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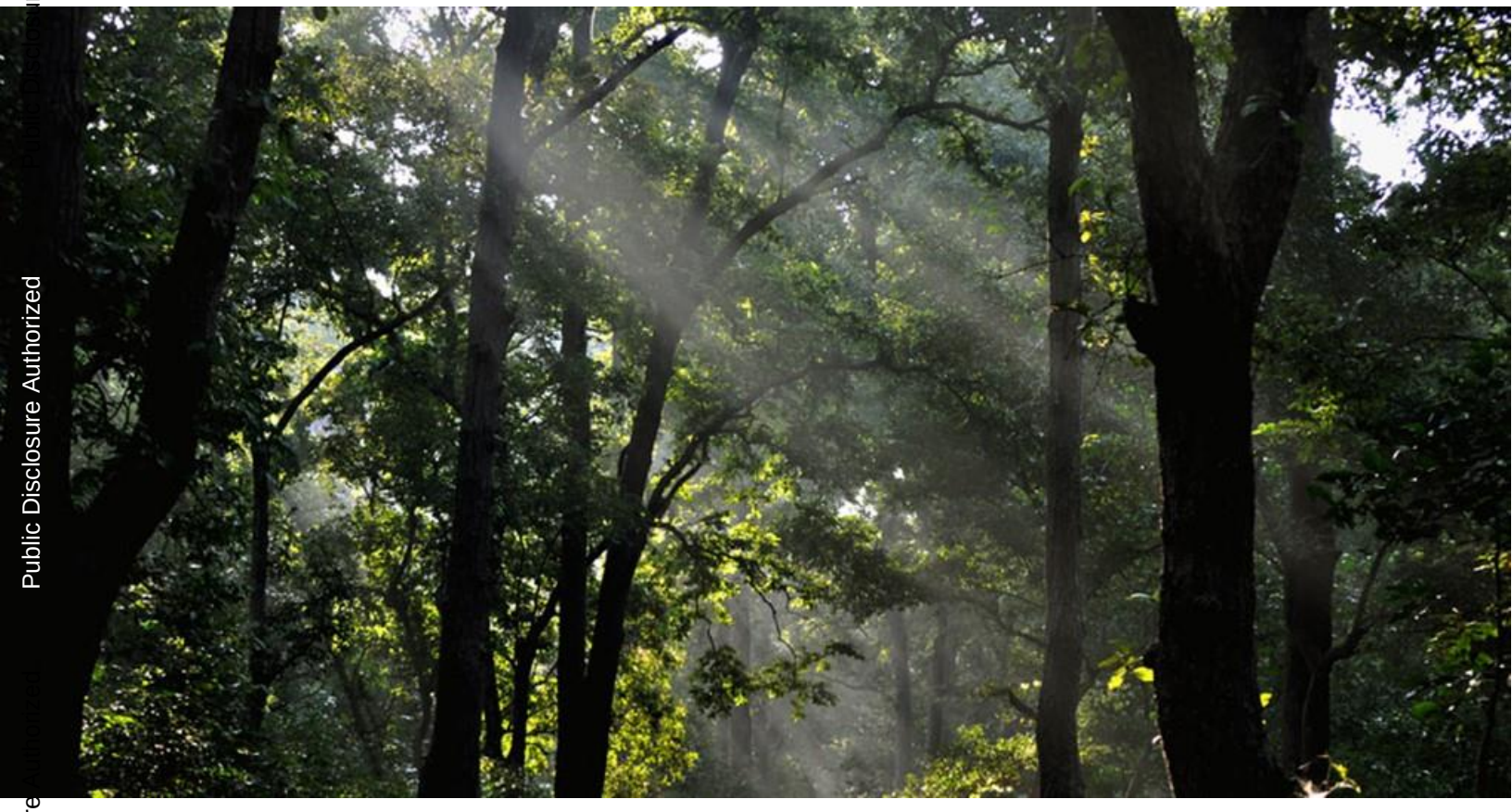

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DEPARTMENT OF TOURISM

GOVERNMENT OF UTTAR PRADESH

NCB Contract Package NO. 01/Braj/Pro-Poor/UPT/W/2016

ENVIRONMENTAL ASSESSMENT REPORT FOR REHABILITATION OF BANKE BIHARI TEMPLE AREA, VRINDAVAN

Project	**:**	**Uttar Pradesh Pro-Poor Tourism Development Project**
Owner	**:**	**DIRECTOR GENERAL TOURISM, Department of Tourism, GoUP** 4th Floor, Paryatan Bhawan, C-13, Vipin Khand, Gomti Nagar, Lucknow, UP 226010

LIST OF ABBREVIATIONS

ASI	Archaeological Survey of India
CPCB	Central Pollution Control Board
DoT	Department of Tourism
DPR	Detailed Project Report
EIA	Environment Impact Assessment
EMP	Environment Management Plan
ESMF	Environment and Social Management Framework
ESMP	Environment and Social Management Plan
ESS	Environmental and Social Safeguards
GoI	Government of India
GRC	Grievance Redress Cell
ICSC	International Center for Sustainable Cities
ICT	Information, Communication and Technology
MVDA	Mathura Vrindavan Development Authority
INR	Indian Rupee
NGO	Non-Government Organization
OBC	Other Backward Castes
OP	Operational Policy
PAP	Project Affected Persons
RAP	Resettlement Action Plan
SC	Scheduled Caste
SPCU	State Project Coordination Unit
ST	Scheduled Tribe
STP	Sewage Treatment Plant
TSU	Technical Support Units
TVC	Town Vending Committee
UP	Uttar Pradesh
UPPCB	Uttar Pradesh Pollution Control Board

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Chapter-1
Introduction

1.0 PROJECT BACKGROUND:

Uttar Pradesh – India's biggest tourist draw, containing some of the country's most iconic heritage and annually attracting millions of devotees and visitors but remains one of India's most lagging states. UP is the fourth largest and most populous state with over 199 million inhabitants, and is home to the emblematic Taj Mahal, to the second ancient living city in the world – Varanasi – located on the banks of the sacred Ganges, and to two of the world's four most sacred Buddhist sites Sarnath and Kushinagar, to mention a few of its heritage assets visited and worshipped by millions annually. In 2011, the state attracted 155 million domestic and 1.8 million international visitors out of 748 million domestic and 6.2 million international tourists visiting India, who contributed a total of USD 6 billion to Uttar Pradesh's economy in the same year. Despite this unique endowment, Uttar Pradesh remains India's third most lagging state, with a 37.7 poverty rate. Currently, over 50 million people live below the poverty line. The state has one of the lowest per-capita incomes compared to the national average. It also lags behind most Indian states across a number of human development indicators, such as literacy and infant mortality. Specifically, in terms of tourism, despite its staggering numbers, the majority of earnings have been captured by airlines, travel agencies and tour operators but poor people in touristic cities often gain very few direct benefits from tourism while bearing many of the costs.

UP Pro Poor Development Project: The UP Government envisioned Uttar Pradesh Pro Poor Tourism Development Project with the financial support of World Bank is one of the stepping stone in restructuring its tourism sector in a pro-poor manner with a view to increasing benefits to local communities and improving the management of its tourism destinations. The pro-poor approach adopted by the project also aims at catalysing the impact of key sectors in each area, such as accessibility/connectivity, environmental preservation, asset management and business development on local communities. The project will do so by promoting an integrated area-based approach in which tourist destinations and their iconic heritage assets are planned, promoted, served, stewarded and linked geographically.

Uttar Pradesh Pro- Poor Development Project focus on two main regions- Braj-Agra Corridor and the Buddhist Circuit; covering in all 12 destinations of high heritage and tourism significance. Among these, the subproject sites for 1st year has been identified along Braj – Agra corridor namely Agra and Vrindavan (Mathura); as these cities depend heavily on tourism but it has had minimal positive economic impact on the lives of the local communities, especially the poor. Almost of half of this city's population are estimated to be living in slums and low-income settlements, without access to adequate basic urban and social services or decent housing. Most of these slums/low income settlements are in the neighbourhood of protected and unprotected monuments and heritage site. The presence of heritage assets in the neighbourhood applies strict regulations for development and does not translate into any income gains or better infrastructure or services. Poor households therefore stay unconcerned about the heritage and do not contribute to their conservation. The "**Rehabilitation of Banke Bihari Temple Area, Vrindavan"** is one of identified subproject under this project. This report focuses on Environmental Impact Assessment (EIA) associated with this sub project.

1.1. SCOPE OF THIS REPORT:

Detailed Project Report for "**Rehabilitation of Banke Bihari Temple Area, Vrindavan**" has been prepared and approved by the Department of Tourism Uttar Pradesh (DoT) while Social Management Plan is being prepared separately. Therefore, scope of this report is limited to assess environmental impacts of the components proposed under the said project and to determine the specific measures to reduce, mitigate and/or offset potential adverse impacts during pre-construction, construction and operation phases of the project.

1.2 ABOUT BANKE BIHARI TEMPLE AREA SUB PROJECT AND ITS COMPONENTS:

Vrindavan is a small town located in Mathura district of Uttar Pradesh, India (27.5 N latitude, 77.7E longitude). The town is located about 10 km away from the district centre Mathura. The Vrindavan town is famous for its association with lord Krishna. It is believed as per the Mahabharata that Lord Krishna spent his childhood in Vrindavan. Due to its association with Lord Krishna, the town hosts hundreds of temples dedicated to the worship of Radha and Krishna and is considered sacred by Hindus and Banke Bihariji temple of Vrindavan, is one of the most prominent and popular religious places in India.

"Rehabilitation of Banke Bihari Temple Area, Vrindavan" is one of the identified sub project proposed under UP Pro-Poor Tourism Development Project. As shown in the Fig.1.1, The project area is centred around the area of Banke Bihari Temple in Vrindavan and the Parikrama Marg in the west and Bhaktivedanta Marg in the east. The subproject is expected to provide a broader and improved experience to tourists visiting one of the most important destinations in the Braj region – Vrindavan – and one of its most significant assets – the Banke Bihari Temple area – while upgrading the infrastructure and services to improve living conditions for its residents. To promote the area as an enhanced tourist attraction, as well as a place of enjoyment for the neighbourhood's residents, the subproject was prepared based on the following underlying principles in support to the area's cultural and historical values while providing important improvements to its image and new uses.

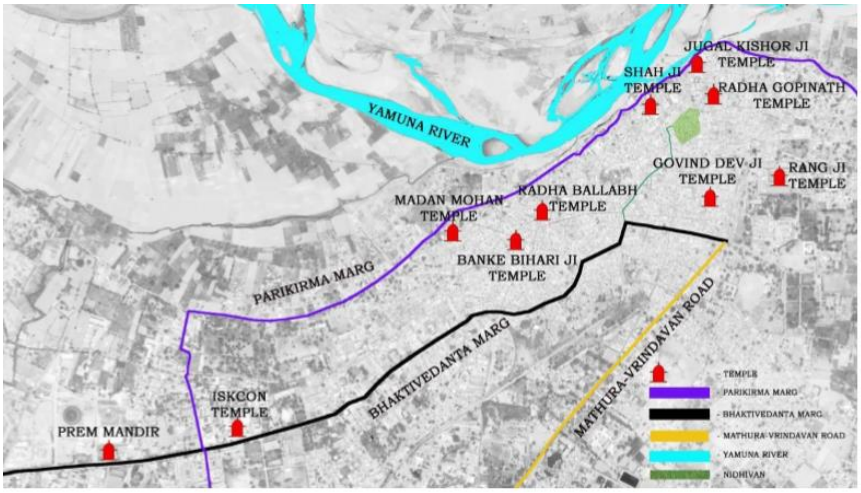


Figure 1.1: Sub-Project Area

These principles include: 1- Enhance the character of the area and quality of existing open / green / leisure areas / chowks and limit new interventions to previously impacted areas, 2- Promote pedestrian friendly public space environments to support safe walking and recreation, while reducing carbon emissions, 3- Integrate smart and green infrastructure technologies that transform

the quality of life and health for local communities, while improving both the visitor experience and the long-term image of the Braj region, and 4- Put in place an identifiable infrastructure that constructs key segments of a broader pilgrimage route.

Components Proposed Under the Project:

In the Detailed Project Report (DPR) of Rehabilitation of Banke Bihari Temple Area, Vrindavan, Braj Region, following components are proposed as rehabilitation components:

S No.	Components Proposed under DPR
1	**Redevelopment of Kalideh Parking**
2	**Redevelopment of Daruk Parking**
3	**Treatment of Streets and Drains**
4	**Development of Community Open Green Area**
5	**Improvement of Streets - Signage and Awnings**
6	**Urban Design Guidelines for Parikarma Marg**

1.3 METHODOLOGY ADOPTED FOR PREPARATION OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

Based on the project components and in compliance with the Environmental and Social Management Framework of the UP Pro-Poor Tourism Development project, following steps were taken in to account while preparing the Environmental Management Plan for **Rehabilitation of Banke Bihari Temple Area, Vrindavan**:

I- **Reconnaissance survey**: Reconnaissance survey was conducted at the project sites of proposed components by the experts to assess the field situation and key issues that need to be addressed in EIA & EMP.

II- **Project Screening:** Screening was done in the initial stages of the project. The purpose of screening was to categorize the project and to screen out significant impacts of the project activities to obtain a broad picture of the nature, scale and magnitude of the issues, if any. Screening was done based on the Environment and Social Management Framework of the project.

III- **Review of World Bank Safeguard Policies & Indian Regulations:** During preparation of EIA and EMP, World Bank Safeguard Policies and Indian Regulations were taken into consideration to fulfill the regulatory requirements.

IV- Data Collection & Analysis: All available information and data (quantitative and qualitative) regarding the proposed project was collected mainly from the old Project Reports, consultation with stake-holders and other information sources including the water/air/noise monitoring reports of Pollution Control Board, City Development Plan, CGWB reports etc. Based on secondary

information, a description and analysis of the sub-project activities along with baseline environmental profile of the influence of the project area has been established.

V- **Stakeholder Consultations**: Stakeholder consultation was carried out while preparing EIA and EMP report. The local people and stakeholders were interviewed in groups. The interviewees were asked about their awareness of the project and their response to it and were made aware of how the project will affect them during construction phase and after completion phase. They were informed about the mitigation and rehabilitation plans, were asked for suggestions for improvement and public grievances, if any towards the project. Interactions with important key stakeholders were done during formal discussions and the relevant government departments were visited to collect data and their feedback on the project activities.

VI- **Identification and Assessment of the Environmental Impacts of sub project Activities**: Based on the analysis of the data gathered from field survey, stakeholder consultations and secondary sources, issues and impacts related to the environmental sector have been identified. The identified impacts have been compared with the existing baseline environmental condition of the project area.

VII- **Development of an Environmental Management Plan**: Based on the identified environmental issues, the EMP recommends measures needed to prevent, minimize, mitigate, or compensate for identified impacts and improve environmental performance of the project activities. The EMP also suggests for setting up an agency for management measures that need to be taken at various stages of implementation (construction and operational phase) along with Cost of EMP. Flowchart describing the steps adopted for preparation of EMP is depicted in Figure 1.2.

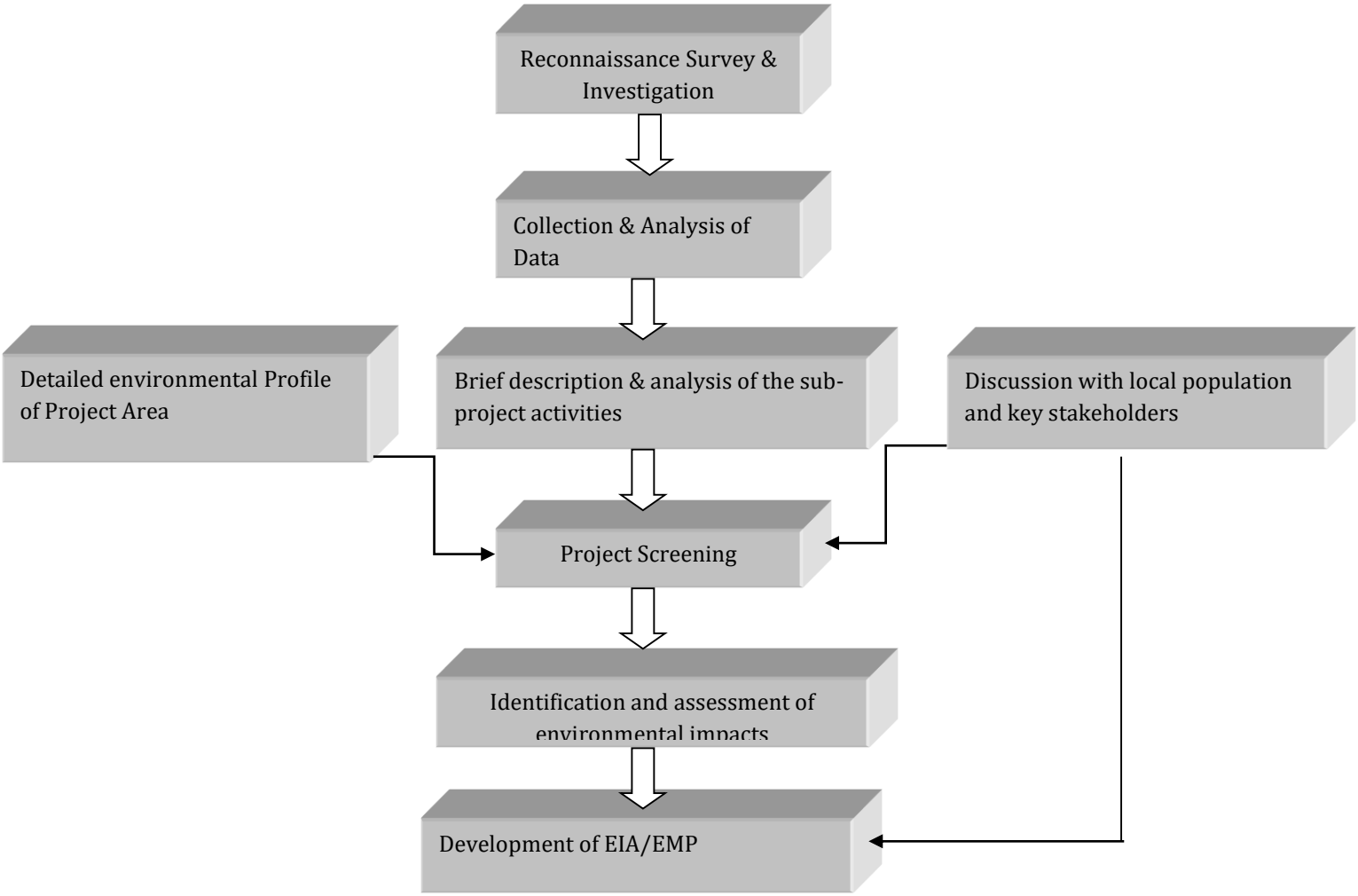


Figure 1.2: Flowchart Describing the Steps Adopted for Preparation of EIA/EMP

Chapter-2
Project Description

2.0 ABOUT THE SUB-PROJECT:

The "Rehabilitation of Banke Bihari Temple Area, Vrindavan" is one of identified sub project proposed under UP Pro-Poor Development Project. In the present situation, surroundings of the Banke Bihari Temple area and other places of visits are not kept clean and infrastructure facilities like approach roads, drainage system, signage and street lighting system are inadequate at most of the places. Public transportation system and parking facilities are also not up to the mark that creates congestions and inconvenience to visitors. Therefore, proposed subproject will not only enhance the tourism potential but also improve the infrastructure and services in the project area that ultimately upgrade the living and aesthetic conditions for its residents and visitors as well.

