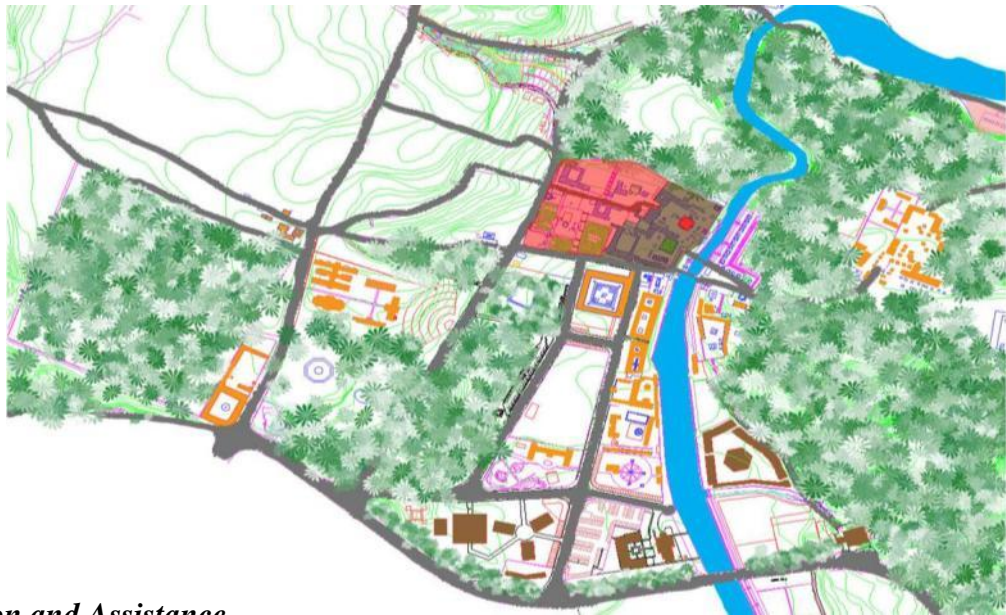
<b>S. N.</b>	<b>Program</b>	<b>Estimated Area (sq.m.)</b>	<b>Proposed Area</b>
1.	Museum	1,500	B1, B5, B8
2.	Library	500	B8
3.	Conference Hall	1,000	B11
4.	Research Centre	1,500	B8
5.	Meditation Centre	160	B1
6.	Audio-Visual Media Room	200	B8
7.	Reception Office	2,000	B10
8.	Pilgrims' Lounge	7,500	B7, B9, C1
9.	Security Post/ Police Quarter	1,800	B1, B3, B5, B11, B13
10.	Post Office	200	B5
11.	Health	500	B6, C1
12.	Commune for sages	10,000	B1
13.	Pashupati Hostel	5,000	B6
14.	Ghat Services	5,000	B6, B13
15.	Electricity-operated Crematorium	600	B12
16.	Parking:		
	A) Light Traffic	4,000	C1
	B) Heavy Traffic	1,000	B7
17.	Pradakshina Path:		
	A) Interior	0.5 km	B4
	B) Exterior	5 km	B4
18.	Fire Rituals Room	1,100	B8, B11
19.	Vedic School	2,000	B1
20.	Exhibition Room	500	B13
21.	Decorative Entrance	75	B10
22.	Devotion Centre	500	B1
23.	Post Funeral Rites Services	2,000	B6, B12
24.	Cafeteria	400	B9, B11
25.	Hostel	2,500	B3
26.	Forest, Garden, Open Field	50,000	B1, B2, B5, B9, B10, B13
27.	Shop for religious items	1,500	B5, B9, B12, B13
28.	Room for slippers/shoes	100	B5
29.	Information Centre	75	B8
30.	"Sanskar Mandap"	1,500	B11
31.	Tourist Services Centre	1,000	B13

32. Banking Services 1,000 B11

**5. Cost Estimate:**

S.N.	Program	Estimated Size	Cost (NRs. in millions)
1.	Development of physical infrastructure in the proposed area:		
	Road, boundary wall	1.2 km	30
	Drinking Water		5
	Sanitation		5
	Electricity		2
	Communications		2
	Land Development		5
	Residential Building		5
2.	Detailed technical analysis research, survey, proposal preparation		10
3.	Other area programs as per plan:		
	A. Infrastructure:		
	Removal of unnecessary infrastructure		5
	Drinking water, sanitation		10
	Road, bridge, boundary wall		56
	Electricity		6
	Communications		3
	B. Preservation-conservation:		
	Temples		500
	Bagmati River		20
	“Pati, sattal, Ghats”		300
	Cleanliness		20
	Land and vegetation		25
	C. New construction:		
	Residential house	250 sq.m.	5
	Pilgrims’ lounge	2,000 sq.m.	50
	Parking	5,000sq.m.	15
	Fire Rituals Room	400sq.m.	8
	Museum, library	800sq.m.	12
	Conference hall	300sq.m.	15
	Administration building	300sq.m.	8
	Decorative Entrance	75sq.m.	5
	Security system and control centre	800sq.m.	20
	Electricity-powered crematorium	100sq.m.	6
	Pradakshina path	5km.	5
	Services, convenience site, buildings		25
	“Sanskar Mandap”		10
	Tourist services, information centre		5
	Miscellany		30
4.	Post Funeral rites, and Ghat services		5
5.	Program outside the quadrangle:		
	A. Preservation of open field, historic sites		5
	B. Preservation of temples, and shrines		25
	C. Studies, research, plan preparation		2.5
	D. Infrastructure, new construction		67.5
6.	Administrative Expenses (at 10%)		184.5
	<b>Grand total</b>		<b>2,029.5</b>





### ***6. Co-ordination and Assistance***

In view of Pashupati Area Development Trust's (PADT) master plan, one thing that must not be forgotten is that Pashupati Area is not a separate island in itself. In reality, Pashupati Area is a part of metropolitan Kathmandu valley. Hence, when discussing PADT's master plan, Kathmandu Valley's urban development should be observed. From the geographical and administrative points of view, even today this area can be treated as a part of Kathmandu Metropolitan City. This area's developed infrastructure cannot be very different from those of other areas. Also, the concerned authority, not by any other authority should only implement any renovation programs. Hence, it is essential that the government, quasi-government and non-government institutions of Kathmandu Valley be involved in the construction of infrastructure for the overall development of Pashupati Area. The concerned authority should administer any development of infrastructure as per the proposed master plan. For, this one should involve the concerned authority on time.

### ***7. Conclusion:***

Pashupati Area, which is important from religious and cultural point of view, is under attack from human encroachment and expectations. Shrines, temples and ancient sites are in a dilapidated state and have not been utilized as their founders wished they would be. Their state of repair and improvement looks grim. The conceptualization, a modification of the pre-conceptual master plan, is presented in order to expand services and conveniences to the pilgrims who come to worship Lord Shree Pashupatinath, and also to develop this area in the long run according to the plan, and to develop programs for future execution. In the present context, such undertaking seems very expensive and ambitious, in spite of the fact that this sacred pilgrimage site, where the national deity is enthroned in the only Hindu nation, also happens to be the spiritual centre for all Hindus worldwide. If this holy and respected Pashupati Area is looked at sentimentally, it becomes clear that the proposed programs are the least that can be done.

The proposed master plan outline accommodates these facts and goals. It is believed that the proposed master plan will be instrumental in the planned preservation and improvement of Pashupati Area's religious, spiritual and environmental aspects, and will enhance and strengthen the respectability, faith and glory of not only Nepal and its inhabitants but also of the whole Hindu world. Its success depends largely on the heartfelt and active support of all those concerned.



### 3.7 OTHER ISSUES WITHIN THE MONUMENT ZONE

Within the Pashupati monument zone, there are various other issues that must be considered beyond the crematorium. These issues have not been directly addressed in this Heritage Impact Assessment; however the impact of these development activities and possible neglect must also be addressed immediately.

#### Road Construction through Pashupati Monument Zone September 2007



As mentioned in the Committee Decisions, the discussions on the construction of an illegal road through the monument are still ongoing. This issue is being dealt with through another process of cooperation between the various stakeholders and UNESCO. The stakeholders are not only PADT, the Department of Archaeology, the Department of Roads, the Department of Civil Aviation, the Nepal Army as well as the community. This coordination is critical to ensure that the final solution is appropriate for the community as well as for the World Heritage property.

### **Demolitions and redevelopment west of main temple**



The demolition of part of the urban fabric to the west of the main temples solved the problem of illegal construction; however it changed the identity of the place. The chowks, streets, squares and age old historic buildings associated with different cultural activities in and around Pashupati area, have given way to an open plaza. These developments need to be reviewed and the possibility of rehabilitation of this area should be considered. The trend of introducing alien garden designs must be reconsidered.

### **Monuments and traditional buildings requiring restoration**



There are various historic buildings that are in need of restoration. There have been discussions on the need for restoring the main Pashupatinath temple; however the procedures have not been clarified. The Bishworoop temple on Mrigasthali hill which is already at risk due to the illegal road has been neglected. Other buildings in the Gorakhnath area have also been neglected and have collapsed. Not only the listed monuments, but all monuments must be conserved.



### **Community Hall under construction**



A community hall is under construction right next to the electrical crematorium. The official procedures for this building have not been fulfilled. Here it must be also noted that the design of this building is not adapted to the surrounding area and does not respond to the adjacent crematorium building. This building is clearly a concern.

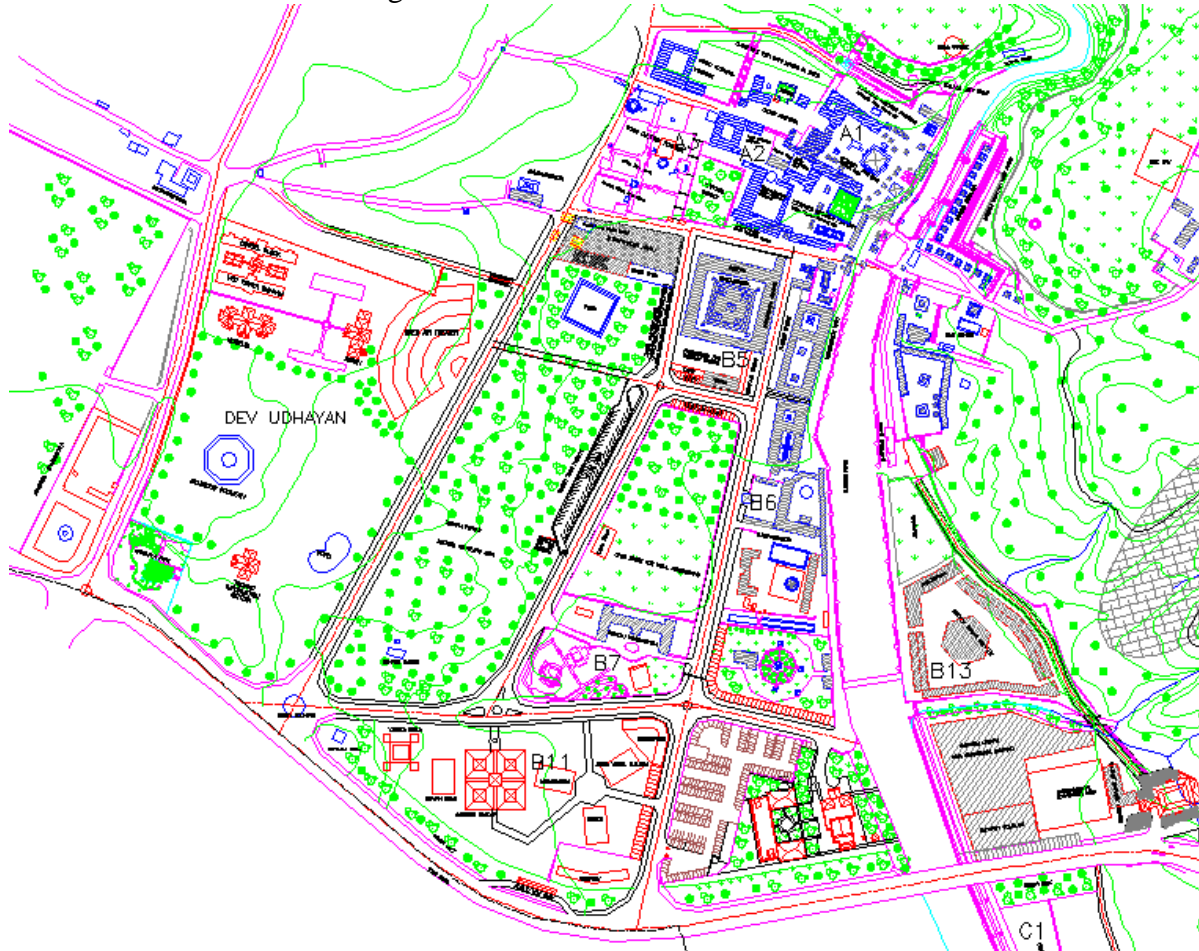
### **Further areas that are planned for development**



The Pashupati Master Plan envisions the entire area along the ring road being developed with requirements for the visitors. This includes various buildings and even multi-storied parking. Clearly, the extent and design of these facilities could have an impact on the heritage site. This shows the importance of reviewing the Master Plan and clearly defining the design parameters and the correct procedures to carry out such development works. The prevalent trend of ad hoc decisions must be halted.

#### 4. DESCRIPTION OF CHANGES OR DEVELOPMENTS PROPOSED

The new development proposed is to construct an electric crematorium on the consonant area (B12). Traditionally, wood pyres are used for the cremation of the deceased. However due to growing numbers of cremations, the scarcity of wood and the impact on the environment, an electrical crematorium is being established.



The proposed site is near the boundary of the World Heritage property, close to the modern Ring Road. The site is within Pashupati area on the right bank of Bagmati River. This would be an extension of the area where the cremation platforms have been traditionally located. According to the authorities, this site was also chosen to minimize the adverse effect on people, the monuments and the cultural and religious activities within the Pashupati and adjoining areas.





This location for the crematorium was demarcated in the 1996 Master Plan as area B12. Accordingly the area which was covered with uncontrolled and inappropriate urbanization was expropriated by the government. The buildings which did not follow the bylaws of the area where cleared as per the Master Plan.



Before -Aerial photographs: 2003 A.D:

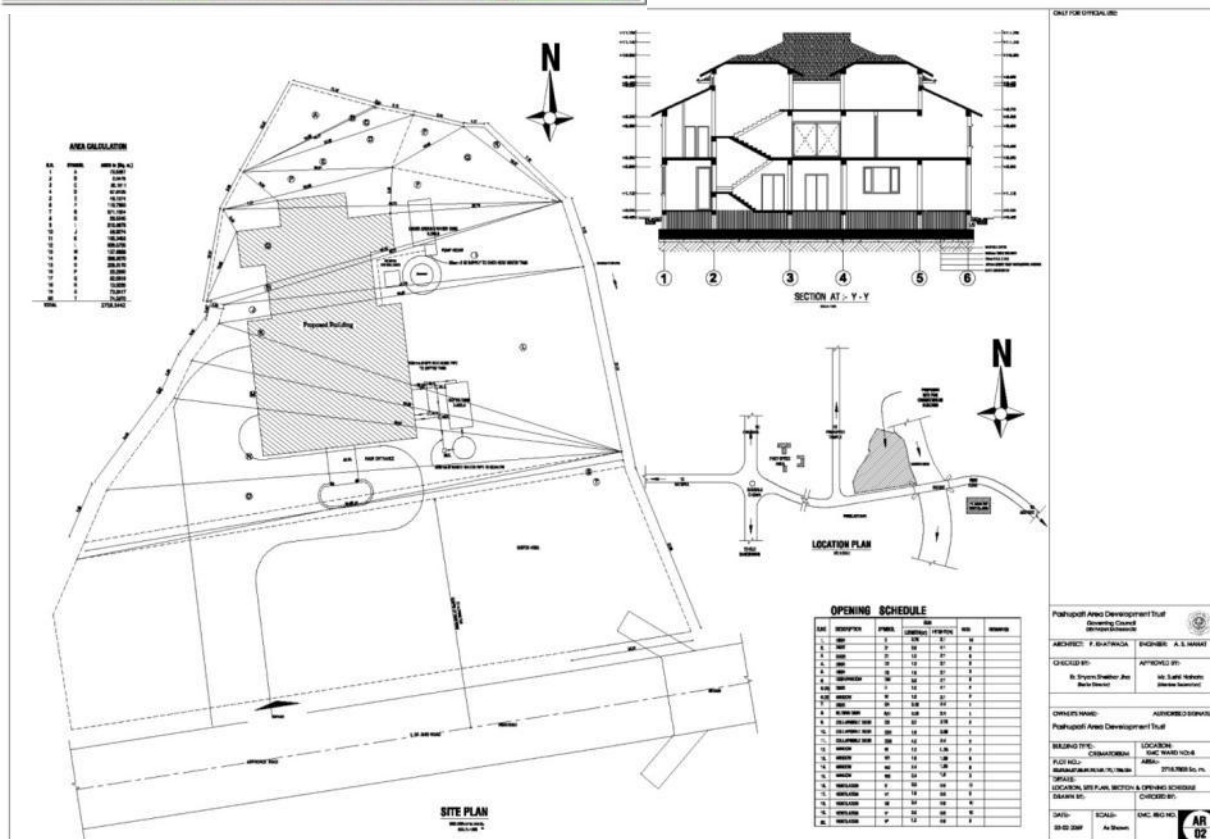


After -Aerial photographs: 2012 A.D:



## Plans of the crematorium building with chimney

The design of the building housing the crematorium has been prepared based on the technical and the functional requirements. There are three furnaces which are serviced by a ritual hall taking into account all the requirements for the last rites. The design of the building has been adjusted to take into account the building bylaws for the area. This is especially in connection with the overall height of the building as well as the façade finishes and materials. The floor to floor height has not been adhered to; however this has been compensated with appropriate façade finishes and height of floor cornices. The chimney however does not conform to the bylaws. The chimney will be 30 meters tall. The diameter of the chimney is 100 cm in the lower third decreasing to 50 cm for the remaining upper part. Additionally there will be a metal ladder attached with a safety caging which makes the entire structure more dominant.





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<p><b>TERRACE FLOOR PLAN</b></p>	<p><b>ROOF PLAN</b></p>	<p>ONLY FOR SPECIAL USE</p> <p>Pushpott Area Development Trust Planning Council</p> <p>ARCHITECT: P. SUBTHAKA    ENGINEER: A. L. MAMAT</p> <p>CHECKED BY:    APPROVED BY:</p> <p>BY: [Signature]    BY: [Signature]</p> <p>CONSENTED:    AUTHORIZED SIGNATURE</p> <p>Pushpott Area Development Trust</p> <p>BUILDING TYPE:    LOCATION:</p> <p>PLAT NO:    CMC WARD NO: 6</p> <p>PROJECT NO:    AREA:    2718.788 Sq. m.</p> <p>TERACE AND ROOF PLAN</p> <p>DATE:    CHECKED BY:</p> <p>DATE:    SCALE:    CMC WARD NO: 6</p> <p>07/03/2015    1/2000    AR 04</p>



**Proposed Crematorium at Pashupati Protected Monument Zone:**

*Justification as submitted by Pashupati Area Development Trust*

1. As indicated in the approved master plan for the Pashupati Area an electric crematorium is to be constructed in this location.
2. The proposed site is near the boundary of the World Heritage property, close to the *modern* Ring Road.
3. The site lies adjacent to the Bagmati River and is in linear continuity with Aryaghat, the traditional cremation area.
4. This site is not being used for any cultural/social related activities other than for cremation and burial for some communities.
5. In the recent past, this area was encroached on and ugly, crowded settlements were constructed even though it falls within the Pashupati protected monument zone. The Government of Nepal provided funds for the acquisition of this land which has recently been completed. There weren't any heritage or traditional buildings within this area. All the unplanned concrete structures were demolished to clear the illegal and inappropriate settlements for implementation of the master plan.
6. Due to the rise in population, there is an increase in dead bodies being brought for cremation. The cultural significance of cremating the dead in Pashupati on the bank of the Bagmati River will lead to continued demand for cremations to take place here. The only way to manage such demands is to introduce an environmental friendly, time and fuel efficient cremation system.
7. Hence the construction of an electric crematorium, on the land acquired by the government is found to be appropriate in the given context.
8. The project is designed to control the pollution, reduce the consumption of fire wood and thereby protect the environment. The cremation time will be reduced from 3 hours to 55 minutes. This would minimize the impact on people, monuments, archaeological site, cultural and religious activity around the Pashupati area.
9. Energy used -
  - Cremation carried out solely by super heated air and not by introducing burning gases or fuel.
  - Electrically heated (resistance type) double chambered type cremation furnace along with charging machine and latest pollution control system.



*The crematorium building under construction 27 October 2012*

## 5. ASSESSMENT AND EVALUATION OF OVERALL IMPACT

The justification for the site is clear. The site lies adjacent to the Bagmati River and is in linear continuity with Aryaghat, the traditional cremation area. This site is not being used for any cultural/social related activities other than for cremation and burial for some communities. The site fell outside the monument zone when Kathmandu valley was listed as world heritage site in 1979. It was only after boundary redefinition in 2006 that the area was included to ensure that the uncontrolled urbanization could be brought under control. The State Party provided funds and the acquisition of this land has recently been completed. There weren't any heritage or traditional buildings within this area. All the unplanned concrete structures were demolished to clear the illegal and inappropriate settlements for implementation of the master plan.

The justification for the need of the electrical crematorium is clear. Due to the rise in population, there is an increase in dead bodies being brought for cremation. The cultural significance of cremating the dead in Pashupati on the bank of the Bagmati River will lead to continued demand for cremations to take place here. The only way to manage such demands is to introduce an environmental friendly, time and fuel efficient cremation system. The project is designed to control the pollution, reduce the consumption of fire wood and thereby protect the environment. The cremation time will be reduced from 3 hours to 55 minutes. This would minimize the impact on people, monuments, archaeological site, cultural and religious activity around the Pashupati area. Cremation will be carried out solely by super heated air and not by introducing burning gases or fuel. The cremator has electrically heated (resistance type) double chambered type cremation furnace along with charging machine and latest pollution control system.

### **Impact of Procedure**

Procedures were not followed. The development project was not reported to the World Heritage Committee before decisions were taken. Building permits as per the local procedures and the Integrated Management Plan were not obtained before construction began. It must however also be mentioned that though delayed, the site managers did report the project to the World Heritage Centre and established a Committee together with the Department of Archaeology to clarify the permissions for the construction.

### **Impact of Project Preparation**

The area as per the Master Plan is B12. Here major encroachment had taken place until the area was expropriated by the government and these illegal buildings were removed. This same area was initially outside the World Heritage boundary, was then in 2005 was proposed in the buffer zone. However to ensure government funding for the expropriation of the land, as per the wish of the site manager, Pashupati Area Development Trust, the areas of B11 and B12 were included inside the boundaries. The Master Plan has however not been coordinated with the World Heritage status of the property and the proposed development works planed in these areas have generally not been notified to the World Heritage Committee

### **Impact of Function**

Pashupati is an important place for cremations, which constitutes an intrinsic part of the identity of the property. Due to the rise in population there are growing numbers of cremations being carried out on the Ghats by the river using open wood pyres. The tradition of cremating the dead bodies will continue, however the use of large amounts of wood as



well as the pollution from the fires impact on the environment. Additionally, the remains that might not always be fully charred are thrown into the river causing further impact on the environment. The reduction of pollution and use of wood that will be possible through the electrical crematorium will clearly have a positive impact on the environment. The cremations will continue to be carried out by the banks of the river, supporting one of the main functions of the heritage site.

### **Impact of Building**

The design of the building follows the bylaws for new buildings; however the requirement for floor to floor height is not fulfilled. The façade however has provided cornices at the required height to emulate the required floor height. The overall building height and other requirements have been met. Considering the building to be a crematorium, there could be a question of the building not being “authentic” in respect to its function, for it does not reflect the function other than the adjacent chimney. Clearly the propose ornamentation might be inappropriate for the given function and location.

### **Impact of Chimney**

The chimney is a technical requirement which is not appropriate for the location. However, considering that chimney a requirement to ensure reduced impact on the environment, it must be considered as a temporary solution until more appropriate solutions are available.

### **Overall Evaluation**

#### **PROCEDURES WERE NOT CORRECTLY FOLLOWED**

The procedures were not carried out in time to influence the outcome of the planning from the early stages. In this specific case, there does not seem to have been any major drawback due to this, however the recommended mitigation measures must be accounted for. The project falls within a Master Plan area. The Master Plan itself has not been assessed for its impact on the World Heritage property. This needs to be rectified to ensure that further development work within the monument zone area does not impact the Outstanding Universal Value of the property.

#### **THE LOCATION AND FUNCTION IS CONSIDERED APPROPRIATE**

The function of having an electrical crematorium along the Ghats of the Bagmati is considered to be appropriate to ensure the continued functioning of the site as a place for cremation while ensuring the protection of the environment.

#### **THE BUILDING IS CONCEPTUALLY ACCEPTABLE WITH MODIFICATIONS**

The building that is to house the crematorium is designed as per the bylaws developed during the preparation of the Integrated Management Plan for the monument zones of the Kathmandu Valley World Heritage property which was adopted by the cabinet of the Government of Nepal in 2007. Further detailing of the project must continue to follow all the articles of the bylaws, including the development guidelines. The design does however seem to present too much ornamentation for a building that should not dominate the historic context. The building could be screened off using appropriate forms of vegetation.

#### **THE CHIMNEY IS NOT ACCEPTABLE FOR THE LONG TERM**

The chimney does not follow the bylaws, will have a visual impact and would be a wrong precedent for developments within the World Heritage boundaries. It is a requirement to control the pollution of the crematorium. It can only be allowed if it is considered a component that is reversible and clear procedures are put in place to ensure the removal of the chimney in the foreseeable future. The chimney itself must be made to be as least intrusive as possible by taking into account colour, texture, finishes, etc.



## **6. SUGGESTED MITIGATION MEASURES**

### **Mitigation of Impact of Procedure**

The procedures for this project must be fulfilled both in respect to the World Heritage Committee as well as with the local authorities. Permission from the local authorities as per the prevalent bylaws must be obtained. This should at the same time establish procedures that will allow for all further project – and ongoing development projects – to fulfil all necessary procedures. This is especially in respect to the road construction, the community building (being built adjacent to the crematorium), other planned buildings such as Dharamsalas, Anathalayas and multi-levelled parking. The site management must understand that considerations can be made to overlook this in one case, but in future would be unacceptable.

### **Mitigation of Impact of Project Preparation**

The removal of the uncontrolled buildings within the Areas designated as B11 and B12 is a commendable activity carried out by the site managers with the support of the State Party. Clearly the development that is planned by the site management must first go through clear procedures to ensure its appropriateness and that it does not impact the outstanding universal value of the property.

### **Mitigation of Impact of Function**

The acceptance of the electrical crematorium by the community might become an issue. How further traditional wood pyre cremations will be allowed parallel to the use of the electrical crematorium is something the management might need to look into. Once the electrical crematorium is built, it must be used effectively and there must be a clear reduction in pollution and use of wood.

### **Mitigation of Impact of Building**

The building must first of all follow all bylaws. The building itself must however not be too ornamental which might imitate or try to out-do the historic buildings. The crematorium building must remain simple. This would also include the development of the spaces around the crematorium. The legal provisions in the Management Handbook which includes development guidelines must be consulted.

### **Mitigation of Impact of Chimney**

The chimney is not an acceptable solution. Considering that the chimney is a requirement to ensure reduced impact on the environment, it must be considered as a temporary solution until more appropriate solutions are available. The State Party – more specifically the site manager Pashupati Area Development Trust – must ensure that they will continue to look for more appropriate technology that will not need a chimney of that size or any chimney at all. When such technology is available, all meant shall be put to disposal to remove the chimney and replace it with a less intrusive option. The chimney itself must be made to be as least intrusive as possible by taking into account colour, texture, finishes, etc.

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## **9. APPENDICES**

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## **APPENDIX 1 - Pashupati in the News (*some recent articles*)**

### ***Burial Rights: Christians to opt for stern stir if demand goes unheard***

Kathmandu

April 07

With the government still unable to resolve the protracted burial rights issue, Christians in Nepal have threatened to protest the government's indifference by 'gifting' a coffin to the prime minister very soon.

After the Pashupati Area Development Trust (PADT) barred Christians from burying the dead in the Bankali forest two months ago, Christians have been demanding burial rights on the temple premises at least until the government arranges for alternative burial grounds.

However, with the PADT remaining adamant on its decision and the government unable to convince the PADT, the row has taken a toll on the funeral rites of the Christian community in the country. With the hunger strike being staged by members of Christians entering the 16th day on Thursday, irate members of the community have said they would opt for other "stern" forms of demonstrations if the government failed to show them their graveyard in a couple of days.

"We will be staying like this only for a few more days," said CB Gahatraj, General Secretary of the Christian Committee on Constitution. "If the government fails to support us even after that, we will be forced to stage a demonstration by taking the dead bodies outside the Constituent Assembly (CA) hall."

According to Gahatraj, after the PADT ruled out their burial rights, the Christian community of the Valley has been left with no space to bury its dead. "What we are doing now is collect the bodies and take them outside the Valley to be buried. We have to reserve a vehicle every two or three days to take the bodies out of the valley." Places like Trishuli, Charikot and Nuwakot are chosen for burying the dead, according to him.

"When a dog dies on the streets, the municipality takes no more than an hour to decide where the dog is to be buried," Gahatraj lamented. "This is the case of human beings and the state is indifferent to this problem."

In the 16 days of the hunger-strike at Shanti Batika at Ratnapark, a group of Christians saw many politicians and human rights defenders committing to solve the problem at the earliest. "We have been assured several times, but in vain. Nepali Congress (NC) President Sushil Koirala held conversations with the prime minister over the phone in front of us, urging him to solve the problem. But nothing has happened so far," he said. "We want action now." The Supreme Court (SC) on March 18 issued an interim order to allow non-Hindus to bury their dead on the Pashupati temple premises until an alternative burial space is allotted to them. However, another writ has been filed by the PADT against the interim order and the SC is yet to issue a final verdict. A hearing, which was slated for April 6, has been deferred, adding to the woes of the Christians.

"We are concerned only about protecting our religious sanctity," said PADT Member Secretary Sushil Nahata. "It's the government's job to allot an alternative burial space. We are not going to let anyone litter our shrine by burying their dead."

Posted on: 2011-04-08 09:01

### ***Electric Crematorium in Pashupati***

By Binu Shrestha

Kathmandu, May 13

After a long wait and much debate, the foundation for an electric crematorium at the southern part of the Pashupatinath temple area was finally laid on Friday.

The crematorium was one of the major agendas of the 10-year master plan of the Pashupati Area Development Trust (PADT). The crematorium, which will be completed in next 18 months, will be set up at the southern part of Chharshivilaya area of the Pashupati area where the last rites of the dead are performed every day.



Minister for Federal Affairs, Constituent Assembly and Parliamentary Affairs and Cultural Khagendra Prasai, who is also the president of PADT, laid the foundation stone of the crematorium.

Minister Prasai said that several religious communities are residing in the capital and the electric crematorium will be helpful in meeting with the requirements of all cultural aspects of conducting last rites of people of all faith and religions.

Shedding light on the importance of religious faith of various communities, the minister said that ethnic unity is necessary to end all religious discrimination and to boost religious harmony.

Sushil Nahata, member secretary of the PADT, said that the electric crematorium might be the first one in the nation which would be built using the latest technology.

He further said that the question regarding the management of the electric crematorium during the power outage time would be addressed by establishing two powerful generators.

Shyam Shekar Jha, senior director of the PADT, informed that the building will be constructed in a different way using modern machine keeping in view the clean environment issue. Smoke billowing out of the crematorium's 30 meter long chimney will be harmless to the environment of the area, he added.

The concept of electronic crematorium building was developed around four decade ago. However, the traditional way of cremating body through funeral pyre would also continue even after the setting up of the crematorium.

The relatives of the dead persons can easily perform their own traditional last rituals at the crematorium. The building will be constructed in such a way that it would assist people of all faith to perform the last rites as per their tradition which is being carried out at present at Arya Ghat.

He said the electric machine required only 45 to 50 minutes to do away with a dead body. The design of machine is same as a box.

Kanak Mani Dixit, senior journalist, said that the electric crematorium building was a necessity even from the environment aspect as it would lessen the pollution in the Bagmati River. It would assist in helping the large number of people in performing last rites of the relatives simultaneously, he added.

Source: Gorkhapatra

### ***Mrigasthali deer park gets in hassles***

By A Staff Reporter  
Kathmandu, Dec. 19

Pashupati Area Development Trust (PADT) has failed to operate Mrigasthali as a suitable habitat for deer. PADT had decided to promote the area as deer park on its premises for visitors targeting Nepal Tourism Year 2011.

PADT also decided to development Mrigasthali adding other species of birds and animals in the deer park, construct a bridge to reach the Kailash Park, expanding the pasture for deer and construct a pavement inside the park but there is nothing except barren ground, big trees and deer.

The deer of Mrigasthali at Pashupati area has hit adversely by the shortage of green leaves, grass and new bushy plants since long time. The beautiful deer come too close when visitors go near them expecting food.

According to Pashupati Areas Development, all deer are dependent on artificial feeds due to a lack of green lush grasses and new bushy plants inside the area. Staffs served such fodders to them only two times a day- during morning and evening.

The multiplying number of deer has invited the risk of soil erosion, deforestation and marred the growth of new plants in Mrigasthali. The growing number of deer has badly scratched off the bark of trees with their horn and eaten barks of trees which have threatened to start deforestation in the areas, according to PADT.

