



Initial Environmental Examination

Project Number: 40648-034
September 2016

IND: Infrastructure Development Investment Program for Tourism (IDIPT) - Tranche 3

Package : Rejuvenation of the Markandeya Temple Precincts and Provisions of Visitors Facilities,
Bilaspur Package (HPTDB/11/1)

Submitted by:

Program Management Unit, Tourism Development Board, IDIPT-Himachal Pradesh,
Shimla

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Asian Development Bank

Tourism Development Board

IDIPT-HP (ADB Loan No.2676-IND)

Project Management Unit

US Club, Shimla-171001 (H.P.)

Tel. : 0177-2659926, 2659962

Fax : 0177-2659925

E-mail : projectdirector.adbhp@gmail.com



Department of Tourism & Civil Aviation

SDA Complex, Block No. 28,

Kasumpti, Shimla-171 009, HP, India.

Tele.: +91-177-2623959, Fax : +91-177-2625456

E-mail : tourismmin-hp@nic.in

Website : www : himachaltourism.gov.in

No. IDIPT-HP/3223-IND/IEE- Tranche 3/2016-2610 Dated: 01.09.2016.

Project Director

To

**The Country Director,
India Resident Mission,
Asian Development Bank,
4 San Martin Marg, Chanakayapuri,
New Delhi-110021 (India).
(Fax No. 011-26870955)
Tel.: +91-11-24107200**



Kind Attn: Mr. Leonardus Boenawan Sondjaja (ADB).

Subject: Submission of Revised IEEs for Markandeya and Christ Church under Tranche-3.

Ref No.: IDIPT-HP/ 3223-IND/ IEE- Tranche 3/ 2016- 2300 dated 12.08.2016

Madam,

This is with reference to the above referred letter vide which the IEEs of Rejuvenation of the Markandeya Temple Precincts & Provisions of Visitors Facilities, Bilaspur (Package HPTDB/11/1) and Conservation of Christ Church in the Heritage Zone in Shimla (HPTDB/16/1) was submitted to you.

As per the discussion with the Environmental Safeguard Consultant, ADB the IEE reports have been revised. Please find enclosed the revised IEEs for the above said projects. This is for your information and approval please.

Yours Sincerely,

**Project Director,
IDIPT-H.P.**

Encl: As Above.



Environmental Assessment Document

Initial Environmental Examination

ADB Loan No. 3223–IND

Project Number: 40648

Tranche 3

Subproject- Rejuvenation of the Markandeya Temple Precincts and Provisions of Visitors Facilities, Bilaspur (Package HPTDB/11/1)



September, 2016

Prepared by the Government of Himachal Pradesh

This IEE is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff.

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ABBREVIATIONS

ADB	–	Asian Development Bank
BPL	–	Below Poverty Line
DSC	–	Design & Supervision Consultants
EA	–	Executing Agency
EAC	–	Expert Appraisal Committee
EARF	–	Environmental Assessment Review Framework
EIA	–	Environmental Impact Assessment
EMP	–	Environmental Management Plan
GoI	–	Government of India
GoHP	–	Government of Himachal Pradesh
HPPCB	–	Himachal Pradesh Pollution Control Board
HPTDC	–	Himachal Pradesh Tourism Development Board
IDIPT	–	Infrastructure Development Investment Program for Tourism
IEE	–	Initial environmental examination
MC	–	Municipal Corporation
MLD	–	Million Litres per day
MOEFCC	–	Ministry of Environment, Forests and Climate Change
MSL	–	Mean Sea Level
NGO	–	Non-Governmental Organization
O&M	–	Operations & Management
PFR	–	Periodic Financing Request
PIU	–	Project Implementation Unit
PM	–	Particulate Matter
PMC	–	Project Management Consultants
PMU	–	Project Management Unit
REA	–	Rapid Environmental Assessment
SEAC	–	State Expert Appraisal Committee
SPM	–	Suspended Particulate Matter
SPS	–	Safeguards Policy Statement
TCP	–	Town & Country Planning

EXECUTIVE SUMMARY

1. **Background.** The Infrastructure Development Investment Program for Tourism Financing Facility (the Facility) will develop and improve basic urban infrastructure and services in the four participating states of Himachal Pradesh, Punjab, Uttarakhand and Tamil Nadu to support the tourism sector as a key driver for economic growth. It will focus on:
 - (i) strengthening connectivity to and among key tourist destinations;
 - (ii) improving basic urban infrastructure and services, such as water supply, road and public transport, solid waste management and environmental improvement, at existing and emerging tourist destinations to ensure urban amenities and safety for the visitors, and protect nature and culture-based attractions. Physical infrastructure investments will be accompanied by:
 - (iii) capacity building programs for concerned sector agencies and local communities for better management of the tourist destinations and for more active participation in the tourism-related economic activities, respectively.
2. **Markandeya Ji:** Temple is situated in a beautiful place known as Markandeya, named after the famous sage Rishi Markandeya, this temple holds much significance, especially amongst childless couples. Markandeya is a beautiful place about 20 Kms. from Bilaspur on Ghagus- Brahmpukhar road. Bilaspur is located at 31°20'N 76°45'E 31.33°N 76.75°E. It has an average elevation of 673 metres (2208 feet). It lies at foot of Bandla Hills. It lies near the reservoir of Govind Sagar on the Satluj River. It is first major town after entering Himachal on way to Manali.
3. **Executing and Implementing Agencies.** The executing agency is the Dept. of Tourism and Civil Aviation, HP. Project Management Unit (PMU) is set up at Shimla to coordinate the overall execution. Project Management Consultant (PMC) at Shimla provides assistance to PMU in execution. The implementing agency is Project Implementation Unit (PIU) Kullu, to be supported by Design Supervision Consultant (DSC), Kullu. The Line agencies (Temple Trust) will be asset owners after completion of the subproject. The NoC has been procured for the said project and MoU has been signed by the Pradhan, Shri Markandaya Prabhandhak Avam Vikas Samiti, Bilaspur.
4. **Categorization.** Bilaspur Markandeya Temple subproject Package HPTDB/11/1 is classified as Environmental Category B as per the SPS as no significant impacts are envisioned. Accordingly this Initial Environmental Examination (IEE) has been prepared and assesses the environmental impacts and provides mitigation and monitoring measures to ensure no significant impacts as a result of the subproject.
5. **Subproject Scope.** The major scope of this subproject as per Detailed Project Report (DPR) - Package No. HPTDB/11/1 is: (i) Upgrading the entire temple precinct like surface improvements, provision of public amenities etc (ii) Restoration of Gufa (iii) Provision of visitor's facilities like installation of signages, railings etc.
6. **Description of the Environment.** Subproject components are located in Bilaspur town area or in its immediate surroundings which were converted into agricultural and urban use for many years ago and there is no natural habitat left at these sites. There are no protected areas, wetlands, mangroves, or estuaries in or near the subproject locations.