To promote the area as an enhanced tourist attraction, as well as a place of enjoyment for the neighbourhood's residents, the subproject was prepared to achieve following goals in support to the area's cultural and historic values:

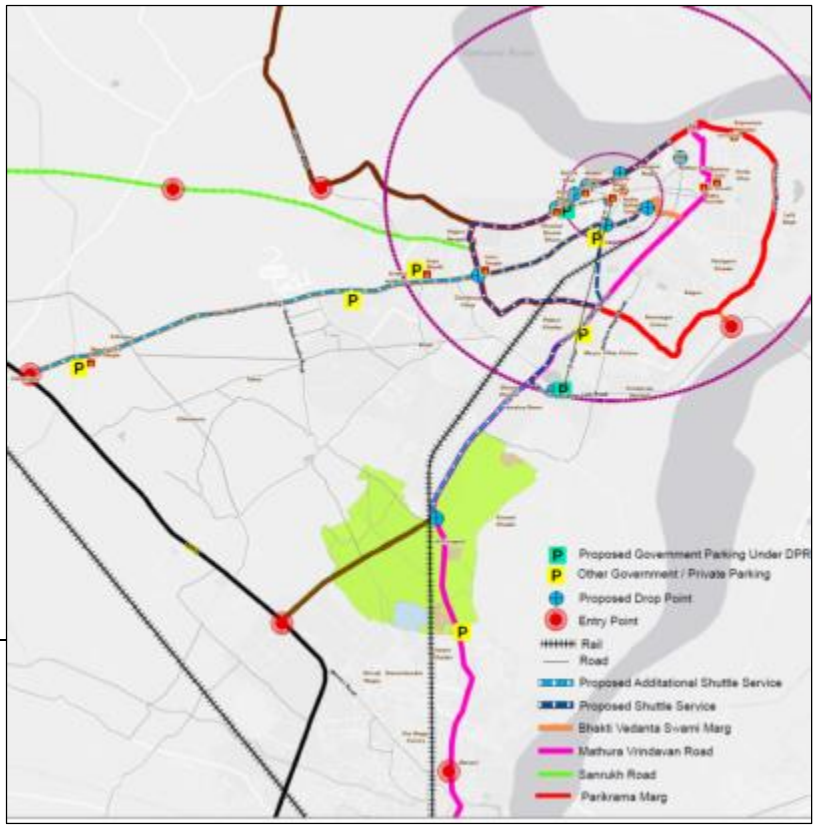
- To improve the sanitation conditions and drainage in Banke Bihari Temple Area
- To improve the roads conditions approaching toward Banke Bihari Temple Area
- To promote pedestrian friendly public space to support safe walking and recreation
- To put in place identifiable infrastructure that constructs key segments of a broader pilgrimage route
- To enhance aesthetic features and provide urban design guidelines for façade improvement
- To enhance the character of the area and quality of existing open / green / leisure areas / chowks
- To enhance tourism potential and improve livelihood

2.1 OVER VIEW OF COMPONENTS PROPOSED UNDER SUB-PROJECT

In the sub project "Rehabilitation of Banke Bihari Temple Area, Vrindavan, Braj Region" is linked with mobility and accessibility strategy which is given at section 2.1.1. Based on this strategy the six project components were identified which are summarized in section 2.1.2.

2.1.1 Overall Mobility and Accessibility Strategy and Approach

Adjoining Figure No. 2.1 shows connectivity and approach strategy for Banke Bihari temple. Proposed plan suggests how people coming via different routes to Vrindavan visit, Banke Bihari temple and other important temples/sites such as Nidhi Van, ISCKON temple, Prem Mandir, Radha Vallabh temple and



others located along the Parikrama Marg and Bhaktivedanta Marg.

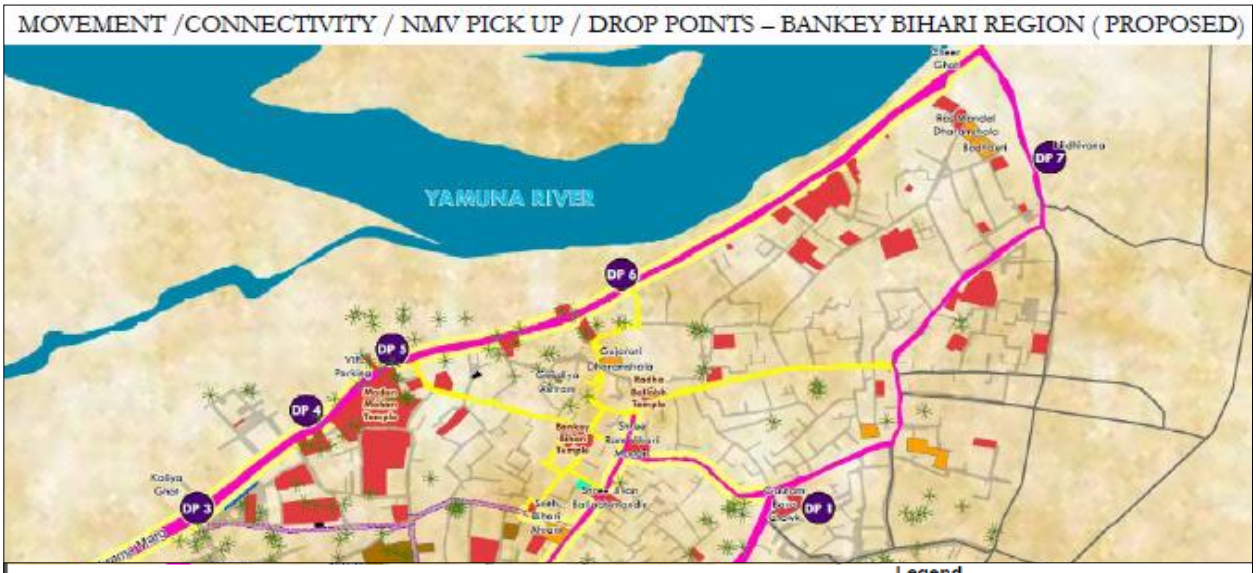
The map illustrates pick up and drop off points of Non-Motorized Vehicles (NMVs) through main roads and connectivity circuits. The map also suggests the main and additional NMV routes that connect existing and proposed parking areas, religious establishments and some of the most visited areas such as Chir Ghat, Madan Mohan temple, Nidhi Van etc.

Proposed NMV shuttle service aims to

- Help pilgrims to move freely and rapidly in the Banke Bihari Temple area
- Reduce traffic movement and the use of private vehicles within the city
- Decongest the heritage city of Vrindavan by promoting NMVs and pedestrian movement
- Generate livelihood for locals as NMV drivers

Figure 2.1: Over all Mobility Map

Proposed Movement, Connectivity, NMV Pick Up and Drop off Points are shown below in the Figure No. 2.2.



NO	ROAD / STREET	TYPE OF MOVEMENT	NO. OF STOPS	DESCRIPTION
1	Parikrama Marg	Pedestrian + vehicular route where devotees travel in groups to reach ghats or Bankey Bihari Temple	4	4 NMV pick and drop points are proposed on Parikrama Marg DP 3: Kalia Ghat DP 4: VIP Parking Area DP 5: Madan Mohan Temple DP 6: Chir Ghat
2	Gautam Bara Chawk	Start of Pedestrian Movement	1	End point of vehicular movement (4 wheelers not allowed beyond the point) DP1: Gautam Bara Chauk
3	Vidyapith Chauk	Pedestrian + vehicular Movement	2	DP2: Vidyapith Chauk / Integration of public parking proposal and proposed shuttle DP2.1: At the proposed parking location
4	Nidhi Van	Pedestrian + vehicular Movement	1	DP 7: Nidhi Van entrance

Figure 2.2: Proposed Movement, Connectivity, NMV pick Up and Drop Points in Banke Bihari Region

2.1.2 Component No. 1- Redevelopment of Kalideh Parking

Existing Kalideh parking area is strategically located appx. 450 meters away from Banke Bihari temple on the busy Parikrama Marg (Peripheral road). This parking is in close proximity to some old heritage Cenotaphs *(Chattris)* and an ASI protected monument-Madan Mohan temple. This parking area is one of the few government owned open land that can be utilised for such development. The land was developed as a parking area earlier with basic toilet facilities and a boundary wall. It is paved but due to lack of maintenance and inadequate facilities and it was never fully used and currently the parking lies unutilised - locked and non-accessible to visitors.

Under this subproject components, it is proposed to develop, maintain and government managed parking area for visitors which will be secured with an all-night guard for vehicle safety. The development proposal includes parking, utility area, and integrated visitor's facilities. The proposed facilities will include the following:

- Male and Female toilets
- Toilets for drivers with separate access
- Inquiry counter and an information centre
- Administration and management room
- Locker Room
- Shoe Racks
- Open courtyard
- Multipurpose store room
- Guard room
- Provision for water ATMs

The Proposed plan for the Kalideh parking area is shown in Fig. 2.3.

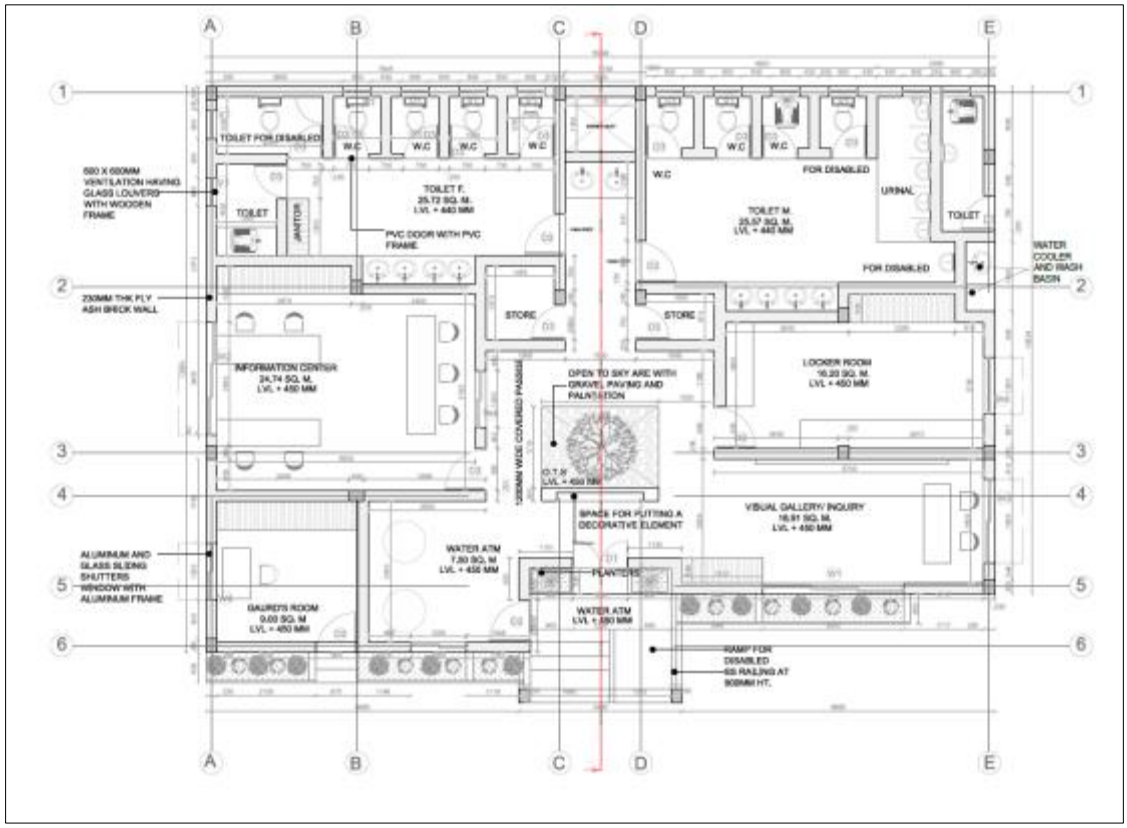


Figure 2.3: Proposed Plan of Utility block in Kalideh Parking area

2.1.3 Component No. 2- Redevelopment of Daruk Parking

Existing Daruk parking area is situated at the intersection of Mathura-Vrindavan road and the Yamuna express way but due to lack of facilities and operation issues, this parking area is currently unused and not operational. Therefore, Redevelopment of Daruk parking is considered as a component under the proposed sub-project considering its strategic location and potential. Under this subproject component, it is proposed to develop a well-managed parking area for visitors with following facilities:

- Male and Female toilets
- Toilets for drivers with separate access
- Toilets for differently abled persons
- Inquiry counter and an information centre
- Administration and management room
- Locker Room
- Shoe Racks
- Multipurpose store room
- Guard room
- Courtyard with food kiosks
- Provision for water ATMs

Proposed plan for Daruk Parking is given in Fig. 2.4.

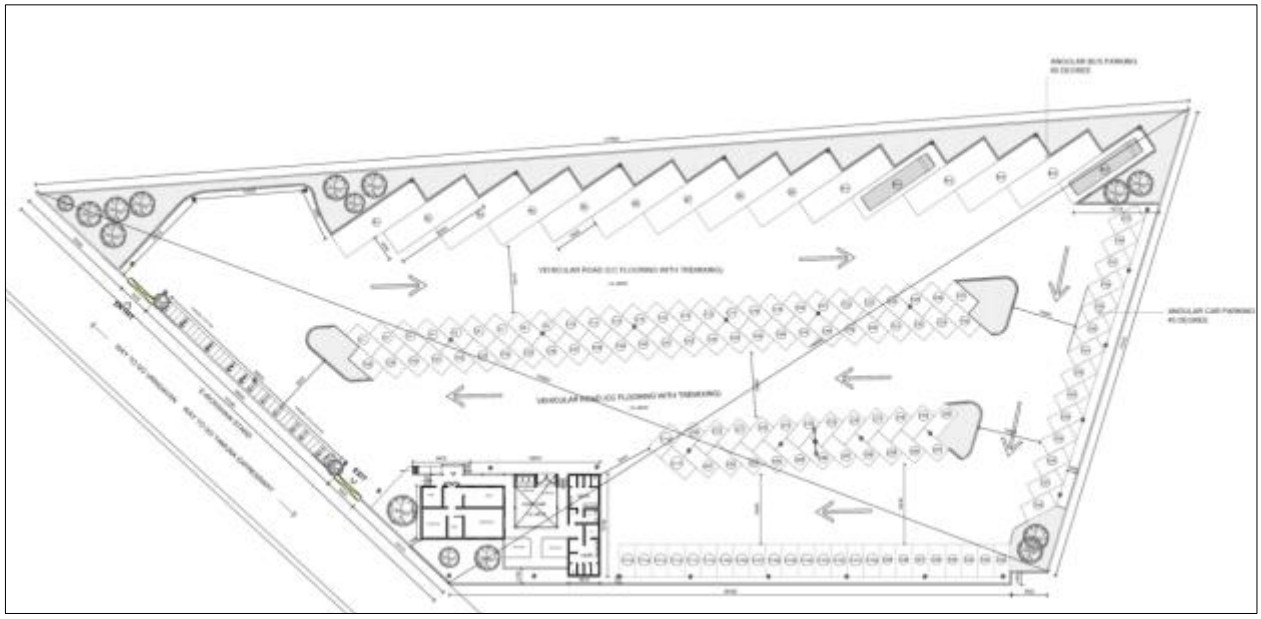


Figure 2.4: Proposed Plan for Redevelopment of Daruk Parking

2.1.4 Component No. 3- Treatment of Streets and Drains Leading to Banke Bihari ji

Upgrading of streets is an important and critical issue around the Banke Bihari temple area. Old city of Vrindavan has numerous streets, alleys and lanes that lead to the famous temple. In the past few years several streets in and around the temple have been undertaken for upgradation and some of these have been paved, along with works for covering of drains and concealing of electrical cables. These efforts have resulted in a variety of paving and a non-uniform surface treatments. Other than non-uniformity, following issues have been observed related to streets:

- Undulating ground
- Broken edges
- Open drains and broken drain covers in most parts
- Non – uniform paving on the streets
- Lack of adequate street infrastructure

Proposed Street Treatment:

Location of Streets leading to Banke Bihariji that have been included in the sub project for upgradation are highlighted in Fig. 2.5. There are various types of street treatment which are defined below:

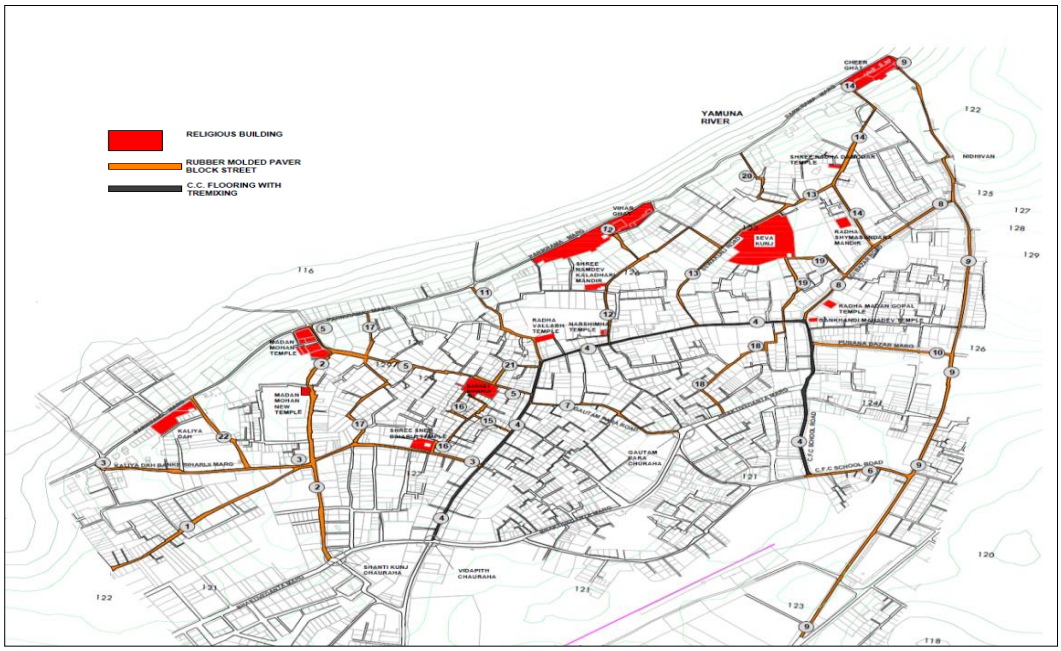


Figure 2.5: Location of Streets Leading to Banke Bihariji being taken for Upgradation

A- Street Treatment Type 1: Rubber Moulded Paver Blocks

Streets leading to Banke Bihari temple from Parikrama Marg (Peripheral road), Bhakti Vedanta Marg (road), Vidyapith Chowk (Crossing) and from other famous and more visited religious establishments such as Radha Vallabh temple, Jaipur temple, Nidhi Van, Seva Kunj have been included for street upgradation and will be paved with rubber moulded pavers blocks.