Mrigasthali is spread over 90 ropanis of land is enough for only about 50 deer but there are around 150 spotted, black and barking deer, according to the PADT. Ten years ago, there were only 32 deer here which were brought from central zoo.

PADT said that it was going to plant new saplings at the barren land of the area. It said it would like to transfer some of the deer only to the central zoo and Natural Preservation Trust (NPT), said Bhola Prasad Sitaula, Director of PADT. The Mrigastghali hill, which is also called Sleshmantak Forest, is a holy site for the Hindus who visit the Pashupati area.

Source: Gorkhapatra

### ***Heritage watch: Fear of Valley's delisting as UNESCO heritage site looms***

Kathmandu  
September 25

With the government yet to come up with a concrete plan concerning the deviation or blockade of road that cuts through the middle of the Pashupati area—a world heritage site—Kathmandu is again on the verge of being listed by UNESCO as an endangered heritage site.

Owing to threats that the road adjoining Tilganga and Guheshwari poses to the Pashupati area, UNESCO had in 2011 told the government to come up with an alternative. According to the UNESCO directives, if the government fails to present a progress report on the matter before February 2013, Kathmandu will be listed as an endangered heritage site.

According to UNESCO, listing a particular heritage site as endangered is aimed at informing the international community and UN member states of conditions that threaten the site's originality. UNESCO means to call for corrective actions from the government, as well as international stakeholders, to preserve the site. However, if the site loses its characteristics even after being listed as endangered, the site may be deleted from the UNESCO's world heritage list.

"If the features that determined a site's inscription in the UNESCO's list vanish completely, World Heritage Committee may decide to delete the property from the list of world heritage in danger as well as the world heritage list," UNESCO's website says.

The gravel road at Pashupati measuring around 855 metres was opened for private vehicles in 2007. Vehicles passing through, thus, cut across Sleshmantak Ban (jungle) in the Pashupati area, threatening the forest and the archaeological importance of the entire area.

"UNESCO had been alerting the government of the bad consequences ever since the road was opened for vehicles," said Ves Narayan Dahal, Director General of the Department of Archaeology (DoA). "Despite the DoA's several attempts to make sure the government does something in time, nothing was done until the UNESCO cautioned in 2011, giving us a one-and-a-half-year deadline."

Moreover, in what may come as a bigger threat to the country's pride of cultural richness, experts say chances are equal that the historical city might be removed from the UN's list of world heritage sites forever, since this is the second time Kathmandu is on the brink of being listed as an endangered heritage site. Earlier, UNESCO listed Kathmandu as an endangered site in 2003, citing private houses built in the Bouddhanath Stupa area, another world heritage site in Kathmandu Valley. However, Kathmandu was later removed from the list after the DoA reconstructed all the houses there.

"Most of the heritage sites across the world that have been tagged as endangered twice have been removed from the world heritage sites list forever," said Dahal. "Kathmandu may have the same fate unless something is done on time."

Kathmandu Valley, one of the four world heritage sites identified by UNESCO, consists of seven heritage locations—Pashupati area, Bouddhanath, Swoyambhu, Changunarayan and three durbar squares of Kathmandu, Bhaktapur and Lalitpur. A problem with any one of these seven sites will put the listing of the entire Valley

under threat. Lumbini, Chitwan and Sagarmatha National Park are other heritage sites identified by UNESCO in Nepal.

According to Dahal, the DoA conducted a study whether the road in question could be taken through a tunnel. “However, that seemed impossible, given the topography and the costs involved,” he said, adding that the DoA has been trying recently to divert the route through an area that edges beyond the UNESCO -marked heritage boundary. “We are thinking of diverting the road and blocking it for vehicles,” he said.

A committee of representatives of the DoA, the Pashupati Area Development Trust (PADT), the Kathmandu Valley Town Development Implementation Committee, the Department of Roads and other stakeholders was set up on Wednesday to conduct a feasibility study of the proposed diversion.

“However, as the road may pass through the compounds of an Army camp in the nearby Tribhuvan International Airport, we could hit another hurdle,” he said. “But if the Army agrees to part with a small chunk of its land, we could save our pride.” PADT Member Secretary Sushil Nahata said his office was doing all it can to convince the locals who benefit from the shortcut road from Tilganga to Guheshwari. “Locals are still unhappy with the idea of blocking the road,” he said.

Posted on: 2012-09-26 07:48

### ***KMC flattens vendors’ shops in Pashupati***

Kathmandu  
January 20

The Kathmandu Metropolitan City (KMC) has destroyed temporary huts built by street vendors in the Pashupati area.

On Wednesday night, the City Police, along with Nepal Police and the Armed Police Force, burnt over 250 huts constructed along the road to Pashupati Temple and on both the sides of the stairway joining it.

According to Dhanapati Sapkota, the chief of the KMC’s Implementation Department, temporary huts constructed along another road joining Gaushala to Pashupati will also be cleared within a few days. “We have asked the vendors to remove the shops as soon as possible.

The shops will be removed if they are not shifted to business shutters,” Sapkota said.

The Pashupatinath Temple area was listed as a UNESCO World Heritage Site in October 1979. But, of late, culture conservationists are concerned over the fading beauty of the area owing to heaps of waste and dirt. Officials warn that the government could have to bear the loss of exclusion of the temple premises from the list of the world heritage site if the encroachment in the area is not cleared immediately.

Earlier on Thursday, a group of street vendors reached the KMC office to register their protest against the government move, but to no avail. “KMC cannot afford any alternative for the encroachers,” Sapkota said.

A good presence of security personnel could be seen at the Pashupati area throughout the day on Thursday. The Metropolitan Police, Armed Police Force and City Police were seen helping pedestrians and devotees take alternative routes to the temple as the main entrance road was sealed to avoid demonstration of the vendors.

The street vendors, however, were an angry lot. “We will come back if the government does not manage an alternative for us,” said Gyanu Lama, whose shop was burnt to ashes on Wednesday night.

Posted on: 2012-01-20 08:05  
Source: Ekantipur

### ***NIBL organising Heritage Marathon tomorrow***

By A Staff Reporter

Kathmandu, Dec. 10

In a bid to preserve the rich cultural heritages of the Kathmandu Valley, Nepal Investment Bank Limited (NIBL) is going to organize 'NIBL Heritage Marathon 2009' with the theme 'Run for Fun' in the capital on coming Saturday.

Prithivi Bahadur Pande, Chairman/Chief Executive Director of the bank, informed the press on Thursday that the marathon aims to raise funds which would be handed over to Pashupati Area Development Trust (PADT) for the improvement of Aryaghat at the Pashupatinath.

Aryaghat, which was built in the early 16th century, is not equipped with modern facilities to meet the needs of an ever growing population.

"As the existing crematory site lacks sufficient space and not well equipped, the bank has decided to fund to construct a few more crematory sites to make the funeral system more efficient and effective," he said.

Similarly, part of the funds raised will be used for the renovation of 16th century Bhai-Degal temple in Patan Durbar Square.

The Kathmandu Valley Preservation Trust (KVPT) will implement the renovation work.

He said that the bank had expected to raise Rs. 5 million from the programme.

"NIBL has been actively involved in a variety of social works in the country. The marathon being organized annually is a joint platform to promote health and corporate wellbeing and heritage conservation," he said.

Lauding the previous charity works, Pandey said in spite of Nepal being renowned worldwide for its cultural heritages, its preservation works were severely underfunded.

"I feel embarrassed to note that the country should depend on funds coming from abroad to preserve its historical and cultural heritage," Pandey said and urged the people to develop culture of donating to social organizations for the preservation of the heritages.

"NIBL has been actively involved in heritage preservation since its inception in 2002, when it donated around Rs. 1.5 million for the restoration of the legendary Kaal Bhairav statue at the Hanuman Dhoka premises," he said.

"Similarly, in 2007, the bank raised Rs. 2.5 million from its first corporate marathon to aid the restoration of Sundari Chowk in Patan Durbar Square."

Dr. Rohit Ranjitkar, the Project Director, Kathmandu Valley Preservation Trust (KVPT), said that funds would be used for restoring the 16th century Bhai-Degal temple that was originally a three-storey pagoda structure that collapsed in the great earthquake of 1990 BS and exists now as a mere shadow of its previous grandeur.

Dr. Ranjitkar said that the Patan Durbar Square in Nepal was regarded as one of South Asia's finest and most pristine historic royal palace.

Its construction dates back to 17th and 18th centuries, a period when Malla dynasty (A.D. 1200-1768) ruled the Valley.

Similarly, marathon champion Baikuntha Manandhar, informed about the ongoing preparations about the programme.

He said that more than 2,200 people had already registered their names to take part in the marathon that would start at 6:00 in the morning of December 12.

According to the organizers, they expect more than 3,000 people to turn up for the marathon.

Nepal Investment Bank Limited (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners.

Source: Gorkhapatra

### ***Pashupati road opens despite UNESCO protest***

Kathmandu  
September 14

The United Bagmati Cultural Development Committee has completed construction of an 800-meter road through the forest area on the eastern side of Pashupati Monument Zone despite protests from the United Nations Educational, Scientific and Cultural Organization (UNESCO), Pashupati Area Development Trust (PADT) and the Department of Archaeology (DoA).

"The road has been completed. It is open now," said Krishna K C, chairman of the committee. "The earth may overturn, the sky may fall. We have nothing to do with such things. We constructed the road according to the Pashupati Development Master Plan," he added.

However, PADT and the World Heritage Section of the DoA, which were not even informed of the road construction, say that the road does not feature in the master plan.

"There is no mention of the road in the master plan," said Rajesh Mathema, chief of the World Heritage Section of DoA. "The road should not have been built. Now, there is a possibility of the Pashupati Area being removed from the World Heritage list," he said.

PADT Member Secretary Nirmal Kuinkel echoed Mathema. "The road is not mentioned in the master plan. We ask DoA's permission even for minor things like replacement of a pole in the area. But they constructed the road without even informing us, let alone DoA," Kuinkel said.

Kuinkel added that PADT had informed the Prime Minister, the Ministry of Culture, Tourism and Civil Aviation and the DoA in time about the construction. "We had requested that the construction be stopped. The Ministry of Culture had held discussions with the Ministry of Physical Planning and Works for halting the construction. It is unfortunate that the road was still constructed," Kuinkel further said.

The committee constructed the road with the help of the Department the Roads (DoA) which is under the Ministry of Physical Planning and Works led by Maoist Minister Hisila Yami. Yami could not be reached for comments on Thursday as she was bed-ridden due to illness.

On September 11, the UNESCO had said that the road construction was inappropriate as it would impact upon the authenticity and integrity of the Monument Zone, leading to loss of outstanding universal value.

"The road that passes through the middle of the forest to the east of the Bishworoop Temple will directly endanger the Bishworoop Temple complex by further aggravating the sandy topography and affecting the fragile ecology of the forest," UNESCO had said in a statement.

Pashupati Monument Zone, one of the seven monument zones in Kathmandu Valley, was included in the list of World Heritage Sites in 1979 and put on the endangered list in 2003 because of threat of uncontrolled growth and loss of authenticity. The 31st session of the World Heritage Committee in June this year had decided to remove Kathmandu Valley from its endangered list after the government expressed commitment to implement an Integrated Management Plan.

The newly constructed road stretches from the edge of the golf course in front of Tilganga Hospital to Tamraganga area.

Posted on: 2007-09-13 08:29



## APPENDIX 2 – LEGAL PROVISIONS

### **Guiding Conservation Principles for Classified Monuments**

#### **Introduction**

*This section deals with the legal framework for the conservation and maintenance of classified monuments. Classified Monuments are all buildings and structures that have been listed and categorized in the most recent inventories prepared by the Department of Archaeology and gazetted by the Government of Nepal. The conservation guidelines are to be enforced for classified monuments.*

#### **Legal Provisions for Classification of Monuments:**

*As per the Ancient Monument Preservation Act 1956 with amendments, Article 3(a) sub-article (i) states that “From the viewpoint of ownership, the ancient monuments shall be classified in two categories as public ancient monuments and private ancient monuments.” Sub-article (ii) states “From the view point of importance, the ancient monuments shall be classified in three categories as of international importance, of national importance and of local importance”.*

#### **Legal Provisions for Ancient Monument Survey and Classification Committee:**

*Provisions for establishment of this committee are made in the Ancient Monument Preservation Rules 1988 – (third amendment 1998) Rule 2.3. As per Rule 2.4 the Committee is responsible to “...prepare(d) the criterion for the classification of ancient monuments from the ownership and point of view of importance ... to advise the Department to classify the ancient monuments on the basis of said criterion.”*

#### **Criteria for Classification of Monuments:**

*The Ancient Monument Survey and Classification Committee developed the criteria for documenting and classifying monuments in a series of meetings held between 17<sup>th</sup> February and 26<sup>th</sup> June 2000. There was general agreement that ancient monuments like historic buildings, palaces, monasteries, temples, houses, stupas, stone water conduits etc. have to be classified by collecting, recording and registering their complete historical records and information available as far as possible. In doing so, the aspects of antiquity, art, rarity, historicity, cultural and religious importance etc. of those monuments have to be considered. It was found highly crucial to Classification ancient monuments on the basis of ownership and importance for the purpose of managing their security and conservation activities. The monuments would need to be categorized as ‘Classification I’, ‘Classification II’ and ‘Classification III’ according to their antiquity, significance, nature, art and architecture etc. Specific criteria were developed for each Classification.*

#### **Format for Recording Monuments:**

*For the purpose of classifying ancient monuments on the basis of importance and ownership, the following format for preparing the description and records of monuments is proposed:*

- 1. Address, cadastral no. and on-map location of the monument site;*
- 2. Monument’s Ownership: if public – under what agency / body, if private – name of landlord / owner, if monument – the current use / function;*
- 3. Monument’s photograph;*
- 4. Name of the person who constructed and established the monument, the date of establishment and historical description; whether the renovation has been done or not, the description of renovation if any, associated guthi system and management;*
- 5. The significance of monument and its important elements: **elements and attributes that contribute to the value of the historic building / structure for which the monument has been listed;***
- 6. Building materials and current physical condition of monument*

*The Ancient Monument Survey and Classification Committee developed the criteria for the Classification of monuments in a series of meetings held between 17<sup>th</sup> February and 26<sup>th</sup> June 2000.*

#### **Criteria for Classification 1**

*All monuments and historic buildings that were built before 1825 BS (1768 AD) and that have remained intact till date. Monuments which are unparalleled from their artistic, architectural and historic standpoint. These include all Malla period palaces, temples, monasteries, stupas, maths and architecturally important private and public patis, sattal and houses - buildings that are representative of excellence of the art and skills of the country; all superior-class Malla-period artworks, sculptures, statues*

*of kings and courtiers, and all pieces of art in any medium; likewise, Licchavi-period statues/sculptures, chaityas, stone water conduits, inscriptions and relics from pre-Licchavi period.*

*It has been proposed that the buildings constructed before 1903 BS (1846 AD) shall also be included in this Classification. These include buildings that are of superior class from art and architectural standpoint such as Shah-period palaces and buildings that have been built in exquisite artistic style and that have remained intact till date. Likewise, all the structures that are representative of art and architecture of the period before 1903 BS such as all royal, religious, public or private monuments, buildings, temples, exceptionally artistic statues, stone water conduits etc. Some examples of buildings in this Classification: Shah period palaces, temple complexes with exquisite artworks, buildings that display superb woodwork and use of highly refined traditional brick (dachi apa); temples that are built in traditional or “cupola” style (being less in number, these need to be included in this category); gold-plated statues (religious or secular), statues and images of rulers and courtiers etc. from the Shah period.*

*Likewise, archaeological sites located at different districts of Nepal and Medieval or pre-Medieval period buildings such as palaces of rulers from different time periods, houses, temples, stone water conduits, forts – that are important due to their period, art, architecture and religious significance and that have remained intact till date have been proposed to be included in this category. All Medieval and pre-Medieval period gumbas of outstanding significance (whose form and size have not been changed) and ancient caves are also proposed in this category.*

### **Criteria for Classification II**

*Private and public temples, palaces and buildings of Rana period – constructed after 1903 BS (1846 AD), associated with important historical figure(s) or event(s), notable examples of art and architectural excellence, retaining their beauty and original form; representative of art and architecture of their time period have been proposed to be included in Classification II.*

*Monuments like temples, houses and buildings etc. that were built before 1825 BS (1767AD) but are not included in Classification I – monuments that are important from historic, artistic and architectural standpoint, that have retained their original form, character and features but have undergone minor modification during renovation are also proposed in this category.*

*Monuments like temples, houses and buildings etc. that were built after the Unification of Nepal (1825 BS) but before 1903 BS – monuments that are important from artistic and architectural standpoint, associated with important event(s), representative of original art and architecture of that time period but have undergone minor modification during renovation and conservation works are also proposed in this category.*

### **Criteria for Classification III**

*Monuments and artworks of local importance such as temples, buildings and houses etc. that cannot be included in Classification I and Classification II Monuments; that are representative of the importance of their locality and periphery are proposed in Classification III.*

*Monuments that were built before 1825 BS and, although having undergone a considerable change in their original style during renovation and conservation works, have retained few representative art elements of that time period are also proposed in this category. Likewise, the artworks that, after being destroyed in 1990 BS earthquake, were renovated in unscientific and simplistic way yet retaining a few old artistic elements are also proposed to be included in this category.*

*Structures, temples, buildings and houses etc. that were built before 1903 BS – monuments that are not so much attractive from art and architectural standpoint; that have undergone considerable modification and change have been proposed in this category.*

*Rana-period structures and artworks that were built after 1903 BS and not included in Classification II are also proposed to be included in this category.*

### **Guiding Conservation Principles for Classified Monuments**

*The basic principle of the conservation guidelines is:*

- to preserve all those elements and attributes that contribute to the value of the historic building / structure for which the monument has been listed and classified in the inventory and*
- to ascertain that all other elements and attributes are compatible and appropriate to the building / structure and its context*

*The conservation of classified monuments must be carried out as per the value, condition and character of the specific monument. It is therefore not possible to formulate bylaws for conservation of historic*

*buildings. Conservation must be carried out based on the classified inventory, which is the only legal document that defines each monument individually.*

*The classified inventory must contain specific information on the monuments, to allow it to be used as the basis for conservation. This means that the “elements and attributes that contribute to the value of the historic building or structure for which the monument has been listed and classified in the inventory” must be clearly stated.*

*This principle must be applied to all 3 categories of listed monuments based on their respective criteria for Classification.*

*The “elements and attributes that contribute to the value of the historic building / structure for which the monument has been listed and classified in the inventory” may include the overall structure, various individual elements (such as carved windows) or a specific attribute which bears witness to an important historic event or process. These elements and attributes must be conserved as stringently as possible.*

*“All other elements and attributes” must be “compatible and appropriate to the building / structure and its context”. Once the primary elements and attributes have been preserved, the remaining elements and attributes can only be modified if these are compatible and appropriate in respect to mass (height, coverage and form) and exterior (material, colour, texture, order, scale and proportions) to the overall monument and surrounding historic buildings.*

**The following Building Bylaws shall be adhered to within the Pashupati Monument Zone.**

**1. Maximum Ground Coverage**

*One hundred percent ground coverage could be permitted for repairing or rebuilding by dismantling the old structure, 90 percent for land area up to 0-2-2-0 for empty plots, 80 percent for land area that equals to or is more than 0-2-2-0 (or 770 square feet whichever is greater). While streamlining the house rows or after leaving required setback, if the remaining depth of the plot is equal to or less than 6.0 metres, 100 percent coverage shall be allowed for remaining land.*

**2. FAR**

*2.1. Permission may be granted for 3.75 times of available land for construction on empty plots and 4 times for building on area by dismantling the existing structure.*

*2.2. Permission may be granted for 4 times of available land for construction on empty plots, 4.5 times for building on area by dismantling the old structure. Irrespective of what is stated above, the maximum height of the building shall not exceed 35 feet.*

**3. Maximum Floor to Floor Height**

*The height of the floor could be up to 8’.*

**4. Maximum Height of the Building**

*4.1. The building could be as high as 35’- 0”. However, if there is any monument near the proposed building that is important from the historic or architectural standpoint and construction of a building of 35’-0” height would have an adverse affect, a building that is of a lesser height than the monument and does not adversely affect it may be permitted to be constructed. However, even if the height of the monument is less than 28’-0” tall, permission may be granted for construction without adversely affecting the environment around the monument, height of the elevation towards the road and in line with the old traditional houses. Nevertheless, the height of the building should not exceed 35’-0” while doing so.*

*4.2 Irrespective of what is written on 4.1, in case old houses constructed in traditional style are taller than 35’-0”, permission may be granted to reconstruct the buildings by maintaining the existing height.*

*4.3 Measurement shall be taken from the surface in front of the door of ground floor while concluding the height of the building. For the buildings constructed on sloped land, measurement shall be taken from the surface in front of the door of the lowest floor facing the main road. The number of storeys shall also be calculated in the elevation towards the main road.*

**5. Maximum Number of Storeys**

*The buildings could have maximum of 4 (four) storeys. The ground floor and stair cover of the building shall also be included in the calculation.*

**6. Structure**

*Permission may be granted to construct houses with load bearing structure, R.C.C and steel frame structure by adopting minimum earthquake safety technology. However, R.C.C and steel frame*

*structures have to be covered on all sides by bricks or wood so that it is not visible on any elevation. Chinese bricks or brick-coloured tiles shall not be allowed to be used for this. Permission may be granted to use steel and concrete, with assurance that it will not be visible, for retrofitting of old load bearing houses. Incomplete construction after installing the R.C.C and steel frame structure shall not be permitted.*

### **7 Finishing / Elevation**

*7.1. There should be a clearly visible brick wall surrounding all sides of the building in traditional manner. The natural colour and texture of the construction material should be shown on the outer wall, as far as possible. Shiny (for example: Varnish) or other type of paint shall not be allowed.*

*7.2. Plastering the outer wall using cement, lime etc shall not be allowed. However, the corners of the doors and windows, cornice and wall could be plastered using lime, brick dust, etc. Plaster of lime, brick dust may be used for repair and renovation of Rana-style houses.*

*7.3. Pointing may be done on the outer wall using appropriate materials. However, the elevation of the house should not be affected and should be streamlined with the nearby buildings while doing this.*

*7.4. Bricks such as Dachi Appa, Sinkwa, and Paleswan should be used only after understanding its actual meaning and usage.*

### **8. Cantilever / Projection / Top**

*8.1. No cantilever shall be allowed. Cantilever or roof projection of up to 3'-6" could be allowed from the top of third floor within one's own land for the purpose of sun shading, rain-cover or to show sloped chhaja projection.*

*8.2. Projecting only horizontal cantilever slab shall not be permissible. For roof and slanting roof, R.C.C top or cantilever shall have to be sloped between 25 to 30 degrees and fixed with wooden plank from underneath. Struts shall have to be installed for support compulsorily.*

*8.3. If any corner of the building has impinged the road, courtyard or public space, construction of the new building shall only be permitted after the corner occupying the land, road or public space has been surrendered for public use. The wall of any elevation of the building or the part without RCC casting/wooden sloped roof outside the wall should be considered as "Cantilever" or "Projection" or "Top".*

### **9. Window / Door**

*9.1. The shape and size of windows/doors should comply with local/traditional Nepali style. The overall area of the openings on the elevation of the building could be up to 50 percent of the overall area of the elevation. All windows on load bearing structure should be 3'-0" from the corner of elevation. The height and width of windows/doors should comply with styles of Malla period, Shah period or Rana period. The windows should be odd-bayed. Traditional form of windows could be fixed on the attic and only single bayed window shall be allowed on the ground floor. For windows other than single-bayed, minimum width per bay shall be 2'-6". The proportion of elongated windows shall be between 1:1.5 to 1:2. Square windows shall not be larger than 3' X 3'. The reuse of existing doors/windows or use of new doors/windows in the old style shall be encouraged as found necessary.*

*9.2. The door shutters should be made of wood and no iron rolling shutters, bars or collapsible chain gate shall be allowed. Those willing to fix rolling shutters in the shop fronts should do so without showing any part of the rolling shutter outside the wall or by covering the rolling shutters with wooden panels.*

*9.3. Permission may be granted to put up windows that resemble traditional style, or shape and size or are streamlined, on the elevation that is not visible from the main road or public space. Those wanting to fix bars on the window should build shutters so that it is not visible from outside.*

*9.4. Irrespective of what is mentioned in 9.3, the main elevation of the house and the elevation visible from the main road and public space shall have to abide by 9.1 and 9.2.*

### **10. Roof**

*10.1 Roofing should be done with jhigati or terracotta tile, with two-sided sloping. However, one-sided slope roof may be allowed on the side facing the road if the house under construction is surrounded by other buildings on all three sides. Slope may be cast and jhigati or terracotta tiles fixed on it. The inner side of the slope that is visible from outside should be covered with wood and constructed in traditional manner.*



10.2. Buildings, that have a narrow frontage towards the main street but greater depth inwards, may construct sloping roofs in 25-30 degree slope at either side up to the overall building height of 35 feet, leaving the middle part open. However no construction whatsoever shall be allowed in this open portion, whatever the purpose may be.

10.3. Except towards courtyard or road, a maximum of 3 feet wide chhaja projection from the bottom of the uppermost storey that is allowed by rule and within one's own property, may be constructed. As far as possible, the chhaja projection shall have to be streamlined with the eaves or chhaja projection of houses on either side. The slope of chhaja projection, main roof and stair cover should be kept between 25 to 30 degrees. Plain or decorative struts to support the roof shall have to be fitted in compulsorily.

10.4 The shape of roof should not create disturbance to neighbours. No water tank, disk antenna, air conditioning set, cooler set, solar equipment set, etc should be installed on the roof or external parts visible from road or courtyards. The Department of Archaeology may issue direction to install such modern facilities by concealing from view from road / courtyard and not affecting the architecture of the building adversely. If owner wishes not to build up to the maximum storey, as per the condition, Department of Archaeology may grant special permission to build slope roof only on the stair cover and leaving the rest of the roof as open terrace.

### **11. Balcony**

11.1. Wooden balcony with maximum projection of 3'-0'' on third floor and over one's own land may be allowed. But this provision shall not be permissible where the road width is less than 3.0 metres. For the buildings adjacent to main road or public squares, balcony recessing inside the house on the elevation facing that side shall not be allowed.

11.2. Balcony of 1.0 metre projection from the first floor may be allowed towards the private land at the back, provided a setback of 2.0 metre is maintained at the back. If balcony of larger width is required, the setback should be increased accordingly.

### **12. Cornice**

Cornice could be projected up to 9" beyond the surface of the wall to separate each floor level. As far as possible, the cornice band shall have to be streamlined with that of the houses on either side. Depending upon the style of the building, Cornice may be of plain or decorative bricks or plastered with lime, brick dust to streamline with neighbouring

### **13. Apron**

Apron with height of 1 feet – 1.5 feet and width of maximum 2 feet or less than 6" of chhaja projection could be constructed on one's own land and in line with that of neighbouring house. In slope land, the height of apron shall be measured at the centre point. If the height and width of the existing apron is greater than above, it should be constructed as not to exceed its former height.

### **14. Staircase**

The stairs for every storey of the new building could be sloped maximum of 60 degrees and the minimum width of the stairs should be 0.8 metre.

### **15. Terrace**

If the owner wishes to build up to the maximum height fixed for the area, terrace area of one-third of roof area shall be permissible on the top floor. In special circumstances Department of Archaeology, in consultation with the concerned expert committee, could either accept or refuse changes in area and size of such terrace.

### **16. Basement / Semi-basement**

Construction of building with basement / semi-basement (underground) shall not be permitted.

### **17. Courtyards and Public Spaces**

Existing courtyard indicated in the cadastral map should be retained as it is. The users shall be responsible for conservation and maintenance of the existing courtyard and any other construction work in the courtyard shall not be allowed. Additionally, permission shall not be granted to construct projections over the courtyard such as cantilever, projected rooms, balcony etc. The sidewalks (apron) of the courtyard shall be regarded as a part of the courtyard.

### **18. Addition of Storeys / Repair**



*Permission may be granted for addition of floors and repairs of modern type of houses that are already built, in accord to the standard of “Bylaws and Guidelines for Rectification of Inappropriate Buildings”.*

### **19. Conservation and Renovation of Unclassified Traditional Styled Buildings with Architectural Significance**

*Unclassified buildings with traditional styled architectural significance shall be encouraged to be conserved. Permission may be granted for renovation of such buildings in existing style and form.*

#### **The Building Bylaws for the Pashupati Buffer Zone:**

- 1. Permission may be granted to construct single-sloped roofs, with cast jhigati tiles painted in brick tile colour.*
- 2. Non-traditional shaped windows may be placed on elevations that don't face the main road and public courtyards, however ensuring that they do not dominate the traditional appearance.*
- 3. Permission may be granted to construct a terrace covering half of the roof surface.*
- 4. For articles other than those stated above, the “Bylaws for Unclassified Buildings” of the Pashupati Monument Zone shall be applicable.*

### **Guidelines for Rectification of Inappropriate Buildings:**

#### **Introduction**

*The “Guidelines for Rectification of Inappropriate Buildings” provide the legal framework for rectifying existing buildings that have a negative impact on the elements and attributes that contribute to the outstanding universal value of the Monument Zone.*

#### **Inappropriate Buildings:**

*Inappropriate Buildings can generally be understood as those buildings that do not correspond to any of the traditional styles of architecture normally understood to be found within the Kathmandu Valley and do not*

*correspond in scale, height, façade (material, colour, texture) with the surrounding historic buildings.*

#### **Application:**

*These guidelines are only applicable for Inappropriate Buildings that were constructed before April 14th 2007, and should not be used to legitimize illegal construction in the future. The guidelines are to be implemented with authorization of the Department of Archaeology.*

### **Guidelines for the Rectification of Inappropriate Buildings**

#### **The basic principle of the rectification guidelines is:**

- to remedy those elements and attributes of inappropriate buildings that contribute negative impact on the value of the surrounding historic context;*
- specifically focusing on compatibility of mass (height, coverage and form) and exterior (material, colour, texture, order, scale and proportions)*

*Inappropriate buildings must be rectified to fulfil the following conditions, however keeping in mind the basic principles mentioned above:*

#### **Mass**

- Must not be higher than the neighbouring historic buildings or must comply with the relevant article in the Building Bylaws;*
- Must not cover areas that are not within the plot, with the possible exception of sloping (non cement concrete) roof projections;*
- The overall form of the building must be compatible to neighbouring historic buildings or must comply with the relevant article in the Building Bylaws for roof, balconies, projections, etc.*

#### **Exterior**

- The materials, colour and texture of all elements of exposed facades or facades that could be exposed in the future must be compatible to neighbouring historic buildings or must comply with the relevant article in the Building Bylaws;*
- The order of elements of the main facades and of the elements themselves must comply to traditional rules;*
- The scale and proportions of the main facades must be rectified to whatever degree possible to reduce their negative impact on any adjacent historic buildings*

### ***Prioritization and Validity***

*The conservation of historic buildings will be given priority before the rectification of inappropriate buildings. The implementation of the Guidelines for the Rectification of Inappropriate Buildings will only be valid for buildings and structures built before April 14th 2007. The implementation process will take into account the legal status of the inappropriate building.*

#### ***Categorization of Inappropriate Buildings: Legal Inappropriate Buildings Construction before 1998:***

*Those buildings that were constructed before 1998 within the extension area gazetted in 1998 as Protective Monument Zone and at the time of construction fulfilled the legal provisions of the time*

#### ***Legal Inappropriate Buildings Construction after 1998:***

*Those buildings that were constructed after 1998 within the respective gazetted areas fulfilled the legal provisions of the time, however still being inappropriate*

#### ***Illegal Inappropriate Buildings Constructed without Notification:***

*Those buildings that were constructed illegally without notifying any authority*

#### ***Illegal Inappropriate Buildings Constructed after Notification:***

*Those buildings that were constructed illegally after beginning the process to obtain building permits and submission of appropriate designs*

#### ***Appropriate Buildings with Illegal Inappropriate Modifications:***

*Traditional and legal appropriate buildings which have become inappropriate due to illegal modifications*

### **Development Guidelines:**

#### ***Introduction***

*The “Development Guidelines” addresses the need for an appropriate approach to conserve the identity of the public and semi-public realm within the Monument Zones. The public and semi-public realm encompasses the physical spaces, (urban spaces such as squares, roads, streets, courtyards and natural environment such as the forest, etc.), the intangible heritage linked to these physical spaces and the public services and infrastructure that support the monument zone. These guidelines are to be read in conjunction with the “Guiding Conservation Principles for Classified Monuments”, the “Building Bylaws” and the “Guidelines for Rectification of Inappropriate Buildings”.*

*A close cooperation of numerous authorities is needed for the implementation of the Development Guidelines. Often these authorities are not concerned with the conservation of the historic context of the Monument Zones. The Site Managers need to take the lead role to coordinate such activities. The involvement of the Coordinative Working Committee is essential in ascertaining the awareness and compliance of related government authorities, line agencies and private parties. The coordination and cooperation between the various offices of the municipality must also be guaranteed.*

***The Development Guidelines are comprised of the following articles:***

#### ***GENERAL***

##### ***1. Identity***

*The traditional identity of the public and semi-public spaces (squares, streets, courtyards, etc.) must be preserved; the form, shape, boundaries and character of the public and semi-public spaces must not be altered; the traditional systems of streets and courtyard accesses must be preserved;*

##### ***2. Encroachment***

*Encroachment of public and semi-public spaces is not allowed - at ground level, below ground level and above ground level – which includes the construction of aprons, plinths steps etc.; spaces that have traditionally been used for public and semi-public functions may not be encroached upon;*

##### ***3. Empty Plots***

*Empty plots must be maintained and should not affect the integrity of the place;*