7. **Environmental Management.** An Environmental Management Plan (EMP) is included as part of this IEE, which includes (i) mitigation measures for environmental impacts during implementation; (ii) an environmental monitoring program, and the responsible entities for mitigating, monitoring, and reporting; (iii) public consultation and information disclosure; and (iv) a grievance redress mechanism. A number of impacts and their significance have already been reduced by amending the designs. The EMP will be included in civil work bidding and contract documents.
8. **Locations and siting of the proposed infrastructures were considered to further reduce impacts.** The concepts considered in design of the subproject are (i) design, material and scale will be compatible to the local architectural, physical, cultural and landscaping elements; (ii) preference will be given to the use of local material and labour as best as possible; (iii) for conservation, local construction material available in the nearby region as best as possible suiting to those in existence; (iv) all painting (interior and exterior) will be with environment-friendly low volatile organic compounds paints; (v) earth backfill, if any will be done from the site excavated material; and (vii) ensuring all planning and design interventions and decisions are made in consultation with local communities and reflecting inputs from public consultation and disclosure for site selection.
9. During the construction phase, impacts mainly arise from the need to dispose of moderate quantities of waste soil; and from the disturbance of residents, businesses, and traffic. These are common impacts of construction in urban areas, and there are well developed methods for their mitigation. Measures such as conducting work in lean season and minimizing inconvenience by best construction methods will be employed. In the operational phase, all facilities and infrastructure will operate with routine maintenance, which should not affect the environment. Facilities will need to be repaired from time to time, but environmental impacts will be much less than those of the construction period as the work will be infrequent, affecting small areas only.
10. Mitigation measures have been developed to reduce all negative impacts to acceptable levels. Mitigation will be assured by a program of environmental monitoring to be conducted during construction. The environmental monitoring program will ensure that all measures are implemented, and will determine whether the environment is protected as intended. It will include observations on- and off-site, document checks, and interviews with workers and beneficiaries. Any requirements for corrective action will be reported to the ADB.
11. The stakeholders were involved in developing the IEE through discussions on-site and public consultation, after which views expressed were incorporated into the IEE and in the planning and development of the subproject. The IEE will be made available at public locations in the town and will be disclosed to a wider audience via the ADB and Himachal Pradesh Department of Tourism websites. The consultation process will be continued and expanded during project implementation to ensure that stakeholders are fully engaged in the project and have the opportunity to participate in its development and implementation.
12. The citizens of Bilaspur town area will be the major beneficiaries of the project. The most noticeable net environmental benefits to the population of the town will be positive and large as the proposed subproject will improve access to reliable and adequate tourism facilities.

13. **Consultation, Disclosure and Grievance Redress.** Public consultations were done in the preparation of the project and IEE. On-going consultations will occur throughout the project implementation period. A grievance redress mechanism is described within the IEE to ensure any public grievances are addressed quickly.
14. **Monitoring and Reporting.** The PMU, PIU, PMC and DSC will be responsible for environmental monitoring. PIU in coordination with DSC will submit monthly monitoring report to PMU on the basis PMU will submit to ADB semi-annual reports on implementation of the EMP and will permit ADB to field environmental review missions which will review in detail the environmental aspects of the project. ADB will post the environmental monitoring reports on its website. Any major accidents having serious environmental consequences will be reported immediately. PMC environmental expert will help in preparing progress reports including environmental closure report.
15. **Conclusions and Recommendations.** Therefore the proposed subproject is unlikely to cause significant adverse impacts. The potential impacts that are associated with design, construction and operation can be mitigated to standard levels without difficulty through proper engineering design and the incorporation or application of recommended mitigation measures and procedures. Based on the findings of the IEE, there are no significant impacts and the classification of the subproject as Category “B” is confirmed. No further special study or detailed environmental impact assessment (EIA) needs to be undertaken to comply with ADB SPS, 2009 or Government of India EIA Notification, 2006.

I. INTRODUCTION

1. **Background** The Infrastructure Development Investment Program for Tourism Financing Facility (the Facility) will develop and improve basic urban infrastructure and services in the four participating states of Himachal Pradesh, Punjab, Uttarakhand and Tamil Nadu to support the tourism sector as a key driver for economic growth. It will focus on:
 - (i) Strengthening connectivity to and among key tourist destinations;
 - (ii) Improving basic urban infrastructure and services, such as water supply, road and public transport, solid waste management and environmental improvement, at existing and emerging tourist destinations to ensure urban amenities and safety for the visitors, and protect nature and culture-based attractions. Physical infrastructure investments will be accompanied by:
 - (iii) Capacity building programs for concerned sector agencies and local communities for better management of the tourist destinations and for more active participation in the tourism-related economic activities, respectively.
2. The area that is now Bilaspur District was formerly known as Kahlur, a princely state of British India. The ruler acceded to the Government of India on 12 October 1948, and Bilaspur was made an Indian state under a chief commissioner. The state of Bilaspur was merged with Himachal Pradesh on 1 July 1954, and became Bilaspur District. The main Temple considered for this subproject is Markandeya. Markandeya Ji Temple is situated in a beautiful place known as Markandeya, situated 20 km from Bilaspur. Markandeya is named after the famous sage Rishi Markandeya, this temple holds much significance, especially amongst childless couples.
3. **Executing and implementing agencies.** The executing agency is the Dept. of Tourism and Civil Aviation, HP. Project Management Unit (PMU) is set up at Shimla to coordinate the overall execution. Project Management Consultant (PMC) at Shimla provides assistance to PMU in execution. The implementing agency is Project Implementation Unit (PIU) Kullu, to be supported by Design Supervision Consultant (DSC) Kullu. The Line agencies (Temple Trust) will be asset owners after completion of the subproject. The NoC has been procured for the said project and MoU has been signed by the Pradhan, Shri Markandaya Prabhandhak avam Vikas Samiti, Bilaspur (attached at **Annexures 10 & 11**). The PMU team comprises of technical, administrative and financial officials, including safeguards specialists, to implement, manage and monitor project implementation activities. The PIUs are staffed by qualified and experienced officers and responsible for the day-to-day activities of subproject implementation in the field, and will be under the direct administrative control of the PMU. Consultant teams are responsible for subproject planning and management and assuring technical quality of design and construction; and designing the infrastructure and supervising construction; and safeguards preparation.
4. **Proposed Subproject Scope.** The major scope of this subproject as per Detailed Project Report (DPR) - Package No. HPTDB/11/1 are:

- Upgrading the entire temple precinct like surface improvement, provision of seating, provision of public amenities like drinking water and street lighting, improvement of toilet facilities and improvement / extension of bathing area, improvement of the existing shops (involving the vernacular building techniques and typology)
 - Provision of visitor facilities like improvement lighting in temple campus, installation of signages, provision of railing and seating along the road at strategic locations. Provision of parking for vehicles. , amphitheater/ wrestling, tourist reception centre, waiting halls for visitors and pilgrims, restaurant, toilet facilities and souvenir shops.
 - Restoration of Gufa.
5. **Categorization.** An environmental assessment using ADB's Rapid Environmental Assessment (REA) checklist for urban development (**Annexure 1**) was conducted. After the assessment as per detailed design of subproject, is unlikely to cause significant adverse impacts. Thus it is classified as Environmental Category B as per ADB SPS-2009 as no significant impacts are envisioned. Accordingly this Initial Environmental Examination (IEE) has been prepared and assesses the environmental impacts and provides mitigation and monitoring measures to ensure no significant impacts as a result of the subproject.
6. **Purpose of the IEE.** This report gives an account of the Initial Environmental Examination (IEE) of subproject as per DPR. It has been prepared in accordance with ADB SPS-2009 requirements for environment Category B projects and provides measures to (i) ensure the environmental sustainability of subproject; (ii) integrates environmental considerations into the project preparation process; and (iii) provide for environmental management during project implementation.