Key Specifications

- Total Length to be covered: 8.4 Kms
- Average width: between 3 to 6 mts width

B- Street Treatment Type 2: Concrete Road with Tre mixing With Side Walks and Drain Covers- One of the main streets leading to Banke Bihari temple begins from Vidyapith Chowk (Crossing) to Banke Bihari Chauraha (Crossing) and up-to Radha Vallabh temple is finished with concrete. Proposed intervention on this street focuses on upgrading the street by retaining the concrete surface with an additional layer of tremix on top. Sidewalks about a meter wide are proposed on either side of the street as per the existing site conditions.

Key Specifications

- Total Length to be covered :1.2 Kms
- Average width: between 4.5 to 6 mts

Key Inclusions

- Partial dismantling of old street paving material, where broken or in a bad condition
- Resurfacing of streets with concrete tremix and sidewalks with rubber moulded paver blocks
- Repair of existing drains
- Installation of drain covers

2.1.5 Component No. 4- Development of Community Open Green Area Behind Banke Bihari Ji Temple

A small sized government owned plot is situated about 120 meters away from the Banke Bihari temple. It is surrounded by traditional houses and is one of the few open areas around the Banke Bihari temple and is therefore being retained as one for the community. At present, it has an elevated platform used by residents for walking and community gathering. Due to its present utility, development of Community Open Green Area Behind Banke Bihari Ji Temple having total area of 235.4 Sq.m is considered in the proposed sub project which aims to develop present open area as a community place with elements that would make it more lively, usable and beneficial for the people living and working in its vicinity. Key Proposed interventions proposed are as follows:

- Traditional Tree Plantation: Native tree species will be planted at strategic locations on the platform to provide for natural shade around the chowk
- Provision for Benches: Benches will be placed around trees for children, women and families to sit around and enjoy evening community interactions
- Provision of Children Play Area: A small portion of the chowk is proposed to be developed with sandpit / grass to enable the children to play in the open area
- Repair of the Existing Platform and Steps

Proposed plan of the Community Open Green Area is provided in Fig. 2.6.

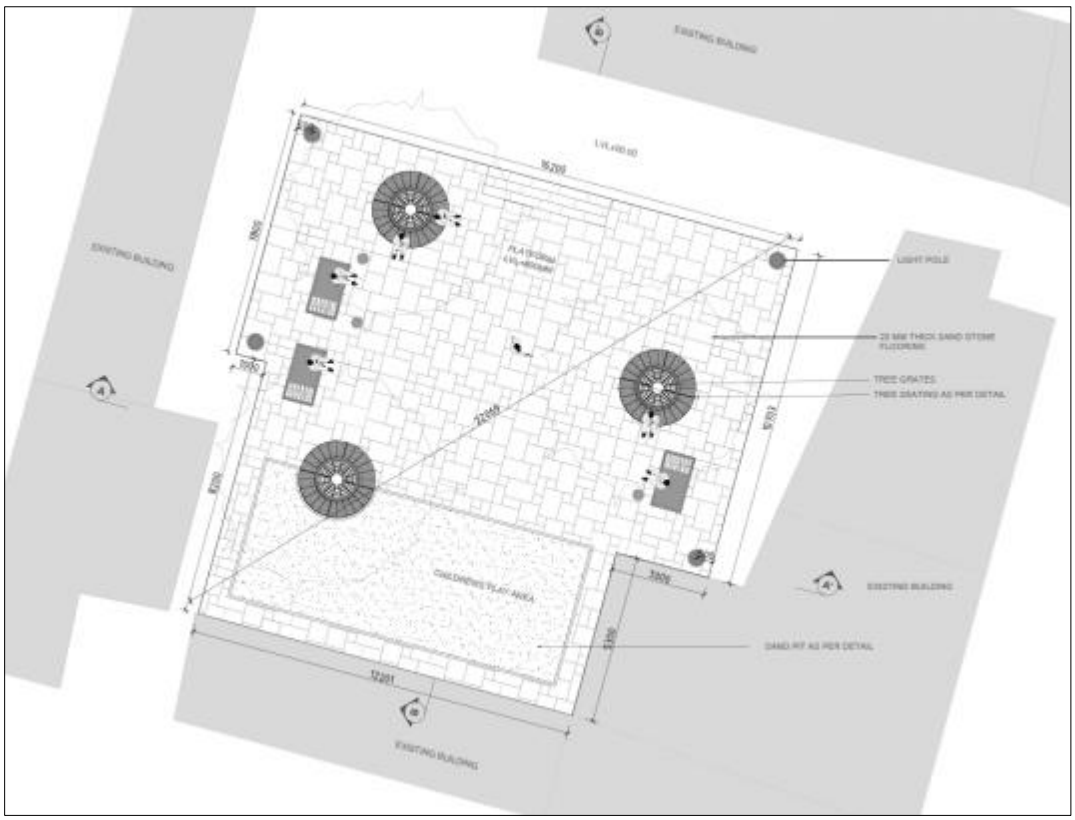


Figure 2.6: Plan for Development of Community Open Green Area Behind Banke Bihari Ji Temple

2.1.6 Improvement of Street Signage and Awnings

Improvement of street signage and awning includes following three sub-components considered in the project:

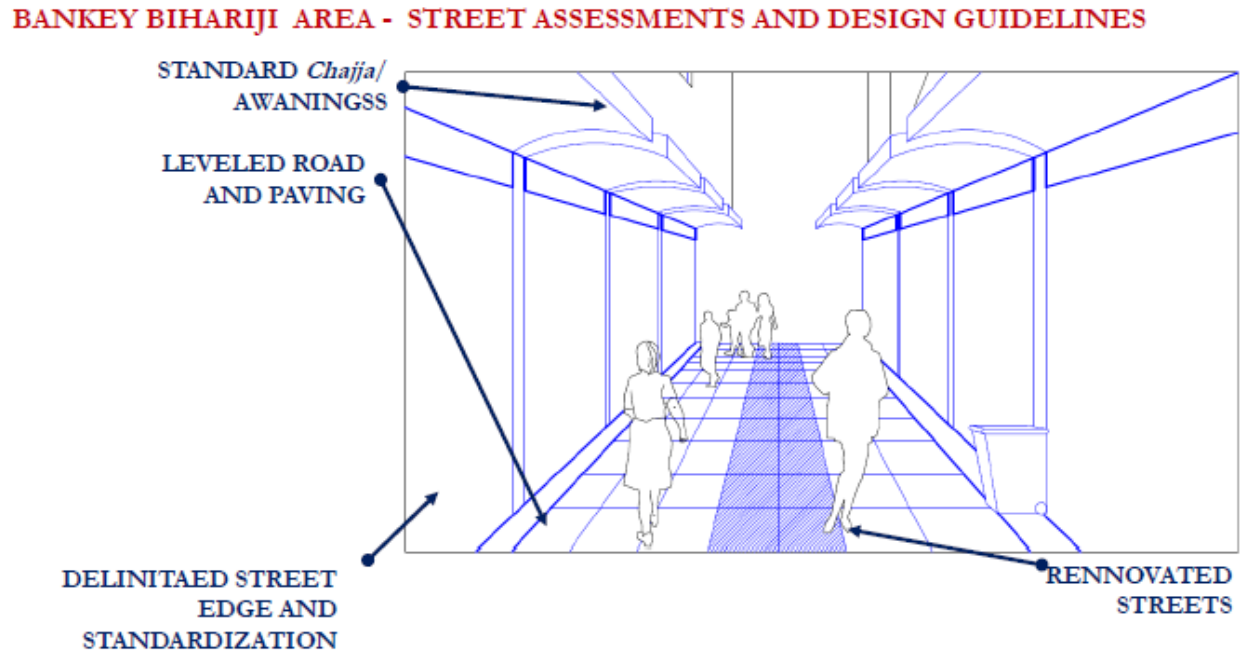
1-Street signage (directional and informative) with readable fonts in Hindi & English in bold colours for direction and information about the mythology of Banke Bihariji has been proposed. This will help the visitors to orient themselves in the temple area and inform them about the facilities available around. LED street lamps have been provided to ensure safety of the pedestrians and illuminate the narrow streets of Banke Bihari ji area.

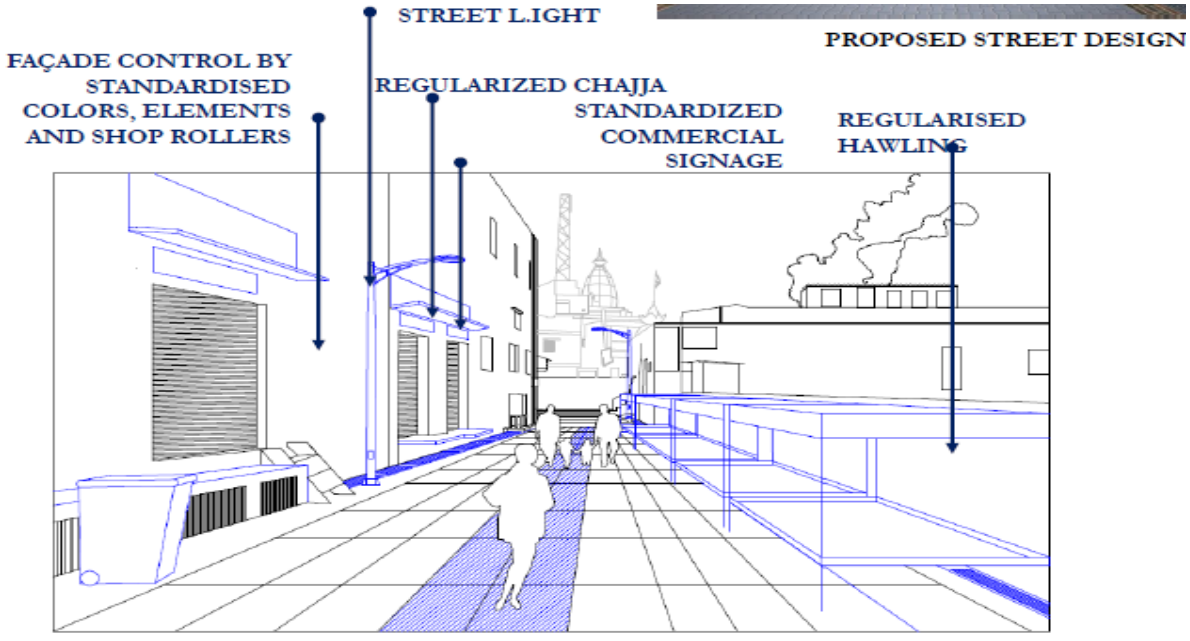
2-Retractable Awnings: This item focuses on developing standardised awning system for the street No. 4 to provide for uniformity and an integrated character in the temple area.

3--Standardised Shop Signage along Street No: 4: This item focuses on developing standardised shop signage for street No. 4 to achieve uniformity throughout the street

2.1.7 Urban Design Guidelines

Façade control of Street No 4 is proposed under this component where standardization of facades - plastering, painting and surface finishes is proposed and to develop it as a "Model Street". Area around the community open area behind the Banke Bihariji temple is also undertaken for façade improvement within this component. Proposed urban design guidelines are shown in Fig. 2.7 and Fig. 2.8.

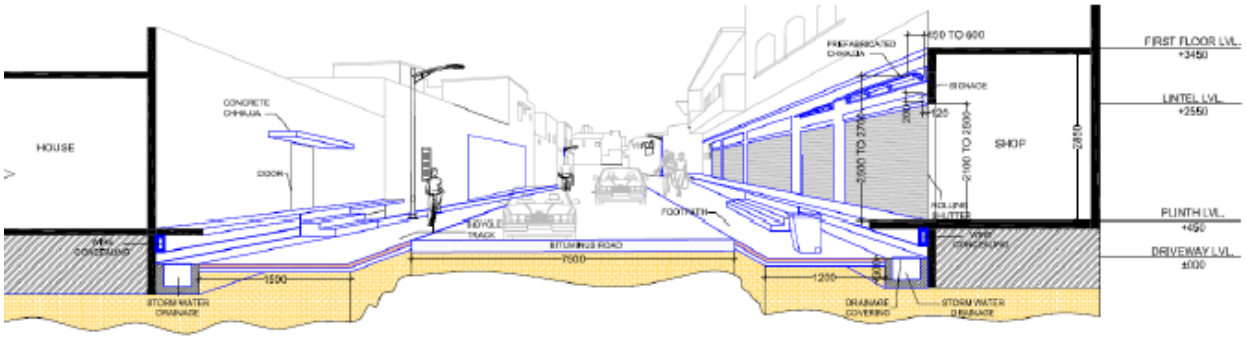




PROPOSED STREET DESIGN GUIDELINES(NEW DEVELOPMENT AND RENNOVATIONS)

Figure 2.7: Proposed Street Design Guidelines

BANKEY BIHARIJI AREA , PARIKRAMA AND BHAKTIVEDANTA - STREET DESIGN GUIDELINES



STANDARDIZATION AND STREET PAVING AND TREATMENT	• Road repair • Leveling and resurfacing • Standard paving patterns for all identified streets (narrow and mid sizes and vehicular streets) • Designate area for different activities on street
CONCEALING OF OPEN STORM WATER DRAINS	• Repair of drains • Treatment of open drains • Drain concealing
DEMARCATING DEVELOPMENT EDGE ON STREET	• Removal of temporary construction that has happened on street • Removal of haphazardly erected signboards and promotional elements • Removals of benches, platforms and other elements linked to the shop promotion and business • Defining street edge by paving pattern and concealing of drains
FAÇADE DEVELOPMENT AND CONTROL	• Standardization of weather sheds / window shades / Chajjas / Awnings • Integrated signage regulation for commercial streets • Façade control through color pallets for construction elements such as doors, windows, chajjas, jalis, railings and shop shutters • Regulation on construction typology • Façade control through material specifications
INTEGRATION OF SUPPORT INFRASTRUCTURE	• Street Lights at regular Intervals • Installation of direction, information and heritage signage • Signage for pick up / drop of points for cycle rickshaws and NMVs • Strategically located waste bins • Designated area for hawking and street vending
ADDITION OF STREET DESIGN ELEMENTS	• Wall reflector in narrow streets • Waste bins at regular intervals • Regulated hawking by using specially designed equipment

Figure 2.8: Summary of Works to be done under Street Design Guidelines

2.2 CONSTRUCTION MATERIAL AND SOURCING

General construction activities proposed under the sub project that require Sand and Fine Aggregates, coarse aggregates, bricks and blocks, ready mix concrete (grade M10, 20, 30), TMT steel, Binding wires and cement. Most of the construction material shall be purchased from local sources. however, material such as sand, fine aggregates, bricks and concrete will only be purchased from government approved authorized dealer and vendors.

2.3 SUB PROJECT COST & IMPLEMENTATION PERIOD

Cost estimates for various DPR components are summarized below:

S No.	Particulars	Amount (Rs.)
1	Redevelopment of Kalideh Parking	15,782,045.32
2	Redevelopment of Daruk Parking	49,471,172.33
3	Treatment of Streets and Drains	149,573,965.05
4	Development of Community Open Green Area	1,999,369.35
5	Improvement Signage and Awnings	14,468,369.94
6	Urban Design Guidelines For Parikarma Marg	7,502,456.00
7	EMP Cost	3,552,500.00
	Taxes & Contingency	46,046,476.82
	Grand Total (Rs.)	**288,396,354.80**

IMPLEMENTATION SCHEDULE:

The overall implementation of the EMP would require three years considering 24 months for project implementation and external evaluation.