##### ***4. Construction Sites***

*Construction sites within the Monument Zone must be properly secured to ascertain that no monument or historic building is damaged; provisions need to be made for the disposal of construction rubble and waste outside the heritage area;*

##### ***5. Risk Management***

*Risk preparedness, especially in respect to earthquakes and fires, has to be integrated into the overall planning of the WH areas; Risk management and disaster preparedness should be done keeping in mind the authenticity and integrity of the historic area;*

## **INFRASTRUCTURE / SERVICES**

### **6. Traffic Planning**

*Pedestrian access to the public and semi-public spaces in the core should be planned beyond the monument zone as part of the general traffic management scheme for the historic city; Vehicular access should be restricted in the core area; heavy vehicles should be banned from entering the core area at all times; emergency access for ambulance and fire brigade must be provided for; parking areas outside the core area must be developed;*

### **7. Paving**

*The public and semi-public spaces must have either their traditional paving or where the traditional paving has been lost, either brick or stone paving (whichever is more appropriate for the specific location); when laying new paving, the paving level should only be raised from its previous (original) level if it does not affect monuments and traditional buildings; the repair and reconstruction of pavements (also after installing underground services) must be done as far as possible by reusing original materials in order to maintain the authentic character; If new materials are used, they have to be similar to the original; the regular cleaning of the paving must be done in a manner that is appropriate to the paving material;*

### **8. Aprons**

*The apron shall be constructed on one's own land and in line with and adjusted to the level of neighbouring houses. Aprons should be planned together with the rain water drainage system. Note should be taken on the plinth height as defined in the building bylaws.*

### **9. Surface Rain Water Drains**

*Surface rain water drains should be provided for public, semi-public areas and around historic buildings; The drainage system should be designed considering maximum rainfall; The surface drains must be built to correspond with the surrounding paving; rain water pipes from terraces and roofs must be concealed and must have an outlet within the plot;*

### **10. Sewer Pipes**

*Sewer pipes must be concealed below the ground; sewer pipes must be of sufficient size; provisions should be made to treat waste water before disposal into rivers; Septic tanks should only be considered if sewer lines are not possible; no soak pits should be allowed within the Monument Zone area;*

### **11. Water Supply**

*Traditional water sources such as well and stone water conduits must be preserved; water supply lines must be installed in a planned manner; leaking pipes must be fixed immediately to ascertain that no damage is caused to nearby monuments; connections to historic buildings should only be allowed once it has been ascertained not to cause any damage.*

### **12. Electrical Supply**

*Electrical supply cables should be laid underground (electrical poles should not be installed); transformers should be placed in such a manner that they do not affect the visual integrity of the historic place; connections to historic buildings should only be allowed if they are unobtrusive;*

### **13. Street Lighting**

*Functional lighting for public and semi-public spaces should be planned and installed in a manner that does not disturb the character of the place; cables must be concealed; lighting for special occasions and festivals may be developed in a manner that enhances the traditional quality of the place;*

### **14. Telecommunication and TV**

*Telephone and TV cables are to be concealed; no telecommunication or TV equipment and installations should be placed in a location that affects the visual integrity of the core area (even if these are outside the core area); connections to historic buildings should only be allowed if they are unobtrusive*

### **15. Mechanical Installations**

*The installation of utility and mechanical systems such as water or gas meters, antennas, air condition units should be inconspicuously placed, avoiding installation on the street façade whenever possible.*

### **16. Solid Waste Management**

*Provisions need to be made for disposal of solid waste with allocated collection points (preferably with separation of bio-degradable, glass, metal, plastics, etc.); rubbish bins should be provided and strategically located for public and semi-public spaces; provisions for regular solid waste collection should be made;*

## **FUNCTION**

### **17. Traditional Use and Intangible Heritage**

*Traditional functions and usage of public and semi-public spaces should be supported; traditional rituals, processions and festivals that have been performed over the centuries in the public and semi-public spaces must in no way be hindered;*

### **18. Commercial Use**

*Use of public and semi-public spaces for private commercial use is not allowed unless specifically managed within allotted areas by the Site Manager and without disturbing the identity of the place; this also includes the public space in front of commercial buildings such as shops;*

### **19. Commercial Signage**

*Commercial signage and hoarding boards are not allowed, pamphlets, posters, banners etc are not allowed; however commercial enterprises may have signboards that follow strict norms of size and aesthetic quality;*

## **ENVIRONMENT and GREENS**

### **20. Urban Greens**

*Urban greens are to be clearly demarcated and preserved as such; urban greens are to be restored to its original state or then maintained as a public area with minimum intervention; additional structures, hard landscaping and beautification should not be carried out;*

### **21. Water Bodies (ponds / rivers)**

*Traditional ponds must be retained, repaired and restored; No lake, pond, tank, water reservoir, canal, rivers, rivulets, streams, natural drain, spring or water source or any other water course shall be permitted to be filled up; No piece of land which is located within 5 meters in any direction of the outside edge of the maximum recorded inundation level of such water courses shall be used as a site for building construction;*

### **22. Natural Environment**

*Pashupati Monument Zone contains areas of natural environment in the form of the Mrigasthali hillock (which is the religious jungle linked with the main Pashupatinath temple), Bhandarkhal Garden and the area along the Bagmati River; The natural environment of the Monument Zone must be clearly demarcated and conserved, keeping in mind its cultural and natural significance:*

- the authenticity of the natural environment must be preserved, which includes the flora and fauna;*
- stabilization of the soil must be carried out but in a manner that will not impact the character of the environment;*
- the river must be maintained in its original state, which includes sanitation and stabilization of the river banks;*
- No construction should be undertaken within the areas demarcated as natural environment. However where necessary traditionally used paths can be paved using natural materials;*

**APPENDIX 3 – Final Data from Surveys****SUMMARY OF QUESTIONNAIRE ABOUT ELECTRIC CREMATORIUM AT PASHUPATI AREA FOR HERITAGE IMPACT ASSESMENT**

The survey was carried out with 48 people and their responds were analyzed as follows.

**1. Do you know Electric Crematorium is being built in Pashupati Area?**

<b>RESPOND</b>	<b>NO. OF PEOPLE</b>
Yes	42
No	4

**2. What is your view regarding it?**

<b>RESPOND</b>	<b>NO. OF PEOPLE</b>
Good	24
Not good	1
Neutral	5
Environmentally good	10
Environmentally bad	1
Culturally bad	3
Quicker process	2
Economic	1
Less harmful	1
Less caste discrimination	1
Will not be accepted by society	3
Loss to material providers	1

**3. Do you think it is necessary in context of Kathmandu?**

<b>RESPOND</b>	<b>NO. OF PEOPLE</b>
yes	20
Yes due to high population	14
Yes, especially during hazards	1
Yes managing wood is difficult	5
Yes to save environment	3
Yes it saves time and long queue	1
Safe and inexpensive	2
Contextual in present generation	1
Not now	2
Degrades culture	1

**4. Is the location for the Crematorium good?**

<b>RESPOND</b>	<b>NO. OF PEOPLE</b>
Good	27
Not good	2
Neutral	4
It's the most pious place	3
Should be at the forest across river	1
Should be away from settlement	6
Should be away from cultural site	2
It is easy for public	2
Damages spiritual feeling	1



**5. How should be the design of Crematorium?**

RESPOND	NO. OF PEOPLE
No comments	2
Be the landmark	1
Display Nepalese architecture	10
Modern	2
Closed building	1
Open building	1
Respond site and surrounding	2
Functional and convenient to all culture	15
Designed as per religious text	1
Address environmental issues	5
Experts should be consulted	1
Malami space should be provided	1

**6. What do you think about the present design of the Crematorium?**

RESPOND	NO. OF PEOPLE
Ok	2
Good	1
Not good	10
Should not be near to community building	2
Blocks view of Pashupati	1
Looks like industry	1
Typical building	2
Should not be enclosed	15

**7. Does 100 feet high chimney disturbs the environment around monument zone?**

RESPOND	NO. OF PEOPLE
Yes	5
No	13
Negligible	3
Height is not sufficient	3
Pollutes overall area	4
Visual disturbance	7
Must dissolve into context	1
Plantation must be done	1
Controls pollution	2
Smoke should be well filtered	3

**8. Suggestions:**

- I. It should be constructed and operated fast.
- II. Chimney should be made by its standards.
- III. Awareness program must be launched
- IV. Proper management of power supply resting places and parking must be provided.
- V. There should be proper planning and security
- VI. Staffs must be trained for operation of crematorium
- VII. Study of crematorium at other places must be done.

## APPENDIX 4 – Outcome from First Interaction Program

### Notes on

### Interaction Program on Heritage Impact Assessment on Electric Crematorium at Pashupati

*(Most of this has been translated from Nepali)*

**Date: 17 Dec 2012**

**Venue: Hotel Dwarika's**

#### **Opening Remark by Kosh P. Acharya, Executive Director, PADT**

- Our concern – Culture enriching the development & development for the sake of culture
- HIA as a part of requirement for any (?) changes in Heritage Sites
- HIA is something which is not mandatory by Nepali law but indispensable for International Convention Regulation.
- The current requirement for Electric Crematorium involved two things – 1. Seeking approval from competent authority and 2. Having to prepare HIA.

#### **Presentation by Kai Weise, Consultant**

#### **Bhesh Narayan Dahal, DG, DoA**

- The culture of cremating at Pashupati is deep-rooted. But it also has underlying environmental issues.
- Electric Crematorium is something which is indicated by Master plan for Pashupati Area.
- We need to inter-balance the issues of culture, intangible heritage, environment and other factors.
- PADT is an autonomous institution but it should also abide by national regulations also. In this regard it should consult DoA for any issues on WH.
- Regarding Electric Crematorium, design should be approved, rules & regulations/bylaws should be met, and technical committee should be consulted. People are already complaining about the apparent partiality in enforcing bylaws – strict for others, lenient for PADT (?).
- The exercise will function as guideline for further interventions.

#### **Axel Plathe, UNESCO Representative for Nepal**

- The exercise of preparing HIA is already belated – it should have been started at planning stage.
- The exercise should be directed so as to come up with solutions acceptable both for national and international bodies.
- Close scrutiny of WH Centre on issues of heritage sites shows how difficult it is to deal with issues of community living inside them.
- The main trust of this work is to avoid the site from being listed on WH list in danger.
- We are here to help you to find the solution acceptable both for national and international agencies.

#### **Yagya P. Gautam, Secretary, MoCTCA**

- Regarding one of the concerns raised in the presentation about the airport extension – since the extension area does not overlap with the WH Area, it does not seem that it would have any great effect.
- Regarding the Tilganga road – this is a road which has been opened up from local initiation and not by government. But we should be conscious about being listed on WH list in danger due to the impacts caused by this road.
- Regarding the Electric Crematorium, we should see to it whether it will overshadow the WH Area. We need to analyze the impacts of the diameter of chimney.
- Regarding the height limit of 35 feet in WH Areas – we have to consider the flexibility of 3 feet.
- Regarding the approval of DoA – this is something which should be considered by PADT itself whether applicable bylaws are met or not.

- To conserve and preserve is the duty of everyone – so let's consider areas where we can compromise and let's discuss on areas which cannot be spared.
- Let's consider issues which need to be clarified as for UNESCO, and UNESCO also needs to give due consideration on lenient areas/issues.
- Luckily, the wind direction in Kathmandu is south westerly due to which the wind blows in north easterly directions which aids in reducing the impacts of smoke. Reducing the height of chimney might affect the temple of Pashupatinath.
- Let's not talk about being listed on WH list in danger solely on the ground of construction of this building. Instead let's suggest on what needs to be done or improved and let's decide on limits of intervention. Let's refine the imperfections in design if any.
- Government has already decided on its construction, and funds allocated every year.
- Let's conduct a comparative study on the level of pollution caused by current practice of cremating on firewood and that by electric crematorium. Let's move towards minimizing the practice of cremation having greater pollution level.
- Let's not protest for the sake of protest and let's not suggest for the sake of suggestions. Let's decide on areas which cannot be considered and let's discuss on limits of intervention.

### **Discussion Session**

#### **Modraj Dotel, Former Secretary Ministry of Culture**

- On one hand we have the obligation of abiding by WH regulations due to it being listed on WH list. On the other hand, Pashupati is the centre of faith of all Hindus all over the world – a last resort where one wishes to be cremated in this holy site. The report which fails to address the sentiments of the people will itself be incomplete.
- We need to make an assessment of time, labour, expense & pollution level regarding the current practice of cremation. And thereby make a comparative study of the proposed exercise.
- Since this site is not a tourist site – this is a site which is associated with the sentiments of the people, we need to think about mitigating the impacts of the height of chimney.
- If we make a study on preference of the people regarding cremation practice – pertaining to the crisis of firewood time and again and because the supply of firewood from all over the nation is always insufficient, it seems that people will ultimately choose the electric cremation method.
- The assessment of the situations created by past traditions should be done and in no way our sentiments should be disregarded.

#### **Sagar K. Vaidya, Local resident**

- In the currently proposed electric cremation method, carbon emission cannot be avoided. There should be the subsequent flow of carbon air and fresh air.
- I can provide technical suggestion in this regard if need be.

#### **Gopal Jha, Engineer, DoA**

- Instance of electric crematorium in Banaras – the ever burning cremation altar in Manikanika Ghat
- As people don't have time, gradually we will face the decline in *malami* people in future. The need for electric crematorium will definitely be felt in the future. But I doubt that we can change the current practice of cremation within coming 10-20 or 25 years.
- This will reduce the pollution level and the crisis of firewood can also be tackled.
- But we need to respect our faith and tradition.

#### **Bhim Nepal, Former Archaeological Officer, DoA**

- This is a general principle that the discussion on design and its impacts should have been done before its construction. Should I take this interaction only as a formality?
- As an instance, PADT has previously demolished existing structures but it constructed new structures replacing them. I feel it is already too late to discuss on the impacts these new constructions have caused.

- It seems that there is a lack of coordination among related bodies – has the design been sent to DoA? Has the approval been sought?
- Since it is a WH property, we need to look at this issue from the perspective of the impacts on its values. So any construction needs to meet the building bylaws set out for the site.
- On one hand we need to consider our requirement to construct electric crematorium and on the other hand we also need to respect our sentiments. Considering these issues we have to convince WH Centre in this regard.

**Indraman Singh Suwal, KMC**

- We have tried to install an electric crematorium in Teku some 28 years ago. But due to various reasons it could not succeed.
- Due to urbanization and ever increasing population there is the requirement of cremating over 50 corpses daily. In such situation the 2 feeder design may not be sufficient.
- Regarding the design of chimney, when we installed 30 meter chimney for garbage incinerator, it created problem of backflow. So in this case also, chimney height less than 30 m might not work.
- Regarding the height restriction, maybe we can reduce the parapet wall to bring it within the height limit. We may not change the structure too much but we can maintain the building height. There is no other way except to give the chimney a suitable form compatible with the surrounding.

**Kosh P. Acharya, Executive Director, PADT**

- Attempts have been made to bring the new construction under DoA bylaws – e.g. by introducing false ceiling the building has been brought under prescribed limit.
- Things that can be adjusted have been considered – the only thing that is bit tricky is the chimney.
- The work has been done as per the requirement of the original master plan and not in haphazard way.

**Ram P. Shrestha, Engineer, Kathmandu Development Corporation**

- This discussion should have been done before the design has been conceived – UNESCO is bit lagging in this case.
- People are already appreciating the construction of this electric crematorium.
- We need to build it in such a way that our heritage is preserved.
- We need to look into the problems like how much the heritage is affected by the impacts of dust and smoke, whether the culture itself is affecting the heritage, the extent of deforestation all over the nation etc.
- If the height of the chimney is the only problem we need to find alternate ways. I don't think it will be too difficult.
- We also need to consider all processes that are carried out pertaining to our culture & tradition.
- We can refine the design – maybe we don't need 5 m diameter chimney; like in flat areas the height of chimney may not have distinct impact in this undulating terrain.
- It has already been recommended that because it lies in buffer zone the construction of this structure can be considered as appropriate.
- We should not take it negatively and should move ahead by considering what improvisations we can make.

**Uttam Pudasaini, Local resident, Jorpati**

- I see this program as futile – discussing after the construction has been started.
- There is apparent lack of coordination among related bodies – DoA, local stakeholders etc.
- The social, economic and environmental issues related to this exercise need to be raised.

**Aruna Nakarmi, Bhaktapur Durbar Square WH Site Manager**

- The design of this structure does not seem to meet the building bylaws. So do we allow this building as an instance to validate the design of other structures?

- The instance of not permitting NTC tower in Bhaktapur Durbar Square Area. Contrary to it is the matter of chimney in Pashupati.

**Bhim Nepal, *Former Archaeological Officer, DoA***

- Taking instance of this exercise the Government might face difficulty in future in enforcing bylaws set out for WH Areas.
- Curious about the implementation status of IMP!

**Hari Kumar Shrestha, *KMC***

- The instance of introducing waste recycling owing to the difficulty in managing solid waste.
- Such structures have socio economic impact which needs to be discussed.
- Study on the extent of deforestation all over the nation and the efficiency of electric crematorium has to be conducted.
- There should be coordination among related authorities.
- A middle way has to be found where everyone has to compromise.
- Federalism might affect the transport of firewood from one region to another.

**Ambika Shrestha, *Nepal Heritage Society***

- Has the impacts been discussed upon? Has the assessment been done?
- Curious about mitigation measures!
- We need to consider that this is not a monument – this is a living heritage.

**Dipak Aryal, *Journalist***

- Electric Crematorium might have less carbon emission property.
- As this is constructed in buffer zone, it might not have great environmental impact.
- The need for an electric crematorium is pressing – we need to accept the changes and accept the tradition incorporating modern methods.

**Suresh Suras Shrestha, *DoA***

- This structure does not seem to meet any of the bylaws set out for WH area.
- While framing bylaws previously it was decided that structures not abiding by the style of residential settlement of middle ages will not be approved. This posed difficulty in the case of commercial or public buildings. This structure presents a need to frame new bylaws for commercial or public buildings?

**Kosh P. Acharya, *Executive Director, PADT***

- The drawings of the electric crematorium have been sent to KMC and the process of seeking approval is ongoing.
- Of course conducting HIA for electric crematorium is already late but we are trying to improve/correct the situation.
- If Mr. Sagar can provide us with his suggestion we will appreciate it.
- We have the past experience of keeping the corpses in waiting due to the shortage of firewood. As the population increases so does the number of corpses to be cremated. So this exercise is directed towards adopting a quick, less polluting method of cremation.
- When we talk about visual impact we need to link it with the adjoining context.
- We are not trying to impose new thing – we are but trying to improve what is already in practice in Pashupati.
- The tradition of cremating in Pashupati cannot be avoided. To address the ever increasing population, electric crematorium is an indispensable measure. Considering the context attempts are being made even if we sometimes have to go out of the way.
- While framing bylaws, attempts have been made to incorporate as many building typology as possible. This exercise has made the exercise of seeking building permit a little time consuming.

**Sushil Nahata, *Member Secretary, PADT***



- We have not tampered with the sentiments of traditions in any way. If a departmental store is opened up in an area of local grocers, has it created a situation to make them disappear?
- I presume the master plan for Pashupati, which has indicated the need for electric crematorium, was not prepared in a whim. It might have taken years of homework by many responsible authorities.
- There might be some shortcoming from our side in seeking building permit for which we express our apology. But isn't this an absurd thing that we need to seek permit for cremation altar?
- A small tree can yield firewood for 2 cremation altars; a big tree can yield firewood for 5 cremation altars. Even if we cremate 10 corpses a day in electric crematorium, we will be saving 3 trees a day – 1000 trees in a year.

**Comments by Kai Weise, *Consultant***

- We have to think about the solution as well. If something needs to be done at present, and if it is done in a reversible way (which can be altered later on), it is still acceptable. The issue of chimney has to be dealt with in similar way.
- The requirements of the electric crematorium are indispensable and the information that we have collected also testifies the fact. The report will clearly show these things.
- We have spent almost 10 years in preparing Integrated Management Plan for Kathmandu Valley WH Site but I have been able to see the Master plan for Pashupati only a couple of months ago. This might show the lack of coordination among related people/bodies. It would be better if we could improve the coordination and carry out the HIA for the whole area. Maybe we can review that HIA during the review of overall Integrated Management Plan. Even in that review we need to find out appropriate ways acceptable to all rather than totally shunning the things.
- DoA probably will have to take the lead role in reviewing Integrated Management Plan. I will offer my help wherever required.
- The site of electric crematorium lies in the core zone of WH area. That's why the need to look at it in detail has been so critical.

**Narottam Vaidya, *Treasurer, PADT***

- The concept of electric crematorium has been launched first time in Nepal and we are doing HIA for the first time ever.
- If PADT wishes that its bylaws are respected by others, it also needs to abide by the bylaws of Nepal Government.
- This exercise has been done with due respect to the sentiments of all.
- There is an environment inside electric crematorium – there is *brahmanal*, there is *tulasi math*. Only after completing all required procedures as per Hindu tradition, the corpse is set to fire in electric crematorium. So this does not distort our tradition in any way.
- Managing both the electric crematorium and the current practice of cremating in firewood is difficult. What do we do if people don't prefer to be cremated in electric crematorium? We need to convince and direct everyone towards electric cremation methods.
-

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## APPENDIX 5 – Outcome from Second Interaction Program

### Notes on

### Interaction Program on Heritage Impact Assessment on Electric Crematorium at Pashupati

*(Most of this has been translated from Nepali)*

**Date: 02 Jan 2013**

**Venue: Sano Sadabrat Sattal, Pashupatinath WHS Premise**

#### **Welcome Speech by Narottam Vaidya, *Treasurer, PADT***

- This crematorium is being built out of the wish of all Nepali people. There is underlying interest of Government of Nepal out of which the entire funding has been done by Government of Nepal.
- Fulfilling the legal obligations inside the country is one thing but at the same time we are in the process of carrying out HIA by considering the spirit of international conventions, by winning the trust of UNESCO and by considering suggestion from all people.
- I hope that with everyone's support a good report can be prepared which will serve as a reliable document for further legal matter.

#### **Presentation by Kai Weise, *Consultant***

- From the evaluation of issues we may achieve quantitative data but practically, we have to see whether it is acceptable/allowed or not. If it is allowed, then we need to focus on what are the impacts and what are the mitigation measures to deal with them. From our assessment, we arrive at the point that electric crematorium is essential. Then the question arises as where we locate it and what are the impacts. Even though there might not be direct impact, but the visual impact is definitely there. The issue of chimney may be unavoidable, but we cannot say that it is appropriate. PADT needs to commit that it will go on exploring the appropriate solution to replace the chimney and if found it will definitely change it in coming time. We may not be able to forecast the exact time at the moment. But in doing so no damage to what exists then should be done.
- Building permit cannot be sought on the ground of chimney. But we need to convince the related bodies on installing chimney for short term basis and on the commitment to change it whenever any appropriate technology is found.
- The chimney should not compete with the existing buildings. We need to dilute its appearance e.g. by planting trees or hedges.
- Along with the build form, the surrounding open areas and their paving should be compatible with the existing cremation ground. There is no traditional garden concept in Nepal. Mere landscaping may not be appropriate concept for open spaces. The planning of surrounding areas needs to be done accordingly.
- Conducting HIA on other issues might clear the dialogue with national authorities/UNESCO, e.g. on newly constructed road.
- It would have been better if the landscaping of the open spaces was done consciously whether it will be appropriate to the area or not or on the basis of what was the spirit of the master plan. Similar is the case with the rehabilitation of restored/renovated buildings.
- The issue of development is one thing but the issue of correcting/amending the things that are suffering from neglect is also critical.
- Master plan proposes new constructions in block B11 & B12. But it would be better if we think about what would be the most appropriate from the very outset or as prescribed by the HIA of overall area. Instead of totally shunning the things it would be better if we put a lot of thought on the appropriateness of what is being done.
- Though the matter of electric crematorium is belated, fortunately we have been able to get hold of the situation. Taking the lesson, if everything in the master plan can be reviewed and approval sought on them, a lot of thing can be carried out accordingly with less fuss.
- It would be better if the impact assessment of the overall master plan can be carried out.



**Lok Bahadur Khatri, *MoCTCA***

- I felt as if this study is incomplete. If survey has been done then what kind people are questioned, what are the norms of UNESCO – these kinds of information should have been presented as well.
- If there is an agreement on the construction of electric crematorium, then what are the things that need to be compromised?
- The temple of Pashupatinath should hold priority over the crematorium.
- The study on the possible instances of chimneyless crematorium in other countries needs to be done. The idea of installing chimney for short term and then removing it might not work.
- The solution should have no impact on the heritage. There should be to-the-point answer to all issues. We need to find the appropriate solution of the chimney at this very time.
- I felt as if a broader discourse is still lacking.

**Jayaram Shrestha, *MoCTCA***

- It would have been better if a similar example in India could have been presented as a reference.
- We have to think about to what extent we can compromise the spirit of religious and cultural beliefs.
- We have to compare between the impact we are facing today and that we will possibly face tomorrow – whether it will be positive or negative.
- We have to decide on the extent up to which things are restricted and the extent up to which we can go.

**Ram Prasad Shrestha, *Engineer, Kathmandu Valley Development Corporation***

- There are no two opinions on its necessity.
- Perhaps an alternative technology for chimney can be sought after. PADT or the Government of Nepal can organize a global tendering for the same and perhaps a chimneyless solution could be found.
- On the issue of environment of the surrounding area (referring to the mythological tales about Lord Shiva's activities in Sleshmantak forest) it would be better if we could emphasize on natural things.
- On the matter of reviewing the master plan – I think it would be better if we could include not only architects and planners but also the experts on Hindu religions and traditions from global arena.
- It would be better if the master plan could be upgraded considering the problems and issues/grievances in Pashupati.
- I don't think development will degrade the heritage. Instead development seems to offer protection to heritage.
- We are considering whatever we have inherited from the past as our heritage. Similarly, whatever we will be doing today might be transferred as heritage to future generation. Development activities should not put heritage in stake.

**Comments by Kai Weise, *Consultant***

- In the report the study on heritage impact is mentioned. It would have been better if the study on environmental impact could have been done in detail separately. The environmental impacts should be dealt with in detail scientific way.
- We have already mentioned that procedures were not correctly followed. It would have been better if HIA could have been done at the very outset. But still we have been able to follow up the procedure. This might serve as a lesson for future ventures.
- Location-wise, the electric crematorium is located away from the main temple but yet within Ring Road. This might be appropriate from the environmental standpoint.
- UNESCO does not have any specific rules. The emphasis is on Outstanding Universal Value. The issue of living heritage and intangible heritage is also associated within this value. As a World Heritage Site, there is an underlying message that the cremation and its practice in Pashupati needs to be addressed.

- Since there is no guideline or design pertaining to traditional crematorium, the forthcoming practice of cremation should be brought into an acceptable and appropriate compromise.
- Commitment for seeking acceptable solution of cremation practice has to emerge. Visually the chimney is clearly unacceptable.

**Kosh P. Acharya, *Executive Director, PADT***

- This interaction is organized not for seeking/providing justification for crematorium. The issue of electric crematorium has already been discussed upon during the preparation of master plan itself. At the moment we are focused on whether the electric crematorium has any impact on heritage; what are the impacts and what are the measures to mitigate them?
- Generally, we have the tendency of not referring to earlier documents. As an instance we prepared and disseminated the seven management handbooks after preparing Integrated Management Plan for Kathmandu Valley World Heritage Site but hardly anyone bothered to go through them.
- UNESCO does not have any separate guideline. It is only concerned with the Outstanding Universal Value of the property due to which it has been inscribed in the WH List and State Party needs to assure that the Outstanding Universal Value of the property will not be disturbed in any way.
- We are trying to bring the structure into prescribed standard. But the chimney is clearly not allowed inside this standard. It is the outcome of finding developed technology to reduce the pollution prevalent at the moment.
- The grandeur of Pashupati lies not only inside the temple of Pashupatinath but also on the cremation practice over here which is an unavoidable aspect associated with it. So we have our options open – whether we tolerate the smoke from funeral pyres or do we tolerate the visual intrusion from the appearance of chimney.
- There are examples of crematoriums in India that are satisfactorily operated and those that are not in operation as well. If the reason lies behind not addressing the traditions and rituals properly, then we have tried to incorporate all possible aspects of conventional funeral ritual.
- HIA for Pashupati has been conducted by following the format of ICOMOS as far as possible.
- It would have been better if HIA was conducted at the very time of preparing master plan. But even if we could make it a part of the process of reviewing the master plan, it would be exemplary. It might help to amend or possibly mitigate the shortcomings in earlier works as well.
- There is no alternative of chimney in the technology available at the moment. But the issue of adopting any appropriate technology that will possibly emerge in the future is undeniable.
- We have the general impression that structures built by using cement and steel are irreversible. But this is not so. This has been proven by the demolition and reconstruction of buildings in Pashupati. The issue of reversibility needs to be dealt along with its context.
- I would like to draw attention to the possible impact of airport extension on Pashupati Area and to the possible ways of mitigating it.
- This is an effort to set a standard.

**Sushil Nahata, *Member Secretary, PADT***

- The newly opened road was initiated by Department of Road but it is PADT who was to suffer – UNESCO's threat to put Pashupatinath in the list of WH in danger. In the presence of Joint Secretary of MoCTCA here I would like to suggest that PADT should not be blamed for the possible impacts of airport extension as well.
- This issue is related to what are the impacts of electric crematorium on the heritage in hand. We are ready to abide by applicable rules (national or international) but I would like to request that related agencies should also try to understand & consider our situations/obligations over here.

**Narottam Vaidya, *Treasurer, PADT***

- This issue may not have come up if this was conducted in due time. But we are trying to catch up the procedure realizing our shortcoming.
- To make the electric crematorium acceptable to the society at large all elements necessary in traditional funerary ritual have been incorporated inside it (e.g. brahmanal, tulsi math). And only

after all traditional rituals are performed the corpse is finally inserted inside the burning chamber. Hindu philosophy for funerary ritual has been entirely endorsed.

- But due to possible lack of proper management there is an element of risk that more people might still prefer the traditional method of cremation rather than the electric cremation method.
- On an average 50 corpses are burnt daily at the moment. The burnt wood, ashes and other materials discarded after the funerary ritual are thrown into the river – this practice is continuously making the situation worse. To mitigate this situation the necessity of electric crematorium has been so critical. I would like to request the concerned agencies to consider this necessity.
- The chimney is the only thing where we are finding it difficult to compromise. We have definitely gone for global tendering. A Calcutta based firm was finally chosen. But there was no option available for chimneyless solution.
- I hope UNESCO and the Kathmandu Metropolitan City will take it positively.

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### **TERMS OF REFERENCE for the preparation of HERITAGE IMPACT ASSESSMENT OF A CREMATORIUM at Pashupati Monument Zone**

#### **1. Background**

Lord Pashupatinath is not only the most renowned and worshipped god of Nepalese and Hindu worldwide, but also considered as guardian deity of Nepal and Pashupati area is its most holy shrine. It is a holiest pilgrimage centre of inspiration of Hindu faith and unique heritage of Nepal. Since time immemorial, this sacred place exhibits an inculcated faith in one's religion, sense of tolerance and harmony among the different sects thus, generating a unique Socio-religious ambiance and symbiosis.

Pashupati Area, which is culturally, religiously, archaeologically as well as naturally endowed heritage spot not only to Nepal and its inhabitants, but also to the world. The preservation and development of the region, is indeed, preservation conservation, enhancement and sustainable development of its history, religions, cultures, art and crafts, and its natural environment. The socio-religious, culture and traditions of this area have their own uniqueness in the country. The vegetation and forests of this area have their own natural uniqueness embodied with religious interpretation. Similarly rivers, canals, wells, lakes, and tap-systems also have their own religious and cultural significance. The area once upon a time consists of nine gates, nine gods, nine goddesses, nine tap-systems, nine lakes, nine courtyards, nine roads, and nine fields together with inhabitant of nine ethnic groups.

At present, Pashupati Area like other part of the Kathmandu City is extreme pressurized by uncontrolled urbanization, which on one hand deteriorate the religious and archaeological monuments and on other hand increase the complication of development and conservation works. Therefore, the challenge for Pashupati Area Development Trust (PADT) at present is to develop the area in sustainable and planned manner. In this process PADT had prepared a conceptual master plan for Pashupati Area.

One of important feature of Master Plan is an electrical crematorium facility within Pashupati Area which is allocated in B12 area of Consonant Area.

This heritage impact assessment is a part of Electric Crematorium project, based on the approved conceptual master plan and detail of Electric Crematorium Building with furnace. Further development and conservation works will be based on the outcome and recommendation of this study. Hence, the investigation, study and recommendation on this study are extremely vital and crucial for the enhancement of Pashupati monument zone.

#### **2. Objective:**

The objective of the proposed assessment work is to analyze the impact of Crematorium project on Pashupati Monument Zone and carry out design, construction and operation accordingly.

#### **3. Scope of the Work**

The scope of this work shall be limited to the Crematorium at B12 area of Consonant Area as mentioned in Map together with the bank of Bagmati up to the Ring Road Bridge. However, the assessment should be incorporated with the other area in vicinity and also in the spirit of the provisions of Pashupati Area Master Plan.



The consultancy shall perform Heritage Impact Assessment including socio-cultural and Visual Impact and archaeological works of all aspects to attain the desired objectives. The consultancy shall be responsible for accuracy, interpretation and analysis of all data received, their report and conclusion and recommendation withdrawn by it.

For the achievement of objectives listed above, field investigation, review of documents, interviews and site visits should be carried by the consultancy.