II. DESCRIPTION OF SUBPROJECT COMPONENTS

A. Existing Condition and Need of the Subproject

7. **Location:** Markandeya is a beautiful place about 20 Kms. from Bilaspur on Ghagus-Brahmpukhar road. Bilaspur is located at 31°20'N 76°45'E 31.33°N 76.75°E. It has an average elevation of 673 metres (2208 feet). It lies at foot of Bandla Hills. It lies near the reservoir of Govind Sagar on the Satluj River. It is first major town after entering Himachal on way to Manali. Location of proposed sites is shown in **Figure 1**.

Figure 1: Google Image of the Site



- 8. Brief history:** Markandeya Ji Temple is situated in a beautiful place known as Markandeya, situated 20 km from Bilaspur. Named after the famous sage Rishi Markandeya, this temple holds much significance, especially amongst childless couples. It is said that if a childless person applies kajal in one eye of the idol of Markandeya ji and vows to apply the same in the other eye when blessed by a child, he becomes a parent very soon. There is an interesting legend attached to Markandeyaji Temple, which revolves around one Rishi Mrikandu. The Rishi had no children and used to pray to Lord Shiva fervently for a child. The Lord blessed him with a son, but also told him that the son will die after reaching just 12 years of age. Rishi Mrikandu named his son Markandeya and started living in the constant anxiety and fear of death of his only child. When Markandeya came to know the reason of his father's fear, he started worshipping Lord Shiva at the same place where the idol stands enshrined today. Markandeya got blessed by the Lord, with a long life, on the day of Baishakhi and at that very moment, a spring of water started flowing there. This spring is considered holy and it is said that the pilgrimage of Char Dham is complete only when one takes a dip in this spring. Markandeya ji temple serves as the venue of a religious fair that is organized every year at Baisakhi.
- 9. Existing Conditions:** The Markandeya temple complex has witnessed several additions over the past decades; many structures have come up around the original temple structure. During the process of constructing these structures, an integrated approach for designing and planning was found lacking. The significant growth of these structures has created much harm which is evident while visiting the site.
- The original temple structure is deteriorating with time.
 - The scared spring don't have proper drainage system.
 - The pilgrimage shrines are also not in good condition and needs renovation
 - The path leading to the spring requires surface improvement, signage, railings and seating facilities.
 - The main street leading up to the temple has shops on both sides. The road edges are not properly defined.

B. Proposed Sub-Project

- 10.** To save the heritage values of the place ensure development in harmony with tradition. Apart from the concern regarding the deterioration of the heritage value of the historic town, the connecting plazas and streets all around the area needs infrastructural interventions for improvement of the entire precinct under consideration.
- 11.** Apart from the restoration proposals for the above stated heritage sites and structures at a building and precinct level, the project also includes appropriate parking facilities and basic amenities for decongestion around the main entrance and allow better pedestrian movement; Improvement in the approach road to provide the much needed relief to this significant temple town; Identification and development of home stays.
- 12.** To generate and improve livelihood opportunities for local communities, particularly women, linked to the cultural and natural heritage tourism. The restoration of the heritage structures intends to bring in more visitors to Bilaspur by boosting the tourism potential of the region.

13. Site Location and layout plan is given in **Figure 2 & 3** and **Annexure 2** shows photo illustration of the subproject sites. The features of the proposed activities are briefly described below:

14. Restoration of the Markandeya Temple precinct: Restoration of the Markandeya Temple precinct involves following scope of work -

- a) Main Gate at National Highway
- b) Entrance gate into temple premises
- c) Tourist Reception Centre.
- d) Provision of Closed Parking for vehicles
- e) Provision of Open parking for heavy vehicles.
- f) Rain shelter
- g) Amphitheatre / Wrestling Arena with Stage and green Room.
- h) Improvement of bathing area
- i) Creation of a *Prasad* Counter and eateries and improvement of the existing shops
- j) Upgrading the entire temple precinct in terms of
 - surface improvement, provision of seating,
 - Provision of public amenities like drinking water and street lighting.
 - Improvement of toilet facilities.
 - Improvement / Repair of Retaining walls and providing cladding to walls.
 - Channelizing water at site.
- k) Improvement of Existing Langar hall building.
- l) Providing new Roof to Mess/Store building.
- m) Replacing Shikras and jagmohans of Radhekrishna Temples and Main temple.
- n) Improvement and street lighting of the path leading to the sacred water body.
- o) Installation of signage's, provision of railing and seating at strategic locations.
- p) Waiting halls for visitors and pilgrims, restaurant, toilet facilities and souvenir shops.
- q) Creation of Recreation area including provision of Fountain , Gazibo and swings

15. Community Involvement and livelihood:

- a) The artisans engaged in woodcrafts, metal crafts etc. are facing problems in marketing their paintings and reach out to all the segments of the market.
- b) A value chain analysis of key products shall be undertaken to understand the bottlenecks in production and marketing of these products.
- c) Establishing marketing linkages and promotion for local crafts. Value Chain analysis will form the basis for these activities.
- d) Hospitality training/ local cuisine training for service providers in home Stays, hotels, small cafeterias.
- e) Heritage training for Tour operators, taxi operators, guides, Hotel owners, Tourism officers etc.
- f) Soft investment for development of IEC material.
- g) Association and capacity development of identified SHGs with souvenirs development, requirements of home stays with respect to milk and milk products, vegetables.
- h) The direct beneficiaries would be artisans, SHGs, tour operators, taxi drivers, Hotels/restaurants, cafeterias, shopkeepers, students & tourists.

16. All sites for subproject (Package No. HPTDB/11/1) are owned by Temple Trust thus no land acquisition is required. The sites are located in temple premises and are not within or adjacent to any protected area.
17. The design, material and scale will be compatible to the local architectural, physical, cultural and landscaping elements. Preference will also be given to the use of local material and labour as best as possible. For the conservation, local construction material available in the nearby region as best as possible suiting to those in existence. All painting (interior and exterior) will be with environment-friendly low volatile organic compound paints.
18. The earth backfill, if any will be done from the site excavated material.
19. Stone aggregate and sand are available within 40 km radius from sites. Also formwork and skilled labour is locally available. For brick wall construction, bricks are also available within 50 km radius from the proposed site/region.
20. Water supply during construction will be provided by HP Irrigation and Public Health (IPH) Department from their existing system or will be transported through mobile water tankers, if required. Solid waste generated at sites will be disposed at designated areas.

C. Implementation Schedule

21. Preliminary design of the subproject has been done by the Design and Supervision Consultant (DSC) team. It is estimated that construction period will cover 18 months.