Chapter- 3

Policy and Regulation Framework

3.0 KEY INDIAN POLICIES & REGULATIONS

The Government of India procedures on externally aided projects entail that all projects must be prepared and implemented in full compliance with the national legislation, regulations and standards governing protection and management of the cultural and natural heritage of the country, social development, and environmental management frameworks. In line with that, the Environment and Social Management Framework prepared for UP pro poor tourism development project includes the national and state level environmental laws and the operational policies of the World Bank. Specific state and local level standards and regulations also apply to the projects based on their location and nature of the proposed investments and activities. Pertaining to current subproject, some of the key national legislations and regulations related to environment that may apply for this project are summarized in Table 3.1

Table 3.1: Important National Rules and Regulations that may apply to this Project

Act/ Policy	Year	Objective	Main stipulations	Applicability to the project	Responsible Agency
Cultural Heritage – Government of India					
Ancient Monuments and Archaeological Sites and Remains Act Amended	1958 2010	Declares certain monuments/sites as being of "national importance". Stipulates conservation of cultural and historical remains found in India.	Monuments are "protected" area. 100m radius is "prohibited" area – no construction or reconstruction. Repairs allowed. 200m radius is "regulated" area (structures can be constructed by archaeological officers with due sanctions from competent authority). Protection, maintenance and conservation managed by Archaeological Survey of India (ASI)	Some of the proposed components of the sub project are located within the regulated zone of every archeologically protected monuments and would require permission from National Monuments Authority	Ministry of Culture; NMA with ASI
The Antiquities and Art Treasures Act	1972	To ensure registration of antiquarian remains in personal possession of individuals and institutions.	Registration of antiquities/remains/art is mandatory.	Possibly, if any subproject involves chance find.	Directorate of Culture, Govt. of UP.
Tourism					

National Tourism Policy	2002	To increase the number of domestic and international tourists. To diversify the Indian tourism product and substantially improve the quality of (tourism) infrastructure, marketing, visa arrangements and air-travel.	To focus on welcoming, information provision, facilitation, safety, cooperation, infrastructure development, and cleanliness.	Yes. The policy objectives are in sync with project objectives.	Ministry of Tourism, Govt. of India
Tourism Policy of Uttar Pradesh	1998	To leverage a diversified tourism sector for economic benefit of local populations.	Projects must improve and diversify the tourism product base with a focus on adventure, religion and monument-based travelers, while economically benefiting local populations and increasing employment opportunities	Yes. The objectives of the policy are in sync with project objectives.	Department of Tourism, Govt. of Uttar Pradesh
Environmental					
Environmental (Protection) Act	1986	To protect and improve the overall environment.	Prevention, control, and abatement of environmental pollution. Gives central government rights to monitor and test for environmental pollution, and if necessary penalize for infringements.	Environment (Protection) Act, popularly known as EP Act, is an umbrella legislation that supplements existing environmental regulations.	MoEF. Govt. of India; Central Pollution Control Board; UP State Pollution Control Board; Central and Regional Ground Water Boards

The Forest Conservation Act & Its Amendment The Forest (Conservation) Rules & Its Amendment	1927 1981	To check deforestation by restricting conversion of forested areas into non-forested areas.	If any forest land is proposed to be used for nonforest purposes, the user agency needs to get the clearances under the Forest (Conservation) Rules, 1981	The project doesn't pass through any kind of reserve forest and doesn't involve any diversion of reserve forest area. Additionally, no protected forest area diversion is involved.	Forest Department, Govt. of UP (for land conversion below 5 hectare & 40% density), MoEF, Regional Office and MoEF.
Wild Life (Protection) Act	1972	To protect wildlife through certain of National Parks and Sanctuaries.	The Act provides for protection of wild animals, birds and plants and related matters. The Act contains specific provisions and chapters on protection of specified plants, sanctuaries and national parks, etc.	The project does not pass through any wildlife sanctuary, or falls within 10km from either side of the project road from any wild life sanctuary/National Park/ Biosphere Reserve etc. Therefore, no such clearance is required for this project.	Chief Conservator. Wildlife, Wildlife Wing, Forest Department, Govt. of UP and National Board For Wildlife, Govt. of India
Water (Prevention and Control of Pollution) Act	1974	To control water pollution by controlling discharge of pollutants as per the prescribed standards.	Provides for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water; creates Boards and assigns functions and powers for the prevention and control of water pollution.	Implementing agency need to ensure that construction activities do not deteriorate the	UPPCB

				water quality.	
Air (Prevention and Control of Pollution) Act	1981	To control air pollution by controlling emission of air pollutants as per the prescribed standards.	Act provides for prevention, control and abatement of air pollution and establishment of Boards for planning a comprehensive program for this task. Collect and disseminate information relating to air pollution, lay down standards for emission of air pollutants into the atmosphere from industrial plants, automobiles or other sources.	Implementing agency need to ensure that construction activities do not deteriorate the ambient air quality.	UPPCB; Transport Department.
The Noise Pollution (Regulation And Control) Rules	2000	To control noise pollution by controlling noise at sources.	Rules provides statutory norms to regulate and control noise levels to prevent their adverse effects on human health and psychological wellbeing of the people. statutory norms to regulate and control noise levels to prevent their adverse effects on human health and psychological wellbeing of the people	Implementing agency need to ensure that construction activities do not deteriorate ambient noise level	UPPCB; Transport Department.
Solid Waste Management Rules	2016	To control and management of Solid Waste	Waste generator shall segregate and store the waste generated by them in three separate streams namely bio-degradable, non-biodegradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorised waste pickers or waste collectors as per the direction or notification by the local authorities from time to time. No waste generator shall throw, burn or burry the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies. All waste generators shall pay such user fee for solid waste management, as specified in the bye-laws of the local bodies.	This act will be applicable for the proposed project. Applicable provisions of this act are summarized in Annexure-I.	Municipal Corporation/body

Construction And Demolition Waste Management Rules	2016	The rules shall apply to every waste resulting from construction, re-modeling, repair and demolition of any civil structure of individual or organization or authority who generates construction and demolition waste such as building materials, debris, rubble.	Every waste generator shall prima-facie be responsible for collection, segregation of concrete, soil and others and storage of construction and demolition waste generated, as directed or notified by the concerned local authority in consonance with these rules. (b) The generator shall ensure that other waste (such as solid waste) does not get mixed with this waste and is stored and disposed separately.	This act will be applicable for the proposed project. Applicable provisions of this act are summarized in Annexure-I.	Municipal Corporation/body
Central Motor Vehicle Act Central Motor Vehicle Rules and (Amendment)	1988 1989	To check vehicular air and noise pollution.	Vehicles to be used for construction and other purposes need to meet the standards and certificates prescribed as per the Rules, 1989 to control noise, pollution, etc.	Yes. All vehicles used at project road should have of valid 'Pollution under Control' (PUC) Certificates issued as per Central Motor Vehicle Act	Motor Vehicle Department

Applicable Legislations and Permission Required: As per the Government of India procedure on externally added projects and its subprojects also must be prepared and implemented in full compliance with national legislation, regulation and standards governing protection and management of cultural and natural heritage of the country, social development and environmental management. Specific state and local level standards and regulations also apply based on the project location and nature of proposed interventions. Pertaining to current subproject, some of the key national legislations and regulations related to environment that may apply for this project are summarized in Table 3.1 while proposed activities require permission and authorization prior to implementation of project are summarized in Table 3.2.

Table 3.2: Proposed activities require permission prior to implementation of Project

Activity/Permission	Applicable Rules & Regulations	Responsibility	Technical Support	Granting Authority/Executing Authority
1. Permission for renovation/construction/ repair in Archeologically Protected area and its 300 m regulated zone.	Monuments and Archeological sites and Remains Act, 1958 & as amended Act 2010.	State Project Coordination Unit (SPCU UP Pro-Poor Tourism Development Project/Mathura Vrindavan Development Authority (MVDA).	Supervision Consultant	National Monuments Authority
2. Permission for Traffic Diversion during Development of Parking Places.	Traffic Rules & Guidelines	State Project Coordination SPCU / MVDA	Supervision Consultant	Department of Transport, Mathura

3.1 WORLD BANK SAFEGUARD POLICIES:

Safeguard policies are cornerstone of its support to sustainable growth, environment conservation, poverty reduction and shared prosperity. The core objective of these policies is to prevent and mitigate undue harm to people, their environment and cultural assets in the development process. Safeguard policies have often not only increased the effectiveness and development impact of projects and programs supported by the World Bank, but also provided a platform for the participation of stakeholders in project design, and thus have been an important instrument for building ownership among local populations, government agencies and partner organizations.

To achieve these ends, client (in this project- UP Tourism Dept.) are required to develop two overarching documents during a given project preparation. These include:

- An Environmental and Social Management Framework (ESMF), which establishes the overarching standards that the client is to meet throughout the life of the project.

- An Environmental and Social Impact Assessment (ESIA), which establishes the specific procedures, management and mitigation measures that the client is to meet for the implementation of each identified subproject and activity to be financed under a project supported by a World Bank loan or credit.

The ESIAs and ESMF provide a practical tool for the State Department of Tourism, its partners and associated implementing entities to identify measures to reduce, mitigate and/or offset potential adverse impacts while enhancing positive impacts during the project design and implementation. They also make provisions for the State Department of Tourism, its partners and associated implementing entities to estimate and budget the costs of such measures, as well as providing information on the agencies responsible for addressing such impacts during the project implementation. Finally, given the pro-poor tourism development nature of the project as well as the distinctive features of its target areas, the ESMF and ESIAs will pay specific attention to and provide the State Tourism Department, its partners and associated implementing entities with the principles and guidelines for culturally sensitive and ecologically sound subprojects in the project target areas.

Environmental and Social Management Framework:

This Environmental and Social Management Framework (ESMF) is a project-level document for the Uttar Pradesh Pro-Poor Tourism Development Project.

It is a technical day-to-day guide for the State Department of Tourism and its partners at government, private, civil society and expert levels to identify and address the potential environmental and social and cultural concerns or adverse impacts of the project from the preparation stage to its implementation and post-implementation operation and maintenance. It provides guidance on cultural properties, environmental and social management aspects for the adequate planning, design, execution and operation of the works and investments to be financed under the project, ultimately enhancing the expected positive impacts of the project.

The main objectives of the ESMF are to:

- Establish clear principles and outline all relevant legislation/regulations for the cultural, environmental and social planning, review, approval, implementation and monitoring of subprojects to be financed under the project
- Outline the procedures to be followed in order to comply with the principles, laws and regulations relevant to the project
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring cultural, environmental and social concerns related to subprojects to be financed under the project
- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF
- Establish the project funding required to implement the ESMF requirements Provide practical information resources for implementing the ESMF

Out of the several World Bank safeguard policies which were discussed in the ESMF of UP Pro-poor tourism project, following policies as highlighted in Table 3.3 will be applicable for the implementation of sub-project on Rehabilitation of Banke Bihari Temple Area, Vrindavan, Braj Region:

Table 3.3: Relevant World Bank Safeguard Policies

World Bank Safeguard Policies	Objective	Applicability	Safeguard Requirements
OP 4.01 Environmental Assessment	The objective of this policy is to ensure that Bank financed projects are environmentally sound and sustainable.	The environmental issues will be addressed adequately in advance. An integrated Environmental Screening and Environmental Assessment (EA) with Environmental Management Plan (EMP) will be developed to manage environmental risks and maximize environmental and social benefits wherever it is Applicable	EIA and/or EMP required.
OP/BP 4.11 Physical Cultural Resources	This policy aims at assisting in the reservation of cultural property, historical, religious and unique natural value-this includes remains left by previous human inhabitants and unique environment features, as well as in the protection and enhancement of cultural properties encountered in WB financed project	This policy may be triggered by sub-projects where cultural property, historical, religious and unique natural value-this includes remains left by previous human inhabitants and unique environment features may be affected due to project.	Appropriate cultural properties management plan shall be prepared as part of the EA and EMP for the sub-project. In addition necessary local clearances from the Archaeological Department, as per GoI regulations.

3.2 SCREENING & CATEGORIZATION OF THE PROJECT

Screening was carried out to understand the nature, scale and magnitude of environmental and social issues and impacts associated with the proposed sub-project. The screening activity was conducted as per the standard guidelines and format defined in Environment and Social Management Framework (ESMF) of UP Pro Poor Tourism Development Project. Before doing the project screening, review of project components proposed under the DPR, site visit and stakeholder consultations were completed. The detail of screening is summarized below in Form 1:

Screening Form-1

Rehabilitation of Banke Bihari Temple Area, Vrindavan, Braj Region

Uttar Pradesh Pro-Poor Tourism Development Project			
Screening Note no. 1			
Subproject Title: **Rehabilitation of Banke Bihari Temple Area, Vrindavan, Braj Region**			
Subproject location (area/district/site): Banke Bihari temple area, Vrindavan, District –Mathura, (UP) India			
Subproject scope of work: 1. Overall Mobility and Accessibility Strategy and Approach 2. Redevelopment of Kalideh Parking 3. Redevelopment of Daruk Parking 4. Treatment of Streets and Drains Leading to Banke Bihariji 5. Development of Community Open Green Area Behind Banke Bihari Ji Temple 6. Improvement of Signage and Awnings			
Subproject cost: Rs. **28.84 cr**			
Implementing Agency: MVDA (Mathura – Vrindavan Development Authority)			
Date of screening: August 2016, Revised November 2016			
Responsible agency: ICSC, Ahmedabad & Environmental Consultant, UP Tourism Dept.			
S/n.	**Screening Criteria**	**Assessment of category**	**Explanation**
ENVIRONMENT			
1	Is the subproject in an eco-sensitive area or adjoining an eco-sensitive area or monument? (Yes/No) If Yes, which is the area? Elaborate impact accordingly.	Yes	Sub project is located within the Taj Trapezium Zone (TTZ) which is a large trapezoid shaped, defined area of 10,400 Sq. Km around the Taj Mahal. It is a buffer zone designed to protect the historic monument from pollution. Within the TTZ, there are over 40 protected monuments and out of these protected monuments, some are located in Vrindavan also, some of the proposed project components such as Redevelopment of Kalideh Ghat parking with visitor facility falls under 300 mts from Madan Mohan temple while Street improvement related activities (street No 4, 11, 21) comes under 100-300 m from Radha Vallabh temple. These two temples are ASI protected monuments. Therefore, permission is required under the Ancient Monuments and Archaeological Sites and Remains Act,

			1958 to undertake construction/ reconstruction/ repair/renovation activities but considering the nature of the project and proposed interventions, it is expected that proposed activities will have very limited impact on environment and no adverse impact on ASI protected monuments.
2	Will the subproject create significant/limited/no environmental impacts during the construction stage?	Limited impact	
	• Clearance of vegetation/ tree-cover/other	No	No vegetation will be cleared for proposed activities.
	• Direct discharge of construction run-off, improper storage and disposal of excavation spoils, wastes and other construction materials adversely affecting water quality and flow regimes.	Limited	At the time of construction activities, there is some possibility of temporary flushing away of un-managed spoils and construction wastes during rainfall via storm water drains because activities are within project area only. However, all necessary measures will be ensured by the implementing agency to avoid any such situation.
	• Flooding of adjacent areas.	Limited	There will be no disturbance in drainage pattern owing to the project activities. Street drains leading to Banke Bihari temple are proposed to be resurfaced and covered that will reduce the chances of flash flooding which occasionally happen during rainy season. However, during project implementation, street drain related activities should not be done in rainy season to avoid localized flooding.
	• Improper storage and handling of substances leading to contamination of soil and water.	Limited	Temporary storage of construction and masonry material will not create severe impacts on soil and water. However, during rainfall materials such as cement, oil, fluids and grease, if not appropriately, managed or in the event of an accident.
	• Elevated noise and dust emission.	Limited	Construction is likely to increase the dust and noise levels temporarily

	• Disruption to traffic and visitor movement.	Limited	At the time of construction activity and supply of raw materials to the construction site may lead to slowing down of the traffic movement but occasionally. During construction activities, there will be some disruption in visitor movement.
	• Damage to existing infrastructure, public utilities, amenities.		No damage is expected to existing infrastructure. Proposed project will help create and improve the infrastructure for tourism including better sanitation facilities
	• Failure to restore temporary construction sites.	May be	Construction activities proposed under project are confined in defined and limited areas. However, SPCU/TSU will ensure that the contractor will restore any temporary construction sites.
	• Possible conflicts with and/or disruption to local community and/or visitors.	Limited	Some inconvenience to the visitors is expected at the time of construction activities. However, it will be temporary and will be managed by providing proper alternate access, putting signage and clearly demarcating and the construction activity zones.
	• Health risks due to unhygienic conditions at workers' camps.	Limited	It is expected that in this kind of project mostly daily wagers & local workers would work, thus labor camp will be a remote possibility. However, if, there would be some small camps within the project area with poor hygienic conditions, it may have temporary impact on the health of the workers
	• Safety hazards during construction.	Limited	If not appropriately managed, there may be potential of temporary hazard such as injuries and damage to property during the construction phase
	• Other, specify.	-	-

3	Will the subproject create significant/limited/no environmental impacts during the operational stage? (Significant / limited / no impacts)	Limited	-
	• Flooding of adjacent areas	No	As there is no disturbance in drainage pattern by the project activities
	• Impacts to water quality due to effluent discharge	No	STP/ETP is not proposed thus effluent discharge will not be there. In proposed project, only resurfacing and covering of street drains is proposed.
	• Gas emissions	No	-
	• Safety hazards	No	-
	• Other, specify- Impact on ground water table	No	-
4	Does the subproject involve any prior clearance from the MOEF or State Forest Department for either the conversion of forest land or for tree-cutting? (Yes/ No). If yes, which?	No	No such permission is required.
CULTURAL HERITAGE			
5	Will the subproject create significant/limited/no cultural properties impacts?	No	
	• Involve significant excavations, demolition, movement of earth, flooding or other major environmental damages.	No	Some of the proposed project components such as Redevelopment of Kalideh Ghat parking with visitor facility falls under 300 mts from Madan Mohan temple while Street improvement related activities (street No 4, 11, 21) comes under 100-300 m from Radha Vallabh temple. These two temples are ASI protected monuments. Therefore; permission is required under the Ancient Monuments and Archaeological Sites and Remains Act, 1958 to undertake construction/
	• Is located within or in the vicinity of a recognized cultural property conservation area or heritage site.	Yes	
	• Is designed to support the management or conservation of a cultural property.	Yes	

	Other, specify.		reconstruction/ repair/renovation activities but considering the nature of the project and proposed interventions, it is expected that proposed activities will have very limited impact on environment and no adverse impact on ASI protected monuments. .
6	Does the subproject involve any prior clearance from the MoC or State Archeology Department for either the conservation or management of heritage sites or vicinities? (Yes/ No). If yes, which?	Yes	Grant of permission/ NOC will be required from National Monuments Authority for construction of parking and reconstruction of streets near temple area. Application and project details have already been submitted to NMA for NOC and grant of permission.
SOCIAL			
7	Will the subproject create significant/limited/no social impacts? • Involuntary land taking resulting in loss of income; livelihood; sources of livelihood; loss of access to common property resources and / or private residential and/or commercial property. • Land acquisition resulting in relocation of households. • Any loss / reduction of access to traditional dependent communities (to areas where they earn for their primary or substantial livelihood). • Adverse impacts to women, including economic and safety concerns. • Other, specify.	Yes, but positive Yes No No No	It is expected that street re-organization, elimination of encroachment and organized vending may result in some loss of livelihood. These issues will be addressed in the SIA.