The Report should include assessments based on the process on World Heritage nomination (1979), the PADT master plan, boundary gazette as per the Ancient Monument Preservation Act (1998), redefinition of boundary and Buffer Zone for World Heritage (2006), the Management Plan as adopted by the Cabinet of the Government of Nepal (2007) and the retrospective Statement of Outstanding Universal Value (2011).

#### **4. Staff inputs**

The assessment team should comprise of at least Heritage Conservation professional (Master in Architecture having conservation experience), senior architect and Architect.

#### **5. Reports and Time Schedule**

Period of Contract: 60 days

Mode of Payment: 50% on signing contract, 50% on submission of final report.

#### **6. Data, Local Services, and Facilities to be provided by the PADT**

Pashupati Area Development Trust (PADT) will provide all relevant information on the development plans of Pashupati (the Master Plan), other planning issues as well as specific information related to the crematorium. PADT will also provide information carry out their own survey on the requirements of the crematorium as well as the perception of the visitors on the possible impact of the crematorium.

PADT will organize two workshops. The first workshop will focus on discussions with stakeholders to obtain their views on the crematorium project and the future conservation of Pashupati. The second workshop will be to discuss and finalize the assessment of the project.



# Establishing Heritage Impact Assessment (HIA) in Nepal

## PART TWO: PROCESSES



**Kai Weise**  
**President ICOMOS Nepal**  
**Submitted on 15 September 2015**

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## 1. Introduction and summary

### **Proposal for the establishment of an official Heritage Impact Assessment procedure in Nepal**

*Heritage Impact Assessment (HIA) can be a strategic means of ensuring that development and conservation activities in and around heritage properties do not cause an unacceptable degree of negatively impact. For HIA to be an effective tool, it must have legal justification and be integrated in official procedures. This proposal provides an overview of the how HIA can be established as an official procedure in Nepal. This would additionally require the formats and procedures for carrying out HIA.*

#### **Justification**

There are no standard procedures for assessing the impact of development and conservation works on cultural heritage. Till present, this task has been dealt with by a component of an Environmental Impact Assessment (EIA). This has not been satisfactory particularly since the EIA procedure is not linked to the governance system of heritage. To address this disparity HIA has been promoted particularly by the World Heritage Committee and the advisory bodies ICOMOS and ICCROM. The HIA procedure once established would of course not only cater to World Heritage, but can be used as standard procedure for all identified cultural heritage sites.

#### **Legislative basis**

HIA needs to be embedded in the legislation of the Department of Archaeology. This means that in the sixth amendment of the Ancient Monument Preservation Act (AMPA 1956), the provision for HIA needs to be included. The Act would only mention the establishment of HIA, leaving the details to be formulated separately. This would give the Department of Archaeology the authority to demand HIA wherever found necessary and defined by respective regulations.

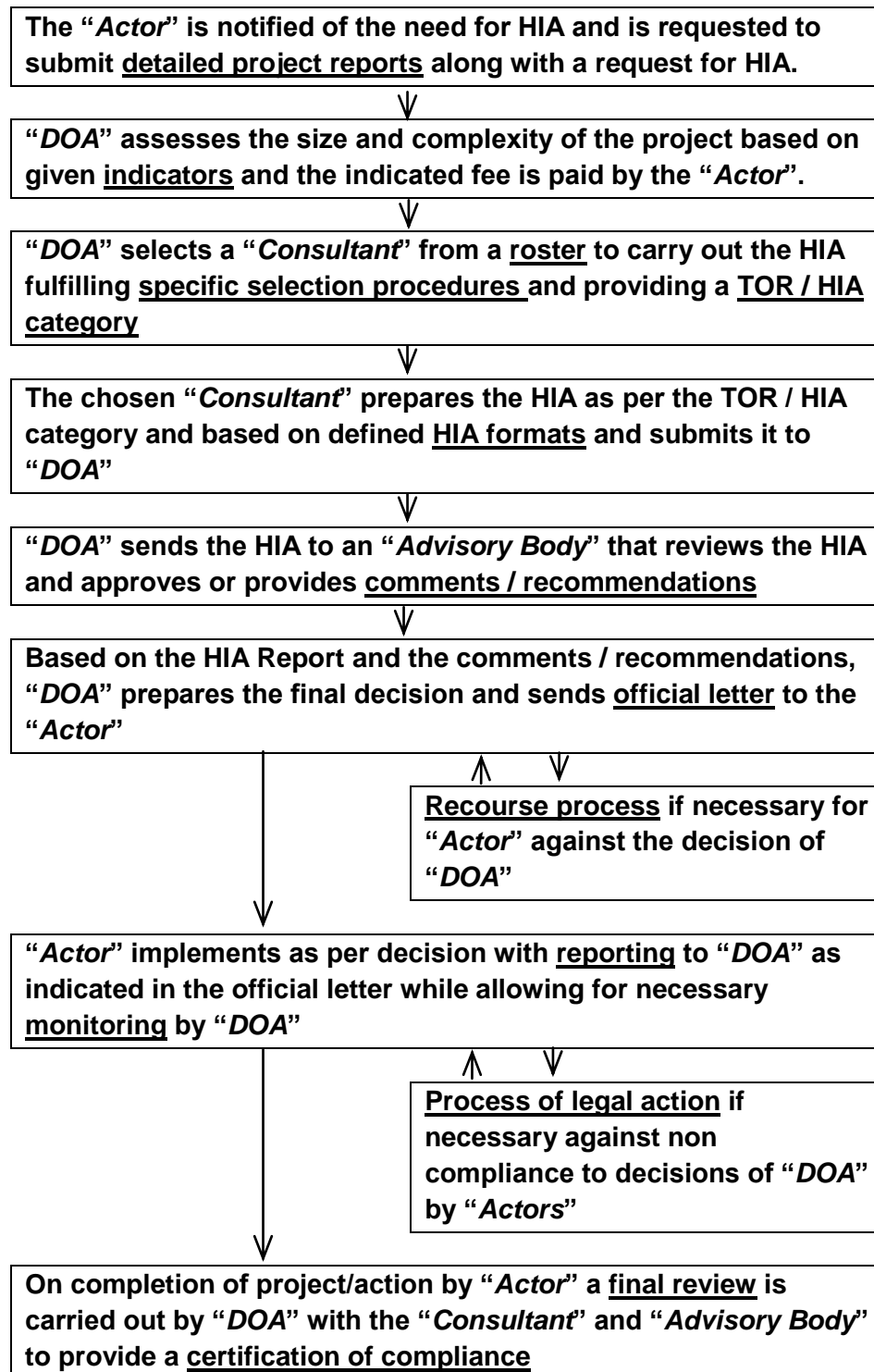
#### **Regulations for HIA**

The HIA procedure needs to be clearly defined within a set of regulations adopted by the Department of Archaeology. The regulations would identify under what circumstances HIA would be applied, as well as clarifying the format and process of implementation.

This proposal intends on providing recommendations for the detailed regulations for HIA to be established in Nepal.

## Process of implementation

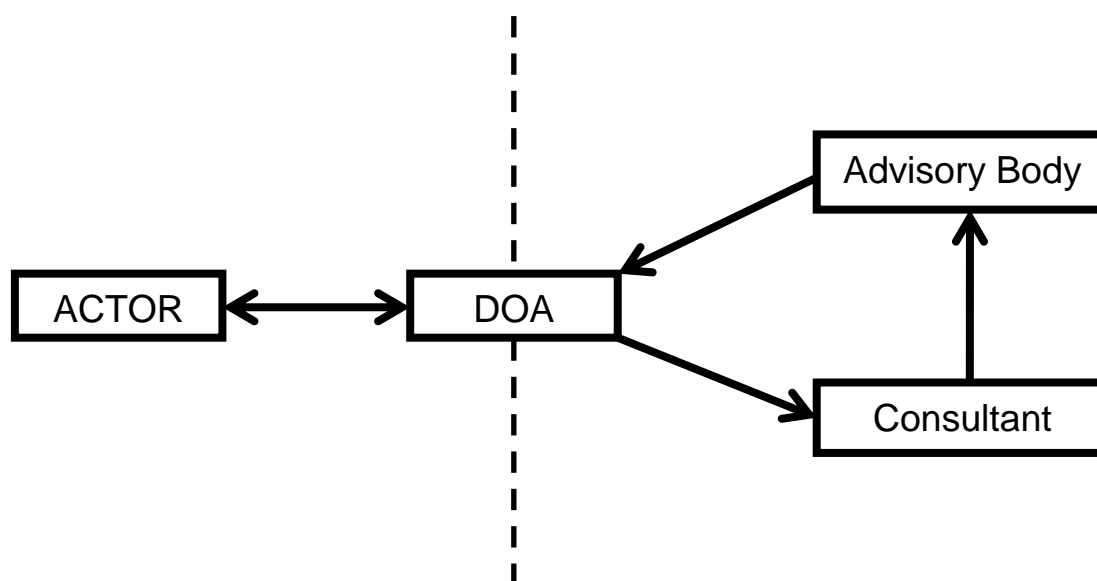
Once the need for HIA has been identified, a clear process needs to be followed which is integrated into the system of governance and justified by legislation.





## Involved parties:

Actor	the person or legal body that carries out actions that could impact heritage
DOA	Department of Archaeology (Focal Authority) under the Ministry responsible for Culture
Consultant	professional with adequate experience and training to carry out HIA to be listed in a roster prepared by DOA
Advisory Body	a body of experts to advise the authorities on HIA which could be represented by ICOMOS Nepal



Separation must be guaranteed between those intending to carry out a certain action which might impact heritage and those assessing the possible impact. The coordination would be done by the Department of Archaeology as the official focal point and authority for the process.

## Objective of the Heritage Impact Assessment (HIA)

The HIA procedure is being established with the following objectives to safeguard heritage in the broad categories of heritage sites, monuments, historic buildings and cultural objects:

1. To provide a permit system to control impact of proposed projects and activities on heritage.
2. To mitigate the impact of past or ongoing projects or activities through assessments and recommendations for rectification.
3. To plan measures to control risk of future projects or activities that could potentially impact heritage.

## 2. Processes

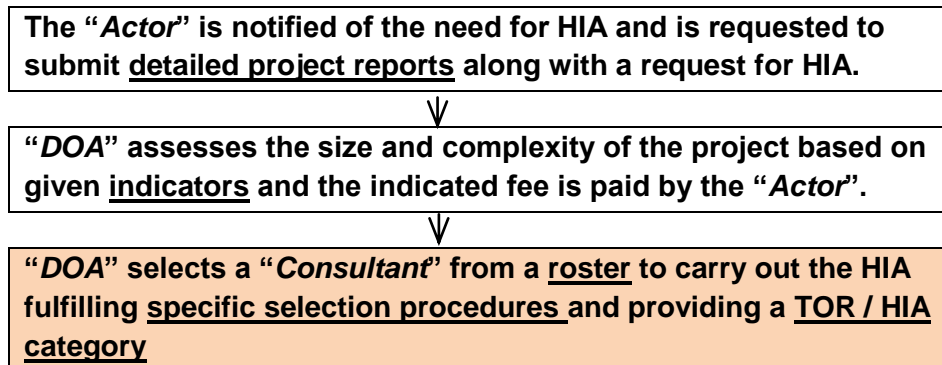
For the establishment of a Heritage Impact Assessment in Nepal the following processes will be required. Draft processes are being provided in this report. These would still need to be discussed with experts and site managers. Only after several trial runs on practical Heritage Impact Assessments can these be finalized and adopted as standard formats.

**Required processes:**

- **Process for Selection of Consultant by DOA**
- **Process of preparation of HIA by Consultant**
- **Recourse process for Actors**
- **Reporting by Actor**
- **Monitoring by DOA**
- **Process of legal action by DOA**
- **Process of final review by DOA / Consultant / Advisory Body**

## 2.1 Process for Selection of Consultant by DOA

As per the overall process the Actor submits detailed project reports and the Department of Archaeology assesses the project / activity based on indicators. The Actors then need to pay the indicated fees for carrying out the HIA. This then becomes the basis for selection of Consultants by DOA.



For the Department of Archaeology to choose the Consultant who will carry out the HIA, a consultant is chosen from a roster while ensuring capability to carry out the HIA as per the project indicators (especially in respect to the complexity and the required expertise).

### Establishment of Consultant Roster

The Consultant Roster shall be prepared based on the parameters indicated in the Consultant Roster format (Report Part One 2.3) which includes eligibility, information provided in the registration form (curriculum vitae / company profile attached with information relevant to heritage conservation and the preparation of HIAs. Legal registrations along with PAN and/or VAT registrations shall be submitted). The Consultants are then categorized based on expertise, capacity and experience.

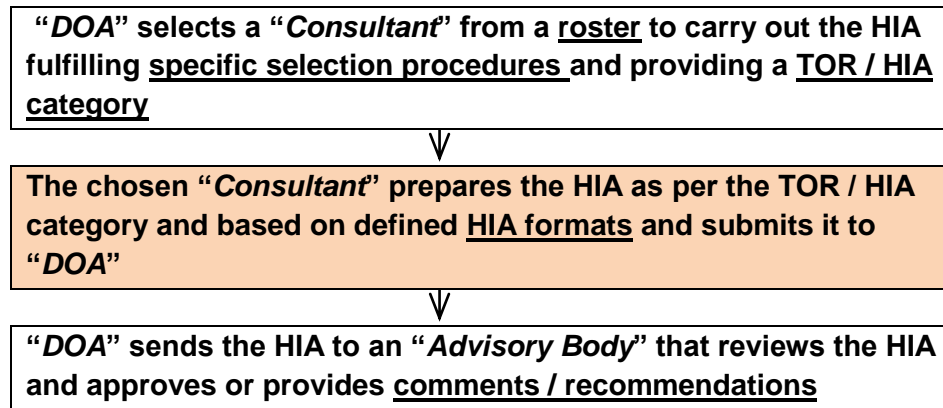
### Choice of Consultant

When choosing the consultant for any specific HIA, the requirements in respect to **expertise, capacity** and **experience** shall be considered. Should any specific expertise be required, this will be negotiated with the consultant before finalizing the TOR and signing the contract. The consultant shall not have any conflict of interest when carry out the HIA.

The choice of the consultant shall be in rotational basis with **the next appropriate Consultant** on the Roster List being approached to carry out the HIA. This might mean skipping Consultants at the top of the list who might not be appropriate for the given task. The chosen Consultant may decline the task if an acceptable justification is provided. The consultant who has carried out an HIA then joins the list at the bottom again.

## 2.2 Process of preparation of HIA by Consultant

As per the overall process the Consultant is selected and a TOR is prepared as per the required HIA for the proposed project / activity. The Consultant would then need to carry out the HIA based on standard formats. These would then be reviewed by the Advisory Body.



The TOR would define the overall requirement as per the Project Indicators (Report Part One 2.2). The project indicators are the required considerations for assessing scale and complexity of the project / activity to determine the timeframe and cost for the preparation of the HIA. These include **Complexity** (Simple project, requiring higher level of expertise but in standard fields of cultural heritage or requiring additional specialized fields), **Scale** (individual activity, small project, large project or special circumstances) and **Location** (Kathmandu Valley, accessible by flight, accessible by road plus up to half day walk, accessible by walking [max 7 days], very remote accessible by helicopter or walking more than a week).

The consultant will be required to:

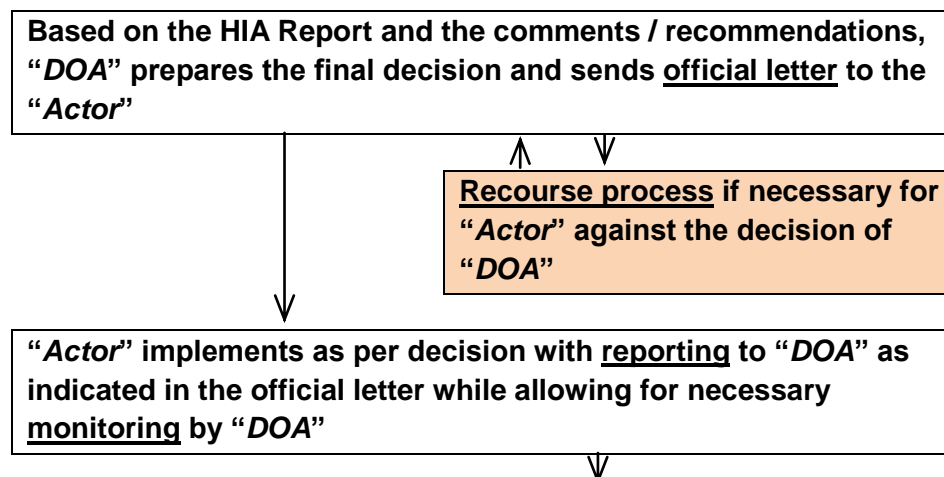
- **Visit the site** and study the circumstances as they are on location
- **Define its values** and determine the most important attributes and elements of the heritage site, monument, historic building and/or cultural objects
- **Determine the impact and threats** to the attributes and elements that express the value of the heritage

The HIA would any one, two or all three components: (for each of these components detailed content formats would need to be prepared.

- (i) **Assessment of proposed project / activity** and recommendations for providing permit or for modifications
- (ii) **Assessment of past projects** and interventions and recommendation for rectification
- (iii) **Assessment of future threats** and recommendation for planning mechanisms

## 2.3 Recourse process for Actors

As per the overall process an official letter is sent by the Department of Archaeology to the Actor with the final decision in respect to the HIA. Should the Actor not be agreeable to the decision, recourse is possible.



The Official Letter that is sent by the Department of Archaeology to the Actor contains at least the following points:

1. **Final Decision:** (i) acceptance of proposal as submitted, (ii) acceptance of proposal but with amendments or (iii) rejection of proposal
2. **Justification:** justification to the decisions that has been taken linked to appropriate legal provisions as well as the assessment.
3. **If applicable required amendments to the project:** detailed information on the required amendments to the project.
4. **Notes on related decisions on rectifications and planning:** information related to the assessment and rectification of past projects and activities as well as planning recommendations to safeguard the site from potential threats.
5. **Validity of decision:** exact dates for the validity of the decision, which means the project / activity would need to be completed.

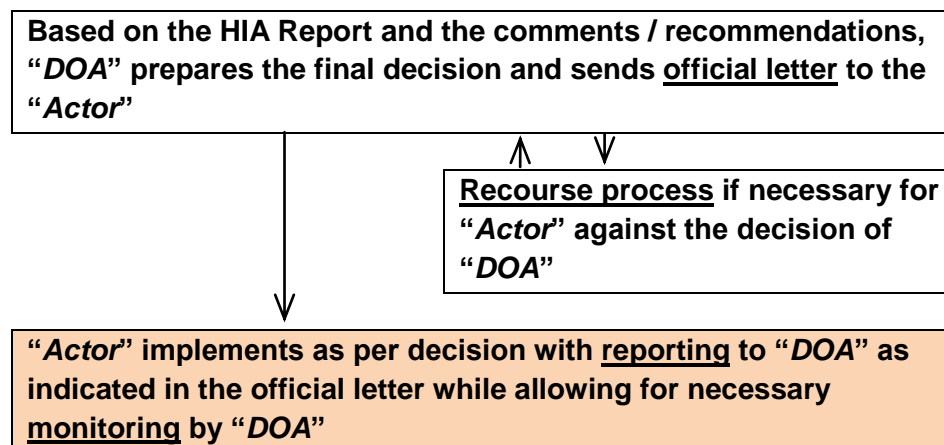
For any of these points recourse can be taken with a clear justification for the Department of Archaeology to reconsider. The recourse would be submitted as a written document with the necessary references and justification (reasoning and legal provisions) to back up the recourse claim.

This would then be discussed with the Consultant and the Advisory Body taking into account the justification provided by the actor. A revised Official Letter will then be sent to the Actor with the response to the recourse. Recourse can be taken repeatedly, however no work may begin without the dispute being finalized.



## 2.4 Reporting by Actor

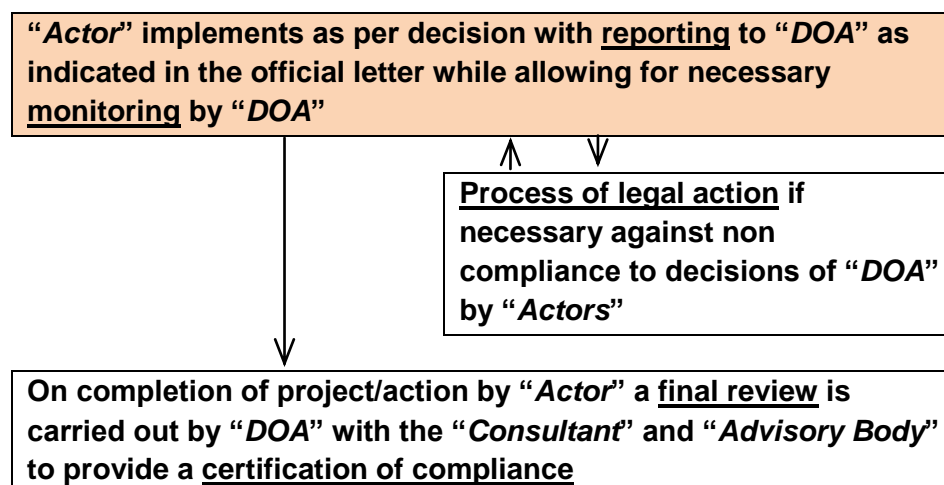
As per the overall process when the Actor receives the official letter and all disputes are clarified and agreed upon and if permission is given, the Actor will start the project / activity. During the entire process the Actor shall provide the Department of Archaeology with detailed reports as defined in the Official Letter.



The reporting by the Actor to the Department of Archaeology shall be done based on the conditions defined in the Official Letter. The reporting shall include progress as well as any changes or new insights into the circumstances. Any new information on the heritage site would be passed on to the Department of Archaeology

## 2.5 Monitoring by DOA

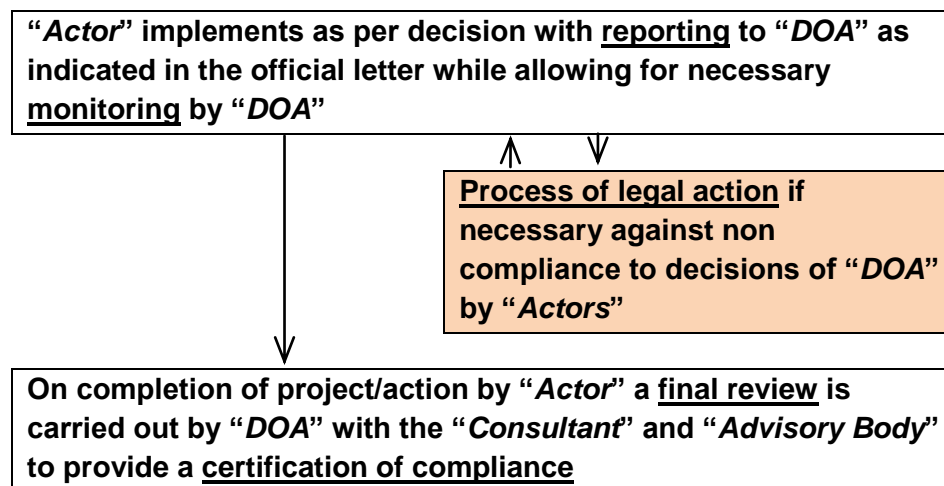
As per the overall process, if found necessary, the Department of Archaeology may carry out monitoring of the project / activity at any time.



Should the reporting by the Actor not seem sufficient, the Department of Archaeology can establish its own monitoring of the project / activity. This means that any supervisor can be deputed to oversee activities. This can be full time or at specific intervals as found necessary.

## 2.6 Process of legal action by DOA

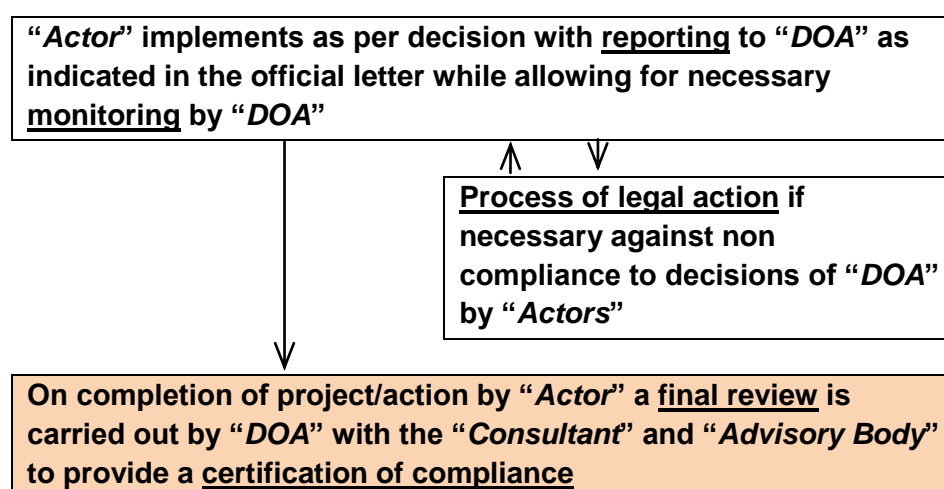
As per the overall process, should there be any part of the project implementation that does not comply with the Official Letter, the Department of Archeology may stop work and take legal action against the Actor.



During the course of the Project / Activity if there is any concern about the on-going process, the Department of Archaeology may stop the work, request rectification or if necessary take legal action. This would then revert to the courts; however a stay order must be issued to ensure that the project / activity halts.

## 2.7 Process of final review by DOA / Consultant / Advisory Body

As per the overall process once the project / activity is completed, a final review shall be carried out by the Department of Archaeology in consultation with the Consultant and the Advisory Body in the presence of the Actor.



Should compliance be found with all points mentioned in the Official Letter, a certificate of compliance shall be awarded to the Actor which allows for full legal recognition of the Project / Activity.

# **Annex**

## **Contents:**

- A. ICOMOS guidelines**
- B. WHITR-AP HIA Report Template**
- C. HIA Hong Kong**
- D. Example Heritage Impact Assessment: Tilaurakot Bus Park and Footpath**

## A. ICOMOS guidelines

Guidance on Heritage Impact Assessments for Cultural World Heritage Properties

A publication of the International Council on Monuments and Sites

January 2011

ICOMOS, 49-51 rue de la Fédération 75015 Paris, France

In collaboration with the World Heritage Centre

### **Guidance on Heritage Impact Assessments for Cultural World Heritage Properties**

#### **Purpose**

**To offer guidance on the process of commissioning HERITAGE IMPACT ASSESSMENTS (HIAs) for World Heritage (WH) properties in order to evaluate effectively the impact of potential development on the Outstanding Universal Value (OUV) of properties.**

The guidance is addressed at managers, developers, consultants and decision-makers and is also intended to be relevant to the World Heritage Committee and States Parties.

The concept of OUV underpins the whole World Heritage Convention and all activities associated with properties inscribed on the List. The World Heritage Convention, for the protection of World's Cultural & Natural Heritage, which came into being in 1972, recognises properties of '**Outstanding Universal Value**' which are part of the "world heritage of mankind as a whole" and deserve "protection and transmission to future generations". Such properties are recognised through inscription on the World Heritage list by the World Heritage Committee, which consists of representatives from 21 States Parties.

Their OUV is fixed by the World Heritage Committee at the time of inscription and since 2007 has been encapsulated in a Statement of OUV. **OUV thus defines the thinking at the time of inscription and is non-negotiable.**

The World Heritage Convention is ratified by States Parties, who agree to conserve properties on their territories that are seen to be of OUV, and thus contribute towards protecting the shared heritage of humanity. This means that OUV needs to be sustained over time through the protection of attributes that are seen to convey OUV.

**World Heritage sites are thus single heritage assets with an international value that has been clearly articulated. Not everything within them contributes to OUV, but those attributes that do must be appropriately protected.**

**This guidance sets out a methodology to allow HIAs to respond to the needs of World Heritage sites, through considering them as discrete entities and evaluating impact on the attributes of OUV in a systematic and coherent way.**

The Guidance was developed following an international workshop organised by ICOMOS in Paris in September 2009.

## Contents

- 1 Background
  - a) Specificities of the World Heritage context within which HIA are undertaken.
  - b) Diverse regulatory, planning and management contexts
  - c) Tools, resources and capacities needed to undertake an HIA
- 2 Suggested HIA procedures
  - 2-1 Introduction
  - 2-2 Understanding what needs to be undertaken before starting an HIA
- 3 Data and documentation
- 4 Methods and approaches appropriate to the property - optimising available tools, techniques and resources
- 5 A defensible system for assessing/evaluating impact
- 6 Can impacts be avoided, reduced, rehabilitated or compensated – mitigation?
- 7 Deliver an evaluation that is helpful to States Parties, the Advisory Bodies and the World Heritage Committee, and relevant to the World Heritage context in general and specific properties in particular

Appendix 1: Heritage Impact Assessment Process

Appendix 2: Scoping Report Contents

Appendix 3A: Example Guide for assessing value of heritage assets

Appendix 3B: Example Guide for assessing magnitude of impact

Appendix 3C: Example Inventory Entry

Appendix 4: Heritage Impact Report Contents

## 1 Background

In recent years the UNESCO World Heritage Committee has addressed considerable numbers of State of Conservation Reports related to threats to World Heritage properties from various forms of large-scale development. These developments include roads, bridges, tall buildings, “box” buildings (e.g. malls), inappropriate, acontextual or insensitive developments, renewals, demolitions and new infrastructure typologies like wind farms, as well as land-use policy changes and large scale urban frameworks. The Committee has also examined threats from excessive or inappropriate tourism. Many of these projects have had the potential to impact adversely on the appearance, skyline, key views and other different attributes that contribute to Outstanding Universal Value (OUV).



In order for the ICOMOS and the Committee to evaluate satisfactorily these potential threats, there is a need to be specific about the impacts of proposed changes on OUV. While heritage impact assessment exists in many countries, these seem less reliably used in the World Heritage context.

Where formal evaluations are undertaken, many of these make use of procedures for environmental impact assessment (EIA). Whilst there is merit at looking at the experience of EIA, this is not likely to be immediately useful without some adaptation. EIA frequently disaggregates all the possible cultural heritage attributes and assesses impact on them separately, through discrete receptors such as protected buildings, archaeological sites, and specified view-points with their view cones, without applying the lens of OUV to the overall ensemble of attributes. A more global approach to the site is required, one directly linked to the expression of the site's OUV.

EIA therefore often produces disappointing results when applied to cultural World Heritage properties as the assessment of impacts is not clearly and directly tied to the attributes of OUV. Cumulative impacts and incremental changes (adverse) may also more easily pass undetected. The recent work done to assess the impacts of the proposed bridge on the World Heritage site of the Middle Rhine Valley is an example of this problem.

Currently, there are limited formal tools for identifying receptors and for assessing impact and few examples of excellence for Heritage Impact Assessment (HIA) undertaken for cultural WH properties. However, progress in 3D virtual representations and digital tools open new means to operate HIA.

#### **a) World Heritage context within which HIA are undertaken**

World Heritage properties need to be seen as single entities that manifest OUV. Their OUV is reflected in a range of attributes, and in order to sustain OUV it is those attributes that need to be protected. Thus the HIA process needs to consider the impact of any proposed project or change on those attributes, both individually and collectively, rather than on a standard range of receptors.

The development of Statements of OUV (SoOUV) for all World Heritage properties, a requirement set out in the Operational Guidelines for the implementation of the World Heritage Convention (UNESCO, 2008) paragraph 154-5, should assist through setting out clearly the attributes that reflect OUV and the links between them. The examination of integrity and authenticity is also a useful starting point.

In terms of assessing the effect of any impact on OUV, concepts such as 'limits of acceptable change' and 'absorption capacity' are being discussed, although there is no consensus yet on the usefulness of these concepts, or on how to operationalise them. There is also no consensus on how to revive heritage value that has been eroded.

Numerous visual assessment tools have been adapted to the assessment of impacts of proposed developments on the OUV of various World Heritage properties, especially those located within dynamic urban contexts, but so far these have rarely been linked to a more in-depth assessment of impact on all the attributes of OUV. There are also new tools on recording and mapping intangible heritage and multiple layers of attributes that have not been exploited for use in WH properties.

World Heritage properties are very diverse, as are the potential impacts. Although development of new tools is potentially useful, for the foreseeable future, impact assessment processes need to be able to access a variety of existing tools, without relying entirely on any one of them.

The 2nd cycle of the World Heritage Periodic Reporting should provide ICOMOS with a new data set relevant to this issue. The goal to have SoOUVs for all World Heritage properties by 2012 will also be an important underpinning of the guidance provided by ICOMOS.

#### **b) The diverse regulatory, planning and management contexts**

Neither EIA nor HIA are mandated in many countries and there is often no national regulatory framework within which they can operate.

The capacity of heritage authorities varies globally and some are not strong within the national government structures. In some countries there are strong environmental systems that provide a basis for EIA, but the heritage elements (including World Heritage) are underdeveloped or non-existent. In others, HIA are undertaken but the identified “triggers” for their use are often basic (usually in the form of lists of activities) or age.

This guidance aims to support the use and influence of HIAs, even where there are few legal structures that support the EIA/HIA processes.

Industry codes of practice should be influential in ensuring that HIA processes occur, and that the methods employed meet internationally-recognised standards of practice.

However, in many countries specific sectors considered to be of national interest are permitted to override EIA or HIA requirements.

Management plans for WH properties are potentially very important. They should be well anchored in planning arrangements at national, regional and local levels, and although embedded in national systems of protection in different ways, could be utilised more to define how change will be assessed. The sustainable development of WH properties is extremely important, including the protection of OUV elements. If the management plan is sufficiently robust and has undergone a thorough consultation process in its development, it should be possible to implement cooperative approaches to potential problems within the framework of the plan.