Figure 2: Project Location

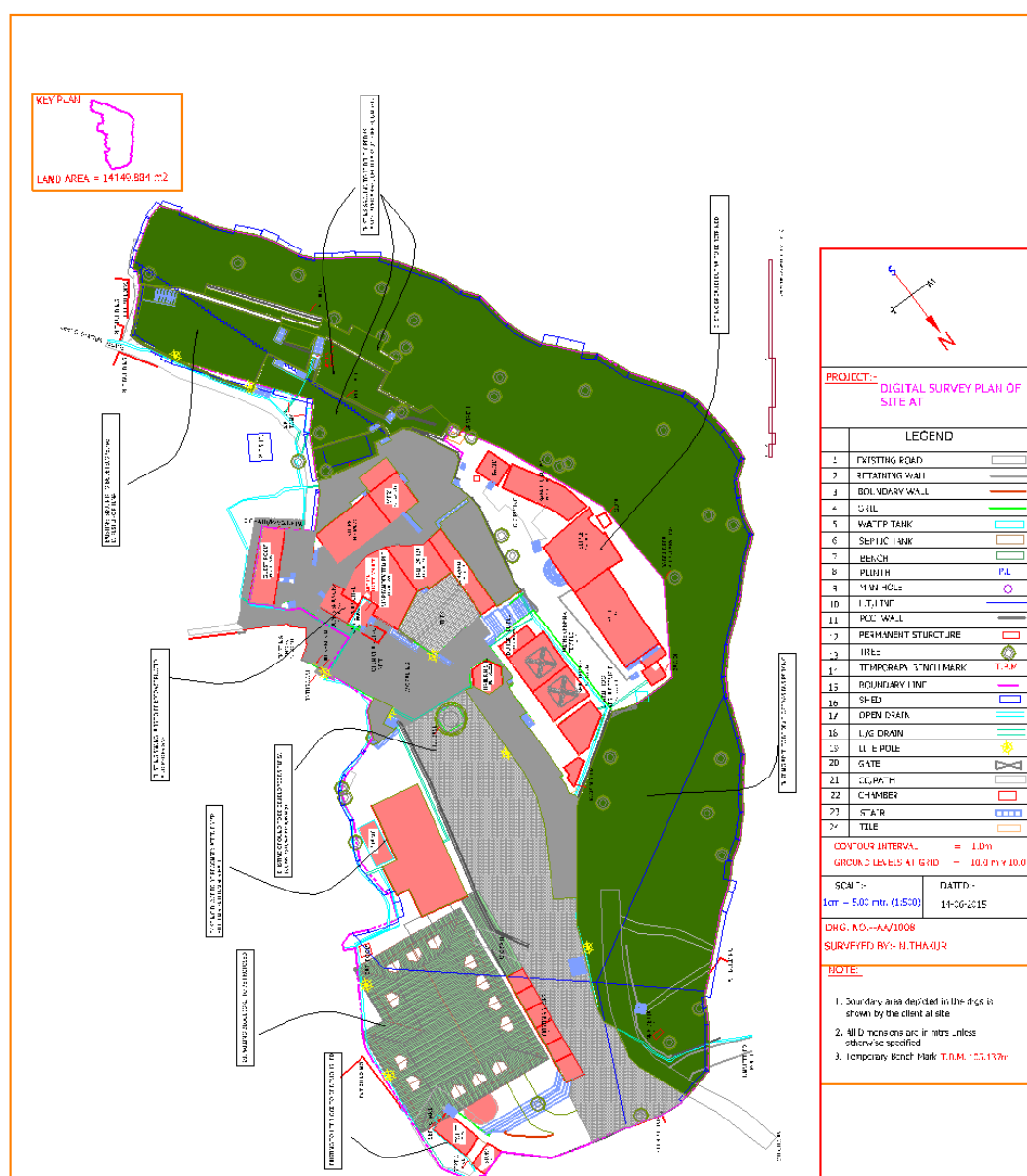


Figure 3: Proposed Layout Plan

III. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

A. ADB Policy

22. ADB requires the consideration of environmental issues in all aspects of ADB's operations, and the requirements for environmental assessment are described in ADB SPS, 2009. This states that ADB requires environmental assessment of all project loans, program loans, sector loans, sector development program loans, and loans involving financial intermediaries, and private sector loans.

23. Screening and Categorization. The nature of the environmental assessment required for a project depends on the significance of its environmental impacts, which are related to the type and location of the project, the sensitivity, scale, nature and magnitude of its

potential impacts, and the availability of cost-effective mitigation measures. Projects are screened for their expected environmental impact and are assigned to one of the following four categories:

- **Category A.** Projects could have significant adverse environmental impacts. An EIA is required to address significant impacts.
- **Category B.** Projects could have some adverse environmental impacts, but of lesser degree or significance than those in category A. An IEE is required to determine whether significant environmental impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report.
- **Category C.** Projects are unlikely to have adverse environmental impacts. No EIA or IEE is required, although environmental implications are reviewed.
- **Category FI.** Projects involve a credit line through a financial intermediary or an equity investment in a financial intermediary. The financial intermediary must apply an environmental management system, unless all Projects will result in insignificant impacts.

24. Environmental Management Plan. An EMP which addresses the potential impacts and risks identified by the environmental assessment prepared. The level of detail and complexity of the EMP and the priority of the identified measures and actions commensurate with the Project's impact and risks.

25. Public Disclosure. The IEE will be put in an accessible place (e.g., local government offices, libraries, community centers, etc.), and a summary translated into Hindi for the project affected people and other stakeholders. The following safeguard documents will be put up in ADB's website so that the affected people, other stakeholders, and the general public can provide meaningful inputs into the project design and implementation:

B. National and State Laws

26. Implementation of the subproject will be governed by the national and State of Himachal Pradesh environmental acts, rules, regulations, and standards. These regulations impose restrictions on activities to minimize/mitigate likely impacts on the environment. It is the responsibility of the project executing and implementing agencies to ensure subprojects are consistent with the legal framework, whether national, state or municipal/local. Compliance is required in all stages of the subproject including design, construction, and operation and maintenance.

27. The realm of environmental regulations and mandatory requirements for the proposed sub-project is shown in **Table 1**. The Environmental Impact Assessment (EIA) notification, 2006 by the Ministry of Environment and Forests (MoEF, GoI) specifies the mandatory environmental clearance requirements. Accordingly, projects and activities are broadly categorized in two categories¹ - Category A and Category B, based on the spatial extent of

¹All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, will require prior environmental clearance from the Central Government in the Ministry of

potential impacts and potential impacts on human health and; natural and man-made resources.