OVERALL ASSESSMENT	
□ Subproject is declined	NA
□ Subproject is accepted	Yes
□ Subproject is classified as environmental Category A and requires an in-depth Environmental and Social Impact Assessment and an Environmental Management Plan.	NA
□ Subproject is classified as environmental Category B and requires an Environmental Management Plan.	Yes. Environment & Social Management Plan will be prepared.
□ Subproject is classified as environmental Category C and does not require an Environmental Management Plan.	NA

Outcome of Screening & Project Categorization:

Project screening was carried out as per the screening form described in the Environment and Social Management Framework of UP pro-poor tourism development project. The screening result clearly shows that the Rehabilitation of Banke Bihari Temple Area, Vrindavan, would not have any severe adverse impacts on the environmental components and is classified as a Category B su-project. As per the World Bank safeguard policies , a Category B project needs to prepare an Environment Management Plan to minimize and mitigate the impacts on the environment.

Chapter-4
Description of Environment

4.0 BACKGROUND

The baseline environmental data has been collected to determine the existing status of various environmental attributes viz., climate and atmospheric conditions, air, water, noise, soil, hydro geological, ecological and socio-economic environment, prior to proposing the sub project. This study would help to undertake corrective mitigation measures for protection of the environment because any change of attributes due to activities of the proposed project. The baseline data of environment includes inventorization of physical, chemical, and biological parameters.
This section deals with the description of existing environmental setting in the project area.

A. Project Area
B. Influence Area

4.1 PROJECT AREA SETTINGS:

The primary project area is the Banke Bihariji Temple Area in Vrindavan town of Mathura district covering about 13.5 km of roads and alleys comprising of commercial, residential and religious structures. The project area is an important area as it leads to one of the most famous and significant temples in Vrindawan. This area has over time become an important focal area for various activities related to religious tourism. However, haphazard and unplanned growth, activities and movement patterns around the main temple area and in the streets leading to it have at the same time created an unpleasant atmosphere for the visitors. There has been little attempt towards a comprehensive planning of the area resulting in organic growth as per the needs of the tourists and residents. The main focus of this project is to develop it as a well-designed visitor destination with adequate facilities.

A- Physical Settings & Land Use Around the Streets included in the sub project

Twenty-two major streets are included for treatment under this sub project. The physical settings and land use around these streets are given at Table 4.1.

Table 4.1: Physical Settings & Land Use around the streets covered under sub project

STREET_NO	NAME	LENGTH (MT)	AVERAGE WIDTH (MT)	LAND USE AROUND THE STREETS
1	Sunrakh Road	365	5	Residential
2	Dawanal Kund Marg	1377	5	Commercial + Part Residential
3	Kalideh Banke Bihariji Road	590	6	Commercial + Residential
4	Vidhyapith – Banke Bihari Market street	1200	5	Commercial

5	Madan Mohan Banke Bihariji Path	385	5	Commercial
6	C.F.C School Road	658	5	Commercial
7	Gautam Pada Street	375	3	Commercial + Residential
8	Loi Bazar Path	327	5	Commercial
9	Nidhivan Temple Road	1300	5	Commercial + Mixed (Residential & Religious establishment)
10	Purana bazaza	230	3	Commercial
11	Radhavallabh Temple Road	197	5	Predominantly Residential with few commercial establishments
12	Shri Namdev Kala Mahadev Mandir Marg	280	4	Predominantly Residential with religious establishments
13	Sewa Kunj Road	420	5	Predominantly Residential with religious establishments
14	Loi Bazzar (Extension)	386	4	Predominantly Commercial with few residential establishments
15	Banke Bihariji Path	131	3	Commercial
16	Street behind Banke Bihari temple (near community open space)	189	3	Commercial with few Residential establishments
17	Street No. 17	318	4	Residential
18	Street No. 18	270	3	Residential
19	Street No. 19	246	3	Residential
20	Street No. 20	152	3	Residential
21	Street No. 21	36	3	Commercial
22	Street No. 22	177	5	Residential

Figure 4.1: Streets Considered in Sub Project

B- Public Utilities along the streets covered in the sub-project

Some amenities like hand pump, drinking water outlets, public toilets and important parking lots exist which are summarized in Table 4.2 while Figure 4.2 shows their location. These amenities are however located towards the extreme ends of the streets and not in the centre. The drawing also shows the location of electric substations and transformers, and these structures are situated on extreme left or right side of the street and mostly on pillars or elevated platforms. They are not major obstructions at ground level or at the eye level but do create obstructions in viewing the heritage facades lining the Banke Bihariji streets.

Figure 4.2: Profile of Amenities in the Project area

Table 4.2: Public Utilities along the Streets

Street no:	No. of hand pump	No. of drinking water facility	No. of electric substation transfer station and other similar amenities	No. of urinals/toilets
1	**2**		**4**	
2	**2**	**1**	**7**	
3	**2**	**1**	**6**	**1**
4		**1**	**12**	
5			**7**	
6		**1**	**1**	
7		**4**	**1**	**1**
8			**1**	

9	2			
10		1	1	1
11			3	
12	1			
13	1		4	
14				1
15			3	
16			3	
17			1	1
18	2		1	
19	2		2	
20	2			
21			1	
22	2		2	

Note:

- **No. of hand-pumps, drinking water outlets, substations and No. of urinals and public toilets are based on primary surveys. There may be a variation of 10 – 15 % in the total number estimated here.**
- **Location of hand pumps in most cases is either at the turning, corner or extreme side of the street and not in the central portion of the street**
- **Drinking water outlets are mostly adjoining the existing building or structure on the street. In most cases the drinking water outlet extends about 30 – 45 cms from the street edge at about 1 mt height. In most cases ground is free and is cantilevered from the existing street structure anywhere between 90 – 120 cm high.**

C- Physical Status & Topography of the Streets & parking Area Covered under the Sub Project

The area around Banke Bihariji Temple has a unique character owing to the religious-commercial activities associated with the temples, the traditional architecture of houses of Vrindavan lining these streets, wide range of traditional food joints and vendors selling sweets and local delicacies which has influenced the streets improvement and area settings time to time. The street paving offer different types and format associated with localized intent and development and are in undulating and damaged conditions. About nine types of pavements were observed as shown in Figure 4.2. The drainage situation, growing network of electric wires and watersheds are haphazard and dangerous situation along most of the streets. Overview of such situations are shown at Fig 4.3. However, the parking area is largely flat with no vegetation at present.

Paving Type 1: Brick Paving

Paving Type 2: Rubber Molded Paver Block (single color)

Paving Type 3: square shaped paver block (3 colors)

Paving Type 4: Rubber Molded Paver block (2 color paving design)

Paving Type 5: Concrete paver block

Paving Type 6: Bituminous road

Paving Type 7: Single colored rubber molded paver blocks (single color)

Paving Type 8: Combination of Bituminous road and square paver blocks

Paving Type 9: Rubber Molded paver block

Figure 4.3: Overview of Paving Situation in the Sub-Project Area

Drainage Situation around the Streets covered under Sub project

Dangerous Situation due to Growing Network Of Electric-Wires And Haphazardly Errected Weathersheds

Haphazardly Placed Signages On Heritage Structures

Figure 4.4: Overview of the drainage situation, growing network of electric wires and weathersheds in a haphazard and dangerous situation

4.2 BASELINE STATUS OF PROJECT & INFLUENCE AREA (Vrindavan Town)

Vrindavan as of today, is a small town with limited civic services, though visited by almost 4 million people annually. The town is located about 10 km away from the district centre of Mathura. The town is famous for its association with lord Krishna. It is believed as per the epic Mahabharata that Lord Krishna spent his childhood in Vrindavan. Due to its association with Lord Krishna, the town has hundreds of temples dedicated to the worship of Radha and Krishna and is considered sacred by Hindus and Banke Bihariji temple of Vrindavan, is one of the most prominent and popular religious places of India.

4.2.1 Topography:

The area of Vrindavan is about 4.56 sq.km and is defined by the Parikrama Marg that runs all around the town. The Municipal Board of Vrindavan was created way back in 1866, and is one of the oldest in the state of Uttar Pradesh. The Nagar Parishad area is divided into eight sanitation wards.

The topography of Vrindavan is generally flat with a gradual slope towards the River Yamuna. An earthen mound of about 10 metres height, exists towards the north-west side of the town, close to the Suraj Ghat, on which the Madan Mohan temple was built.

4.2.2 Land Use:

Vrindavan has mixed land-use of residential and commercial spaces together due to higher number of religious temples in the city streets leading to a huge inflow of visitors every year. In the proposed master plan of MVDA 2021 Vrindavan has been allotted around 3.4% (of total MVDA master plan area of 215 sq.km) of land use for religious purposes from Chattikraha till Vidyapith and Banke Bihariji area. Land use around temples is primarily residential with high density and commercial spaces along the visitor routes with shops, rest houses, dharamshalas, etc.

4.2.3 Climate:

The climate of Vrindavan varies from hot in summer to cold in winter, with a maximum of 42 - 45ºC in May-June and a minimum of 5-10ºC in December-January. The average annual rainfall is about 800 mm (August - September).

4.2.4 Demography:

Vrindavan city is the second highest populous place in whole Braj Region after Mathura with a total population of 63,005 persons in 11,637 Households as per Census 2011 data. Vrindavan also has lowest household size of 5 persons. It has 45% of women population which is lowest in Braj region. It has highest Schedule Caste (SC) population i.e. over 6294 but very little STs. A large number of foreigners also stay in and visit the town. Vrindavan has 68% literacy level where female literacy is 61% and male 74%.

4.2.5 City Infrastructure:

The city lacks infrastructure services for both tourists and residents. As shown in Figure 4.5, local residents face issues regarding basic infrastructure facilities in the city like – traffic congestion, poor sanitation and street conditions, lack of community open spaces etc. Visitors face lack of basic facilities like – proper signage, tourist guides or information center,

refreshment zones, drinking water points, toilets, shoe racks & cloak rooms, clean access routes to temples etc. The city has poor transport services which becomes almost un-manageable in peak festive times.

Figure 4.5 Waste collection, water logging on main road and uncovered drains

4.2.6 Mobility in Vrindavan

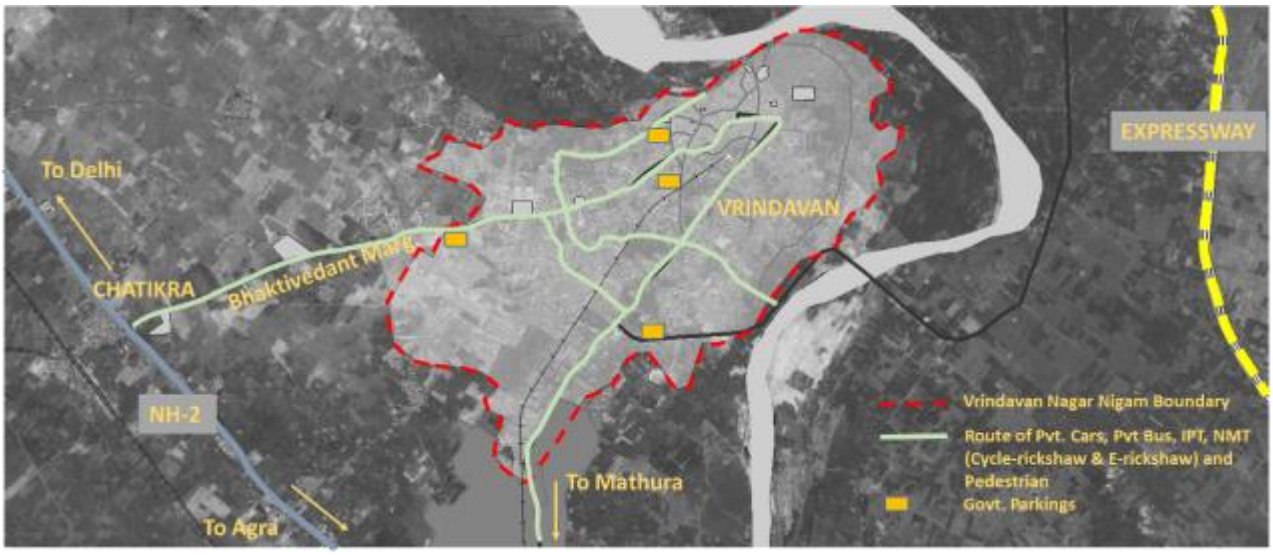


Figure 4.6: Map showing major vehicular movement routes of Vrindavan & govt. parking lots location

Movement from periphery to the city and then within the city streets has become difficult in Vrindavan due to many reasons apart from the huge traffic inflow it witnesses, e.g. 60% of its streets are only 2-lane carriageways, undivided carriageways are 85% and road markings are absent from 90% of the roads. The private vehicle owners also park their vehicles on the road which causes major congestion. Organized public transport is also absent in the city and there is a lack of integration between the parking facilities and other important amenities for visitors with the transportation system. In Vrindavan 91% of roads do not have footpath and 9% of them are discontinuous, encroached or in a deteriorating condition. NMT options exist but are functioning in a disorganised manner; streets are narrow with damaged pavements and surfaces[1]. Better mobility can improve the visitor experience of Vrindavan tremendously. Figure 1.6, showing major vehicular movement routes of Vrindavan and govt. parking location

1[1]CMP Mathura-Vrindavan,2011

4.2.7 Tourism Profile

Vrindavan is one of the most widely-visited pilgrim spots for Hindus in the country. It is situated close to Mathura, its twin holy city, associated with Lord Krishna's kingdom. The holy town of Vrindavan has a very rich and ancient history associated with the Hindu god, Lord Krishna. It is said to be the place where Lord Krishna spent his childhood and adolescence in the forests and there are many popular myths and folklore that revolve around Vrindavan and the ancient town. The town is peppered with many beautiful temples devoted to Lord Krishna. Vrindavan is also home to one of the most prominent sites for the international Krishna devotees association ISKCON.

The city gets pilgrims and visitors throughout the year. It has become a major pilgrim center for both Indian and Foreign visitors. The city also has important historical linkage with other neighbouring places of Braj region, like Mathura, Gokul, Barsana, Govardhan, Nandgao etc.

Vrindavan also comes under golden triangle and Braj-circuit. It has the 2nd highest international tourist inflow in Braj circuit after Mathura with 19,050 tourists and is 4th in domestic tourism after Goverdhan, Mathura & Gokul (As per U.P. Tourism Data, 2014). Vrindavan witnesses different types of visitors which include religious visitor, general visitors and specific ritual visitors.

Chapter 5

Stakeholders Consultation

5.0 BACKGROUND

Consultation is a process in the project cycle in which an attempt is made to involve the public as stakeholders in project preparation through consultations and focus group discussion meetings. Stakeholders' participation and consultation have been viewed as a continual course of action, which promote public understanding and help eradicate hurdles in the way of the project. Consultation during project preparation is an integral part of the environmental and social assessment process that not only minimizes the risks but also removes the gap between the community and the project formulators, which leads to timely completion of the project and making the it people friendly.

Public consultations and community participation was an integral part of this project preparation. Consultation sessions were carried out with different stakeholder groups at the local, regional and district levels, so as to incorporate their concerns and needs

To ensure the effectiveness of the consultations and the full participation of all stakeholders in the project, all relevant information was shared with stakeholders in a timely manner prior to the consultation and in a form and language that could be understood and accessed by all groups.

Consultations with these groups were carried out on two occasions:

a. Shortly after environmental and social screening; and
b. Once after draft ESMP was prepared such groups were also consulted throughout project implementation as necessary to address ESMP related issues relevant to them, allowing relevant stakeholders the opportunity to share their concerns during both the implementation phases of the project.

5.1 OBJECTIVE OF PUBLIC CONSULTATIONS

Keeping in mind the objective of minimizing adverse impact and the need of the stakeholders participation for the smooth implementation of the project, consultation with the members of different sections of society and local communities of the project area were carried out. The consultation with people is to be made with the aim of building awareness among them.

The type of consultations undertaken were individual interviews, field level observations, community consultations and meetings. The main objective of undertaking these consultations are as stated under:

- Dissemination of information to build awareness among stakeholders and inform them about the objective of the project.
- To inform stakeholders about the adverse and positive impacts of the project
- To inform stakeholders about the design aspects
- Discuss about the training requirements to enhance their skills & livelihood options

The primary and secondary stakeholders included (i) community having their shops & residence in the project area, (ii) Street vendors, (iii) visitors, and (iv) project officials. These consultations provided inputs on environmental and social issues and in identification of the needs of the communities.

In deciding the target groups for consultation, all sections of stakeholders viz. visitors, govt. officials, vendors, residents, private tourist agents, parking contractor and NGOs etc. were considered. These consultations provided inputs on social issues and in identification of the required needs of the communities.

Consultations were conducted with two major objectives:

a. Identifying specific issues related to the project, and
b. Ensuring participation of people in project activities.

5.2 TOOLS APPLIED FOR PUBLIC CONSULTATION & OUTCOMES

Different tools were employed in such interviews and discussions ranged from informal and undirected to formal and directed. Focus Group Discussions, Interviews and Public Consultations were the three tools largely used; the latter being the most important of them. The entire process of public consultation was completed through a series of actions starting from giving out a public information notice in the newspapers and culminating in acquiring feedback from the participants.

Focus Group Discussion

Public consultation is a continual process. In order to document the issues raised by the people potentially affected, Focus Group Discussions were conducted with the identified groups. This gave an opportunity for some of the affected people to express their views about the proposed project.