Potential threats should be anticipated in the management system in a property specific way – not “one size fits all”. Conservation policies embedded in the management system may also be used as a measure to assess potential adverse impacts.

A large number of World Heritage properties do not have a well-functioning management system (for some even where there is a management plan). This is an underlying issue for many properties selected for State of Conservation reporting.

#### **c) Tools, resources and capacities needed to undertake a HIA**

State of the art techniques are possible in many countries, but in many others, the levels of skills, knowledge and resources are quite basic. This guidance attempts to be applicable to all situations.

The skills required to do a HIA, using modern IT based and highly technical tools are only held by a limited number of people. These can be very helpful, particularly in complex situations, but HIA should not depend on them. On the other hand, diffusion of new HIA tools should be encouraged when their efficiency is proven.

In some cases, the level of analysis undertaken is very deep and expensive to produce but the outcome is difficult to understand and to operationalise. A key issue is identifying the optimum resources to get the job done, and not requiring more than is necessary.

Training of managers and staff at World Heritage properties and in the approvals agencies of all levels of government within a country will be important in order to ensure that the commissioning process for HIA is appropriate and that full and effective use is made of the output.

The backgrounds and professional skills of those who conduct HIA are diverse, but training and capacity-building will often be needed. Single professionals cannot always do a total HIA – there is most often a need to bring together an HIA team with the specific analytical skills needed for a particular project or site. A number of professional environmental management institutions provide archiving and other tools. In some circumstance opportunities for partnerships could be explored.

Although proposals for WH nominations should make sure adequate data and documentation are in place, and that realistic and relevant monitoring arrangements are in use, there is often a lack of baseline documentation.

Good documentation does not require a Geographic Information System (GIS), although this has been a powerful and useful tool where it is available. All approaches need to be systematic and follow rational guidelines.

## **2 Suggested procedures for Heritage Impact Assessment**

### **2-1 Introduction**

2-1-1 This section is intended to help to States Parties, heritage managers and decision-makers or others in managing their WH properties in circumstances where some form of change may affect the Outstanding Universal Value (OUV) of those sites. Change may be adverse or beneficial, but both need to be assessed as objectively as possible, against the stated OUV as reference point.

2-1-2 The guidance is a tool to encourage managers and decision-makers to think about key aspects of heritage management and to make decisions based on evidence within the framework of the 1972 World Heritage Convention. It is also designed to encourage potential developers or other agents of change to consider key factors at an appropriate time and at an appropriate level of detail. Heritage Impact Assessments (HIAs) may also be useful in the general management of cultural WH properties by collating information at a given point in time.

2-1-3 There are many ways of assessing impact on heritage assets, some formalised in law, some very technical and sophisticated, others less so. This guidance sets down some

principles and options. But whatever route is chosen, the assessment must be “fit-for-purpose” – suitable for the WH property and for the changes proposed, and suitable to the local environment. It must provide the evidence on which decisions can be made in a clear, transparent and practicable way.

2-1-4 In any proposal for change there will be many factors to be considered. Balanced and justifiable decisions about change depend upon understanding who values a place and why they do so. This leads to a clear statement of a place's significance and with it the ability to understand the impact of the proposed change on that significance.

2-1-5 In the case of WH properties, their international significance is established at the time of inscription and defined as their Outstanding Universal Value (OUV). States Parties undertake to retain and guard this OUV through protecting and conserving the attributes that convey OUV. The Statement of Outstanding Universal Value (SoOUV) which sets out why a property is deemed to have OUV and what the attributes are that convey OUV will be central to the HIA. Every reasonable effort should be made to eliminate or minimise adverse impacts on significant places. Ultimately, however, it may be necessary to balance the public benefit of the proposed change against the harm to the place. It is therefore also important to know who benefits from the proposed change and for what reasons. In such cases the weight given to heritage values should be proportionate to the significance of the place and the impact of the change upon it. WH properties de facto are seen to have global value and thus logically have a higher significance than national or local heritage value.

2-1-6 Where change may affect the OUV of a WH property, consideration of the cultural [and/or natural] heritage attributes should be central to planning any proposal and should be presented early on in any general assessment (such as an Environmental Impact Assessment - EIA). Managers and decisionmakers should consider whether the heritage conservation needs should be given greater weight than competing uses and developments. A key consideration is the threat or risk to the WH status and this should be clearly addressed in the HIA report.

2-1-7 Where statutory environmental impact assessments apply, the cultural heritage sections must take account of this ICOMOS guidance where the EIA relates to a WH property. An HIA undertaken as part of an EIA in these circumstances is not additional to normal EIA requirements, but uses a different methodology which clearly focuses on OUV and attributes that convey that OUV. The HIA should be summarised early on in the Environmental Statement, and the full technical HIA report should be included as a technical appendix. The requirements should be made clear at the planning or scoping stage. ICOMOS and the World Heritage Centre will encourage States Parties to ensure that HIAs in line with this guidance are undertaken in line with best practice. Where cultural heritage sections of EIAs clearly do not focus on the attributes of OUV, they would not meet desired standards in managing change at WH properties.

## **2-2 Understanding what needs to be undertaken before starting an HIA**

2-2-1 The assessment process is in essence very simple:

- . What is the heritage at risk and why is it important – how does it contribute to OUV?
- . How will change or a development proposal impact on OUV?

. How can these effects be avoided, reduced, rehabilitated or compensated?

2-2-2 The overall process is summarised in Appendix 1, but key elements include early and continued consultation with all relevant parties and agreement on the scope and expectations of the HIA before work commences. It is also important to identify possible negative impacts very early on in the process, in order to inform both the development design and the planning process in a pro-active rather than reactive manner.

2-2-3 The basis for management and decision making is a good understanding of the WH property, its significance and OUV, its attributes and its context. The Management Plan will often be the important first step in building an ability to have clear and effective impact assessments. Establishment of baseline data about the WH property and its condition is critical.

2-2-4 The starting point for any heritage assessment, once an initial development proposal or change of use is identified, should be to set out the scope of work necessary for an HIA which will provide the evidence for decisionmaking. Early consultation with relevant parties, including any affected community, is important. The HIA may also be useful in collating information about WH properties not otherwise easily accessible. HIA is a useful cooperative tool for all stakeholders.

2-2-5 A Scoping Report (or HIA brief) should be agreed with all relevant parties – the State Party, regional or local government, heritage advisors or managers, local communities or others as necessary. The scoping report should make it clear what is to be done, why and how, when and what are the expected outputs. It is important to include an agreed calendar between all stakeholders and the development programme (Appendix 2)

2-2-6 The Scoping Report should provide an outline description of the WH property and set out its OUV. It should have an outline of the proposed change or development including the need for change or development, a summary of the conditions present on the site and its environs, details of any alternative development being considered, an outline methodology and terms of reference for the HIA. The methodology should include organisations or people to be consulted, determining, for example, who are stakeholders and who is part of a heritage community related to the site, details of the baseline information to be collected including methods and appropriate study areas, likely sensitive heritage receptors and proposed survey and assessment methodology. It is also important at this stage to identify whether the proposed development is within a WH property or within a buffer zone or within the setting of the property but outside both. A Scoping Report should be used to flag large or critical impacts – the full HIA Report can then assess any positive reaction in terms of the altered development.

2-2-7 The Scoping Report should also give (as far as is practicable) a clear indication of what knowledge exists about the site and where lacunae exist – how good is the information base and what level of confidence may be placed on the assessment. This should be followed through in the actual assessment itself.

2-2-8 It is not only big developments that need an assessment of impact. WH properties may also be vulnerable to changes of policy which could have significant consequences – for example changes in land use and urban planning policies. Tourism infrastructure and



increased visits may have unintended consequences. Major archaeological excavations could also adversely affect the OUV of properties, though possibly compensating by the gaining of knowledge.

2-2-9 It is also important at this stage to ensure that organisations or individuals undertaking the HIA are suitably qualified and experienced, and that their expertise matches the demands of the site, its material and intangible content, its OUV and the nature and extent of the proposed changes. Single professionals can rarely do a total HIA, and the composition of the HIA team - heritage professionals and all other necessary competences - is crucial: the team will need specific analytical skills for a particular project or site. Opportunities for partnerships could be explored. This may also bring benefits in terms of developing capacity for HIA, and in developing and sharing best practice.

### **3 Data and documentation**

3-1 There are no agreed minimum standards for inventories, data review or condition surveys, though it may in due course be useful to define these. Such matters need to be proportionate to the property and its management needs. It is desirable that the HIA documentation stage is as comprehensive as possible, including developing an archive.

3-2 For WH properties the core documentation is the Statement of OUV and the identification of attributes that convey OUV. Hence this guidance concentrates on identifying impact on attributes that convey that OUV. However, the HIA should collect and collate information on all aspects and attributes of the cultural heritage within the agreed study area, so that the historical development of the property, its context, setting and where appropriate other values (for example national and local) can be fully understood.

3-3 It is useful, if not essential, to document and manage the collection of data. Assessment processes can be very lengthy and data sources may require periodic “refreshment”. When data sources are in a state of flux or the timetable for assessment is lengthy, it may be necessary to agree a “data freeze” so that the HIA team can compare like with like information.

3-4 Inventories should be included in the HIA reports, as tables or gazetteers in appendices to the main text. Underpinning archives of material and information collected should be retained for future use and properly referenced, including location and accessibility. Good documentation does not require sophisticated techniques such as GIS or complex databases; it needs a common sense, systematic and consistent approach which is suitable to the needs of the property.

3-5 In more complex cases, more sophisticated approaches could be considered. However, the use of databases and GIS, or 3D-modelling, changes the way in which HIAs are undertaken. The systems allow assessment to be a far more iterative process, and as a result HIA can be more effectively fed back into the design processes. But this also allows for more “what if” scenarios to be requested of the HIA team. The scoping report would need to set down the principles for this iteration so that the HIA team can work effectively.

#### **4 Methods and approaches appropriate to the property - optimising available tools, techniques and resources**

4-1 The collection of information during HIA should consider all potential sources of data. Techniques will include desk study or historical research, and site visits to check condition, authenticity and integrity, sensitive viewpoints and so on. They may include terrain modelling, or inter-visibility modelling to predict impacts on heritage assets. It is necessary to capture and explain in clear text evidence of both tangible and intangible heritage attributes, and wherever possible to relate the latter to the physical features which embody them.

4-2 Field studies are also generally essential to ensure that the HIA is robust. Techniques should be linked to the development proposal and could include nonintrusive evaluation or field testing by topographic survey, geophysical survey, virtual 3D scale models or more intrusive methods such as artefact collection, scientific survey, test pitting or trial trenching. In some circumstances the collection of oral histories or evidence may also be valid and useful.

4-3 The data collection must enable the heritage attributes to be quantified and characterised, and allow their vulnerability to proposed changes to be established. It is also necessary to look at the interrelationship/s between discrete heritage resources, in order to understand the whole. There is often a relationship between a material aspect and an intangible aspect which must be brought to the fore.

4-4 Collection of information during the HIA is an iterative process which can often lead to the emergence of alternatives and options for the development proposal.

4-5 Understanding the full meaning of the OUV of a WH property (and other values of heritage) is a crucial part of the HIA process. The evaluation of the overall significance of the effect (overall impact) is a function of the heritage value and assessment of scale of changes and impact.

4-6 When describing WH properties, it is essential to start by describing the attributes of OUV. This is the “baseline data” against which impacts must be measured, and includes both tangible and intangible aspects. A statement of condition may be useful for each key attribute of OUV.

4-7 However, while the SoOUV is an essential starting point, sometimes they are not detailed enough in terms of attributes to be directly useful to impact assessment work. Each property will need to be assessed and where necessary, the attributes may need to be more specifically defined during the HIA process.

4-8 Such definition of attributes should not seek to re-define the SoOUV, but to describe the attributes in a way which assists decision-making on the proposed change. It should be noted that OUV is defined at the time a WH property is inscribed on the WH List and cannot be changed without a re-nomination which goes through a full evaluation process.

4-9 The production of location or themed maps or plan views is almost always needed to demonstrate the findings and issues raised. Spatial rendering is useful to show the disposition of attributes, the relationships between the attributes (which may be processes), and the associations attributes have such as visual, historical, religious, communal, aesthetic

or evidential. It is necessary to link the attributes back to the components of the SoOUV in a clear and readable manner, which does not oversimplify but retains cultural or other complexities in synoptic statements or diagrams. HIA teams should, however, be wary of too much reliance on maps, as our human experience of places is in 3D – ground-truthing is always required to check spatial relationships.

4-10 One option for assessing value is set out in Appendix 3A. In this system the value of heritage attributes is assessed in relation to statutory designations, international or national, and priorities or recommendations set out in national research agendas, and ascribed values. Professional judgement is then used to determine the importance of the resource. Whilst this method should be used as objectively as possible, qualitative assessment using professional judgement is inevitably involved. The value of the asset may be defined using the following grading scale: . Very High . High . Medium . Low . Negligible . Unknown

4-11 In the HIA Report there should be a clear and comprehensive text description of individual and/or groups of heritage attributes, which sets out their individual and/or collective condition, importance, inter-relationships and sensitivity, and possibly also an indication of capacity for change. This should be accompanied by appropriate mapping to aid the reader. All heritage elements should be included, but the components contributing to the WH property's OUV will be particularly relevant and may merit a further detailed section. A detailed inventory should be included in supporting appendices or reports so that the reader may check the assessment of each element. An example is included in Appendix 3C.

## **5 A defensible system for assessing/evaluating impact**

5-1 Effects on cultural heritage attributes from development or other changes may be adverse or beneficial. It is necessary to identify all changes on all attributes, especially those attributes which give the property its OUV, on which this guidance concentrates. It is also important to identify the scale or severity of a specific change or impact on a specific attribute – as this combination is what defines the significance of the impact, otherwise called “significance of effect”.

5-2 There is sometimes a tendency to see impacts as primarily visual. While visual impacts are often very sensitive, a broad approach is needed as outlined in the ICOMOS Xi'an Declaration. Impacts take many forms – they may be direct and indirect; cumulative, temporary and permanent, reversible or irreversible, visual, physical, social and cultural, even economic. Impacts may arise as a consequence of construction or operation of the proposed development. Each needs to be considered for its relevance to the HIA.

5-3 Direct impacts are those that arise as a primary consequence of the proposed development or change of use. Direct impacts can result in the physical loss of part or all of an attribute, and/or changes to its setting - the surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape. In the process of identifying direct impacts care must be taken of the development technique of gaining approvals by just avoiding direct impact - impacts which just “miss” physical resources can be just as negative to a single resource, a pattern, ensemble, setting, spirit of place etc.

5-4 Direct impacts resulting in physical loss are usually permanent and irreversible; they normally occur as a consequence of construction and are usually confined within the development footprint. The scale or magnitude of these impacts will depend on the proportion of the attribute affected, and whether its key characteristics or relation to OUV would be affected.

5-5 Direct impacts that affect the setting of an attribute may occur as a consequence of construction or operation of the development scheme and may have an effect Guidance on some distance from the development. Assessment of impacts on setting refers to perceptible visual and aural (noise) effects that can be appreciated at a given time. Such impacts may be temporary or permanent, reversible or irreversible depending on the extent to which the cause of the impact can be removed. Impacts may also be transient where occurrence is sporadic or of limited duration, for example, related to hours of operation or the frequency of passage of vehicles.

5-6 Indirect impacts occur as a secondary consequence of construction or operation of the development, and can result in physical loss or changes to the setting of an asset beyond the development footprint. For example, construction of related infrastructure such as roads or powerlines that are required to support the development. Facilitated impacts should also be considered which may be further actions (including by third parties) which are made possible or facilitated by the development.

5-7 Scale or severity of impacts or changes can be judged taking into account their direct and indirect effects and whether they are temporary or permanent, reversible or irreversible. The cumulative effect of separate impacts should also be considered. The scale or severity of impact can be ranked without regard to the value of the asset as: . No change . Negligible change . Minor change . Moderate change . Major change

5-8 The significance of the effect of change – i.e. the overall impact - on an attribute is a function of the importance of the attribute and the scale of change. This can be summarized for each attribute described using the following descriptors. As change or impacts may be adverse or beneficial, there is a nine-point scale with “neutral” as its centre point: . Major beneficial . Moderate beneficial . Minor beneficial . Negligible beneficial . Neutral . Negligible adverse . Minor adverse . Moderate adverse . Major adverse

VALUE OF HERITAGE ASSET	SCALE & SEVERITY OF CHANGE/IMPACT				
	No Change	Negligible change	Minor change	Moderate change	Major change
For WH properties Very High – attributes which convey OUV	SIGNIFICANCE OF EFFECT OR OVERALL IMPACT (EITHER ADVERSE OR BENEFICIAL)				
	Neutral	Slight	Moderate/ Large	Large/very Large	Very Large

For other heritage assets or attributes	SIGNIFICANCE OF IMPACT (EITHER ADVERSE OR BENEFICIAL)				
<b>Very High</b>	Neutral	Slight	Moderate/ Large	Large/very Large	Very Large
<b>High</b>	Neutral	Slight	Moderate/ Slight	Moderate/ Large	Large/Very Large
<b>Medium</b>	Neutral	Neutral/Slight	Slight	Moderate	Moderate/ Large
<b>Low</b>	Neutral	Neutral/Slight	Neutral/Slight	Slight	Slight/ Moderate
<b>Negligible</b>	Neutral	Neutral	Neutral/Slight	Neutral/Slight	Slight

5-9 For example:

. Total demolition of a key building which is the main conveyance of OUV for a WH property to make way for a new road would be a major adverse effect or overall major adverse impact.

. Removal of a later road from the immediate vicinity of a key building which conveys OUV and which is not directly related to its OUV attributes would be a major beneficial effect or overall impact.

5-10 The table above is a summary to aid assessment of impact. The HIA Report will need to show the assessment for each OUV attribute – for example in a simple table - and demonstrate how the results for each individual or collective heritage attribute have been obtained. This should include qualitative as well as quantitative evaluation.

5-11 Proposals should be tested against existing policy frameworks and the management plan for the property and surrounding area. The compatibility of the scale, pattern, use, etc should be tested according to the attributes of the property that convey OUV and other assets. Issues such as sight lines, architectural type, volumes and surface appearances, settlement form, functional uses and persistence through time etc might be relevant. In all this, it is necessary to match the attributes of the development to the attributes of the site, so that development is complementary and even enhancing to the property.

5-12 Changes arising from developments must also be assessed for their impact on integrity and authenticity. The property should have baseline statements regarding integrity and authenticity at the time of inscription, or at the time the retrospective SoOUV was undertaken [paragraphs 79-88 in Operational Guidelines]. The relationship between attributes of OUV, authenticity and integrity needs to be understood and needs to be shown to be understood in the HIA report. Authenticity relates to the way attributes convey OUV and integrity relates to whether all the attributes that convey OUV are extant within the property and not eroded or under threat.



5-13 Benefits and dis-benefits – or adverse effects - must be very carefully considered. There are a range of benefits and dis-benefits, and the question of who receives the benefits (or misses out through the benefits) is important. Often the property itself and the associated communities do not receive the benefits flowing from development. Financial consequences of the assessment are also important and often directly influence decisions. The analysis must reveal rather than disguise these complexities. The conservation of the property should be counted within the benefits of a project, so that projects that are supportive of conservation can be weighted more than those that do not.

## **6 Can impacts be avoided, reduced, rehabilitated or compensated – mitigation?**

6-1 Impact assessment is an iterative process. Results of data collection and evaluation should be fed back into the design process for the development, or proposals for change or for archaeological investigation.

6-2 Conservation is about managing sustainable change. Every reasonable effort should be made to avoid, eliminate or minimise adverse impacts on attributes that convey OUV and other significant places. Ultimately, however, it may be necessary to balance the public benefit of the proposed change against the harm to the place. In the case of WH properties this balance is crucial.

6-3 HIA should include proposed principles and where possible proposed methods to mitigate or offset the effects of a development proposal or other agent of change. This should include consideration of other options for the development including site selection/location, timing, duration and design. The HIA should indicate fully how the mitigation is acceptable in the context of sustaining OUV, including the authenticity and integrity of the WH property. Available guidance in the Operational Guidelines on periodic reporting should be consulted to help this process.

6-4 It may be appropriate to undertake further consultation at this stage before finalising the HIA.

## **7 Deliver an evaluation that is helpful to States Parties, the Advisory Bodies and the World Heritage Committee, and relevant to the World Heritage context in general and specific properties in particular**

7-1 Appendix 4 sets out a guide to the contents of an HIA report. It is a matter of expert judgement, following suitable consultation and scoping to define exact requirements.

7-2 The HIA report should provide the evidence on which decisions can be made in a clear, transparent and practicable way. The level of detail needed will depend on the site and proposed changes. The Statement of OUV will be central to the evaluation of the impacts and risk to the property.

7-3 The HIA report will need to show

- . A comprehensive understanding of the WH property and its OUV, authenticity and integrity, condition, context (including other heritage attributes) and interrelationships;

- . An understanding of the range of impacts arising from the development or other proposal for change;
- . An objective evaluation of those impacts (beneficial and adverse) on the heritage elements and in particular on the site's OUV, integrity and authenticity;
- . An assessment of the risk posed to the retention of OUV and the likelihood that the property may be in potential or actual danger;
- . A statement of heritage benefits which may arise from proposals including better knowledge and understanding and awareness-raising;
- . Clear guidelines as to how impact can be mitigated or avoided;
- . Supporting evidence in the form of a suitably detailed inventory of attributes of OUV and other heritage assets, impacts, survey or scientific studies, illustrations and photographs.

7-4 The HIA Report will need to have a non-technical summary clearly setting out all relevant matters, a detailed text description and analysis and a text summary of the results of the evaluation of impact accompanied by tables to assist the reader.

## Appendix 1: Heritage Impact Assessment Process

Stages of HIA
Initial development and design
Early consultation
Identify and recruit suitable organisations to undertake works
Establish study area
Establish scope of work
Collect data
Collate data
Characterise the heritage resource, especially in identifying attributes that convey OUV
Model and assess impacts, direct and indirect
Draft mitigation – avoid, reduce, rehabilitate or compensate
Draft report
Consultation
Moderate the assessment results and mitigation
Final reporting and illustration – to inform decisions
Mitigation
Dissemination of results and knowledge gained

## Appendix 2: Scoping Report Contents

At the outset of any proposed impact assessment it is desirable to agree the scope of the work needed so that the work is 'fit-for-purpose' and will enable decision to be made. Early consultation is essential.

The scope should be agreed with all relevant parties, including the State Party, regional or local government or its agencies, any statutory consultees and local community representatives and the public. In some cases it may be also desirable to consult with the WHC or its advisors, ICOMOS or IUCN.

The “developer” is responsible for producing the scoping report. Its contents should include

- . An outline description of the proposed change or development, providing as much detail as is available at the time of writing;
- . A summary of the conditions present on the site and its environs, based on information collated to that point in time;
- . The Statement of Outstanding Universal Value . Details of how alternatives to changes are being considered;
- . Outline methodology and terms of reference for the HIA as a whole;
- . The organisations/people consulted and to be consulted further;
- . A topic by topic assessment of the key impacts of the development; this should include:
  - details (as known) of the baseline conditions;
  - consideration of the potential effects of the development where overall impacts or effects are not considered to be significant, a justification of why they should be “scoped out” of the HIA;
  - where overall impacts are considered to be potentially significant, details of the baseline information to be collected (including methods and appropriate study areas), likely sensitive heritage receptors in particular those related to attributes of OUV and proposed survey and assessment methodology.
- . A negotiated calendar covering the whole process, including deadlines for reporting and consultation.

### **Appendix 3A: Example Guide for Assessing Value of Heritage Assets**

HIAs for WH properties will need to consider their international heritage value and also other local or national values, and priorities or recommendations set out in national research agendas. They may also need to consider other international values which are reflected in, for example, international natural heritage designations.

Professional judgement is used to determine the importance of the resource. The value of the asset may be defined using the following grading scale: . Very High . High . Medium . Low . Negligible . Unknown potential. The following table is not intended to be exhaustive.

### **Appendix 3A: Example Guide for Assessing Value of Heritage Assets**

HIAs for WH properties will need to consider their international heritage value and also other local or national values, and priorities or recommendations set out in national research agendas. They may also need to consider other international values which are reflected in, for example, international natural heritage designations.

Professional judgement is used to determine the importance of the resource. The value of the asset may be defined using the following grading scale:

☐ Very High, ☐ High, ☐ Medium, ☐ Low, ☐ Negligible, ☐ Unknown potential.

The following table is not intended to be exhaustive

# Establishing Heritage Impact Assessment (HIA) in Nepal PROCESSES

Grading	Archaeology	Built heritage or Historic Urban Landscape	Historic landscape	Intangible Cultural Heritage or Associations
Very High	Sites of acknowledged international importance inscribed as WH property.	Sites or structures of acknowledged international importance inscribed as of universal importance as WH property.	Landscapes of acknowledged international importance inscribed as WH property.	Areas associated with Intangible Cultural heritage activities as evidenced by the national register.
	Individual attributes that convey OUV of the WH property.	Individual attributes that convey OUV of the WH property.	Individual attributes that convey OUV of the WH property.	Associations with particular innovations, technical or scientific developments or movements of global significance.
	Assets that can contribute significantly to acknowledged international research objectives.	Other buildings or urban landscapes of recognised international importance.	Historic landscapes of international value, whether designated or not.	Associations with particular individuals of global importance
			Extremely well-preserved historic landscapes with exceptional coherence, time-depth, or other critical factors.	
High	Nationally-designated Archaeological Monuments protected by the State Party's laws	Nationally-designated structures with standing remains.	Nationally-designated historic landscape of outstanding interest.	Nationally-designated areas or activities associated with globally-important Intangible Cultural Heritage activities .
	Undesignated sites of the quality and importance to be designated.	Other buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade.	Undesignated landscapes of outstanding interest.	Associations with particular innovations, technical or scientific developments or movements of national significance
	Assets that can contribute significantly to acknowledged national research objectives.	Conservation Areas containing very Important buildings.	Undesignated landscapes of high quality and importance, and of demonstrable national value.	Associations with particular individuals of national importance
		Undesignated structures of clear national importance.	Well preserved historic landscapes, exhibiting considerable coherence, time-depth or other critical factors.	

<b>Medium</b>	Designated or undesignated assets that can contribute significantly to regional research objectives.	Designated buildings. Historic (unlisted) buildings that can be shown to have exceptional qualities or historical associations.  Conservation Areas containing buildings that contribute significantly to its historic character.  Historic townscapes or built-up areas with important historic integrity in their buildings, or built settings.	Designated special historic landscapes.  Undesignated historic landscapes that would justify special historic landscape designation.  Landscapes of regional value.  Averagely well preserved historic landscapes with reasonable coherence, time-depth or other critical factors.	Areas associated with Intangible Cultural heritage activities as evidenced by local registers.  Associations with particular innovations or developments of regional or local significance.  Associations with particular individuals of regional importance
<b>Low</b>	Designated or undesignated assets of local importance.  Assets compromised by poor preservation and/or poor survival of contextual associations.  Assets of limited value, but with potential to contribute to local research objectives.	"Locally Listed" buildings.  Historic (unlisted) buildings of modest quality in their fabric or historical associations.  Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings.	Robust undesignated historic landscapes.  Historic landscapes with importance to local interest groups.  Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.	Intangible Cultural heritage activities of local significance  Associations with particular individuals of local importance  Poor survival of physical areas in which activities occur or are associated
<b>Negligible</b>	Assets with little or no surviving archaeological interest.	Buildings or urban landscapes of no architectural or historical merit; buildings of an intrusive character.	Landscapes little or no significant historical interest.	Few associations or ICH vestiges surviving
<b>Unknown potential</b>	The importance of the asset has not been ascertained.	Buildings with some hidden (i.e. inaccessible) potential for historic significance.	n/a	Little is known or recorded about ICH of the area



### Appendix 3B: Example Guide for assessing magnitude of impact

Impact Grading	Archaeological attributes	Built heritage or Historic Urban Landscape attributes	Historic landscape attributes	Intangible Cultural Heritage attributes or Associations
<b>Major</b>	<p>Changes to attributes that convey OUV of WH properties</p> <p>Most or all key archaeological materials, including those that contribute to OUV such that the resource is totally altered.</p> <p>Comprehensive changes to setting.</p>	<p>Change to key historic building elements that contribute to OUV, such that the resource is totally altered.</p> <p>Comprehensive changes to the setting.</p>	<p>Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to sound quality; fundamental changes to use or access; resulting in total change to historic landscape character unit and loss of OUV.</p>	<p>Major changes to area that affect the ICH activities or associations or visual links and cultural appreciation.</p>
<b>Moderate</b>	<p>Changes to many key archaeological materials, such that the resource is clearly modified.</p> <p>Considerable changes to setting that affect the character of the asset.</p>	<p>Changes to many key historic building elements, such that the resource is significantly modified.</p> <p>Changes to the setting of an historic building, such that it is significantly modified.</p>	<p>Change to many key historic landscape elements, parcels or components; visual change to many key aspects of the historic landscape; noticeable differences in noise or sound quality; considerable changes to use or access; resulting in moderate changes to historic landscape character.</p>	<p>Considerable changes to area that affect the ICH activities or associations or visual links and cultural appreciation.</p>
<b>Minor</b>	<p>Changes to key archaeological materials, such that the resource is slightly altered.</p> <p>Slight changes to setting.</p>	<p>Change to key historic building elements, such that the asset is slightly different.</p> <p>Change to setting of an historic building, such that it is noticeably changed.</p>	<p>Change to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; limited changes to noise levels or sound quality; slight changes to use or access; resulting in limited change to historic landscape character.</p>	<p>Changes to area that affect the ICH activities or associations or visual links and cultural appreciation.</p>
<b>Negligible</b>	<p>Very minor changes to key archaeological materials, or setting.</p>	<p>Slight changes to historic building elements or setting that hardly affect it.</p>	<p>Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in a very small change to historic landscape character.</p>	<p>Very minor changes to area that affect the ICH activities or associations or visual links and cultural appreciation.</p>
<b>No change</b>	<p>No change.</p>	<p>No change to fabric or setting.</p>	<p>No change to elements, parcels or components; no visual or audible changes; no changes in amenity or community factors.</p>	<p>No change</p>

### Appendix 3C: Example Inventory Entry

The following list gives a suggested set of data fields which could be used in supporting tables or inventories which collate information on an individual or group of heritage assets.

Unique Identity number

Asset name

Location (map reference)

Type of asset (burial mound, church, fort, landscape, ICH etc)

Date

Statutory designation (e.g. on national or local register, WHS)

Brief description

Condition

Authenticity

Integrity

Inter-relationships (list)

Sensitivity

Importance (Very high, high,

Development magnitude of impact – construction (Major, Moderate, Minor, Negligible, No change)

Development significance of effect – construction (Major beneficial, Moderate beneficial, Minor beneficial, Negligible beneficial; No Change, Negligible adverse, Minor adverse, Moderate adverse, Major adverse)

Operational magnitude of impact (as above)

Operational significance of effect

### Appendix 4: Heritage Impact Report Contents

The HIA Report should provide the evidence on which decisions can be made in a clear, transparent and practicable way. The level of detail needed will depend on the site and proposed changes. The Statement of OUV will be central to the evaluation of the impacts and risk to the site.

The report should include:

- ☐ the proper name of the WH property,
- ☐ its geographical coordinates,
- ☐ the date of inscription,
- ☐ the date of the HIA report,
- ☐ the name of the organization or entities responsible for preparing the HIA report,
- ☐ for whom it was prepared, and
- ☐ a statement on whether the report has been externally assessed or peer-reviewed.

Outline report contents

- 1 Non-technical summary – must contain all key points and be useable alone.
- 2 Contents
- 3 Introduction
- 4 Methodology
  - ☐ Data sources
  - ☐ Published works

- ☐ Unpublished reports
  - ☐ Databases
  - ☐ Field Surveys
  - ☐ Impact Assessment Methodology
  - ☐ Scope of Assessment
  - ☐ Evaluation of Heritage Resource
  - ☐ Assessment of Scale of Specific Impact and Change
  - ☐ Evaluation of Overall Impact
  - ☐ Definition of the Assessment Area
- 5 Site history and description –
- Key in this section will be the Statement of OUV, and a description of the attributes which convey OUV and which contribute to the Statements of authenticity and integrity. This section should also include any nationally or locally designated sites, monuments or structures as well as non-designated sites. It should set out the historical development of the study area, and describe its character, such as the historic landscape, including field patterns, boundaries and extant historic elements of the landscape and cultural heritage. It should describe the condition of the whole and of individual attributes and components, physical characteristics, sensitive viewpoints and intangible associations which may relate to attributes. This should focus on areas affected in particular but must include a description of the whole.
- 6 Description of changes or developments proposed
- 7 Assessment and evaluation of overall impact of the proposed changes
- This part should set out an assessment of specific changes and impacts on the attributes of OUV and other heritage assets. It should include a description and assessment of the direct or indirect impacts, including physical impacts, visual, or noise, on individual heritage attributes, assets or elements and associations, and on the whole. Impact on OUV should be evaluated through assessment of impact on the attributes which convey the OUV of the site. It should consider all impacts on all attributes; professional judgement is required in presenting the information in an appropriate form to assist decision-making.
- It should also include an evaluation of the overall significance of effect – overall impact - of the proposals for development or change on individual attributes and the whole WH property. This may also need to include an assessment of how the changes may impact on the perception of the site locally, nationally and internationally. I
- 8 Measures to avoid, to reduce or to compensate for impacts - Mitigation Measures Such measures include both general and site or asset-specific measures and cover
- ☐ those needed before the development or change proceeds (such as archaeological excavation),
  - ☐ those needed during construction or change (such as a watching brief or physical protection of assets) and
  - ☐ any post-construction measures during the operation of any proposed change or development (such as interpretation or access measures, awareness-building, education, reconstruction proposals),
  - ☐ proposals to disseminate information, knowledge or understanding gained by the HIA and any detailed desk, field or scientific studies.
- 9 Summary and Conclusions, including

- ☐ A clear statement on effects on the Outstanding Universal Value of the WHS, its integrity and authenticity,
  - ☐ The risk to the Inscription of the site as a WH property,
  - ☐ Any beneficial effects, including better knowledge and understanding and awareness-raising.
- 10 Bibliography
- 11 Glossary of terms used
- 12 Acknowledgements and authorship
- 13 Illustrations and photographs showing for example
- ☐ Location and extent of sites, including buffer zones
  - ☐ Any study area defined
  - ☐ Development or proposals for change
  - ☐ Visual or inter-visibility analyses
  - ☐ Mitigation measures
  - ☐ Key sites and views
- 14 Appendices with detailed data, for example
- ☐ Tables of individual sites or elements, summary description and summary of impacts
  - ☐ Desk studies
  - ☐ Field study reports (such as geophysical survey, trial evaluation, excavation)
  - ☐ Scientific studies
  - ☐ List of consultees and consultation responses
  - ☐ The scoping statement or project brief.