Table 1: Environmental Regulatory Compliance

Sub-Project	Applicability of Acts/Guidelines	Compliance criteria
Rejuvenation of the Markandeya Temple Precinct and Provision of Visitor Facilities, Bilaspur.	The Environment Protection Act, 1986 - under EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impacts.	The sub-project is not covered in the ambit of the EIA notification as they are not covered either under Category A or Category B of the notification. Hence, the categorization, subsequent environmental assessment and clearance requirements either from the State Government or the GoI is not triggered.
	ADB's Safeguard Policy Statement 2009	Categorization of sub-project components into A, B or C by rapid environmental assessment has been categorized as B and IEE prepared
	The Wildlife Conservation Act, 1972, amended in 2003 and 2006, provides for protection and management of Protected Areas.	There is no Wildlife Sanctuary within 10 km radius from this subproject; therefore this act is not applicable.
	The Forest Conservation Act, 1980 and its subsequent amendments necessitate obtaining clearance from the MoEF for diversion of forest land for non-forest purposes.	The project does not involve any land diversion or tree cutting therefore, no clearance required. However, the whole area and its surroundings are interspersed with designated protected or reserved forests which have an associated eco-system value that plays a vital role in its unique natural heritage
	Water (Prevention and control of pollution) Act, 1974 and; Air (prevention and control of pollution) Act, 1981	Consent for Establishment (CFE) & Consent for Operation (CFO) from the HP PCB for setting up of diesel generators (if any), hot mix plant, wet mix plant, crusher plant (if exclusively for this project) to be obtained by the Contractor, prior to commencement of construction works at site. If contractor purchases the construction

Environment and Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification; All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfil the General Conditions (GC) stipulated in the Schedule, will require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In addition, General Condition (GC) of the notification specifies that any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 10 km from the boundary of: (i) Protected Areas notified under the Wild Life Protection) Act, 1972, (ii) Critically Polluted areas as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive areas, (iv) inter-State boundaries and international boundaries.

Sub-Project	Applicability of Acts/Guidelines	Compliance criteria
		materials (eg. Sand, gravel) from third party, he must ensure that materials are coming from approved quarry sites.
	The Noise Pollution (regulation and Control) Rules, 2000	The subproject shall put measures for abatement of noise including noise emanating from vehicular movements, blowing of horns, and sound producing instruments and ensure that the existing noise levels do not exceed the ambient air quality standards specified under these rules.
	The Ancient Monuments and Archaeological Sites and Remains Act, 1958, and the rules, 1959 provide guidance for carrying out activities, including conservation, construction and reuse in and around the protected monuments. The Himachal Pradesh Ancient and Historical Monuments and Archaeological Sites and Remains Act, 1976;	Not applicable as neither any such monuments or Archaeological sites present at the site nor the proposed land is under influence of such any issue.
	Himachal Pradesh Ground Water (Regulation and Control of Development and Management) Act, 2005; Himachal Pradesh Ground Water (Regulation and Control of Development and Management) Rules, 2006;	At the site or nearby, no ground water shall be used while construction, therefore, not applicable.
	Himachal Pradesh Policy on Ecotourism;	Shall be adopted.
	Himachal Pradesh Participatory Forest Management Regulations, 2001;	Not required.
	The Himachal Pradesh non-biodegradable garbage (control) Act, 1995;	Shall be adopted.
	The Himachal Pradesh Town and Country Planning Act, 1977;	Not applicable
	The Shimla Road users and Pedestrians (Public Safety and Convenience) act, 2007;	Shall be adopted.
	<p>The BOCW Act 1996 Employer shall-</p> <ul style="list-style-type: none"> • Provide and maintain, at suitable point, sufficient quantity of wholesome drinking water, such point shall be at least 6 meters away from any washing areas, urinals or toilets • Provide sufficient urinals and latrines at convenient place, easily accessible by workers • Provide free of charge, temporary living accommodations near to work sites with separate cooking place, bathing and lavatory facilities and restore the site as pre conditions after completing the construction works 	Contractors are required to follow all the provisions of BOCW Act.

Sub-Project	Applicability of Acts/Guidelines	Compliance criteria
	<ul style="list-style-type: none"> • Provide crèche with proper accommodation, ventilation, lighting, cleanliness and sanitation if more than fifty female workers are engaged • Provide first aid facilities in all construction sites <p>For safety of workers employer shall provide-</p> <ul style="list-style-type: none"> • Safe access to site and work place • Safety in demolition works • Safety in use of explosives • Safety in operation of transporting equipment's and appoint competent person to drive or operate such vehicles and equipment's • Safety in lifting appliance, hoist and lifting gears • Adequate and suitable lighting to every work place and approach • Prevention of inhalation of dust, smoke, fumes, gases during construction works and provide adequate ventilation in work place and confined space • Safety in material handling and stacking/un stacking • Safeguarding the machinery with fly-wheel of moving parts • Safe handling and use of plants operated by compressed air • Fire safety • Limit of weight to be lifted by workers individually • Safety in electric wires, apparatus, tools and equipment's • Provide safety net, safety sheet, safety belts while working at height (more than 1.6 mtrs as per OSHA) • Providing scaffolding, ladders and stairs, lifting appliances, chains and accessories where required • Safety in pile works, concrete works, hot asphalt, tar, insulation, demolition works, excavation, underground construction and handling materials • Provide and maintain medical facilities for workers • Any other matters for the safety and health of workers 	
	<p>Motor Vehicles Act, 1988</p> <p>No person will be allowed to drive a motor</p>	<p>Valid and appropriate (LMV/HMV) driving licence of operators and</p>

Sub-Project	Applicability of Acts/Guidelines	Compliance criteria
	vehicle unless he holds an valid driving license issued to him authorizing him to drive the vehicle	drivers is required to operate or drive vehicle and equipment at construction site
	The Petroleum Rules 2002 All due precautions will be taken at all times to prevent escape of petroleum into any drain, sewer, and harbour, river or watercourse or over any public road or railway line.	Do not allow any escape of diesel, lubricants in to drain or any nearby water course
	Gas Cylinder Rules 2004 These rules deal with Filling, possession, import and transport of cylinders, Safety relief devices, Marking on cylinders, Markings on valve, Identification colours, Labelling of cylinders, Restriction on delivery or despatch of cylinders, repairing of cylinders, Prohibition of employment of children and intoxicated persons, Prohibition of smoking, fires, lights and dangerous substances, General precautions, Special precautions against accidents, Competent person to be incharge of operations, Handling and use, Restrictions on filling, Loading, unloading and transport of cylinders, Storage of cylinders, ownership and record keeping etc.	All the safety in storage, transportation, handling, usage, maintenance, repairing of gas cylinders and other precautions should be taken and record should be kept maintained.
	Labor Laws The contractor shall not make employment decisions based upon personal characteristics unrelated to job requirements. The contractor shall base the employment relationship upon equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment or retirement, and discipline. The contractor shall provide equal wages and benefits to men and women for work of equal value or type.	Annexure 12 provides applicable labor laws including amendments issued from time to time applicable to establishments engaged in construction of civil works.

The proposed subproject does not require statutory clearances from MoEF. All no objection certificates, CFEs and other clearances will be obtained prior to award of contract.