Interviews

A series of questionnaire-based interviews were also conducted to elicit public response to some specific questions regarding the perception of the public about the project as well as their willingness for partnership in the implementation of the same. Simultaneously with the filling of the interview schedules, people were engaged in informal, unstructured discussion about the general objective and design of the project.

Summary of FGDs and Interviews is given in Table 5.1.

Table 5.1: Summary of Interviews and FGDs

S. No.	Participating Stakeholders	Issues raised
1	NGOs	• Dumping of waste in the river • No proper, dedicated walkways for pedestrians compromises with their safety • No proper tourist information system for visitors • Lack of proper signage • Encroachments by hawkers/vendors on the streets
2	Banke Bihariji Temple Management Committee	• Multilevel parking is required to ease the problem of parking • Lack of toilet facilities • Encroachments by hawkers/vendors on the main streets and mismanagement of traffic creates congestion and unhygienic conditions • Lack of proper street lights raises safety concerns

S. No.	Participating Stakeholders	Issues raised
		• No proper management of solid waste by the food joints which throw garbage on the streets
3	Hawkers/Vendors	• Overcrowding in the Banke Bihari Street creates problems in terms of providing less space for tourist movement • No designated place for hawkers/vendors
4	Shop Keepers	• Lack of Cloak Rooms and civic facilities for the tourists • Maintenance of basic infrastructure like roads, drains and street lights is very poor • Erratic power supply
5	Local Youth	• Overcrowding and traffic mismanagement throughout the year. • Lack of resting places for the tourists • Lack of green cover • Poor street lighting
6	Pandas and Guides	• Lack of maps and information booklets which could be shared with visitors. • Training to the guides/pandas in hospitality
7	Tourists/visitors	• Lack of visitor facility • Lack of civic amenities in the sub-project area • Open drains and unclean streets • Mismanaged and unruly traffic in the area
8	Parking owners/contractors	• Lack of toilets and other facilities within the parking areas • Multilevel parking is required to fulfil the peak hour traffic demands
9	Traffic Police	• Enforcement of traffic rules is a challenge • On –street parking should be stopped and no-parking zones declared • Lack of proper signage on majority of internal roads
10	Tourist Police	• Lack of street lights especially in the Parikrama Marg and Banke Bihari Marg • Lack of dedicated space for tourist police

CONSULTATION DURING DPR CONCEPTUALIZATION AND PREPARATION

Consultation have been made with following stakeholders:

- Pujari / Pandits
- Pandas And Guides
- Pilgrims / Devotees
- Shop Owners
- Street Vendors
- Mobile Vendors
- Temple Committees / Trusts
- Parking Owners In The Temple Vicinity

- NMV Drivers
- NGOs Working In The Vicinity
- Widows
- Traffic Police
- Tourism Police

- Table 5.2 Details of Stakeholders

NO.	KEY STAKEHOLDER	COMMON ISSUES
1	NGOs	• Dumping of waste in the river • Risks to pedestrians on streets of Vrindavan • Tourist information Center is missing at Chattikraha or other entrances of Vrindavan for Visitors • Training of Pandas is needed • Signage's for visitors is missing • Un-organized vending near temples
2	Banke Bihariji Temple trust	• Multi-level parking is needed at *Parikrama Marg* • Toilet facilities are missing • Encroachment at streets by shopkeepers, vendors & vehicles create congestion and un-hygienic conditions • Access routes need to be treated well for pedestrian movement • Lighting around temple streets is required for safety • Food joints through waste in open drains which create clogging of drains
3	Flower / street Vendors	• Overcrowding at single route create problems • No designated place for vending • Covered vending zone require in many situations • Flowers are not available in Vrindavan it comes from other places of Braj or from Delhi
4	Shop Keepers	• Cloak room & toilet facilities for visitors is missing • Basic Infrastructure maintenance is poor • Poor electricity supply • Monkey is a serious nuisance • Drinking water supply is bad in residential area
5	Local Youth	• Very crowded streets throughout the year • Un-controlled traffic movement • Missing covered/shaded areas for visitors to rest or sit for a minute • Waste management & monkey's are the other big issues • Vegetation or plantation is missing in the city for locals and visitors • Need more places for gatherings • Well lit roads and Ghats
6	Panda or Guide	• Registration of guides need to be address on priority which is missing • I Card system and periodic training is required for better livelihood opportunity • Lack of good maps/documentation material which could be shared

		with visitors
7	Visitors or Devotees	• Visitor Facility center is needed near temple • Toilets are missing for visitors • Monkey create lot of nuisance • Open drains and un-cleaned streets should be address properly • Vehicles should not be allowed on pedestrian streets • Maximize the pedestrian streets nos. around temple area
8	Waste Collectors around temple area	• Designated place/dustbins for dumping of waste is missing in the region around temple
9	Parking Owners (Private)	• Govt. support is required to make toilets for visitors • Multi-level parking is required to fulfill the demand of peak inflow
10	Traffic Police	• Traffic management, law enforcement is one of the most critical issue in Vrindavan • On street parking and congestion on Parikrama Marg and Bhaktivedanta Marg is a major issue • Solution to reduce on street parking and proposal for big pay and use parking facilities is extremely necessary for Vrindavan • Most of the cross roads do not have signals / lights and hence difficulties in traffic management and efficiency
12	Tourism Police	• Vrindavan is a religious place and not many incidences are witnessed or listed however some of the areas like Parikrama Marg and Banke Bihariji are vulnerable during nights and evenings as there are no street lights. • There are issues of robberies and theft are reported by visitors and specially foreigners • There is no designated place where tourism police can operate from and are contacted only via phone call
13	NMV/ Rickshaw drivers	• Business is not as much • There is a need for standardized fares and provision for parking and drop off and pick up locations • Better and systemized approach will help decongest Vrindavan as well as will improve livelihood opportunities
14	Public Transport Sector	• Bus services and railway connectivity is not as efficient and hence most people come to Vrindavan via provable mode of transportation • There is a need to develop more integrated public transport system

Feedback from Public Consultations, FGDs and Interviews:

The conclusion of the consultation was that there will be no acquisition of private land and no adverse impact on the life of people due to the sub-project. There will also be no adverse impact on the livelihood of the hawkers/vendors and some perceived problems during implementation will be sorted out through mitigation efforts based on mutual understanding. It was agreed by all that the present parking and other civic facilities in the sub-project area are inadequate and adversely affecting public perception and tourist's experience. The attendees were of the view that the sub-project area requires a revamped parking and better civic facilities. All the participants were of the view that such consultations are helpful in two ways; one, they give a clear picture of the project to the largely uninformed public and secondly, they create a feeling of ownership in public perception.

All the respondents are willing to lend their support in the implementation of the project due to three main reasons that were voiced by them during subsequent informal discussions. These may be listed as: historical, religious and cultural importance of the Banke Bihari Temple, perceived socio-economic benefits attached with it, and a feeling of ownership and participation in the project.

5.3 MECHANISM FOR CONTINUED CONSULTATIONS

During the construction phase, periodic consultations will be held with the institutional as well as the non-institutional stakeholders by the supervision consultant with the civil contractor as additional stakeholder. The purpose of these consultations will be to apprise the various stakeholders of the progress of the project and to ascertain and assure that the work is being done as per the approved design and Social Management Plan of the sub-project.

The following set of activities will be pursued for effective implementation of project:

- Involvement of women and other vulnerable groups during the project implementation process to ensure their participation and address their needs.
- The Local Representatives involved in the implementation of project will organize Public meetings, and appraise the communities about the progress in the implementation of project works.
- Involve community in project progress monitoring.

Chapter-6

Anticipated Environmental Impacts

6.0 BACKGROUND

This section of the chapter identifies and discusses both positive and negative environmental impacts associated with the proposed project components. The assessment would be done for nature, types and magnitude of the potential environmental impacts likely to be caused by various project activities. A wide variety of direct and indirect positive and negative impacts have been identified. As a result, it is found that the project will improve the bio-physical and socio-economic environment components, if proper mitigation measures will be adopted in the design, construction and operation phases of proposed Project.

6.1 IMPACT IDENTIFICATION

The general impacts have been assessed from base line information and primary data collected during surveys and investigation. The possible impacts at various stages of the project such as prior initiation, during implementation and post project period will be assessed and mitigation measures will be suggested. The following elements are proposed to be analyzed:

- Natural Environment
    - Topography (Soil, forests, Land-use, Landscape)
    - Geological
    - Hydrological
    - Water Quality- Surface/Ground water
    - Air Quality (Noise & Meteorology)
    - Biodiversity- Flora/fauna]
- Social Environment
    - Resettlement & Land acquisition issues (if any)
    - Livelihood and local economy
    - Public health

Environmental impacts of proposed components are analyzed and predicted for construction and operation phases. Table 6.1 represents activity impact identification matrix and inter-action of project activities and environmental components while details of identified impacts are described in section 6.2.

Table 6.1: Activity Impact Identification Matrix & Inter-action of Project Activities & Environmental components

Project Components		Potential Impacts on Environmental Components by Project Activities										
	Land	Air		Water		Biodiversity		Social & Aesthetic				
		Air Quality	Noise	Surface Water	Ground Water	Flora	Fauna	Livelihood	Traffic	Resettlement / Displacement	Health and Safety	Any damage to Public & sensitive property
Redevelopment of Kalideh Parking	✓	✓	✓	X	X	✓	✓	✓	✓	X	✓	X
Redevelopment of Daruk Parking	✓	✓	✓	X	X	✓	✓	✓	✓	X	✓	X
Treatment of Streets and Drains	✓	X	✓	✓	✓	X	X	✓	✓	X	✓	X
Development of Community Open Green Area	X	X	X	X	X	X	X	X	X	X	X	X
Improvement of Signage, Awnings & Lighting	✓	X	✓	X	X	X	X	X	X	X	X	X
Urban Design Guidelines For Parikarma Marg	✓	X	X	X	X	X	X	X	X	X	✓	X

6.2 ANTICIPATED ENVIRONMENTAL IMPACTS:

The qualitative /quantitative impacts have been taken in to consideration based on following parameters:

- Types: Positive (+) or Negative (-)
- Magnitude: Long term and Short Term
- Duration: Permanent impacts, Temporary impacts
- Reversibility: Reversible, Irreversible

The environmental impacts caused due to the development of the project can be categorized as primary (direct) and secondary (indirect) impacts. Primary impacts are those which are induced directly by the project whereas the secondary impacts are those which are indirectly induced and typically include the associated investment and changing patterns of social and economic activities due to the proposed action. Interaction of the project activities with environmental attributes is presented as Activity-Impact matrix in Table 6.1. Environmental impacts due to the proposed project have considered the following project activities:

- impact identification during construction
- Impact identification during operation

Impacts Due to Project Location, Layout & Design:

Impact on Physical Cultural Property/ Protected Monuments

Proposed sub-project is located within the Taj Trapezium Zone (TTZ) which is a trapezoid shaped, 10,400 Sq. Km area around the Taj Mahal and a buffer zone designed to protect this historic monument from pollution. Within the TTZ, there are over 40 protected monuments and out of these protected monuments, some are in Vrindavan also.

Some of the proposed project components such as Redevelopment of Kalideh Ghat parking with visitor facility) falls under 300 mts from Madan Mohan temple while street improvement related activities (street No 4, 11, 21) comes under 100-300 m from Radha Vallabh temple. These two temples are ASI protected monuments. Therefore; permission is required under the Ancient Monuments and Archaeological Sites and Remains Act, 1958, to undertake construction/ reconstruction/ repair/renovation activities but considering the nature of the project and proposed interventions, it is expected that proposed activities will have no adverse impact on ASI protected monuments.

Impact Identification during Construction

The impact during construction will be localized and short term with reversible changes. Impact will be primarily related to the civil works and less intensive impact is expected during erection of the equipment and operation. Construction works generally involve site clearance, excavation, filling of earth materials, dumping of unusable debris materials, transportation of materials from production site to construction site, and other constructional activities and associated works like mobilization of constructional equipment, setting up of different construction plant, setting up of workforce camp, quarrying, transportation of material, material storage, etc. These activities have

certain impacts of varying magnitudes on different components of environment. A proper care is essential to minimize the adverse impacts to the extent possible and to facilitate least effect on the environment, and this has been discussed under following sub-heads:

Impact on Land and Soil Environment:

- Clearing and excavation of the land
- Generation, storage and disposal of spoils and debris due to construction activities
- Loss of aesthetic features
- Contamination of project land due to leakage or spillage of fuel and lubricants, waste water discharge from labor camps

Impact on Air Environment

I- Dust Emissions

During the construction phase, dust emissions in populated areas will be emitted and deposited on the leaves of trees and other vegetation which may affect the growth of the trees and other vegetation. Certain amount of dust and gaseous emissions will be generated during the construction phase from excavation machine and construction machines. Pollutants of primary concern include respirable particulate matters. However, suspended dust particle matter may be coarse and will be settled within a short distance of construction area. Therefore, impact will be temporary and restricted within the vicinity of the construction activities only.

Generation of Exhaust Gases

Generation of exhaust gases is likely due to movement and operation of machinery for construction. Toxic gases are released through the heating process during bitumen production. This impact will be much localized. Increase in air pollution level from mobile and stationary sources during construction phase will be a short-term impact on the air quality which is not expected to be significant as the commissioning phase will be staggered and intermittent in activity.

Impact of Noise

During the construction phase, the major sources of noise pollution are vehicles transporting the construction material to the construction yard and the noise generating activities at the yard itself. Mixing, casting and material movement are primary noise generating activities in the yard and will be uniformly distributed over the entire construction period. Construction activities are anticipated to produce noise levels in the range of 80 - 95 dB(A). The construction equipment will have high noise levels, which can affect the personnel operating the machines. Use of proper Personal Protective Equipment (PPE) such as earmuffs will mitigate any adverse impact of the noise generated by such equipment. The noise likely to be generated during excavation, loading and transportation of material will be in the range of 90 to 105 dB(A) and this will occur only when all the equipment operates together and simultaneously. This is however a remote possibility.

The workers in general are likely to be exposed to an equivalent noise level of 80 to 90 dB (A) in an 8-hour shift, for which all statutory precautions should be taken into consideration. However,

careful planning of machinery selection (not to operate more than 15-year-old), operations and scheduling of operations can reduce these levels.

Impact on Water Environment

Short term demand of water may increase as it will be required primarily at the construction activities and for domestic purposes in the labor camps. The contamination of ground water due to leakage or spillage of fuel and lubricants from machineries and waste water discharge from labor camps may be a possible impact on water environment. However, looking into the nature of work and workers to be involved contamination of water seems a remote possibility.

Impact on Flora and Fauna:

There are no ecologically sensitive areas like national parks or wildlife sanctuaries and reserved forests within the 10-km radius of proposed site. However following impacts may affect the flora and fauna found near project site:

- Loss of small shrubs & herbs at the time of dumping of debris and construction waste
- Disturbance to residents and fauna due vibration & noise generated during construction activities

Impact on Public buildings and sensitive monuments

The Project is located near ASI monuments and therefore, special attention is required during construction activities. However, looking at the nature of proposed components, there will not be any significant impact on Public buildings and Monuments.

Impact on Traffic

At the time of transportation of raw material, some traffic congestion may occur which may cause inconvenience to the road users.

Impact on Public health and Safety

- Dust, gaseous pollutant and noise generation within the congested area during the construction works may affect the health of people residing in close proximity
- Unhygienic condition and health hazard due to discharge of wastewater from labour camps
- Poor sanitation and accumulated garbage/ waste generated from labor camp may cause increase in communicable diseases
- Safety risks to construction workers

Impact Identification during Operation

During operation stage, major impacts anticipated are highlighted below:

Impact on Air Quality and Ambient Noise

- Slight increase in PM10, PM2.5 and gaseous pollutant levels in ambient air during congestion (if any)

- Increase in Noise level due to movement of vehicles

Impact on Water Environment

- The proposed project may increase the water demand of the area because some public facilities are proposed viz. toilets, drinking water taps, etc. to be developed to facilitate the visitors.

Impact of Refuse Disposal and Sanitation

- Generation of solid waste could result in odor and pollution if not managed properly
- Aesthetic problem and nuisance to commuters
- Un-hygienic conditions in surroundings may trigger diseases

Impact on Public Safety

- Unhygienic conditions due to unsafe disposal of waste generated

6.3 MITIGATION MEASURES:

Environmental impacts of proposed components are analyzed and predicted for construction and operation phases. The assessment results confirm that negative impacts are temporary and short term in nature. However, measures to minimize and mitigate the negative impacts identified under sub project activities are summarized in Chapter 7 in Table 7.1 and 7.2.

6.4 ANTICIPATED SOCIAL IMPACTS & MITIGATION MEASURES

The proposed sub-project, after social screening, census survey and social impact assessment concludes that the project falls in 'low impact' category and has overall positive benefits on the life and environment of the people. There is no land acquisition and no permanent livelihood loss under this project.

Impacts of activities identified during the assessment fall under two separate categories of Construction and Operation. Although no permanent adverse environmental or social impacts were identified, there were certain temporary impacts, for which appropriate mitigation plans have been suggested. 171 vendors will be temporarily impacted by the street upgradation works and subsistence allowance will be paid to them.

The Social Management Plan ensures to suggest appropriate mitigation measure against the issues/ concerns identified during the social impact assessment study. All the social issues were studied and have been substantiated using appropriate evidences to ascertain the magnitude of their impacts. Even the issues of public grievances and public notice have been taken care-off in the report to confirm transparency during the project implementation. It has been envisaged that post construction and integration of the renovated and restored facilities with tourist movement, the shopkeepers and vendors will get better livelihood opportunities thereby meeting the project objectives of pro-poor tourism of the Government of Uttar Pradesh. The details are in the Social Management Plan.