## B. WHITR-AP HIA Report Template

WHITRAP, Shanghai – ICCROM –  
World Cultural Heritage Old Town Lijiang Protection and Management Bureau

International Training Course on Heritage Impact Assessment  
Lijiang, China  
October 15 – 24, 2012

### HIA Report Template

#### COVER AND INSIDE PAGES

Title  
Name and identification reference of the heritage resource  
Name of the organization or entities responsible for preparing the HIA report  
For whom it was prepared  
Date of the HIA report  
A statement of whether the report has been externally assessed or peer-reviewed

#### EXECUTIVE SUMMARY

Non-technical summary containing all key points and useable as a stand-alone document

#### CONTENTS

LISTS OF FIGURES/ TABLES/ DIAGRAMS

LIST OF ABBREVIATIONS / ACRONYMS

GLOSSARY OF TERMS USED

ACRONYMS

ACKNOWLEDGEMENTS AND AUTHORSHIP

#### 1. INTRODUCTION

Background to the HIA

Response to development proposal / response to a disaster / request from an Authority

Mandate and Terms of Reference

Aims of HIA as defined in Brief

Scope of HIA

- Spatial boundaries of HIA
- Range of Heritage to be assessed
- Any limitations or restrictions imposed by the brief

Basic information re: Heritage

Proper name of the property or heritage resource

Geographical coordinates

Date of inscription / listing / where relevant

#### 2. METHODOLOGY

Introduction

Framework guiding the methodology (national guidelines, ICOMOS Guidelines etc.)



Flow chart

Description of steps/ tasks carried out as part of the HIA

Data collection / Baseline

Data made available by the commissioning authority

Desk-Based Research

- Data Sources
- Published works
- Unpublished works
- Databases

Assessment Visit(s)

Additional data collection: surveys, interviews, field work

Significance Assessment

Whether based on an existing Statement of OUV or of Significance or developed as part of the HIA

Impact Assessment

Identification of sources of impacts

Identification of potential impacts

Assessment of Impacts

- On overall OUV / Values and Significance
- On individual attributes

Mitigation Design

- Option modeling
- Evaluating Options
- Mitigation
- Monitoring Plan

### 3. LEGISLATION, GUIDELINES AND STANDARDS

Legislation and Statutory Requirements

National

State / Local

UNESCO WHC Statutory documents

Heritage Guidelines and Standards

National

State / Local

UNESCO and Adv Body Guidelines and Charters

### 4. DESCRIPTION AND ASSESSMENT OF SIGNIFICANCE OF THE CULTURAL HERITAGE RESOURCE

Background to the Heritage

Setting

- Physical background:
  - Geology and landform setting
  - Ecological context (flora and fauna, water and drainage, climate etc.)
- Historical development of the study area
- Demographic background
- Traditional land use

Status of Protection of the Heritage

Past and present conservation and management context

- Formal context (Antiquities Legislation etc.)
- Non-Formal context (traditional management and protection)

Previous interventions  
Previous HIA studies or related studies

Description of the heritage resource and its attributes

If World Heritage: Assessment of Significance

- Statement of OUV/ Retrospective SOUV / augmented for specific focus
- Full text of Criteria, Integrity and Authenticity appended
- Character Defining Attributes

If not World Heritage but other determined significance

- Statement of Significance
- Full text of determination appended
- Character Defining Attributes

If significance is determined as part of this HIA

- Statement of Significance
- Full text of determination and an account of the determination process appended
- Character Defining Attributes

Baseline Conditions and Existing Impacts

Condition of the whole

Baseline conditions and existing impacts for individual attributes and components, eg.:

- Landscape
- Archaeological sites
- Built Heritage
- Living Heritage
- Current uses and community value

Summary assessment of Existing Impacts

## 5. DESCRIPTION OF THE PROPOSED CHANGES

Description of Interventions and Development Proposed

Nature of the proposal

- Scope of the intervention or proposal
- Rationale given for the proposed intervention
- Detailed plans
- Extent and nature of works
- Resulting changes
- User requirements

Adherence to existing regulations, guidelines and standards

Management proposals

- Management proposals during construction
- Management proposals during operation

## 6. ASSESSMENT AND EVALUATION OF IMPACTS OF PROPOSED CHANGES

Identification of Factors /Sources potentially impacting the heritage and its attributes

- During pre-implementation/ planning phase

- During works / construction / implementation
- During operation of the project
- During de-commissioning of the project (as relevant)

Heritage attributes affected by identified sources

Identification of which attributes of the heritage are potentially impacted including tangible and intangible heritage

Level of importance in terms of its function as character defining attribute

Types of Potential Impact:

On individual attributes

(may require separate assessments for Built, Archaeological, Landscape and Living Heritage assets etc.)

Direct impacts and Indirect impacts

Measure of and reversibility

On overall OUV/Significance

Direct impacts and Indirect impacts

Assessment of the severity (level and duration)

- On individual attributes  
(may require separate assessments for Built, Archaeological, Landscape and Living Heritage assets)
- On overall OUV / Significance

Evaluation of the overall significance of effect – overall impact – of the proposal and advisory

May include evaluation of how the changes may impact on the perception of the site locally, nationally and internationally

Non-conformity with heritage standards

Heritage loss and deterioration

Social impacts resulting from change

Summation (*Triage*: Relevance and for which impact)

## 7. MITIGATION RECOMMENDATIONS

Overarching Mitigation for the heritage as a whole

- Scheduling of the mitigation
- Identification of the responsible party

Attribute specific Mitigation

- Scheduling of the mitigation
- Identification of the responsible party

Further Investigations and studies required to implement the mitigation recommendations

Discussion of effectiveness of proposed mitigation and beneficiation

## 8. MONITORING RECOMMENDATIONS

Overarching Monitoring for the heritage as a whole

- Scheduling of the monitoring
- Identification of the responsible party
- Indicators to be used for monitoring

Attribute specific Monitoring

Scheduling of the monitoring

- Identification of the responsible party
- Indicators to be used for monitoring

## 9. EVALUATION SYNTHESIS AND ADVISORY

Introduction

Re-stating the context of the Heritage Impact Assessment  
Revisiting the Heritage Impact Assessment methodology

Conclusions

Summary of impacts

Summary of Mitigation and Monitoring

The implications of in-action

Statement of effects on OUV, Integrity and Authenticity and focused  
significance

Risk to protection status

Beneficial effects forthcoming from this HIA

Dissemination of information, knowledge or understanding gained by the HIA  
and any detailed desk, field or scientific studies

Concluding advisory statement of the acceptability of the proposed project or  
change in terms of its potential impacts on heritage.

## REFERENCES AND BIBLIOGRAPHY

### APPENDICES

Desk studies

Field study reports

Scientific studies

List of consultees and consultation responses

Scoping statement / project brief

### ILLUSTRATIONS

Location and extent of study area

Site maps including buffer zones

Plans of proposed development or change

Visual and/or inter-visibility analyses

Mitigation measures

Key sites and views

Matrices

## C. HIA Hong Kong

<http://www.epd.gov.hk/eia/register/study/latest/figure/esb1442006Appendixb.htm>

### **Criteria for Cultural Heritage Impact Assessment**

#### 1 Baseline Study

##### 1.1 A baseline study shall be conducted:

- a. to compile a comprehensive inventory of archaeological sites (including marine archaeological sites), historic buildings and structures within the proposed project area, which include:
  - (i) all sites of archaeological interest (including marine archaeological sites);
  - (ii) all pre-1950 buildings and structures;
  - (iii) selected post-1950 buildings and structures of high architectural and historical significance and interest; and
  - (iv) landscape features include sites of historical events or providing a significant historical record or a setting for buildings or monuments of architectural or archaeological importance, historic field patterns, tracks and fish ponds and cultural element such as fung shui woodlands and clan grave.
- b. To identify the direct and indirect impacts on the site of cultural heritage at the planning stage in order to avoid causing any negative effects. The impacts include the direct loss, destruction or disturbance of an element of cultural heritage, impact in its settings causing impinge on its character through inappropriate sitting or design, potential damage to the physical fabric of archaeological remains, historic buildings or historic landscapes through air pollution, change of water-table, vibration, recreation pressure and ecological damage by the development. The impacts listed are merely to illustrate the range of potential impacts and not intended to be exhaustive.

##### 1.2 The baseline study shall also include a desk-top study and a field survey.

##### 1.3 Desk-top Research

- 1.3.1 Desk-top searches should be conducted to analyse, collect and collate extant information. They include:
  - a. Search of the list of declared monuments protected by the Antiquities and monuments Ordinance (Chapter 53).
  - b. Search of the list of deemed monuments through the Antiquities and Monuments Office (AMO) of the Leisure and Cultural Services Department.
  - c. Search of the list of sites of cultural heritage identified by the AMO.
  - d. Search of publications on local historical, architectural, anthropological, archaeological and other cultural studies, such as, Journals of the Royal Asiatic Society (Hong Kong Branch), Journals of the Hong Kong archaeological society, Antiquities and Monuments Office Monograph Series and so forth.



- e. Search of other unpublished papers, records, archival and historical documents through public libraries, archives, and the tertiary institutions, such as the Hong Kong Collection and libraries of the Department of Architecture of the University of Hong Kong and the Chinese University of Hong Kong, Public Records Office, photographic library of the Information Services Department and so forth.
- f. Search of any other unpublished archaeological investigation and excavation reports kept by the AMO.
- g. Search of historical documents in the Public Records Office, the Land Registry, District Lands Office, District Office and the Hong Kong Museum of History and so forth.
- h. Search of cartographic and pictorial documents. Maps of the recent past searched in the Maps and Aerial Photo Library of the Lands Department.
- i. Study of existing Geotechnical information (for archaeological desk-top research).
- j. Discussion with local informants.

#### 1.4 Field Evaluation

- 1.4.1 The potential value of the development site with regard to the cultural heritage could be established easily where the site is well-documented. However, it does not mean that the site is devoid of interest if it lacks information. In these instances, a site visit combined with discussions with appropriate individuals or organizations should be conducted by those with expertise in the area of cultural heritage to clarify the position.

#### 1.4.2 Historic buildings and structures survey

- a. Field scan of all the historic buildings and structures within the project area.
- b. Photographic recording of each historic building or structure including the exterior (the elevations of all faces of the building premises, the roof, close up for the special architectural details) and the interior (special architectural details), if possible, as well as the surroundings of each historic building or structure.
- c. Interview with local elders and other informants on the local historical, architectural, anthropological and other cultural information related to the historic buildings and structures.
- d. Architectural appraisal of the historic buildings and structures.

#### 1.4.3 Archaeological Survey

A detailed archaeological field evaluation programme should be designed to assess the archaeological potential of the project area. The programme should clearly elaborate the strategy and methodology adopted, including what particular question(s) can be resolved, how the archaeological data will be collected and recorded, how the evidence will be analyzed and interpreted and how the archaeological finds and results will be organized and made available. Effective field techniques should also be demonstrated in the programme such as the following (but not limited to):

- a. Definition of areas of natural land undisturbed in the recent past.
- b. Field scan of the natural land undisturbed in the recent past in detail with special attention paid to areas of exposed soil which were searched for artifacts.
- c. Conduct systematic auger survey/shovel testing at 20m interval to establish the horizontal spread of cultural materials deposits.
- d. Excavation of test pits to establish the vertical sequence of cultural materials. The hand digging of 1 x 1 m or 1.5 x 1.5 m test pits to determine the presence or absence of deeper archaeological deposits and their cultural history.

1.4.4 If the field evaluation identifies any additional sites of cultural heritage within the study area which are of potential historic or archaeological importance and not recorded by AMO, the office should be reported as soon as possible. The historic and archaeological value of the items will be further assessed by the AMO.

## 1.5 The Report of Baseline Study

1.5.1 The study report should have concrete evidence to show that the process of the above desk-to and field survey has been satisfactorily completed. This should take the form of a detailed inventory of the sites of cultural heritage supported by full description of their cultural significance. The description should contain detailed geographical, historical, archaeological, architectural, anthropological, ethnographic and other cultural data supplemented with illustrations below and photographic and cartographic records.

### 1.5.2 Historic Buildings and Structures

- a. A map in 1:1000scale showing the boundary of each historic building or structure.
- b. Photographic records of each historic building or structure.
- c. Detailed record of each historic building or structure including its construction year, previous and present uses, architectural characteristics, as well as legends, historic persons and events, and cultural activities associated with the structure.

### 1.5.3 Archaeological Sites

- a. A map showing the boundary of each archaeological site as supported and delineated by field walking, augering and test-pitting;
- b. Drawing of stratigraphic section of test-pits excavated which shows the cultural sequence of a site.

1.5.4 A fully bibliography and the source of information consulted should be provided to assist the evaluation of the quality of the evidence. It is expected that the study and result are up to an internationally accepted academic and professional standard.

## 2 Impact Assessment

2.1 Culture heritage impact assessment must be undertaken to identify the impacts of the sites of cultural heritage which will be affected by the proposed development

subject to the result of desktop research and field evaluation. The prediction of impacts and an evaluation of their significance must be undertaken by an expert in cultural heritage. During the assessment, both the direct impacts such as loss or damage of important features as well as indirect impacts such as change of water table levels which may affect the preservation of the archaeological and built heritage in situ should be stated. A detailed description and plans should be provided to elaborate to what extent the site of cultural heritage will be affected.

- 2.2 Preservation in totality must be taken as the first priority. Please refer to paragraph 4.3.1(c), item 2 of Annex 10, items 2.6 to 2.9 of Annex 19 and other relevant parts of the Technical Memorandum on Environmental Impact Assessment Process for the detailed requirements of the impact assessment.

### 3 Mitigation Measures

- 3.1 It is always a good practice to recognize the site or monument early in the planning stage and site selection process, and to avoid it, i.e. preserve it in-situ, or leaving a buffer zone around the site. Built heritage, sites and landscapes are to be in favour of preservation unless it can be shown that there is a need for a particular development which is of paramount importance and outweighs the significance of the heritage feature.
- 3.2 If avoidance of the cultural heritage is not possible, amelioration can be achieved by reduction of the potential impacts and the preservation of heritage features, such as physically relocating it. Measures like amendments of the sitting, screening and revision of the detailed design of the development are required to lessen its degree of exposure if it causes visual intrusion to the cultural heritage and affecting its character.
- 3.3 All the assessments should be conducted by an expert in cultural heritage and further evaluated and endorsed by the Antiquities and Monuments Office and the Antiquities Advisory Board.
- 3.4 Besides refer to paragraph 4.3.1(d), items 2.10 to 2.14 of Annex 19 and other relevant parts of the Technical Memorandum. Proposals for mitigation measures should be accompanied with a master layout plan together with all detailed treatment, elevations, and landscape plan. A rescue programme, when required, may involve preservation of the historic building or structure together with the relics inside, and its historic environment through relocation, detailed cartographic and photographic survey or preservation of an archaeological site “by record”, i.e. through excavation to extract the maximum data as the very last resort.
- 3.5 The programme for implementation of agreed mitigation measures should be able to be implemented. It is to be clearly stated in the EIA report, as required in Annex 20 of the Technical Memorandum. In particular, item 6.7 of Annex 20 requires to define and list out clearly the proposed mitigation measures to be implemented, by whom, when, where, to what requirements and the various implementation responsibilities. A comprehensive plan and programme for the protection and conservation of the partially preserved Site of Cultural Heritage, if any, during the planning and design stage of the proposed project must be detailed.

**D. Example Heritage Impact Assessment:  
Tilaurakot Bus Park and Footpath**

Tilaurakot, the archaeological remains of ancient Shakya Kingdom  
World Heritage Tentative List

**Heritage Impact Assessment HIA**

- |   |
|---|
| <ol style="list-style-type: none"><li>1. Impact of past activities</li><li>2. Impact of specific project</li><li>3. Impact of potential development</li></ol> |
|---|



Submitted to:  
Department of Archaeology  
Ministry of Culture, Tourism and Civil Aviation  
Government of Nepal  
Prepared by:  
Kai Weise  
31 January 2014

*Final amendments submitted on 5 February 2014*

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## Preface

The assignment was to carry out a Heritage Impact Assessment of planned development works at Tilaurakot, the archaeological remains of ancient Shakya Kingdom, a site on the Tentative List for World Heritage nomination.

  
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फ्याक्स: ९७७-९-४२६२८५६  
अभिलेखालय भवन  
रामशाहपथ, काठमाडौं  
मिति २०७०/९/१८

पत्र संख्या:-  
चलानी नं:- ८९८

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केशरमहल मार्ग, १४१  
बडा नं. २९, काठमान्डौ ।  
विषय :- कार्यादेश सम्बन्धमा ।

प्रस्तुत सम्बन्धमा प्राचीन कपिलवस्तु राज्यको राजधानी हालको तिलौराकोट पुरातात्विक क्षेत्रमा Heritage Impact Assessment (HIA) को लागि लुम्बिनी विकास कोषबाट अनुरोध भई आएकोमा विभागका विज्ञहरुको बैठकको निर्णयानुसार तत्काल HIA गर्नुपर्ने भएकाले Janaury को अन्त्यसम्म कार्य सम्पन्न गर्नको लागि मिति २०७०/९/१७ को विभागीय निर्णय अनुसार कार्यादेश दिइएको व्यहोरा अनुरोध गर्दछु ।

११/९/२०७०  
भास्कर ज्ञवाली  
ए.कम.पो.अधिकृत  
पुरातत्व विभाग

“जनमुखि प्रशासन : अनुशासन र सुशासन”

For the preparation of this report, I was supported by Bhesh Narayan Dahal, Saubhagya Pradhanang and Ram Bahadur Kunwar of the Department of Archaeology, Acharya Karma Sangbo Sherpa, Ajitman Tamang and Himel Kumar Upreti of Lumbini Development Trust, Takefumi Kurose and Ryotaro Takanashi of Tokyo University, Robin Coningham and Mark Manuel of Durham University, as well as Kosh Prasad Acharya and Basanta Bidari.

## Executive Summary

“Tilaurakot, the archaeological remains of ancient Shakya Kingdom”, a cultural heritage property on the tentative list for World Heritage nomination, includes the fortified settlement as well as the adjacent areas showing ancient structures and activities. The context and the visual linkage to the present landscape are important, which includes the fields and the Banganga River. The importance of Tilaurakot is also associated to the life of the Gautama Buddha and living traditions of Buddhism.

The need for a dedicated location for parking of busses and cars has been identified. **The location of the parking facilities proposed by the project is not appropriate.** The proposed location is just outside the fortified city directly on top of an integral part of the archaeology of the city: the military architectural ditch complex. There are clear indications of various activities that took place in the area and more detailed archaeological surveys would be required. A location with sufficient distance from the archaeological site would need to be found for the parking. Any such site would need to be surveyed for potential archaeology before it can be considered acceptable for development as a parking area for busses and cars.

A tourism information centre is required for visitors as well as an office for the site management. **The proposed location of the building is not appropriate** and would need to be moved in conjunction with the parking area. The consideration of linking this to the museum should also be considered. **The design of the building must be amended to fit the new location, new requirements and an appropriate design.** The design and appearance of the building must acknowledge a universal image of a sacred site without adopting any given architectural style. A simple, clear, practical design would be considered which does not profess to be linked to a style of any particular culture or ethnicity. It could however integrate certain elements of traditional local architecture.

The requirement for visitor walkways around the archaeological site at Tilaurakot has been acknowledged to guide the visitors around the property, ensure they do not walk on archaeological vestiges, are provided views from vantage points, and allow visits even during the rainy season. The introduction of any new elements of construction such infrastructure within the archaeological area must be **non-intrusive** and **reversible**. The structure should preferably be placed above the ground, but must not be visibly intrusive nor should the structure impact the surface in respect to drainage. The archaeological research at Tilaurakot is still ongoing and further research is required to provide an overall detailed image of the city, its fortifications, the surrounding developments as well as the historic significance of the site. This means that whatever structures are built within the area demarcated as having or potentially having archaeology vestiges must additionally be **movable**.

A proposal has been included to create a “Preserved Area” as provided for in the Ancient Monument Preservation Act 1956 (fifth amendment) under article 17 to control development around the heritage property.

Additionally appropriate proposals for the development of the bus park, the visitor centre and the visitor footpath prepared by a team from Tokyo University, have been included in the annex.

## 1. Introduction

In 1996, the Government of Nepal submitted a tentative list of six cultural properties which included “Tilaurakot, the archaeological remains of ancient Shakya Kingdom”. The site was given the reference number 840. At the time no indication were provided on the proposed criteria for inscription or any kind of description on the value or extent of the heritage property. Clarification is required of the criteria for possible inscription on the World Heritage List, along with the state of authenticity and integrity, as well as the threats and required protection.

Tilaurakot has been considered to be ancient Kapilavastu. There has however been contention due to the lack of sufficient information. This means that further archaeological research must be prioritized. The archaeological site has just recently been understood to extend far beyond the ancient fortifications with new findings of a monastic complex to the east and an industrial workshop area outside the city walls.

To establish a basis for the impact assessment, the following assumptions have been made to ensure that any planned activities in and around heritage property does not have any irreversible and intrusive impact.

The possible criteria for inscription could be all or a combination of the following: (UNESCO, 2011, pp. 20-21)

- (ii) exhibit an important **interchange of human values**, over a span of time or within a cultural area of the world, on developments in **architecture or technology, monumental arts, town-planning or landscape design**;
- (iii) bear a unique or at least exceptional **testimony to a cultural tradition or to a civilization which is living or which has disappeared**;
- (v) be an outstanding example of a **traditional human settlement, land-use, or sea-use** which is representative of a culture (or cultures), or **human interaction with the environment** especially when it has become **vulnerable** under the impact of irreversible change;
- (vi) be directly or **tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works** of outstanding universal significance.

This would indicate the importance of the archaeological site which includes the fortified settlement as well as the adjacent suburban areas showing ancient structures and activities. The context and the visual linkage to the present landscape is important, which includes the fields and the Banganga River. The importance of Tilaurakot is also associated to the life of the Gautama Buddha and living traditions of Buddhism.

If Tilaurakot would be considered an extension to Lumbini as a serial site, the criteria would be restricted to (ii) and (vi), the criteria for the nomination of Lumbini.

## 2. Impact of past activities

### 2.1 History of research and archaeological activities since 1896

Dr. A. Fuhrer (1897), Tilaurakot was first noted as a place of archaeological interest during the 1896 tour of Dr A. Fuhrer, Archaeological Surveyor for the North-Western Provinces and Oudh, during which he stated that there were a number of important Buddhist remains in its vicinity (Fuhrer, 1897,22).

Waddell appears to have visited Tilaurakot in 1898 and 1899 and after requesting the Nepali authorities to cut a trench into the Eastern Stupa, requested them to cut another trench into its core (Mukherji, 1901: 21).

P. C. Mukherji (1899), In 1899 the ruins at Tilaurakot were investigated, surveyed and excavated by P.C. Mukherji, also of the Archaeological survey of India (Mukherji, 1901).

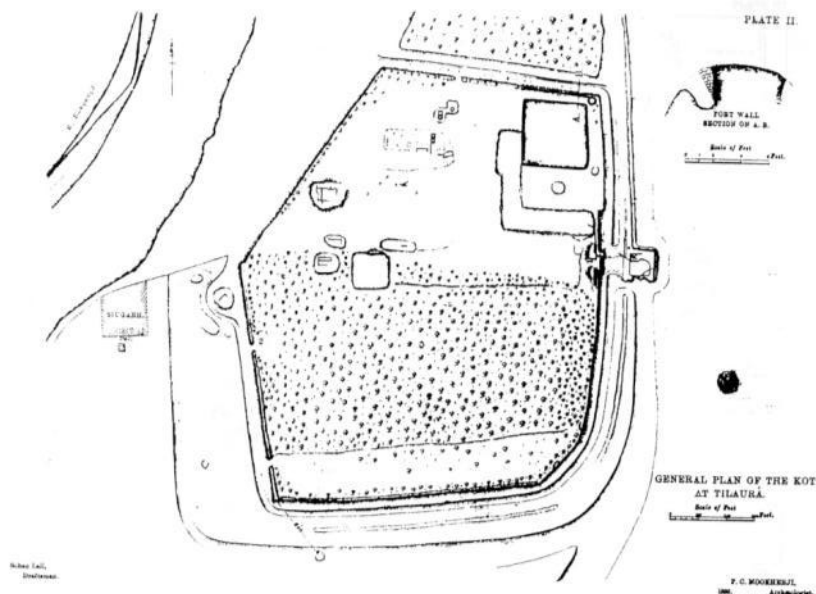


Figure 1: Map of Tilaurakot prepared Mukherji (1901)

Debala Mitra (1962), The site was not investigated again until 1962 when joint excavations were conducted at the site by the Department of Archaeology, HMG of Nepal and the Archaeological Survey of India, under the direction of Debala Mitra (Mitra, 1972).

Tarananda Mishra (1967-72), Further work was therefore carried out by the Department of Archaeology, HMG Nepal between 1967 and 1972 (Mishra, 1978).

Babu Krishna Rijal (1972-73) and a joint team from Rissho University of Japan DoA, Nepal (1967-77)

A Japanese team from the University of Rissho helped excavate a surface structure, interpreted by some scholars as a palace on mound VII (Rijal, 1979,33)

In 1996, Tilaurakot along with Ramagram was inscribed on the tentative list of World Heritage. In preparation for the nomination of Tilaurakot and Ramagrama as part of a serial nomination of World Heritage Sites associated with the life of the Lord Buddha, non-destructive archaeological investigations were carried out in 1997 by a UNESCO Mission comprising of Robin Coningham and Armin Schmidt. This was followed up by a second phase in 1999 where the two experts were joined by Ruth Young. (Coningham and Schmidt, 1997; Coningham et al., 1999)

Excavations on the fortification walls began in 2005 were carried out jointly between the Lumbini Development Trust and the Department of Archaeology. The work was continued by Lumbini Development Trust from 2007 to 2012 under the supervision of Chief Archaeologist Basanta Bidari.



*Figure 2: excavations in 2009*



*Figure 3: excavations in 2010*

2012 – A short excavation season of one month was conducted by the LDT and DoA in collaboration with Durham University. It focused on excavating a 4 by 4 metre trench on the metal-working area of Lohasahrya to the south of Tilaurakot. The 3 metre deep sequence demonstrated that this iron smelting site had been established as early as 400 BC. An auger core profile across the silted fill of the southern ditch demonstrated the presence of a double moat between the city wall and the polluting industrial complex.

2013 - A short excavation season of one month was conducted by the LDT and DoA in collaboration with Durham University. It focused on re-excavating the rampart trench of Debala Mitra and demonstrated the presence of an earlier phase of fortification in the form of a timber palisade. This palisade was succeeded by a clay rampart and, finally, by a brick wall.

2014 – A two month excavation season was initiated by UNESCO and funded by the Japan government in partnership with the Nepal government, along with Durham and Stirling Universities. Its preliminary findings have confirmed the presence of a major monastic complex, including two large tanks, in the vicinity of the Eastern Stupa. In addition, fresh geophysical survey in a portion of the north of the city has reconfirmed the presence of a formal grid-iron street pattern, complete with a large walled tank to the south of the Central Complex and additional structures. Subsequent excavation trenches have confirmed many of these findings as well as exposing a 4 metre stretch of the initial palisade fortification of the northern perimeter of the site.



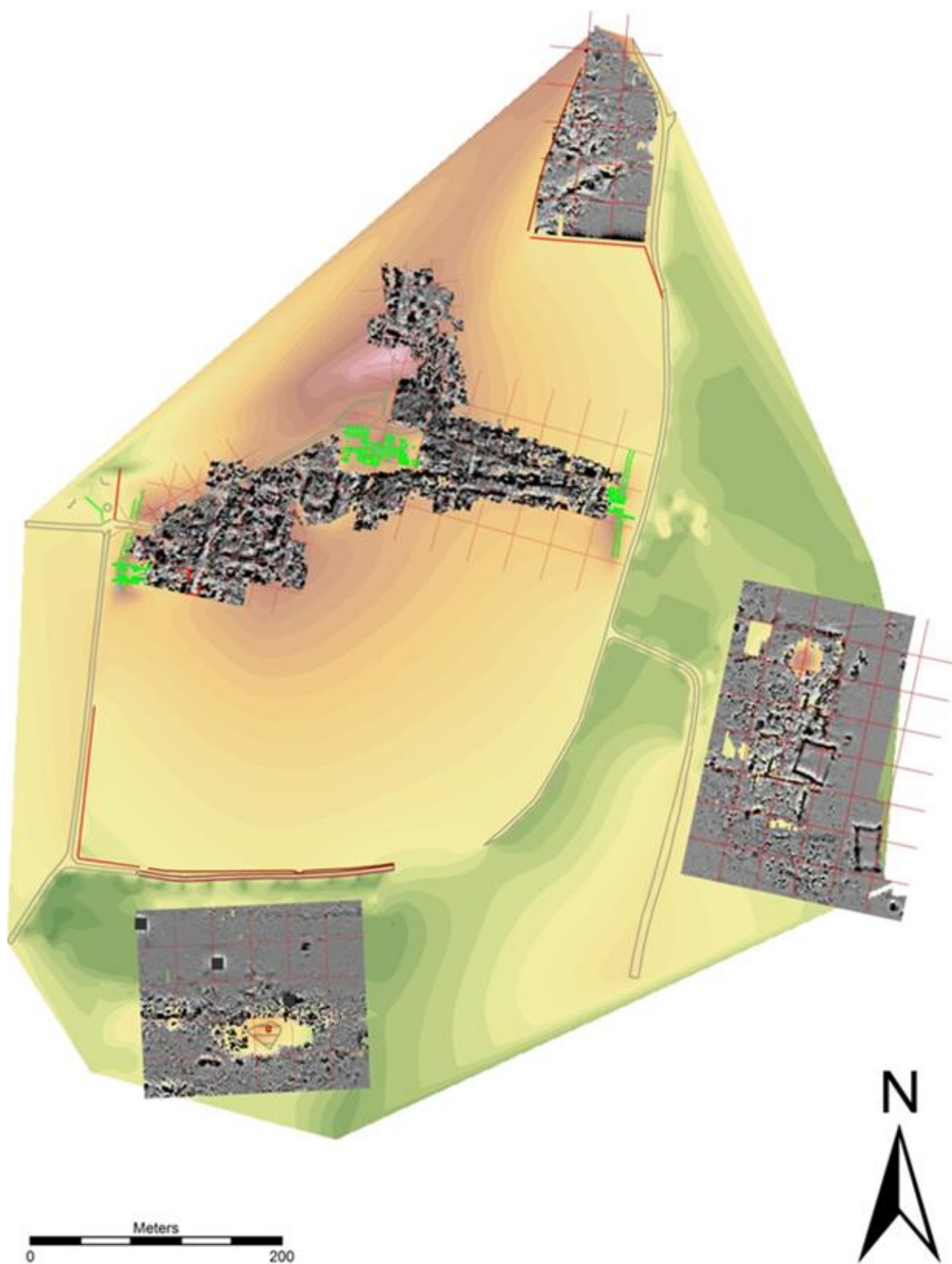


Figure 4: Map showing finding of geophysical survey in Tilaurakot prepared by the Durham University team

## 2.2 Development activities, their impact assessment and future rectification

### 2.2.1 Wall, gate, entrance building

The archaeological site was initially fenced in using wooden posts and barbed wire. This was replaced with a brick wall constructed. This wall around the fortification sits on top of archaeology, in most cases along a critical part of the fortification complex, the moat. The wall impacts the visual integrity of the site. The wall also creates a misinterpretation of the context, since it only encircles part of the heritage site and divorces the site from its industrial and religious hinterland as well as the Northern Suburb. In certain locations it clearly blocks very important ancient linkages such as where the wall blocks off the eastern gate from the surrounding landscape, the route that Gautama Buddha is said to have exited the city. Within a new planning of the site, this wall will have to be removed, with great care being taken to ensure that all the rubble and components of the wall are entirely removed from the heritage site.

### 2.2.2 Road including blacktopping

The roads that run around the main fortifications are actually within the archaeological site and over the ancient fortification moat. Over the past few years these roads have been blacktopped. Clearly these roads will need to be removed in the future and vehicular traffic in the area, especially within the archaeological area will need to be planned out respecting the heritage site. When removing the blacktopping, it must be ensured that the material is entirely removed from the heritage site. Any planned rehabilitation of the city's ancient moat would necessitate the removal of the road. The road also divorces the city from the Eastern Mound. The road has also damaged the eastern side of the Northern Suburb. This area needs to be further investigated archaeologically.