IV. DESCRIPTION OF ENVIRONMENT

A. Physical Environment

- 28. Climate.** The climate of the region is sub-tropical. Summer season extends from March to mid of July and the monsoon is from mid-July to mid-September. The winter is mild and starts from mid-December till mid-March. The maximum temperature goes up to 37°C, whereas the minimum temperature recorded is 5°C in winter. The maximum rainfall 62 mm and minimum 1.5 mm.
- 29. Geology & Soil.** Bilaspur district nestles between Siwalik ranges and forms part of the lesser Himalaya. It has a diverse landscape made of the hills, valleys with piedmont zone. There are seven main hill ranges i.e. *Naina Devi, Kot, jhanjhar, Tiun, Bandla, Bahaupur and Ratanpur* constituting the hill system of District Bilaspur. The district is mostly hilly and has no mountains of higher altitude from the mean sea level. The elevation of the lowest point is about 290 m and the highest peak is *Bhadurpur hill* with an elevation of 1980 m amsl.
- 30.** Two types of soils are observed in the district viz., alluvial soil and non-calcic brown soil. Most of the area in district is covered with alluvial soil and only hilly area in the district is covered with Non-calcic brown soil. Soils are rich in nutrients and thus are fertile.
- 31. Land Use.** Total geographical area is 111776 ha, Forest area is 14013 ha., Cultivable land is 56011 ha. and unusable area is 72423 ha. In the absence of a master plan and unregulated commercial growth adjoining main roads, ad hoc haphazard buildings are mushrooming in almost all neighboring villages and towns.
- 32. Water bodies.** Satluj is the main river passes through the middle of the district. Open wells, tube wells, infiltration galleries, and wells are modes of exploitation of groundwater. Traditional sources of water, such as springs, ponds, and ditches also supplement water requirements in rural areas.
- 33.** The subproject Package HPTDB/11/1 sites are having natural water coming sources of hills
- 34.** There is no water quality monitoring stations in Bilaspur. In general water quality from hill sources are good. Water quality test results may be obtained from I & PH department for drinking purposes during implementation periods as per EMP.
- 35. Ambient Air and Noise Quality.** There are no air quality and noise level monitoring stations in Bilaspur. The main source of air pollution and increased noise are vehicles as Bilaspur is on the route of Shimla, Bilaspur etc. Ambient air quality and noise levels in the subproject Package No. HPTDB/11/1 sites are expected to be within Himachal Pradesh State Pollution Control Board standards as these may be classified as silence zones. Air and noise quality monitoring will be done in silence zones before construction and during implementation periods as per EMP.

B. Ecology Environment

- 36.** Main tree species of the area are Acacia, Jamun, Sisoo, Mango, Mulberry, Ficus, Kachnar, Amla, Prunus, Adatoda Vesica, Mangifera, Dodonea, Woodfordia, Ziziphus, Maurraya, Euphorbia and grasses Saccharum, Cymbopogan, Eulopsis etc. and several subtropical climbers are also found in these forests.
- 37. Flora and fauna.** Subproject Package HPTDB/11/1 are located in Bilaspur urban area or in its immediate surroundings, which were converted into urban use for years ago, and there is natural hill forests at these sites. Animals and plants in the subproject sites are those commonly found in urban and built-up areas. No endangered/protected species of either flora or fauna are found in the sites or its immediate surroundings.
- 38. Protected areas.** There are no protected areas (forests, wildlife sanctuaries, wetlands, mangroves, or estuaries) in or near the subproject sites. There is no wildlife sanctuary within the premises of 10 km radius of the subproject sites.

C. Socio cultural and Economic Environment

- 39. Demographic profile.** As of 2011 census, total population of Bilaspur district is 382056. Male population is 192827 while female population is 189282. Sex ratio is 981 females per 1000 males. Population density is 327 persons per square kilometer. Literacy rate in the district is 85.67% out of which female literacy is 78.90% and male literacy is 92.39%.
- 40. Agriculture /Industries profile.** The district is predominantly agrarian and most of its population depends on agriculture and allied activities for their livelihood. Wheat, maize, rice, vegetables are major crops of the area.
- 41.** There is large ACC Barmana cement Industry with 2200 SSI Units in the area. In addition 402 handicrafts, 204 handloom units & 2399 Khadi & Village Industries around the area.
- 42. Infrastructure Services.** Department for Irrigation and Public Health (IPH) is responsible for water supply and sanitation. Public Works Department (HPPWD) is responsible for construction and maintenance of roads. Himachal Pradesh Transport Cooperation operates buses to various destination of the State.

V. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

- 43.** The assessment of environmental impacts for the proposed interventions under this package has been carried out during the following stages of the project planning and implementation:
- **Location impacts.** Impacts associated with site selection, including impacts on environment and resettlement or livelihood related impacts on communities
 - **Design impacts.** Impacts arising from project design, including the technology used, scale of operations etc.
 - **Construction impacts.** Impacts resulting from construction activities including site clearance, earthworks, civil works, etc.

- **O&M impacts.** Impacts associated with the operation and maintenance of the infrastructure built in the project.

44. Land Acquisition and Resettlement Impacts. The sub-project does not envisage diversion of forest land, therefore no statutory clearance from the MoEF, GoI is required. The proposed sub-project sites do not have any adverse cultural impact. Sub-project does not result in any physical or economic displacement as subproject will not result in permanent land acquisition because it will be undertaken within the existing campus of the Temple having sufficient and vacant lands are available which are under the possession of “Markandeya Parbandhank Seva Samiti”. Also does not envisage any additional land acquisition or impacts on non-titleholders.

45. Design considerations to avoid environmental impacts. The following are design considerations to avoid environmental impacts:

- Incorporation of adequate drainage provisions
 - Adoption of design compatible with the natural environment and suitable selection of materials to enhance the aesthetic appeal and blend with the natural surroundings.
 - Straight lines and simple geometry in the proposed landscape and architectural features.
 - Use of subtle colours and simple ornamentation in the structures.
 - Use of local stone in the proposed walkways and built structures thus maintaining a rustic architectural character
- 46.** The results of interventions are unobtrusive and will be integral part of the ambience of the site. The physical components have been proposed with minimalist design treatment emphasizing use of local materials (wood, stone, etc.) as defined in the management plan of the area.

A. Assessment of Environmental Impacts

47. Determination of Area of Influence. The primary impact areas are (i) sites for subproject Package No. HPTDB/11/1 components; (ii) main routes/intersections which will be traversed by construction vehicles; and (ii) quarries and borrow pits as sources of construction materials. The secondary impact areas are: (i) entire town area outside of the delineated primary impact area; and (ii) entire district in terms of over-all environmental and tourism improvement.

48. In the case of this subproject Package No. HPTDB/11/1 the components will involve straight forward construction and operation, and impacts will be mainly localized, short in duration and expected only during construction period.

B. Pre-construction Impacts and Mitigation Measures

49. Consents, permits, clearances, no objection certificate (NOC), etc. All the consents, permits, clearances and NOCs shall be obtained during detailed design and before start of works. Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works.