Chapter-7
Environment Management and Monitoring Plan

7.0 BACKGROUND:

Environmental Assessment study was carried out for the proposed rehabilitation of Banke Bihari Temple Area and as an outcome of the study, Environment Management Plan (EMP) to minimize and mitigate the impact of activities is proposed under this sub project. The EMP outlines the environmental management system that will be implemented during construction and operational stage of the project. The proposed management plan comprises following components:

1. Environment Management Plan
2. Environment Monitoring plan
3. Reporting Requirement
4. Institutional Arrangement
5. Framework for Monitoring and Evaluation
6. Grievance Redress Mechanism
7. Information Disclosure
8. Capacity Building and Technical support
9. EMP Budget

7.1 ENVIRONMENT MANAGEMENT PLAN:

The proposed sub project "Rehabilitation of Banke Bihari Temple Area" shall implement a sound Environment Management Plan (EMP), which will make environment protection an essential requirement. Prediction of the potential environmental impact arising due to development activities are considered as the heart of EIA process. An equally essential element of this process is to develop measure to eliminate, offset or reduce adverse impacts to acceptable levels and enhance the beneficial ones during implementation and operation of the projects. The integration of the project planning is done by clearly defining the environment requirements within an Environment Management Plan (EMP). Table 7.1 summarizes the Generic Environmental Management Plan which is common to all sub-components of the project while Table 7.2 indicates specific impacts and mitigation measures for the sub-components of the Project.

Table 7.1: Generic Environmental Management Plan: Common to all sub-components of the project

Environmental Component/ Issue	Mitigation Measures	BOQ Reference	Implementing Agency	Supervision agency
I. Air Environment				
1. Emissions from Construction Equipment and movement of vehicles.	▪ All vehicles used at project road should have valid 'Pollution under Control' (PUC) Certificates. ▪ All construction Equipment should be operated only through CNG.	Item J/21	Contractor	Supervision Consultant MVDA/SPCU
2. Dust Generation during earthworks.	Dust Suppression measures such as sprinkling of water (to wet the dust prone area/construction site) will be done at regular intervals to control fugitive dust emissions during construction activities.	Item J/21	Contractor	Supervision Consultant MVDA/SPCU
3. Fugitive dust generation due to wind from stock piling of earth/sand or other loose construction material.	▪ Stock piling of construction material shall be done at designated and approved places away from habitations and water bodies/ drains. ▪ Regular sprinkling of water and covering stack piles should be done to prevent wind-blown dust. ▪ Temporary barriers (berms, silt fence or sandbag) shall be erected to prevent spreading of construction material.	Item J/21	Contractor	Supervision Consultant MVDA/SPCU
4. Disruption of traffic due to construction activities, movement of vehicles leading to congestion and air pollution.	▪ Specific Traffic management and diversion plans shall be prepared by the Contractor and approved by the Engineer–in-charge prior to	Item J/21	Contractor	Supervision Consultant MVDA/SPCU

Environmental Component/ Issue	Mitigation Measures	BOQ Reference	Implementing Agency	Supervision agency
	commencement to works on any section of the street / road. ▪ The plan shall contain details of temporary diversions, traffic safety arrangements, safety signs, temporary barriers and flagmen around the exposed construction site to warn the public and ensure smooth traffic flow.			
II. Water Environment				
5. Depletion of water resources due to use of water for construction.	▪ Authorization for use of ground water or other sources of water supply, should be obtained. ▪ In case tanker water is used, the source of it shall have necessary authorizations. ▪ All efforts shall be made to reuse/ recycle water during construction.	Item J/21	Contractor	Supervision Consultant MVDA/SPCU
6. Contamination of surrounding areas and stagnation of water due to construction waste, vehicle washing, cleaning, other activities.	▪ No cleaning, washing or maintenance activity shall be undertaken in the influence area of the project area and near any water body. All equipment and vehicle shall be serviced /washed only in vehicle workshops. ▪ Adequate water supply and sanitation (toilets with adequate collection and treatment) facilities shall be provided to the construction labor at construction sites and other project facilities. ▪ All waste generated by the project	Item J/21	Contractor	Supervision Consultant MVDA/SPCU

Environmental Component/ Issue	Mitigation Measures	BOQ Reference	Implementing Agency	Supervision agency
	shall be managed complying with Construction and Demolition Waste Management Rules, 2016 & Solid Waste Management Rules 2016 and guidelines annexed to this EMP (Ref. Annexure I) ▪ All waste shall be reused for the project activities to the extent feasible. ▪ Waste and construction activities shall be managed, to avoid spillage in the nearby drains waterbodies.			
III. Noise Pollution				
7. Vehicles and Construction machinery movement & operation.	▪ All plant and equipment used in construction shall strictly conform to the prescribed noise standards of Central Pollution Control Board. ▪ No construction should be carried out during the night. ▪ Construction near habitations/ education institutes/ hospitals (health centers) should be carried out with proper barricades. ▪ All construction personal should be provided with ear plugs and other personal protective equipment.	Item J/21	Contractor	Supervision Consultant MVDA/SPCU
IV. Land Pollution				
8. Soil contamination from spillage of fuel, oils / lubricants from construction equipment and storage areas.	▪ No fuel / lubricants should be stored in project site. All oils/lubricants storage shall be procured from authorized agencies / suppliers. ▪ Construction vehicles should be well	Item J/21	Contractor	Supervision Consultant MVDA/SPCU

Environmental Component/ Issue	Mitigation Measures	BOQ Reference	Implementing Agency	Supervision agency
	maintained with periodic inspection to avoid leakages / spillage. ▪ Bitumen waste / scrap (if any) should be disposed in authorized disposal sites with approval from the engineer in-charge.			
9. Damage to vegetation due to Temporary use of land for construction material storage.	▪ No construction material should be stored in streets and sensitive locations. ▪ Temporary storage of construction material shall be done with the consent of the neighboring population, concerned land owner/authority and with adequate barricading and protection.	Item J/21	Contractor	Supervision Consultant MVDA/SPCU
10. Land pollution due to Disposal of Construction and Demolition Waste.	▪ All Construction and demolition waste should be disposed as per the Construction and Demolition Waste Management Rules, 2016 of Government of India. ▪ Efforts should be made to reuse the waste generated during excavation of the road. Some measures include, (i) the sub-grade of the existing pavement may be used as embankment filling material. (ii) The existing sub base material may be recycled as sub base of any haul road or access road. (iii) existing bitumen surface may be utilized for paving of access	Item J/21	Contractor	Supervision Consultant MVDA/SPCU

Environmental Component/ Issue	Mitigation Measures	BOQ Reference	Implementing Agency	Supervision agency
	roads and paving construction sites and campus, temporary traffic diversions, haulage routes etc. ▪ excess construction waste shall be disposed at a suitable site in compliance to the Construction and Demolition Waste Management Rules, 2016, with necessary authorizations and approval from Engineer in charge. ▪ All arrangements for transportation during construction including provision, maintenance, dismantling and clearing debris shall be considered incidental to the works and shall be planned and implemented by Contactor. ▪ Debris / waste generated from other construction activities shall be disposed such that it does not spill into surface water bodies or drains in the area. ▪ Debris/ waste shall not be stored in the project area or roads for more than 24 hours.			
11. Occupational health and safety hazards to construction personnel.	▪ Shall comply with the safety protocols, Building and Other Construction Workers Regulations of GoI and Environment, Health and Safety (EHS) Guidelines of World Bank Group.	Item J/21	Contractor	Supervision Consultant MVDA/SPCU

Environmental Component/ Issue	Mitigation Measures	BOQ Reference	Implementing Agency	Supervision agency
	▪ Shall provide suitable safety barricading at all construction sites. ▪ Shall provide and ensure use of PPEs (Personal Protective Equipment) such as Helmets, Mask, gum boots, gloves Ear plug etc. ▪ All vehicles and equipment shall have safety gear such as safety belt, reverse horn, etc. ▪ All electrical connections shall be provided earth link circuit breaker (ELCB) and earthing. ▪ Shall provide appropriate and adequate safety signage in local language (Hindi) and English at all project areas. ▪ Shall deploy Health & Safety Officers at the construction sites ▪ Shall provide facilities for first aid and medical support on call at project sites. ▪ Shall monitor and analyze all safety incidents/accidents and take appropriate preventive/ mitigative actions.			

Environmental Component/ Issue	Mitigation Measures	BOQ Reference	Implementing Agency	Supervision agency
12. "Chance of Find" of items / materials of cultural and / or archeological importance during construction the execution of the project.	▪ Report to relevant authorities, comply with World Bank's safeguard policy on Physical and Cultural Resources and Monuments and Archaeological Sites and Remains Act, 1958 & as amended Act 2010 of GoI. ▪ Prepare cultural properties management plan (if needed)	Item J/21	Contractor	MVDA/SPCU

Table 7.2: Environmental Management Plan - Specific to sub-components of the Project

Potential Environmental Impacts	Mitigation Measures	BOQ Reference	Responsible Agency	Supervision
Component 1: Redevelopment of Kalideh Parking				
During Construction Stage				
1. Traffic congestion during re-development works.	▪ Complete barricading shall be erected around the project site to avoid hazards, construction nuisance and dust pollution to neighbouring areas. ▪ Specific Traffic management plans shall be prepared and approved by the Engineer–in-charge prior to commencement to works. The plan shall contain details of temporary diversions, traffic safety arrangements, safety signs, and flagmen around exposed construction sites to warn the public and ensure smooth traffic flow.	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
2. Blockage of storm water drain due to the disposal of construction waste.	▪ All Construction and demolition waste shall be disposed as per the Construction and Demolition Waste Management Rules, 2016 of Government of India. (Refer annexure-I). ▪ Efforts should be made to reuse the waste generated.	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
During Operational Phase				
1. Water logging during rainy season due to loss of natural recharge of surface/ground water because of increased	▪ Proper drainage channels are proposed at parking area to collect rain water to avoid water	-	O&M Agency/ MVDA	MVDA

Potential Environmental Impacts	Mitigation Measures	BOQ Reference	Responsible Agency	Supervision
paved surface	logging/spreading on paved ground and rain water through channels will be discharged into river Yamuna			
Component 2: Redevelopment of Daruk Parking				
During Construction Stage				
1. Traffic congestion during redevelopment works.	▪ Complete barricading shall be erected around the project site to avoid hazards, construction nuisance and dust pollution to neighbouring areas. ▪ Specific Traffic management plans shall be prepared and approved by the Engineer–in-charge prior to commencement to works. The plan shall contain details of temporary diversions, traffic safety arrangements, safety signs, and flagmen around the exposed construction site to warn the public and ensure smooth traffic flow.	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
2. Blockage of storm water drains due to the disposal of excavated material during construction.	▪ All Construction and demolition waste shall be disposed as per the Construction and Demolition Waste Management Rules, 2016 of Government of India. (Refer annexure I). ▪ Efforts should be made to reuse the waste generated.	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
During Operational Phase				
1. Water logging during rainy season due to loss of natural	Proper drainage channels are proposed at parking	-	O&M Agency/ MVDA	MVDA

Potential Environmental Impacts	Mitigation Measures	BOQ Reference	Responsible Agency	Supervision
recharge of surface/ground water because of increased paved surface	area to collect rain water to avoid water logging/spreading on paved ground and rain water through channels will be discharged into river Yamuna			
Component 3: Treatment of Streets and Drains Leading To Banke Bihariji (Redevelopment & repaving of streets & Drains)				
During Construction Phase				
1. Safety hazards and possible accidents to tourists, visitors and local residents during redevelopment of street and drains	▪ Temporary diversion of routes and alternate route shall be developed to avoid inconvenience to visitors and local residents. ▪ Proper and adequate diversion signs shall be provided at all working areas. ▪ Proper safety signs, barriers, warning tapes and flagmen around the construction area shall be provided to ensure safety and avoid accidents. ▪ Work shall be carried out in phases to avoid inconvenience of residents.	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
2. Water logging and water spreading on street during redevelopment of drains. 3. Blockage of storm water drains during street redevelopment/ paving.	▪ Adequate alternate drainage arrangements shall be made during paving and construction of drains/ streets. ▪ Redevelopment work for street and drains should not be carried out during rainy season to avoid flooding.	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
During Operational Phase				
1.Water logging during rainy season and sewage overflow/sewage spreading	▪ Regular cleaning and desilting of drains shall be ensured by the O&M	-	O&M Agency / MVDA	MVDA

Potential Environmental Impacts	Mitigation Measures	BOQ Reference	Responsible Agency	Supervision
due to blockage of drains	agency to avoid water logging and sewage spreading/overflow.			
Component 4: Development of Community Open Green Area Behind Banke Bihari Temple				
During Construction Phase				
Inconvenience to local resident's due dust and noise generation in dismantling, excavation, filling and installations of lights and furniture.	▪ Curtains/ barriers shall be provided at all work sites to control spreading of dust beyond the construction area. ▪ Debris due to excavation of foundation, dismantling of existing structure shall be removed and reused for filling. The excess C & D waste shall be disposed as per the Construction and Demolition Waste Management Rules, 2016 of Government of India. (Refer annexure I). ▪ Construction and installation work should not be carried out during night.	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
During Operational Phase				
There will not be any negative impact of the proposed component during operational phase				
Component 5: Improvement of Signage and Awnings, Street Lights				
During Construction & Operational Phase				
Risk of electrocution and electric safety issues to local communities.	▪ Earth link circuit breaker (ELCB) will be provided for all electrical connections ▪ Proper signage (danger sign) at street lights will be provided to avoid electric shock/electrocution	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
Component 6: Urban Design Guidelines for Façades				

Potential Environmental Impacts	Mitigation Measures	BOQ Reference	Responsible Agency	Supervision
During Construction Phase				
Contamination of soil and water due to improper storage, handling, transportation and disposal of paints/colour materials and empty cans during implementation.	Empty cans of paints/colour materials shall be stored in covered shed and handover to authorized vendor or disposed at hazardous waste disposal facility	Item J/21	Contractor	Supervision Consultant/ MVDA/ SPCU
During Operational Phase				
Maintenance of facades improved under urban design guidelines	Modality for painting and façade maintenance to be discussed and decided by MVDA and residents mutually	-	O&M Agency/ MVDA	MVDA

7.2 ENVIRONMENTAL MONITORING

Monitoring is an important tool in establishing the success or failure of a project with regards to compliance to environmental safeguards. The purpose of the monitoring program is to ensure that the intended environmental measures are achieved and result in desired benefits to the target population. To ensure proper implementation of the Environment Monitoring Plan it is essential that an effective monitoring program is designed and carried out. The broad objectives of the environment monitoring program are:

- ✓ To monitor impacts on the surrounding environment and the effectiveness of mitigation measures during the construction and operation.
- ✓ To ensure that the environmental control systems installed at the plant are operating satisfactorily.
- ✓ To suggest ongoing improvements in management plan, if required, for subsequent effective monitoring
- ✓ To satisfy the requirements of environmental regulatory framework and community obligations

The environmental monitoring program and cost of this sub project is estimated based on the length of implementation (24 months) and existing environmental scenario of the proposed project. Environmental monitoring cost of **Rs. 1,88,000/-** has been allocated for construction and operation stages of project. The details are provided below in Table 7.3:

Table 7.3: Environmental Monitoring Program

Env. component	Project Stage	Location/frequency	Quantity	Unit Rate (INR)	Total Cost (INR)
Air Quality (5 Parameters)	Construction	Quarterly Monitoring at 3 stations, all through during construction	24	6000	144000

	Operational	Once at 2 sites after project completion	2	6000	12000
Noise Monitoring	Construction	Monthly monitoring at 2 sites, all through during construction	24	1000	24000
	Operational	4 times at 2 sites after project completion	8	1000	8000
Cost of Environmental Monitoring (INR)					**1,88,000/-**

7.3 REPORTING REQUIREMENT

Monthly compliance report to the above environmental management plan and monitoring plan shall be submitted by the contractor to DSC / TSU. Based on monthly compliance report from contractor and supervision on site, DSC will prepare quarterly progress report and submit to SPCU/TSU.

7.4 INSTITUTIONAL ARRANGEMENTS FOR SAFEGUARDS MONITORING

The State Project Coordination Unit (SPCU) created in Department of Tourism is supported by existing agencies (the Development Authorities in each core target area) and competitively selected decentralized teams (Technical Support Units – TSUs) based in each of the project core target areas, in principle in Agra, Mathura, Sarnath and Kushinagar. The TSUs will support the respective Development Authorities, the project implementing entities, in the day-to-day execution of respective subprojects.

Social, heritage management and environment specialists are hired by the SPCU to coordinate, review, support and monitor all respective safeguards aspects of the project. The specialists will also train and strengthen the capacities of specialists in the TSUs and in the implementing entities. The project may hire qualified civil society organizations for the implementation of the ESMP. The SPCU and the decentralized TSUs may also be supported by competitively recruited experts in highly specialized areas, as needed.

Mathura Vrindavan Development Authority (MVDA) will be primarily responsible for implementation of the project ESMP. MVDA will be assisted by SPCU through its Environment Specialist and Social specialist and TSU in implementation. MVDA will designate one of its official as Environment and Social Officer. The implementing team will comprise of the following:

- Environment & Social Officer of MVDA,
- Social Specialist of SPCU,
- Environment Specialist of SPCU
- Representative of local NGO
- Local people representatives

The roles and responsibility of these officials is given in Table 7.4:

Table 7.4: Roles and responsibilities of implementing team

Players	ROLES and RESPONSIBILITIES

SPCU Social Specialist	• Provide guidance to Social Officer of MVDA; • Monitoring implementation activities and make budgetary provisions • Participate in meetings; • Monitor physical and financial progress on implementation.
SPCU Environment Specialist	• Dedicated Environment Safeguard Specialist shall be deployed at SPCU for regular monitoring of environmental management plan • Provide guidance to environment Officer of MVDA; • Monitoring implementation of EMP activities through regular visits to the sub- project sites • Participate in meetings; • Monitor progress on EMP implementation.
IE/TSU Officer	• Co-ordinate with district administration for implementation • Translation of ESMP into local language and ensure dissemination at community level – prepare pamphlets on policy for information dissemination; • Provide training for skill enhancement • Liaison with district administration for dovetailing of government schemes for provision of basic services. • Report on physical, financial and EMP progress of implementation • Participate in the project level meetings; • Report progress, highlighting issues not addressed, to provide for mid-course correction;
Contractor	• Designated Environment Safeguard Specialist shall be deployed for Environmental Management during implementation of project. • Monthly compliance report to the above environmental management plan and monitoring plan shall be submitted by the contractor to DSC / TSU.
NGO Representative	• Represent interest of stakeholders during the implementation of ESMP and gender actions. • Provide information to stakeholders and local community and conduct awareness programs • Be part of grievance mechanism

7.5 FRAMEWORK FOR MONITORING AND EVALUATION

The project authority will be responsible for carrying out monitoring and evaluation. Internal monitoring will be carried out by the Environmental and Social Officers of MVDA with assistance from Social Specialist and Environment Specialist of SPCU and local representatives. This will help monitor project activities closely. Regular monitoring by undertaking site visits will help identify potential difficulties and problems faced in the project implementation and subsequently help take timely corrective measures including deviations, if needed.