*Figure 5: Southwest corner of fortification walled in with blacktopped road*



*Figure 6: Wall and blacktopped road along eastern side of fortification*

### 2.2.3 Buildings in surrounding areas

The Risshoin Shanti Vihara, Japanese Monastery, was built within a compound close to the south-west of the city's fortification moat. There are scatters of ceramics in its vicinity and the adjacent Royal Thai monastery currently displays archaeological materials recovered from the excavations of its complex. This area needs to be further investigated archaeologically.

Mukherji identified a series of possible archaeological features within the area of Shivagadh. No subsequent archaeological investigations have been undertaken in this potentially significant archaeological area. This area needs to be further investigated archaeologically. Buildings within Shivagadh village: even within the adjacent village, there are a few buildings that have been built in concrete. These are however single storey structures, but however show a tendency of changing building trends. With economic improvement, the villagers will want to build larger buildings, possibly to cater to the tourists. The economic benefit to these villagers must be considered, ensuring that it however does not negatively impact the heritage site.

The hamlet adjacent to the Northern Suburb, Dhamanihawa, has also expanded over recent years although it has not been archaeologically assessed. It may be anticipated that the Twin Stupas will also be associated a monastic complex.

Though till present there does not seem to be too great an impact on the heritage site a clear trend of future building construction can already be perceived. This needs to be brought under control immediately, with a zoning plan and building control procedures. Incentives and appropriate alternative construction styles must be provided for the development of the area.



Figure 8: New building in Shivgadh village



Figure 7: the entrance to the Royal Thai Monastery

#### 2.2.4 Museum Compound Area

Augering to the south of the Museum Compound indicated an absence of archaeological deposits in the vicinity of the proposed Bus and Car Park; however, some traces were identified within an adjacent grove. It is recommended that the grove is separated from the proposed development, or is incorporated as an undeveloped area of tree growth. Augering within the Archaeological Museum compound identified archaeological deposits within the area between the main Museum building and the sculptural display area. However, there is no cultural material south of this structure. Any such thoroughfare through the Museum should be constrained to this area. Any further development of the Museum building itself should be subjected to a more detailed HIA.



## 2.2.5 The link between Tilaurakot and the Banganga

The links between the urban core and river are attested to by textual records, and even though the course of the river has shifted north and west, the land between city and river should be preserved as an integral part of the site. Indeed, geo-archaeological work in the north-west of the city demonstrates the early history and occupation of the site was intimately linked with the river and its flood events. Any use beyond agricultural should be prohibited, and any present development in this zone should be reversed where possible. This area should also be targeted for further environmental and archaeological analysis.

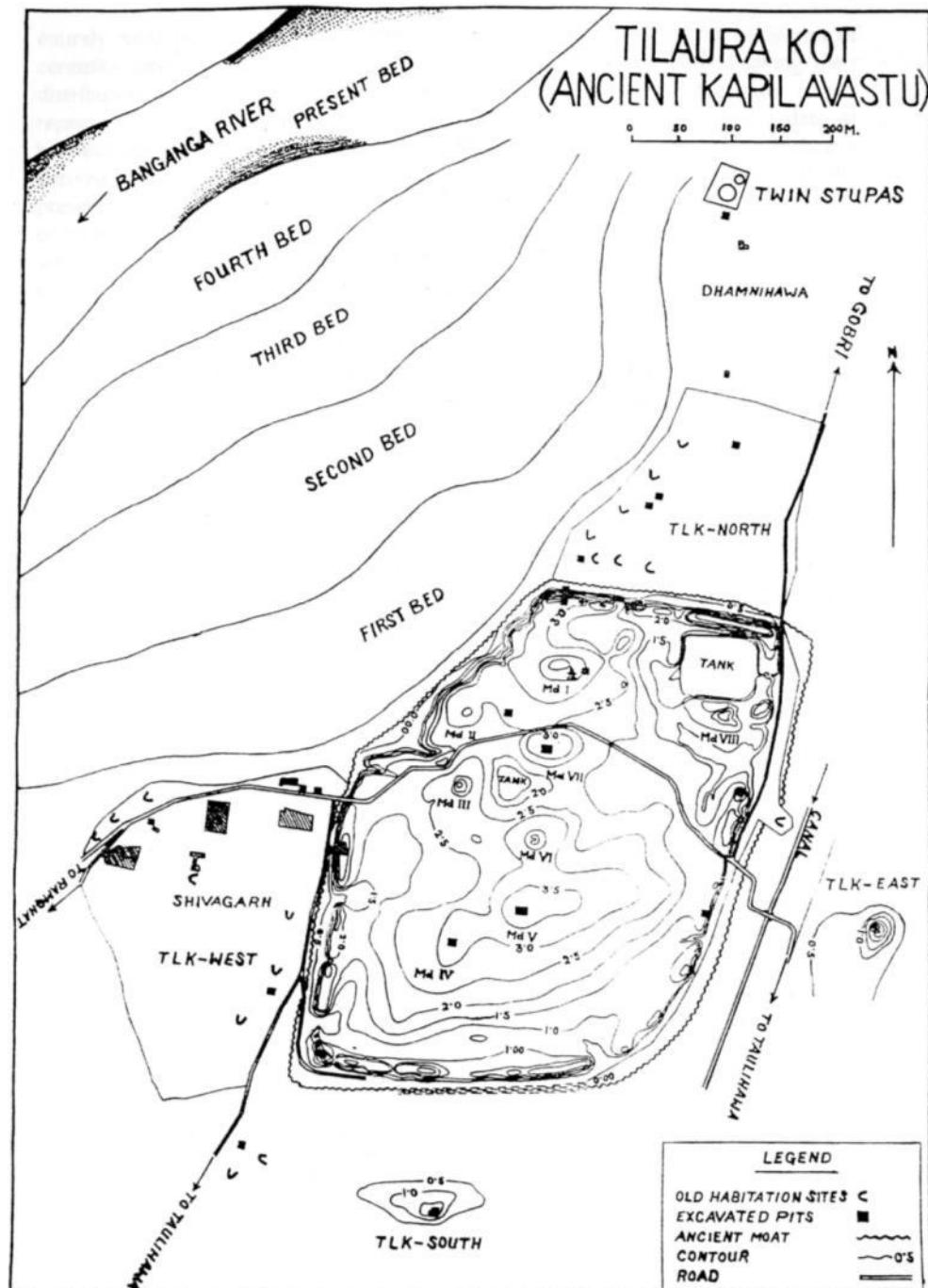


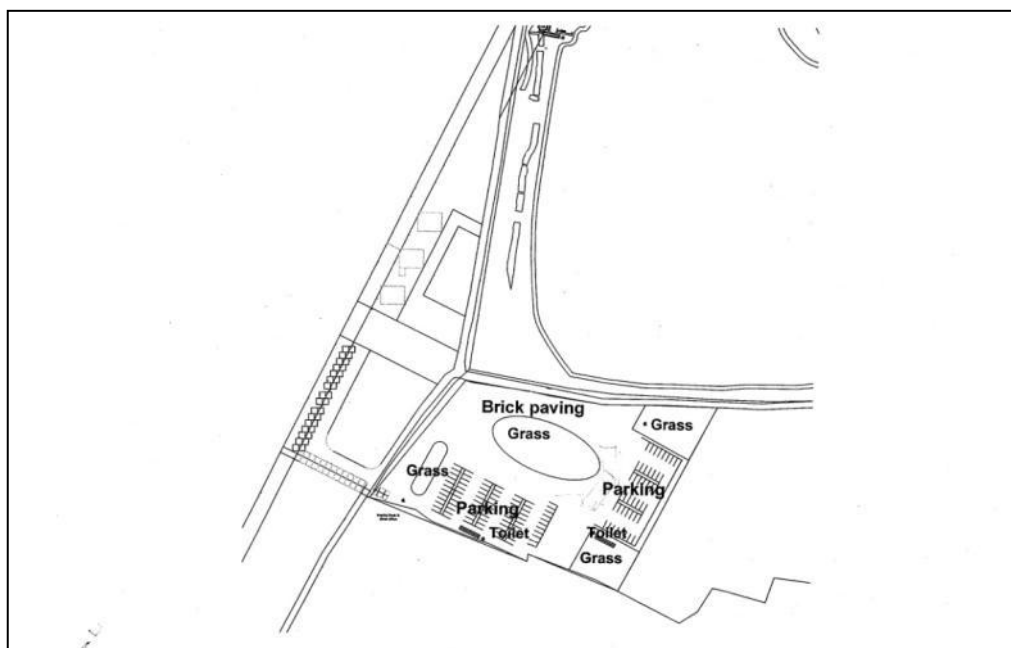
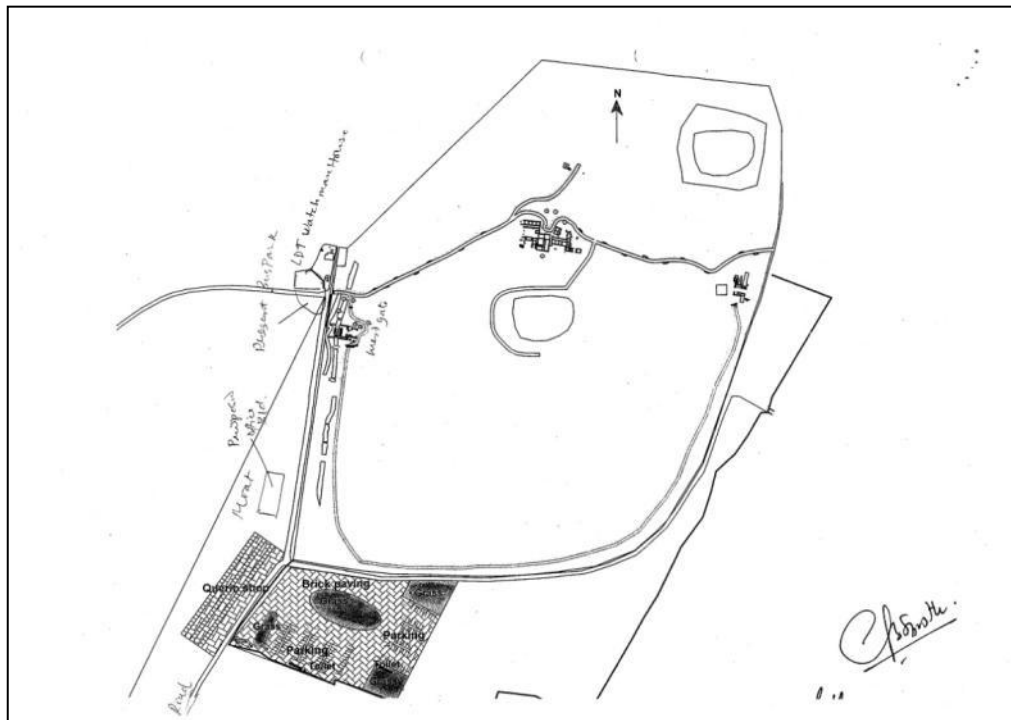
Figure 9: Map of Tilaruakot with link to Banganga (Rijal 1979)

### 3. Impact of specific project

#### 3.1 Description of proposed project

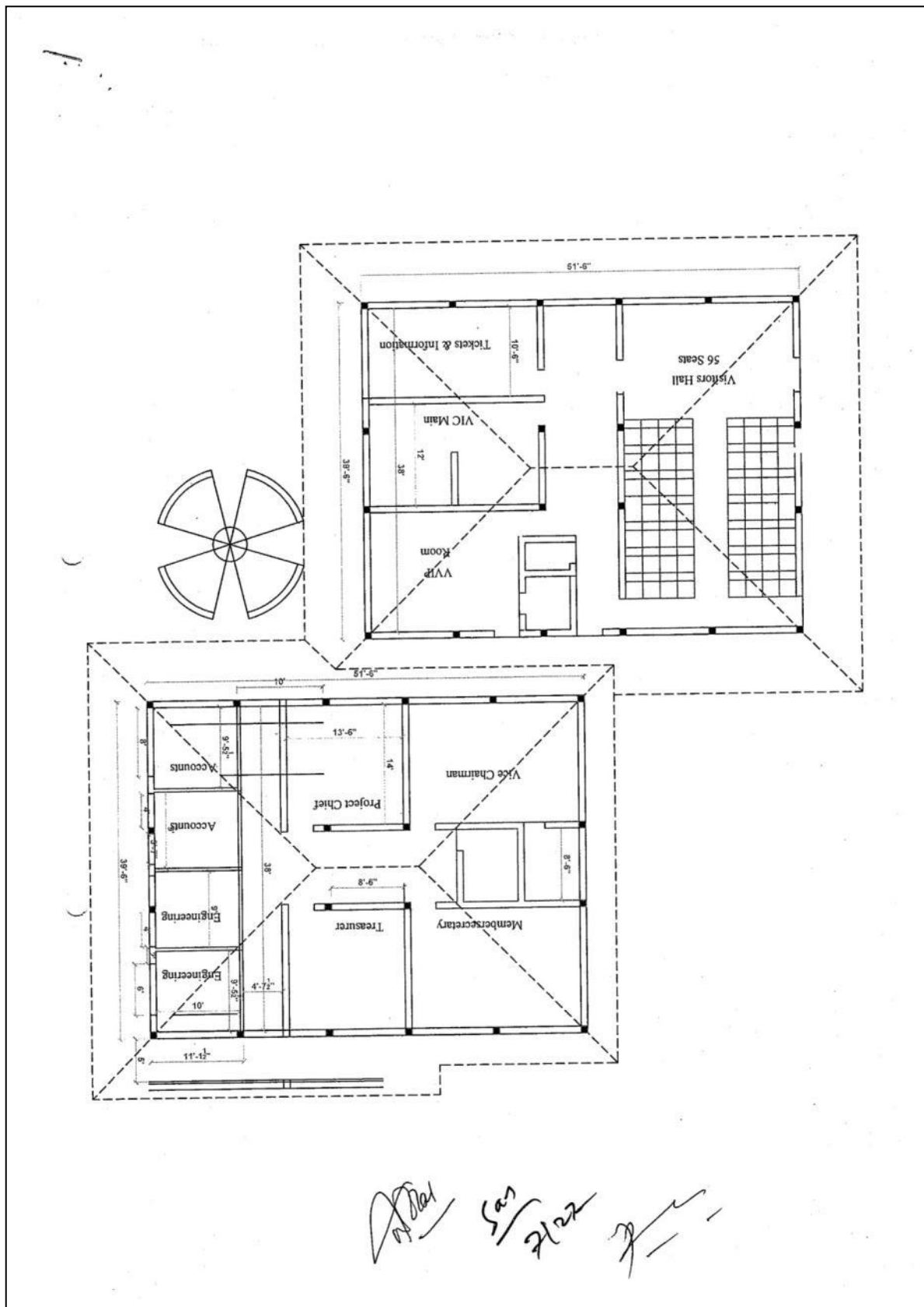
The proposed project has three main components which include a parking area for busses and cars, an information centre and office building and a visitor footpath through the archaeological site. **The proposal comprises of a set of conceptual drawings with little detailing. The drawings show that the proposal was hurriedly prepared with insufficient considerations and lack of design quality.**

##### 3.1.1 Parking area for busses and cars

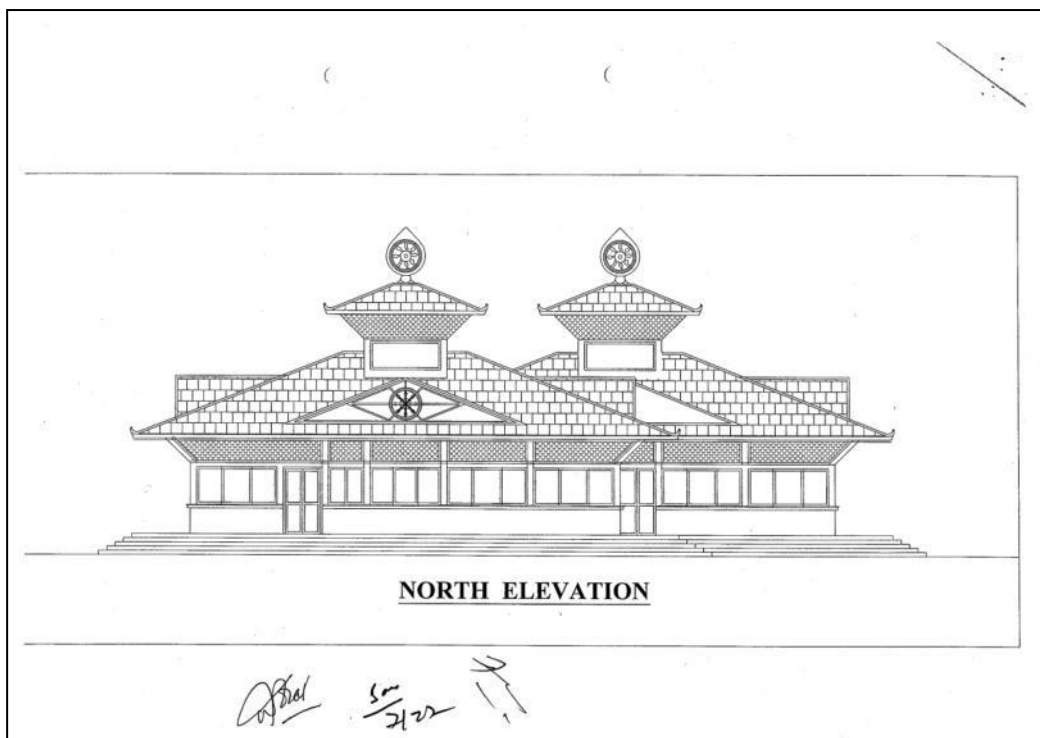
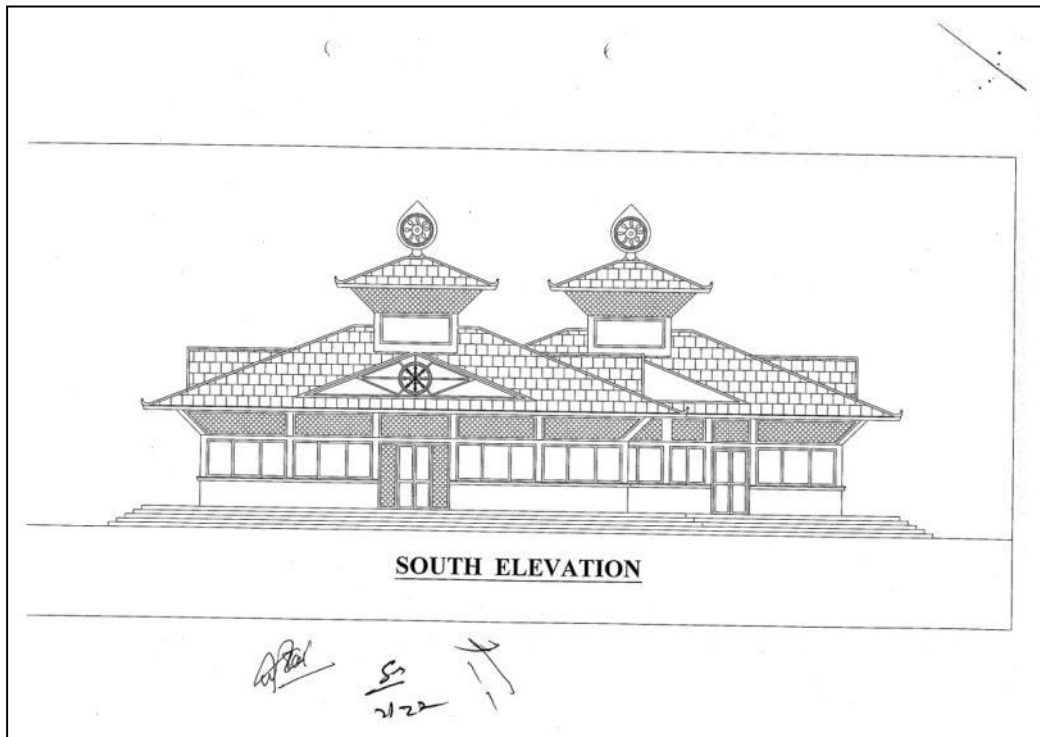




### 3.1.2 Information centre and office building (plan)



### 3.1.2 Information centre and office building (elevations)



### 3.1.3 Visitor footpath through archaeological site

No plans or details have been provided here; however it was assumed that the footpath would be carried out along the same lines as was done in Lumbini with brick side walls and ceramic tiles. Though considered non-intrusive, these footpaths are not easily reversible and are not movable.

### 3.2 Impact assessment and conditions for implementation

The impact of the three components of the proposal on the heritage site has been assessed in respect to the present situation as well as considering the long-term impact of the proposed development works. The report presents a summary of discussions held with numerous experts, authorities and other stakeholders. The following statements on the individual components have been discussed and acknowledged by the experts, site managers and local authorities and respective appropriate solutions based on these statements have already been sought.

#### 3.2.1 Parking area for busses and cars

The need for a dedicated location for parking of busses and cars has been identified. During various peak periods, there are large number of busses parked on the road along the western fortification and western gate. With time, there will be an increase in vehicular traffic and this traffic needs to be managed as soon as possible.

**The location of the parking facilities proposed by the project is not appropriate.** The proposed location is within the area which would consist of the area just outside the fortified city where there are clear indications of various activities that took place and more detailed archaeological surveys would be required.

A location with sufficient distance from the archaeological site would need to be found for the parking. Any such site would need to be surveyed for potential archaeology before it can be considered acceptable for development as a parking area for busses and cars. The size of the parking area should be based on surveys done on the requirements possibly on a 95 percentile basis and not necessarily to cater to individual peak days. Provisions for expansion must however be considered.

#### 3.2.2 Information centre and office building

A tourism information centre is required for visitors as well as an office for the site management. This must be seen in connection with the location of the proposed parking area and that the buildings built at the west gate might need to be removed sometime in the future. It is also necessary to take into account that providing information to the visitors is also a function of the site museum that is located nearby.

**The proposed location of the building is not appropriate** and would need to be moved in conjunction with the parking area (as indicated under 3.1.1). The consideration of linking this to the museum should also be considered.

**The design of the building must be amended to fit the new location, new requirements and an appropriate design.** The new location would probably require a new layout as per the condition of the new plot. The requirements might change if the location is linked with the museum and certain functions are shared. The design and appearance of the building must acknowledge a universal image of a sacred site without adopting any given architectural style. A simple, clear, practical design which does not profess to be linked a style of any particular culture or ethnicity. It could however integrate certain elements of traditional local architecture.

### 3.2.3 Visitor footpath through archaeological site

The requirement for visitor walkways around the archaeological site at Tilaurakot has been acknowledged by experts, authorities and other stakeholders. The visitor walkway is necessary to guide the visitors around the property and dissuading them from climbing all over the exposed archaeological vestiges. Depending on the alignment of the walkway, it would be possible to give the visitors vantage points for a better view of various points within the site such as the fortifications. The visitor walkway would also allow visitors to walk around the site during the rainy season when in many places there is water logging.

The introduction of any new elements of construction such as infrastructure within the archaeological area must be **non-intrusive** and **reversible**. This means that the structure should not protrude into the ground, keeping any kind of digging to a minimum and only under strict supervision of an archaeologist. The structure should preferably be placed above the ground, but must not be visibly intrusive nor should the structure impact the surface in respect to drainage.

The archaeological research at Tilaurakot is still ongoing and further research is required to provide an overall detailed image of the city, its fortifications, the surrounding developments as well as the historic significance of the site. This means that whatever structures are built within the area demarcated as having or potentially having archaeology vestiges must additionally be **movable**. This means that when the structure is moved to a new location all or at least most of the materials can be reused. There should not be any waste, rubble or foreign materials left behind.

### 3.3 Project implementation, impact mitigation and monitoring

The process of designing and finalizing the three project components should be participatory and in line with the impact assessment and conditions of implementation as formulated under section 3.2 of this report.

The finalized plan must be reviewed and accepted by the Department of Archaeology before implementation. The review must take into account the basic principles and conditions presented in this report.

The construction process must be monitored regularly by the Lumbini Development Trust and before any excavations works are carried out approval must be taken from the Chief Archaeologist. The Chief Archaeologist must sign a work order for any such works.

A design proposal has been prepared by a team from Tokyo University under Architect Takefumi Kurose. The proposal was presented to the experts, authorities and other stakeholders at a stakeholder interaction programme in Tilaurakot on 22 January 2014. In principle the proposal was accepted by the participants of the interaction programme. The proposed plans have been attached as an annex to this report.



#### 4. Impact of potential development and moratorium

With increased development pressures, it is necessary to take immediate steps to bring a large area under an interim development control zone (or preserved area). There are provisions in the Ancient Monument Preservation Act 1956 (fifth amendment) under article 17: “Power of Government of Nepal to issue notice declaring an area as preserved area” (Government of Nepal, 1996). This zone, once declared a “preserved area”, would remain so until an elaborate Master Plan is prepared for Tilaurakot. It has been proposed that the process of preparing a Master Plan should begin immediately and be completed over the next three years.

##### 4.1 Preserved Area

The following tentative zone has been proposed as “**preserved area**” which includes an area roughly spreading 1000 meters from the fortified city. The area extends further towards the north up to the Banganga. This area should remain an area for agricultural use (shown in green on the map below) with new developments being prohibited. Any new construction must go through an approval process and should not be taller than 2 floors or maximum 7 meters. The construction should be carried out in local traditional style.

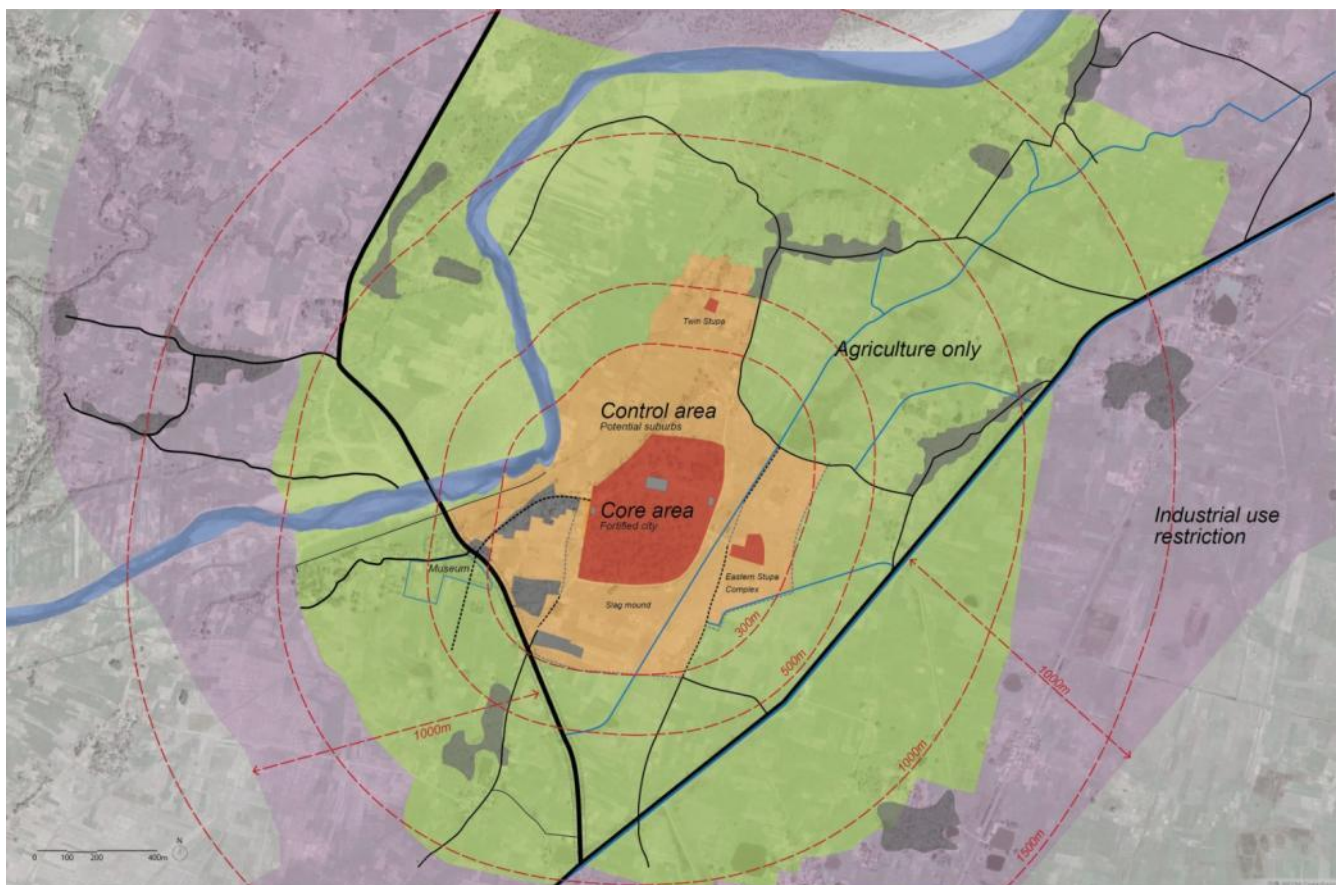


Figure 10: Proposed interim zoning map (Tokyo University Team)



## 4.2 Proposed Area for possible expropriation by the Government of Nepal

The areas that are not under government ownership but need to be expropriated are provided in the map below under '**control area**'. These are areas of importance as potential archeologically sites and areas of important linkages to ensure the long-term integrity of the heritage property.

**High priority** must be given by the government to purchase several critical areas. Its preliminary findings have confirmed the presence of a major monastic complex, including two large tanks, in the vicinity of the Eastern Stupa. A metal-working area of Lohasahrya was identified to the south of Tilaurakot. Geo-archaeological work in the north-west of the city demonstrates the early history and occupation of the site was intimately linked with the river and its flood events. These areas need to be given high priority to be purchased.

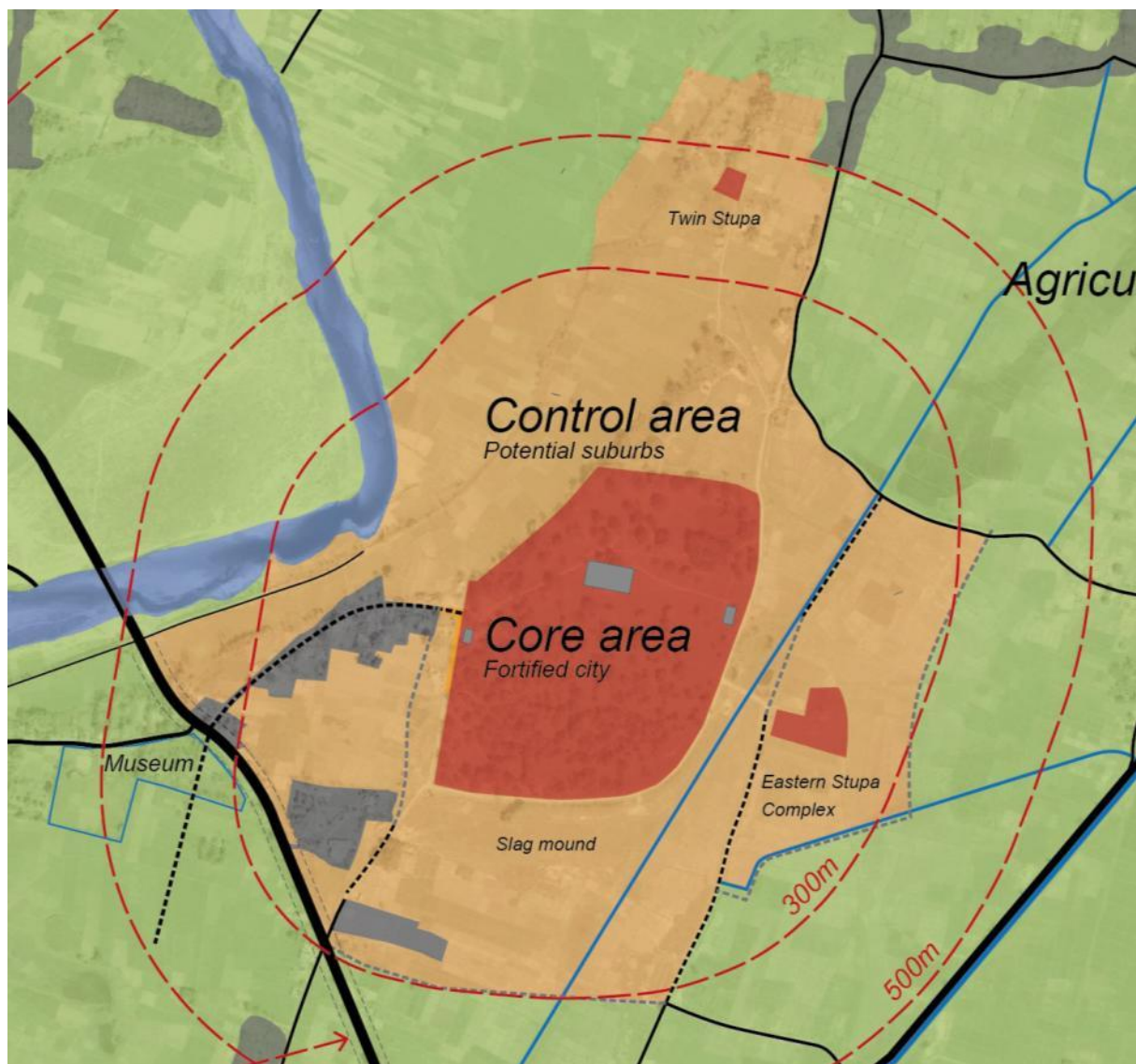


Figure 11: Map of Control Area (Tokyo University Team)

## 5. Recommendation for further action

### *In response to impact of past activities*

- The impact of past activities such as the wall, gate, and black-topping of the road as well as the various concrete buildings must be assessed and a rectification plan prepared. This does not mean that the rectification has to be carried out immediately, but a plan must be in place to ensure that the rectification takes place when required.