50. Mitigation measures. The following will be conducted during detailed design phase:

- Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works.
- Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc.
- Include in detailed design drawings and documents all conditions and provisions if necessary

51. Erosion control. Soil erosion impacts will occur due to excavation and earth movements during parking, tourist reception centre & amphitheatre / wrestling arena with stage and green room construction phase. Prior to commencement of civil works, the contractor will be required to:

- Develop an erosion control plan to minimize soil loss and reduce sedimentation to protect water quality/nearby agriculture fields.
- Minimize the potential for erosion by balancing cuts and fills to the extent feasible.
- Identify and avoid areas with unstable slopes and local factors that can cause slope instability (groundwater conditions, precipitation, seismic activity, slope angles, and geologic structure).
- Minimize the amount of land disturbed as much as possible. Use existing roads, disturbed areas, and borrow pits and quarries when possible. Minimize vegetation removal. Stage construction to limit the exposed area at any one time.

52. Utilities. Interruption of services (water supply, toilets, bathing areas, etc.) will be scheduled and intermittently related to localized construction activities. To mitigate impacts, PIU/DSC will:

- Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during the construction phase.
- Require contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services.
- Require contractor to obtain from the PIU and/or DSC the list of affected utilities and operators;
- If relocations are necessary, contractor along with PIU will coordinate with the providers to relocate the utility.

53. Social and Cultural Resources. There is a risk that any work involving ground disturbance can uncover and damage archaeological and historical remains. For this subproject, excavation will occur in and around existing sites, RoWs and specified temple land so no risk is foreseen to these structures. Nevertheless, the PIU/DSC will:

- Consult Archaeological Survey of India and/or State Department of Archaeology to obtain an expert assessment of the archaeological potential of the site being historical place.
- Consider alternatives if the site is found to be of medium or high risk.
- Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available.

- Develop a protocol for use by the construction contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved.

54. Sites for construction work camps and areas for stockpile, storage and disposal.

The priority is to locate these near the subproject sites. The contractor will be required to meet the following criteria for the sites:

- Will not promote instability and result in destruction of property, vegetation, nearby agriculture fields, bathing place, irrigation, and drinking water supply systems, etc.
- Residential areas will not be considered so as to protect the human environment (i.e., to curb accident risks, health risks due to air and water pollution and dust, and noise, and to prevent social conflicts, shortages of amenities, and crime).
- Disposal will not be allowed near sensitive areas which will inconvenience the community.
- The construction camp, storage of fuel and lubricants should be avoided at the drains/water bodies/river banks. Any construction camp site will be finalized in consultation with DSC and PIU.

55. Sources of construction materials. Significant amounts of gravel, sand, and cement will be required for this subproject. Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution. The contractor will be required to:

- Use quarry sites and sources permitted by government.
- Verify suitability of all material sources and obtain approval from PIU/DSC.
- If additional quarries are required after construction has started, obtain written approval from PIU/DSC.
- Submit to PIU/DSC on a monthly basis documentation of sources of materials.

56. It will be the construction contractor's responsibility to verify the suitability of all material sources and to submit NOCs/approvals of the quarry sites and obtain the approval of PIU/DSC. If additional quarries are required after construction is started, then the contractor should obtain written approval of PIU.

57. Access. Hauling of construction materials and operation of equipment on-site can cause traffic problems and conflicts in ROWs. Construction traffic will access most work areas from the existing road therefore potential impacts will be of short-duration, localized and can be mitigated. The contractor will need to adopt the following mitigation measures:

- Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites.
- Schedule transport and hauling activities during non-peak hours.
- Locate entry and exit points in areas where there is low potential for traffic congestion.
- Keep the site free from all unnecessary obstructions.
- Drive vehicles in a considerate manner.
- Coordinate with the Traffic Police Department for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours.

- Notify affected sensitive receptors by providing sign boards with information about the nature and duration of construction works and contact numbers for concerns/complaints.
- 58.** Provide free access to households and businesses/shops along the ROWs during the construction phase.
- 59. Occupational health and safety:** Occupational hazards can arise from construction activities. Therefore following need to be planned;
- Plan to comply with IFC EHS Guidelines on Occupational Health and Safety
 - Develop comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project.
 - Include in H&S plan measures such as: (i) type of hazards in the intake wells site; (ii) corresponding personal protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents.
 - Provide medical insurance coverage for workers.
- 60. Public consultations:** Continue information dissemination, consultations, and involvement/participation of stakeholders during project preparation/implementation.
- 61.** Identification of Muck disposal site:
- Identify muck disposal areas in consultation with Temple Trust to dispose off construction wastes of the project.
 - Utilize the dismantle material as much as possible.
- 62.** Summary of pre-construction activities is presented in **Table 2**. The responsibilities, monitoring program and costs are provided in detailed in the EMP. Sample waste/spoils management plan, traffic management plan, etc. are attached as **Annexures 3 & 4**. Site-specific plans will be developed as per detailed design.

Table 2: Summary of Pre-Construction Mitigation Measures

Parameters	Mitigation Measures
Consents, permits, clearances, no objection certificate (NOC), etc.	<ul style="list-style-type: none"> • Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works. • Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. • Include in detailed design drawings and documents all conditions and provisions if necessary
Erosion control	<ul style="list-style-type: none"> • Develop an erosion control plan to minimize soil loss and reduce sedimentation to protect water quality. • Minimize the potential for erosion by balancing cuts and fills to the extent feasible. • Identify and avoid areas with unstable slopes and local factors that can

Parameters	Mitigation Measures
	<p>cause slope instability (groundwater conditions, precipitation, seismic activity, slope angles, and geologic structure).</p> <ul style="list-style-type: none"> Minimize the amount of land disturbed as much as possible. Use existing roads, disturbed areas, and borrow pits and quarries when possible. Minimize vegetation removal. Stage construction to limit the exposed area at any one time.
Utilities	<ul style="list-style-type: none"> Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during the construction phase. Require contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services. Obtain from the PIU and/or DSC the list of affected utilities and operators; Prepare a contingency plan to include actions to be done in case of unintentional interruption of services. If relocations are necessary, contractor will coordinate with the providers to relocate the utility.
Social and Cultural Resources	<ul style="list-style-type: none"> Consult Archaeological Survey of India or State Department of Archaeology to obtain an expert assessment of the archaeological potential of the site being historical place. Consider alternatives if the site is found to be of medium or high risk. Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available. Develop a protocol for use by the construction contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved.
Sites for construction work camps, areas for stockpile, storage and disposal	<ul style="list-style-type: none"> Will not promote instability and result in destruction of property, vegetation, nearby agriculture fields, bathing place, irrigation, and drinking water supply systems, etc. Residential areas will not be considered so as to protect the human environment (i.e., to curb accident risks, health risks due to air and water pollution and dust, and noise, and to prevent social conflicts, shortages of amenities, and crime). Disposal will not be allowed near sensitive areas which will inconvenience the community. Disposal will not be allowed in nearby river to check water pollution The construction camp, storage of fuel and lubricants should be avoided at the river bank. The construction camp site for intake well should be finalized in consultation with DSC and PIU.
Sources of construction materials	<ul style="list-style-type: none"> Use quarry sites and sources permitted by government. Verify suitability of all material sources and obtain approval from PIU/DSC. If additional quarries are required after construction has started, obtain written approval from PIU/DSC.