Monitoring will start as soon as the project implementation begins and Environmental Officer and local representatives are appointed / nominated at site for implementation of ESMP. Components of monitoring will include performance monitoring i.e., physical progress of the work and impact monitoring and external evaluation. Indicators that would be monitored related to performance are provided in the following sections. However, if during the project implementation some other indicators are found relevant then those shall be included. NGO with appropriate expertise will be hired for external evaluation of ESMP implementation or the DPR components.

A quarterly report of internal monitoring will be prepared by concerned officer of MVDA. The monitoring will also provide feedback on community concerns, grievances and requests. Monitoring will focus on and ensure the following:

- Verification that there are no outstanding or unresolved issues with respect to the project
- Information campaign, discrimination and consultation with affected people,
- Effective operation of the Grievance Redress Committees detailing out number of complaints received and those resolved; reasons for not being able to resolve the grievance and status of unresolved grievances.

Framework of monitoring is summarized in Table 7.5.

Table 7.5: Framework for Monitoring

Type	Indicators	Issues	Procedure	Timing	Responsibility
Process level monitoring\	Project/ ESMP Implementation	Employment of local labor including women	Site observation, attendance record, interaction with laborers and contractors	Monthly	MVDA / NGO
		Campsite management including lodging arrangement and campsite facilities	Site observation, interaction with laborers, contractors	Monthly	MVDA /SPCU/ Local Representatives/ NGO
		EMP Implementation	as prescribed in the EA Report & Bid document	Monthly	Contractor/SPCU /MVDA
		Use of health and safety measures	Site observation, interaction with laborers, contractors	Quarterly	MVDA / SPCU/ Local Representatives/ NGO
		Temporary leasing of land and house, if any	Site observation, contractors, check contract agreement	Monthly	MVDA / Local Representatives/ NGO
		Discrimination of wage rate between male and female workers	Interaction with laborers, labor survey, record of wage payment	Monthly	MVDA / SPCU.
		Incidence of communicable diseases	Discuss with local people, health workers/ health post/ center records	Annually	MVDA / SPCU/NGO
Impact Level	Change in Forest Cover/ Vegetation Types if any	Changes in vegetation	Consultation with forest department/ local representatives	Annually	MVDA / SPCU
	Social safety	State of social harmony and social security	Police records, consultation with stakeholders.	Annually	MVDA / SPCU
Note:	**No type of change in forest cover /vegetation is proposed under this DPR**				

7.6 GRIEVANCE REDRESSAL MECHANISM (GRM)

An Integrated Grievance Redressal Mechanism (IGRM) based on use of ICT shall be established, with necessary officials and systems, at the state as well as subproject levels. Grievances if any, may be submitted through various mediums, including in person, in written form to a noted address, through a toll-free phone line or through direct calls to concerned officials, and online. All local contact information and options for complaint submission will be available on site on local information boards. Moreover, they will be in addition to the Public Information Officers to be appointed under the Right to Information (RTI) Act. A half yearly report on Grievance Redressal by the project will be prepared. The project will abide by the RTI Act of 2005; it will commit itself for proactive disclosure and sharing of information with the key stakeholders, including the communities/beneficiaries. The project will have a communication strategy focusing on efficient and effective usage of print and electronic media, bill boards, posters, wall writing, and adoption of any other method suiting local context, logistics, human and financial resources.

The project however will have a project level Grievance Redressal Mechanism (GRM) to address the grievances of the stakeholders related to project implementation and project impacts if any.

Members of GRM: The GRM will be constituted by the DM of Mathura. The GRM will have local representatives and other opinion leaders who will consider the grievance of the people. It will be chaired by a retried officer, who served as principal/judge/ DM/Additional DM, etc. The suitability of the Chairperson will be decided by the DM in consultation with MVDA. Apart from the nominated person, the cell will have a representative from MVDA as convener.

GRM will have representatives of the village residents including, farmers, youth groups and women self-help groups together with representative of city administration. Total of 12 – 15 members will be part of the GRM.

Functions of the GRM:

The GRM will conduct a meeting in the first week of every month to hear the grievances from the stakeholders. All the complaints will be forwarded to the concerned department/officials within 15 days from the date of receiving the complaints. The issues will be resolved/addressed by concerned officials within 45 days from the receipt of the complaints. All the grievances received shall be discussed by the Chairperson of the cell with DM for the necessary action.

The compliance to all the petitions shall be reviewed in each of the meeting by the chairman and the DM. In case the grievances are not addressed by the GRM, it will be escalated to the office of District Magistrate by the Chairperson / MVDA. The stakeholders can also approach judiciary if their grievances are not addressed at any of these levels. The GRM shall submit a monthly report to the MVDA for reference regarding the issues received and the cases disposed and forwarded to higher level.

7.7 INFORMATION DISCLOSURE:

The ESMP will be translated into local language and will be shared with the affected community. The English and translated version of ESMP will be disclosed on the website of Department of Tourism. Hard copies in English and Hindi will be placed at following offices:

- MVDA
- Office of District Magistrate, Mathura

Through public meetings, attempts would be made to ensure that vulnerable groups such as SC households understand the process of project preparation and their needs are addressed in the best manner possible.

7.8 CAPACITY BUILDING AND TECHNICAL SUPPORT

Given that Department of Tourism is implementing a World Bank-financed project for the first time, the capacity to address social, cultural and environmental issues as per the World Bank safeguards policies is limited. The Department of Tourism project staff will require training in the management of safeguards issues. The training program is to be coordinated and anchored by the Department of Tourism with support from agencies/individuals experienced in safeguard aspects for developing courses on conducting training programs.

The course contents will focus on the ESMF, concept, regulatory requirements, environment and social priority issues, project cycle of investments, outline of the ESIAs, management plans and report formats. It will also focus on the resettlement and rehabilitation and heritage policies and procedures, land acquisition process, identification of project affected people, social entitlement frameworks, social assessment, risk assessment and management skills.

As part of the capacity building program, the Department of Tourism would also aim to develop decentralized local capacity on managing environmental, social and cultural properties issues associated with various investments. To achieve this objective, the specialists will develop a network of technical man power resources such as staff from universities/research institutions, civil society organizations, etc. These persons will be trained during the project, so that they can provide support to the project agencies in conducting the required impact assessments and later in implementing all applicable management plans (including Resettlement Action Plan, Gender Action Plan, as relevant) and also offer support on an on-going basis.

The capacity building at the local level for ESMP implementation agency as well as for the monitoring and redressal committee would be done through the tourism department.

In addition to the above, DoT program will continue to mainstream the environmental, cultural and social issues within the training programs of State Project Coordination unit and the implementing entities. The program will be structured in such a way that it clearly brings out the value addition and enhancement benefits of proper management of environmental and social issues. Proposed capacity building plan is given in Table No. 7.6.

Table 7.6: Capacity Strengthening Plan

MODULES	CONTENT	DURATION
ESMF	• Project Concept • ESMF Concept • Regulatory Requirements • E&S Priority Issues • Subproject types • ESIA • Process Outline	Half a day To be repeated every alternative year

MODULES	CONTENT	DURATION
	• Reporting	
Environmental Assessment Process	• Environmental Laws & Regulations • EIA process • Identification of Environmental Impacts • Impact Identification Methods • Identification Mitigation Measures • Formulation of Environmental Management Plan • Implementation and Monitoring • Institutional Mechanism	Full day class room training. Half a day field training.
Social Assessment Process	• Social Assessment process • Description of project; RPF, gender frameworks; and National regulatory frameworks • LA process • Necessity for RAP/ ARAP, Gender plan and its preparation process • Implementation and Monitoring • Institutional Mechanism • Grievance Mechanism	Half a day class room training. Half a day field training.
Cultural Properties Assessment Process	• Cultural Properties Assessment process • Description of project and national regulatory frameworks • Necessity for PCRMP and its preparation process • Implementation and Monitoring • Institutional Mechanism	Half a day class room training. Half a day field training.

7.9 EMP- BUDGET FOR THE IMPLEMENTATION OF SAFEGUARD MITIGATION MEASURES

The budget for the implementation (as highlighted in Table 7.7) of various mitigation measures is an important aspect of the safeguard management activities of the project. This section outlines the budget for implementation of the ESMP provisions and has been based on the proposed actions.

Table 7.7: Budget for ESMP implementation

Sr No.	Description	Particulars of EMP Cost				
		Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
1	**Sprinkling of water For Dust Control**					
A-	Sprinkling of water For Dust Control at all the construction points including sites of material storage at every 2 hr interval as dust suppression measures during construction activities. Rate include labour cost, transportation, materials, equipment's and works required to execute the job.	864.0	KL	500.00	4,32,000.00	Considering 6 tanks (2KL capacity) per week for 18 months' construction period
2	**Development of Material Storage Sites 2 in. No.**					
A	Separate storage areas with three side covering with temporary barricading of 2 m Hight is provided for course and fine aggregate material to minimize dust expansion. Land of material storage (base of storage sites) sites shall be protected with high thickness plastic sheets. Loose course and fine aggregate Material should also be covered by high thickness plastic sheets ato prevent dust expansion. Rate include labour cost, transportation, materials, equipment's and works required to execute the job during entire construction period	3.0	No.	100000.00	3,00,000.00	Market Rate
3	**Provision of Sanitation facilities at Labour camp**					
	A-Water Supply Considering 6 tanks (2KL capacity) per week for 18 months	864.0	KL	500.00	4,32,000.00	Considering 5 tanks (2KL capacity) tanks per week for 18 months

Sr No.	Description	Particulars of EMP Cost				
		Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
	B-Solid wastes management by providing bins of 100 Litres capacity at 15 points	15.0	No.	1500.00	22,500.00	Market Rate
	C-Mobile Toilet with anaerobic treatment facility (10 seated) for 18 months on rental basis (2 No.)	36.0	Month	10000.00	3,60,000.00	Market Rate
4	**Traffic measures during construction**					
	A- appointment of two traffic marshals for 18 months	36.0	Month	8000.00	2,88,000.00	-
	B-diversion materials & Safety Signage cost	LS	-	-	1,00,000	-
5	**Noise Control Measures by providing barriers or sheets**					
A-	Noise Control Measures by providing acoustic barriers or sheets that to be used at high noise producing construction activities such as cutting of stones, drilling etc.	100.0	Sheets	3000.00	300000	Market Rate
6	**Provision of PPEs (Personal Protective Equipment) i.e. Helmet, Mask, gum boots, gloves, Ear plugs etc.), first-aid kits and safety signage's**					
	A- Providing 30 Sets of PPEs (Personal Protective Equipment) i.e. Helmet, Mask, gum boots, gloves, Earplugs etc),	30	No.	4000	1,20,000.00	Market Rate

Sr No.	Description	Particulars of EMP Cost				
		Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
	B- 3 Sets for First Aid kits for 25 People that includes following items Kit Includes: (10) Alcohol Wipes (1) Scissors (1) Tweezers (1) First Aid Guide (4) Nitrile Exam Gloves (1) Triangular Sling/Bandage, 40" x 40" x 56" (1) Cold Compress, 4" x 5" (1) Conforming Gauze Roll, 4" x 5 m (6) Gauze Dressing Pads, 4" x 4" (1) First Aid Tape, ½" x 5m (60) Plastic Bandages, 1" x 3" (2) Sunscreen Lotion Packets, SPF 30 (2) Trauma Pad, 5" x 9" (5) 2 Eyewash, 1oz, with 2 Eye Pads and 2 Strips (1) CPR Mask with One Way Valve (1) Burn Dressing, 4" x 4" (6) Hand Sanitizer Packets, 0.9g (4) Insect Sting Relief Wipes (10) First Aid/Burn Cream Packets, 0.9g (10) Triple Antibiotic Ointment Packets	3	No.	10000	30,000.00	Market Rate

Sr No.	Description	Particulars of EMP Cost				
		Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
	C- Safety Signage 42 in No. to use for construction sites, diversion and for other safety message- Manufacturing, supplying and fixing retro reflective sign boards made up 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same in following sizes at suitable sites or decided by the Engineer-in charge				-	
	A- Small -3X2 Feet	30	No.	5000	1,50,000.00	Market Rate
	B-Medium-5X3 Feet	10	No.	8000	80,000.00	Market Rate
	c- Large-7X4 Feet	2	No.	15000	30,000.00	Market Rate
7	**Environment Monitoring**					
	A- Air Quality monitoring at 3 sites bi monthly interval till end of the construction period (parameters-PM2.5, PM 10, SO2, NO2, CO)	24 (Construction Phase)	No.	6000	1,44,000.00	Market Rate
		2 (Operational Phase)	No.	6000	12,00,0.00	
	B- Noise Monitoring (24 Hr)-2 sites at bi-monthly till end of construction	24	No.	1000	24,000.00	Market Rate
		8	No.	1000	8,000.00	

Sr No.	Description	Particulars of EMP Cost				
		Quantity	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
8	**Training & Capacity Building**					
A	Training & Capacity Building on ESMP (as per capacity building plan described in chapter & given in ESMF)	LS	-	-	2,00,000.00	Rs.100000/- considered for each year for two-year construction period that includes trainer cost and logistic arrangements cost
9	**External Evaluation**					
A	External Evaluation – Evaluation needs to done carried out by an independent agency either a Design, Management and Review agency or hired NGO who would undertake the work. This will be independent of DPR implementation agency	LS	-	-	500000/-	ToR for evaluation will be prepared by the subject expert. Cost of ToR preparation is considered Rs. 50000/-. Apart from above cost, Rs. 4.5 lacs will also be estimated for evaluation of external evaluation of ESMP implementation
	Grand Total of EMP Cost:				**Rs. 35,52,500.00 /-**	
	Grand Total (in Words): Thirty Five Lacs Fifty-Two Thousand Five Hundred Rupees Only					

Chapter-8
Conclusion

The UP Government envisioned Uttar Pradesh Pro Poor Tourism Development Project with the financial support of World Bank is one of the stepping stone in restructuring its tourism sector in a pro-poor manner with a view to increasing benefits to local communities and improving the management of its tourism destinations. "Rehabilitation of Banke Bihari Temple Area, Vrindavan" is one of the identified sub project proposed under UP Pro-Poor Tourism Development Project. The project area is centred around the area of Banke Bihari Temple in Vrindavan and the Parikrama Marg in the west and Bhaktivedanta Marg in the east. The subproject is expected to provide a broader and improved experience to tourists visiting one of the most important destinations in the Braj region – Vrindavan – and one of its most significant assets – the Banke Bihari Temple area – while upgrading the infrastructure and services to improve living conditions for its residents.

Detailed Project Report for "**Rehabilitation of Banke Bihari Temple Area, Vrindavan**" has been prepared and approved by the Department of UP Tourism Therefore, scope of this report is limited to assess environmental impacts of the components proposed under the said project and to determine the specific measures to reduce, mitigate and/or offset potential adverse impacts during pre-construction, construction and operation phases of the project. Project screening was carried out as per the screening criteria described in the Environment and Social Management Framework of UP pro-poor tourism development project that conclude that proposed sub project falls in 'Category – B' with minimal impact and have overall positive benefits on the life and environment of the people. There has been no reported land acquisition or livelihood losses to be caused under this sub project. As per environmental and social management framework guidelines of Uttar Pradesh Pro Poor Tourism Development Project; Environment impact assessment was conducted for addressing possible issues/ concerns arising from proposed project. Impacts of activities identified during the assessment under categories of Construction and Operation phase. Although no such permanently negative or adverse environmental or social impacts were identified, there were certain temporary impacts, for which appropriate mitigation plans have also been suggested. The environmental management plan ensures to suggest appropriate mitigation measure against the issues/ concerns identified during the environmental and social analysis study. All the social and environmental issues were appropriately studied and have been substantiated using appropriate evidences, to ascertain the magnitude of their impacts. Even the issues of public grievances and public notice have been taken care in the report to confirm transparency during the project implementation. Report also ensures that well defined institutional mechanism is in place to monitor and evaluate the progress of the project during construction, implementation and operation phases.

Annexure-I

Guidelines for Construction and Demolition Waste Management & Solid Waste Management (as per Demolition Waste Management Rules, 2016 & Solid Waste Management Rules 2015)

(i) Every waste generator shall segregate construction and demolition waste and deposit at collection centre or handover it to the authorized processing facilities

(ii) Waste generator shall ensure that there is no littering or deposition of waste so as to prevent obstruction to the traffic or the public or drains.

(iii) Large generators (who generate more than 20 tons or more in one day or 300 tons per project in a month) shall submit waste management plan and get appropriate approvals from the local authority before starting construction or demolition or remodeling work,

(iv) Large generators shall have environment management plan to address the likely environmental issues from construction, demolition, storage, transportation process and disposal / reuse of C & D Waste.

(v) Large generators shall segregate the waste into four streams such as concrete, soil, steel, wood and plastics, bricks and mortar,

(vi) Large generators shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities;

(vii) Segregate and store the waste generated in three separate streams namely bio-degradable, non-biodegradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorized waste pickers or waste collectors as per the direction or notification by the local authorities from time to time;

(viii) Wrap securely the used sanitary waste like diapers, sanitary pads etc., in the pouches provided by the manufacturers or brand owners of these products or in a suitable wrapping material as instructed by the local authorities and shall place the same in the bin meant for dry waste or non- bio-degradable waste;

(ix) Store separately construction and demolition waste, as and when generated, in his own premises and shall dispose off as per the Construction and Demolition Waste Management Rules, 2016; and

(x) Store horticulture waste and garden waste generated from his premises separately at site and dispose of as per the directions of the local body from time to time.

(xi) No waste generator shall throw, burn or burry the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.

(xii) All waste generators shall pay such user fee for solid waste management, as specified in the bye-laws of the local bodies.

(xiii) No person shall organize an event or gathering of more than one hundred persons at any unlicensed place without intimating the local body, at least three working days in advance and such person or the organizer of such event shall ensure segregation of waste at source and handing over of segregated waste to waste collector or agency as specified by the local body.