### *In response to impact of specific project*

- The project for the bus park and the visitor centre and office building must be moved to an appropriate location and should not be constructed on the proposed location near the southwest corner of the ancient fortified settlement.
- A new location for the bus park would take into account access to the museum, while ensuring that no archaeological vestiges are located on the plot. The proposal prepared by the Tokyo University team should be taken as a basis, since it proposes locating the bus park to the south of the museum on a plot which has already been investigated through auguring and no archaeology has been found. This land which does not have direct access to the main road would be significantly cheaper to purchase.
- The visitor centre and office building would need to be situated taking into account the bus park and the museum.
- The visitor centre and office building should have a simple, utilitarian design, reflecting local vernacular architecture but not prioritizing a style linked to any particular ethnicity or Buddhist culture. The highest quality of design and construction must be ensured.
- The layout of the visitor footpath should take into account the morphology of the city and the most important elements and views, especially of the archaeology which has been exposed and conserved.
- The archaeological research and conservation is an ongoing process and would therefore require the walkways to adopt a system of construction that is non-intrusive, reversible as well as movable. The proposal presented by the Tokyo University team could be followed or taken as a guideline: a footpath of artificial wood planking fixed to runners bolted to prefabricated concrete beams.

### *In response to impact of potential development*

- A moratorium needs to be established for development works in the area for a period spanning three years, with provisions for extension. The moratorium would require a zoning plan as proposed under “preserved area” in the report, with clear legal implications. The zoning plan would need to be linked to a set of regulations that would be adopted by the government and takes into account the materials, style, dimensions, functions and expression of the buildings and infrastructure.
- An overall master plan must be prepared, ideally within the next 3 years. This can be linked to the ongoing UNESCO-JFIT project and in conjunction with the preparations for inscribing the site on the World Heritage list.
- Such a plan would need to be linked to regional cultural and natural heritage conservation plans as well as to development plans for tourism, agriculture, education and other relevant sectors.

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## **Annex A**

### **Proposal prepared by Tokyo University Team under Takafumi Kurose (edited)**

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**Understanding the Ancient City**  
**Preliminary planning for Tilaurakot**  
**January 2014**  
**The University of Tokyo, Urban Design Lab.**  
**Assistant professor Takefumi KUROSE**  
**Master student Ryotaro TAKANASHI**

#### **Introduction**

More and more people are visiting Tilaurakot, which can be said to be the most important archaeological site of the many surrounding Lumbini. There is a need for the construction of infrastructure that can allow this growing number of pilgrims to visit this site. However, at the same time, archaeological excavation is still ongoing. To make clear that Kapilavastu is truly the place where the Shakya Kingdom existed, this excavation and preservation of the site is of highest priority and must continue. Furthermore, to obtain World Heritage status there is a need not only to keep excavating but to make Tilaurakot a site that gives a clear understanding of the history and authenticity, which at present is difficult for the visitor to perceive. To balance the needs for construction, excavation and visitor interpretation, we have created a plan of the Tilaurakot area based on our surveys and interviews from the 10th to the 18th of January 2014.

This report mainly consists of four parts. We first will like to organize the information that needs to be considered upon planning. Secondly, we would like to discuss the land use plan of the area including where the entrance should be. Third, we would like to propose two potential parking area plans according to the land use plan discussed in the previous part. Finally, we would like to propose the pedestrian path both leading to and inside the ramparts of Tilaurakot, along with other infrastructure.

We would like to emphasize that open and positive discussion of the topics given in this plan and cooperation of all the persons involved is necessary to make Tilaurakot a site truly remarkable and valuable not only to all of Nepal but also to the whole world, as it has the potential to be.

#### **Basis of planning**

There are four aspects that we focused on when planning.

The first is the archaeology of the site. There are many potential and existing archaeological remains in the Tilaurakot area and the archaeology team headed by Prof. Coningham has found more. Inside the fortification there are remains of old buildings, roads and other structures like the manmade pond. While the buildings are easy to see and understand, it is necessary to consider how to treat the roads. The fortification itself consists of the rampart, gate and moat. For correct understanding of the site, it is important that visitors use them in the intended way, such as entering through the gate and not walking on top of the walls. Currently the suburbs consist of the newly found eastern stupid complex, slag mound and



twin stupas. The important thing to consider is that excavation is underway and more remains are surely going to be found.

The second consideration is the religious aspects of the site. Buddha is believed to have left Kapilavastu from the east gate. There is also the Kantaka stupa to the east of the gate. Therefore, for Buddhists, the importance of the site is centred to the east of the site and the direction heading east is very meaningful. In addition to Buddhist beliefs, there is a Hindu temple called Samai-mai located near the central complex of the site. It is a religious place not only for the adjacent villages but also villages in the region. Both these religious components make prayer platforms necessary. Also it is important to keep in mind the location of several Buddhist sites in Kapilavastu district.

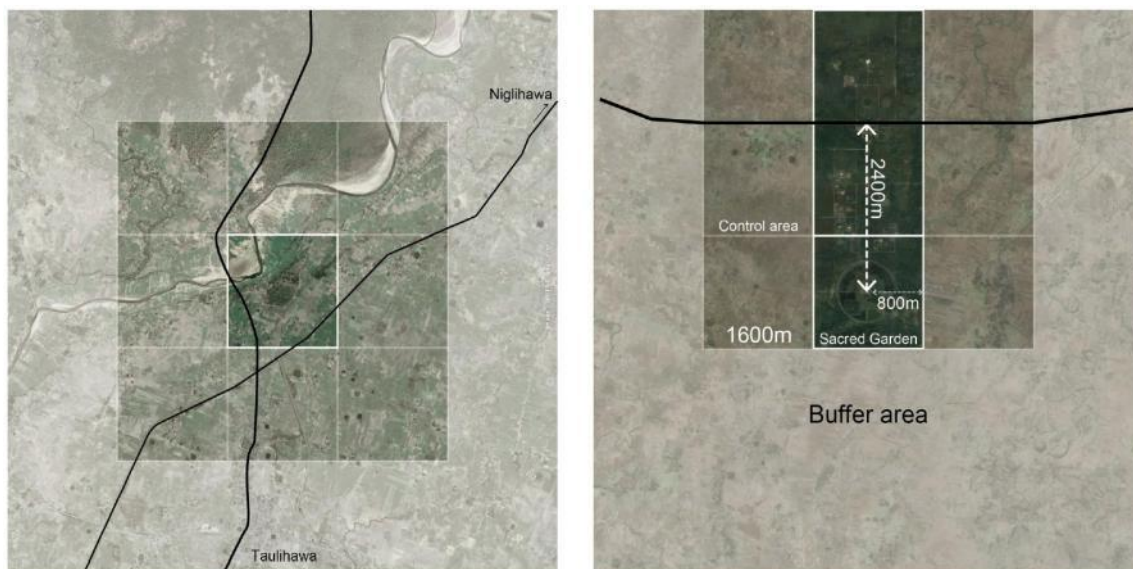
It is also necessary to keep in mind the current situation in the area as a basis of planning. Due to the rising number of visitors there is more and more need for sufficient car parking, bus parking and a visitor centre. Also, represented by the construction of the Thai temple, there is growing needs for development by the religious sector. This should go on in a controlled manner.

Furthermore, the construction of the bridge and the plans to expand the main road makes the site an exciting investment for commercial developers. We cannot let this kind of development ruin the authenticity of the site. On the other hand, there are things that are more difficult to appropriately integrate such are the villagers already living in the area. Their way of life demands access to Taulihawa and agricultural land.





Finally it is essential to incorporate the lessons we have learned from the Tange Masterplan in Lumbini. The two maps here show Tilaurakot and Lumbini on a same scale. For Lumbini, the 1x3 mile area was bought and the 5x5 mile area was chosen as a buffer area. Regarding the land acquisition and zoning a buffer zone, bigger is better. However, acquisition and zoning to the same scale maybe difficult. It is important to acquire important plots to secure the integrity of the ancient city and the suburb. Also effective land use restriction and building control should be enforced based on cooperation of DoA, LDT, local government and community. From the Lumbini example, we have discovered that the 2400m walk to the site is too tough for the elderly with Nepal's harsh summers. The eastern gate of Lumbini, which is located 800m away from the pillar, had spontaneously become the pedestrian entrance.



By considering these four aspects of the site, we have prepared a master plan of the Tilaurakot area.

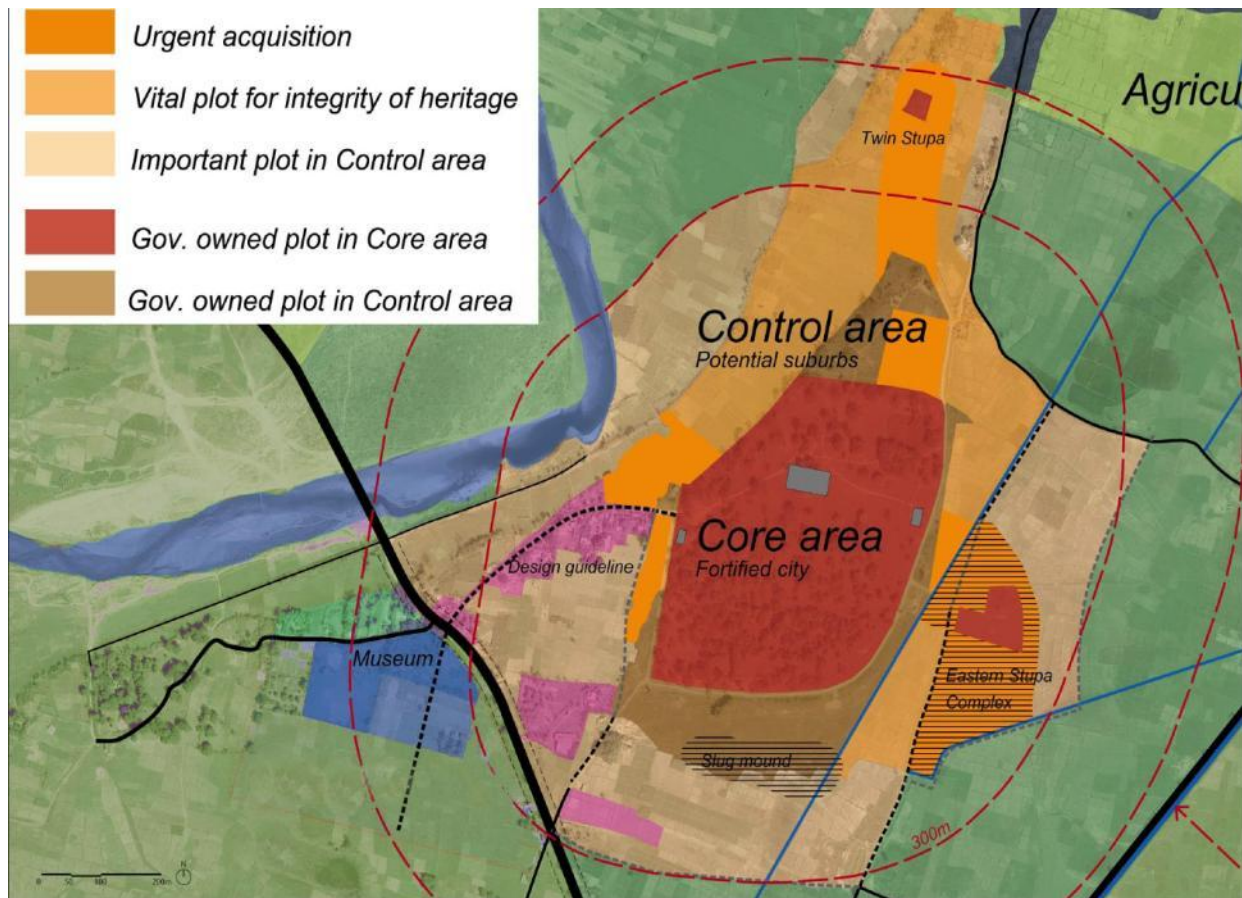
## Landuse

A preliminary land use plan has been prepared for Tilaurakot. There are mainly three types of zoning in the plan. The 'Core Area' is the existing fenced area, which means inside of the rampart or the ancient fortified city. All of the land in this area is already publicly owned. The 'Control Area' covers suburban archaeological remains such as the Eastern Stupa, the Slag Mound and the Twin Stupas and potential archaeological remains yet to be excavated. It is recommended to acquire all plots in this zoning to secure preservation of potential suburbs of Tilaurakot. The third zoning is land use restriction for the surrounding area shown in green. Considering that the Twin Stupas are 500m away from the ancient city, "strictly agriculture only" applied most of the area within 1000m from the rampart. Industrial use restriction should be applied to surrounding area in larger scale. From Araurakot to Kudan, Gotihawa and Lumbini, heavy industrial use should be restricted.

***(Refer updated maps on page 16-17)***

## Land acquisition plan

This plan shows the priority of land acquisition in Control area.



- Deep orange plots need urgent acquisition to secure archeologically high potential area and integrity of the ancient city with the suburb. Especially, the plot to the south of the Eastern Stupa and the plot between the Eastern gate and the Eastern Stupa should be acquired as soon as possible to secure newly found archaeological remains in these plots.
- Medium orange area is the next priority. Most of the area is relatively inexpensive but vital to form the 'control area' to surround the ancient fortified city.
- Light orange is the third priority. The land should be purchased to complete proposed 'Control Area'. If it takes time to acquire this area, land use restriction should be enforced immediately not to allow a new structure in the 'Control Area'.

## Approaching the site

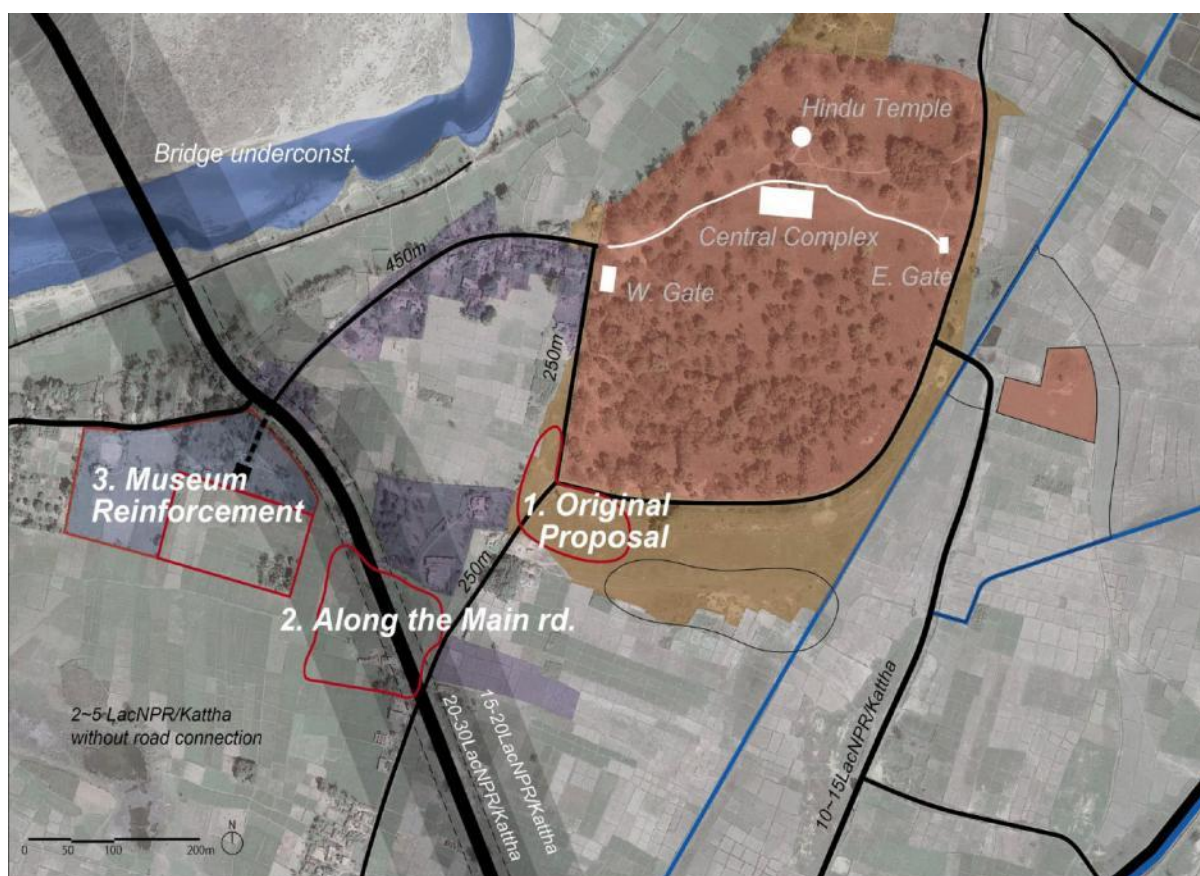
It is believed among Buddhists that Buddha left Kapilavastu from the Eastern Gate. Therefore the Eastern Gate should not be the main entrance for visitors. On the other hand, it is important for visitors to understand the city structure and its suburb. The Southern Gate and Northern Gate of the ancient city are yet to be confirmed. Therefore, the Western gate should be utilized as the entrance of the site at this moment. Looking at the infrastructure and landscape, Banganga runs north of the site and Taulihawa is located to the south of the



site. The main road toward the East-West Highway runs on the southern and western sides of the site. The new bridge will be completed in 2014, which will enhance accessibility to the site. The road along the canal in the south-eastern side of the site can be potential access road. However, considering the religious importance of the eastern side, especially from the Eastern Gate, the eastern side should be kept as agricultural land. In conclusion, the Western Gate and the main road should be utilized as the approach to the site.

### Location of Bus Park

Considering the current location of the village and temples, following 3 alternatives can be potential location of the bus park. First option is the original proposal from LDT. Utilizing the existing government owned land at the south-western corner of the fortification. The second option is utilizing some plots along the main road. The third is reinforcement of the existing Tilaurakot museum with a location to the south of the museum plot.



Archaeological impact is obviously the most important factor to be minimized. Price of land or current land ownership should also be taken into consideration. According to the LDO official, the plot is expensive along the main road such as two to three million rupees per kattha (338sqm) and the plot without road access is inexpensive. The price of the land should also be taken into consideration. The museum itself has several important archaeological remains found in Tilaurakot. The museum and the approach to the site should be coordinated to encourage visitor to go into the museum on the way to the site. Based on this evaluation, we think that the site behind the Museum is the most ideal option.

### Current situation of Museum plot and proposed Bus Park

The museum has a nice tree shaded entrance approach from the main road linking to the ancient western gate through Shivgadh. The museum plot is relatively large with more than 4.6 Bigha (31,000 sqm). The south-western side of the plot is mostly used for agriculture and reserved for future expansion. The museum has a wide frontage to the main road to the east and the secondary road in north. The plots to the south and west of the museum are mostly agricultural land. One must note that the museum plot has shown to contain potentially archaeological vestiges.

The plot proposed for the bus park is a privately owned plot of land of about 2.3 Bighas (15,560 square metres). This plot would need to be purchased. Since the land is not directly on the main road, the price should not be very high. For access, it might be necessary for a road to be provided through the eastern edge of the museum plot. The parking area can easily be expanded towards the south. Augur coring has been carried out through this plot and no archaeology was found. However, there is a clump of trees to the south-eastern corner of the proposed plot which showed possible archaeology and should be protected.



Should it be possible to provide a pedestrian path through the museum plot to the main road, visitors would be drawn the visit the museum. This would of course also be an opportunity to provide information and sensitize the visitors to the site. The visitors centre, lavatories and the office of the Lumbini Development Trust would be planned within this plot and in relationship to the museum.



## The core zone of Tilaurakot

With newly acquired land, any required fencing can be located further from the core zone to ensure the integrity of the site. For the eastern area, where the view is most important, there is conveniently a canal wide enough so that it is equally difficult to cross as it is to climb over a fence. By acquiring the land up to the canal and controlling the bridge, it is possible to manage the site without a fence. In the Tilaurakot fortification, there are also clear remains of the moat. The moat, once re-dug, will enable visitors to understand more easily the ancient city. If placed in the right space, a fence can become less visible.

## Entrance and approach

This is the proposed entrance to the core zone. The approach to core zone of Tilaurakot from the discussed parking lot includes the walk through the village of Shivgadh. For this path, there is a need to control the streetscape. A height restriction of 7 metres would be suitable which would allow for 2 story buildings but none higher. Also, a pavement upgrade of the road would be suitable to allow for the growing number of visitors.

Though it may be difficult, land adjacent to the rampart of Tilaurakot needs to be acquired to be able to control the entry to the fortification. This area would become a cushion for the visitors before entering the core area. It would provide a restroom, parking lots for the handicapped and some benches for the visitors to sit and take a rest. Furthermore, to better understand the ancient city, visitors should enter the fortification through the remains of the West gate, which is now not visible from the current entrance. If possible, crossing the re-excavated moat would further enhance the visitors' experience.



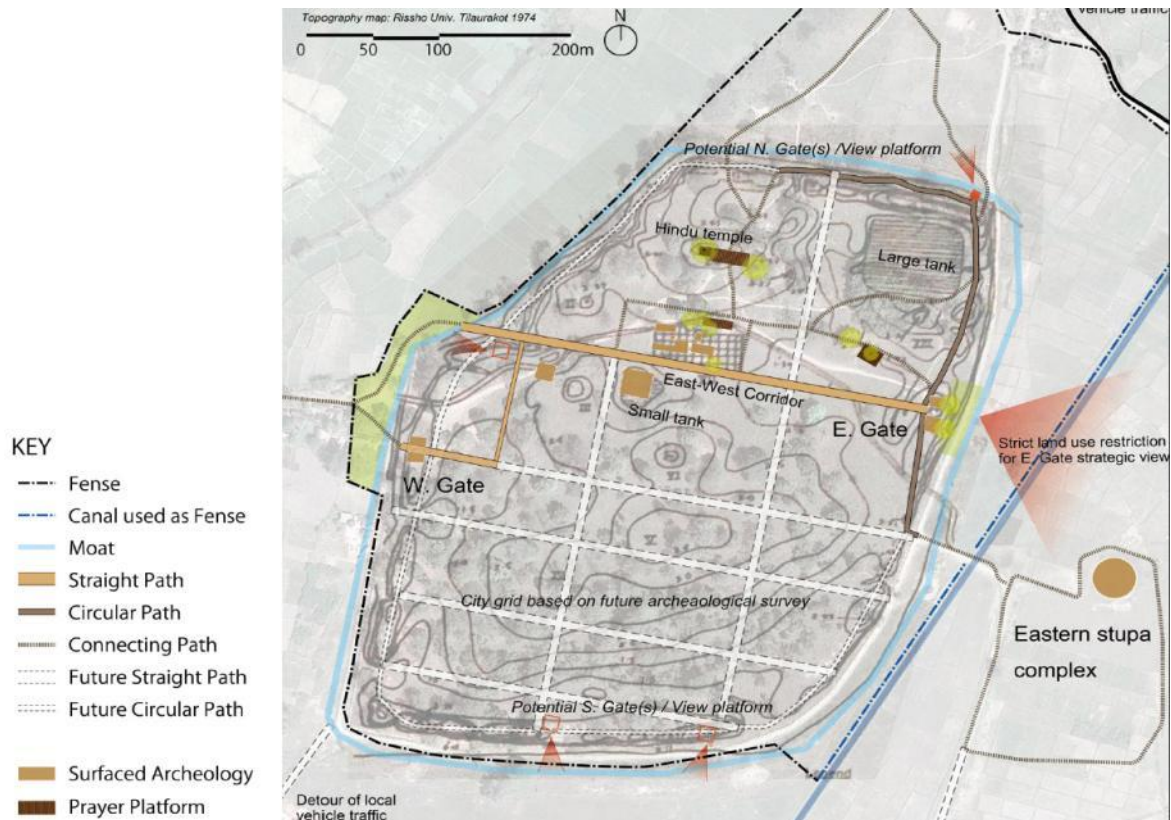
## Visitor pathways

The most important consideration when planning the paths inside the fortified Tilaurakot is the reversibility of the pavement. Tilaurakot is an archaeological site still under excavation and paths need to be designed to be removed with relative ease. The second important consideration is to make the paths coincide with the history and archaeology of the site. The paths will be an important tool to make it possible to understand the structure of the ancient city. Keeping these considerations in mind, we have planned for the site to have three types of paths, the straight paths on top of the ancient city grid, paths linking other paths, and a circular path next to the rampart.

The first of the three paths is the straight path following the ancient city grid that was found by the archaeological team. This path gives an important vista to the eastern gate from the central complex and gives the visitors an authentic experience, allowing them to understand



the grid. The second is the paths linking other paths. These paths are located in places where there are no signs of ancient roads but a current need for pedestrian transportation. The third route is the circular route. It gives the visitors a chance to enjoy the scenery over the rampart. This will enhance the visitor's understanding of the integrity of the fortified city and the suburbs. Re-excavation of the historical moat would also help the understanding of the ancient city.



To make excavations easy at places where the paths are, we propose the footpaths to be of artificial wood planking fixed to runners bolted to prefabricated concrete beams. When excavation is needed, the artificial wood planking is unscrewed from the prefabricated concrete beams and the entire structure can be moved and reassembled.

### Prayer and viewing platforms

For the site at Tilaurakot we think that there is a need for three prayer platforms. One is by the central complex, another is by the eastern gate and the third is by the Hindu temple, as these are the most religiously important. Since it would make prayers uneasy to have platforms in the middle of the field, we have located them next to large trees where they also provide shade. For the eastern gate, the given place is suitable as it is a spot where one can face the eastern gate and also see the eastern stupa through the gate. It also does not interfere with the vista of the East-West corridor. All of these platforms need to be constructed in the same system as the pedestrian walkways, using for example artificial wood planking screwed to runners bolted to prefabricated concrete beams to ensure that they can easily be moved. A further platform could be located in the north-eastern corner of the fortified area. When further excavation uncovers archaeological remains to the north of the site and around the Twin Stupas, this would be a perfect spot to view them from.

(Furthermore, the platform is faced towards other Buddhist sites such as Sagarhawa and Araurakot and gives the visitors a place to picture them in their mind.) Viewing platforms like this allow visitors who either do not have the time or energy to visit the surrounding sites



such as the Twin Stupas, the Slag Mound and Banganga River to get a feel of the whole ancient city.

### Further considerations and conclusion

In this report, we have discussed the overall land use of the area, the parking and entrance of the site and the infrastructure around and inside the fortified site. However there are some important points that we have failed to cover. The first is the need to allow changes to occur to the plan as further excavations continue. Another is the need for a periodic review of the infrastructure that would be installed in this plan. Also, a very difficult part of this plan is to introduce a design guideline for the Shivgadh village, as it cannot be acquired completely. We have also left the development plan of the plot around the museum untouched, but proper planning is necessary. Finally there is a need to consider how to use the Tilaurakot area as a strategic hub when visiting the Buddhist sites of the area.

Again, we would like to emphasize that open and positive discussion of the topics given in this plan and cooperation of all the persons involved is necessary to make Tilaurakot what it is meant to be, a heritage of mankind.

To conclude, we would like to express our gratitude to everyone who helped us in making and presenting this report, especially Robin Coningham, Kosh Prasad Acharya, Vice-Chairman Acharya Karma Sangbo Sherpa, Ram Bahadur Kunwar (DoA representative), LDO officials, Basanta Bidari and Kai Weise.

## Annex B

### Interaction Programme in Tilaurakot on 22 January 2014

The discussions: HIA (Heritage Impact Assessment) 8 Magh 2070 (22<sup>nd</sup> Jan. 2014)

#### Kai Weise – HIA Consultant

- तिलौराकोट World Heritage को tentative list मा रहेको
- पहिला भइसकेको विकासलाई पुनर्विचार गर्नुपर्ने ।
- बाटोको पुनर्विचार
- ढलान भएका घरहरुबारे पुनर्विचार गर्नुपर्ने ।
- Protection को लागि legal base नभएको ।
- तिलौराकोटको दक्षिणतर्फ बसपार्क बनाउने ठाउँमा भग्नावशेष भएकाले बनाउन नमिल्ने ।
- Museum पछाडिको बसपार्क बनाउन उपयुक्त हुने ।
- Museum सँग link गर्नु नै उपयुक्त हुने ।
- Foot path सार्न मिल्ने किसिमको Footpath बनाउन उपयुक्त हुन्छ ।
- काठको वा सार्न मिल्ने Type को Footpath निजी क्षेत्रको विकास control गर्नुपर्ने ।
- Master Plan नै बनाउनु पर्ने ।

#### Dr. Robin Coningham – Durham University

- १०% मात्र थाहा भएको ९०% थाहा हुन बाँकी ।
- एउटा मात्रै कुरा बिगाच्याै भने यसको ऐतिहासिकतालाई चुनौती दिने हुन्छ ।
- भग्नावशेषबाट हिडिरहदा Structure बिग्रिराखेकोले Walk way बनाउन उपयुक्त । यहाँ जति Visitors आउनु हुन्छ यसले यहाँको Structuer बिग्रिराखेको छ । बस्ने उपयुक्त स्थान बनाउन राम्रो (Sitting Arrange)
- ३०/३० पोखरी भेटिएको छ । त्यो अत्यन्तै महत्वपूर्ण छ ।
- सार्न मिल्ने Walk way बनाउनु पर्ने (Mobile walkway)
- अर्को ३ वर्षमा धेरै कुरा थाहा पाउने ।

#### Axel Plathe – Durham University

- रामग्राम र तिलौराकोट पनि
- मा प्रस्ताव गरिएको ।
- जनताबाट सुरक्षा निकाय, लु.वि.को., पुरातत्व विभागले Protection लागि गरेको प्रयास प्रति धन्यवाद ।
- अर्को पटक आउँदा विकास भएको र विश्व सम्पदामा सूचीकृत भएको हुने ।



#### अन्तक्रिया

##### रविन्द्रनाथ मिश्र

- कपिलवस्तु विकास कोषको स्थापना हुनुपर्ने ।

##### जनसन शर्मा

##### रामदयाल ठाकुर

- बिना Planning को कार्य सार्थक नहुने ।
- Hoarding board need

##### तेज क. कौड्याचार्य

##### नारायण प्रसाद पौडेल

- लु.वि.को. लाई नेताको घोडा बाँच्ने तवेला नबनाऔ ।
- यसलाई आत्मनिर्भर बनाऔ ।

##### भानु प्र. श्रेष्ठ

- Master plan माथि जोड ।

##### दिनेश हमाल

- बिना Planning काम अगाडि बढाइएको (टेण्डर)
- LDT सँग विवाद आउन सक्ने निर्माण व्यवसायीसँग
- पुनः टेण्डर आव्हान हुनुपर्ने ।
- कपिलवस्तु प्रवेशद्वार (कोठी नदीमा)

##### मनोज पौडेल

- पहिला योजना बनाऔ ।

##### राम प्र. पाण्डे (जि.वि.अ.)

- लगानीले द्वन्द सिर्जना गर्नु भएन,
- ठाउँ, समय र साभेदारी आवश्यक
- अब लगानी बढाउन तयार रहनु भएको ।

##### कृष्ण चन्द्र घिमिरे (प्र.जि.अ.)

- Walkway+Praying area necessary

##### लु.वि. को. का सदस्य सचिव

- भोलुङ्गेपुल बनाउन उपयुक्त ।
- पुरातत्व विभागसँग समन्वय गरेर काम गर्न तयार ।
- कपिलवस्तु अन्तर्गतका साइटहरुलाई समेटेर गुरुयोजना बनाउनु उपयुक्त हुने ।
- यहाँ भएका सुभावहरु लु.वि.को. कार्यकारिणी समितिमा छलफल गर्ने प्रतिवद्धता व्यक्त ।

##### भेषनारायण दाहाल(महानिदेशक, पुरातत्व विभाग)

- Heritage site हाम्रो गर्व हो । यसलाई बिगानु, नाश गर्नु हुँदैन ।
- Museum भित्रको जग्गा उपयुक्त ।
- Moat मा रहेको Pitch Road भत्काउनु पर्ने ।





## Annex C

### Final Meeting in Kathmandu on 5 February 2014

#### Minutes of the meeting:

<p>आज मिति २०६०/१०/२२ का दिन पुरातत्व विभागका महानिर्देशकसूत्रको समुपस्थितिमा वहाँको कार्य कुकुरमा Tibumaxal, the archaeological remains of ancient Sakyen Kingdom. World Heritage Tentative List Heritage Impact Assessment (HIA) सम्बन्धी छलफल कार्यक्रममा निम्नानुसार महानुभावहरूको सहभागितामा निम्नानुसार निर्णय गरियो।</p>	
उपस्थिति	
१. महानिर्देशक	श्री मेघ नारायण दाहल
२. उ.पु. अधिकृत	श्री दामोदर जोत्तम
३. उ.पु. अधिकृत	श्री श्याम सुन्दर राजवंशी
४. उ.पु. अधिकृत	श्री योगज्य प्रधान
५. उ.पु. अधिकृत	श्री राम बहादुर कुँवा
६. उ.पु. अधिकृत	श्री सुखे सुन्दर मोक्त
७. प्रमुख, राष्ट्रिय अभिलेखालय	श्री उदय कर्ना
८. वरिष्ठ पुरातत्व विद्वान (पूर्व महानिर्देशक)	श्री कोश प्रसाद आचार्य
९. विशेषज्ञ	श्री काव्यानी
१०. अभिलेख अधिकृत	श्री देवेन्द्र महर्ग