Parameters	Mitigation Measures
	<ul style="list-style-type: none"> Submit to PIU/DSC on a monthly basis documentation of sources of materials.
Access	<ul style="list-style-type: none"> Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites. Schedule transport and hauling activities during non-peak hours. Locate entry and exit points in areas where there is low potential for traffic congestion. Keep the site free from all unnecessary obstructions. Drive vehicles in a considerate manner. Coordinate with the Traffic Police Department for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours. Notify affected sensitive receptors by providing sign boards with information about the nature and duration of construction works and contact numbers for concerns/complaints. Provide free access to households and businesses/shops along ROWs during the construction phase.
Occupational health and safety	<ul style="list-style-type: none"> Plan to comply with IFC EHS Guidelines on Occupational Health and Safety Develop comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project. Include in H&S plan measures such as: (i) type of hazards in the intake wells site; (ii) corresponding personal protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents. Provide medical insurance coverage for workers.
Public consultations	<ul style="list-style-type: none"> Continue information dissemination, consultations, and involvement/participation of stakeholders during project preparation/implementation.
Identification of Muck disposal site	<ul style="list-style-type: none"> Identify muck disposal areas in consultation with MC, Bilaspur to dispose off construction wastes of the project. Utilize the dismantle material as much as possible.

C. Anticipated Construction Impacts and Mitigation Measures

63. Construction Schedule and Method. As per DPR, construction activities will cover 18 months.

64. The infrastructures will be constructed manually according to design specifications. Excavations and trenches, if required, will be dug by small backhoe diggers supplemented by manual digging where necessary. Excavated soil will be placed nearby. Excavated materials will be reused to the maximum extent possible. Materials will be brought to site

by trucks and will be stored on unused areas within sites and nearby vacant areas. Any excavated road will be reinstated. The working hours will be 8 hours daily, the total duration of each stage depends on the soil condition and other local features.

65. There is sufficient space for a staging area, construction equipment, and stockpiling of materials. However, the contractor will need to remove all construction and demolition wastes on a daily basis.

66. Although construction of these project components involves quite simple techniques of civil work, the invasive nature of excavation and the subproject sites in premises where there are of human activities, will result to impacts to the environment and sensitive receptors such as residents, businesses, and the community in general. These anticipated impacts are short-term, site-specific and within relatively small areas.

67. Erosion Hazards. The sites are in the built up area of the town therefore risk of erosion is low, limited during parking, tourist reception centre & amphitheatre / wrestling arena with stage and green room construction activities and not expected to have any negative impact on the drainage and hydrology of the area. Runoff will produce a highly variable discharge in terms of volume and quality, and in most instances will have no discernible environmental impact. The contractor will be required to:

- Save topsoil removed during excavation and use to reclaim disturbed areas, as soon as it is possible to do so.
- Use dust abatement such as water spraying to minimize windblown erosion.
- Provide temporary stabilization of disturbed/excavated areas that are not actively under construction.
- Apply erosion controls (e.g., silt traps) along the drainage leading to the water bodies.
- Maintain vegetative cover to prevent erosion.
- Clean and maintain catch basins, drainage ditches, and culverts regularly.
- Conduct routine site inspections to assess the effectiveness of and the maintenance requirements for erosion and sediment control systems.

68. Impacts on Water Quality. Excavated materials may end up in drainages and water bodies adjacent to the subproject sites, particularly during monsoon season. Other risks of water pollution may be caused by: (i) poorly managed construction sediments, wastes and hazardous substances; and (ii) poor sanitation practices of construction workers. The contractor will be required to:

- Schedule civil works during non-monsoon season, to the maximum extent possible.
- Ensure drainages and water bodies within the construction zones are kept free of obstructions.
- Keep loose soil material and stockpiles out of drains, flow-lines and watercourses.
- Avoid stockpiling of excavated and construction materials (sand, gravel, cement, etc.) unless covered by tarpaulins or plastic sheets.
- Re-use/utilize, to maximum extent possible, excavated materials.
- Dispose any residuals at identified disposal site (PIU/DSC will identify approved

sites).

- Dispose waste oil and lubricants generated as per provisions of Hazardous Waste (Management and Handling) Rules, 1989.
- Develop a spill prevention and containment plan, educate workers about the plan, and have the necessary materials on site prior to and during construction.
- Refuel equipment within the designated refueling containment area away from drainages, nallahs, or any water body.
- Inspect all vehicles daily for fluid leaks before leaving the vehicle staging area, and repair any leaks before the vehicle resumes operation.

69. Impacts on Air Quality. There is potential for increased dust particularly during summer/dry season due to stockpiling of excavated materials. Emissions from vehicles transporting workers, construction materials and debris/materials to be disposed may cause increased in air pollutants within the construction zone. These are inherent impacts which are site-specific, low magnitude, short in duration and can be easily mitigated. The contractor will be required to:

- Conduct regular water spraying on earth piles, trenches and sand piles.
- Conduct regular visual inspection along alignments and construction zones to ensure no excessive dust emissions.
- Spreading crushed gravel over backfilled surfaces if re-surfacing of disturbed ROWs cannot be done immediately.
- Maintain construction vehicles and obtain “pollution under control” certificate from HPSPCB.
- Obtain CFE and CFO for hot mix plants, crushers, diesel generators, etc., if to be used in the project.

70. Noise and Vibration Impacts. Noise and vibration-emitting construction activities include earthworks, rock crushing, concrete mixing, movement and operation of construction vehicles and equipment, and loading and unloading of coarse aggregates. The significance of noise and vibration impacts will be high in areas where noise-sensitive institutions such as health care and educational facilities are situated. These impacts will be temporary, short-term, intermittent, and expected to be in the range of 80 to 100 dB(A) as per **Table 3** (typical noise levels of principal construction equipment).

Table 3: Typical Noise Levels of Principal Construction Equipment

CLEARING		STRUCTURE CONSTRUCTION	
Bulldozer	80	Crane	75-77
Front end loader	72-84	Welding generator	71-82
Jack hammer	81-98	Concrete mixer	74-88
Crane with ball	75-87	Concrete pump	81-84
		Concrete vibrator	76
EXCAVATION & EARTH MOVING		Air compressor	74-87
Bulldozer	80	Pneumatic tools	81-98
Backhoe	72-93	Bulldozer	80
Front end loader	72-84	Cement and dump trucks	83-94
Dump truck	83-94	Front end loader	72-84
Jack hammer	81-98	Dump truck	83-94
Scraper	80-93	Paver	86-88
GRADING AND COMPACTING		LANDSCAPING AND CLEAN-UP	
Grader	80-93	Bulldozer	80

Roller	73-75	Backhoe	72-93
		Truck	83-94
PAVING		Front end loader	72-84
Paver	86-88	Dump truck	83-94
Truck	83-94	Paver	86-88
Tamper	74-77	Dump truck	83-94

Source: U.S. Environmental Protection Agency. *Noise from Construction Equipment and Operations. Building Equipment and Home Appliances. NJID. 300.1. December 31. 1971*

71. The contractor will be required to:

- Limit construction activities to **day time only**.
- Plan activities in consultation with the PIU/DSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.
- Minimize noise from construction equipment by using vehicle silencers and fitting jackhammers with noise-reducing mufflers.
- Avoid loud random noise from sirens, air compression, etc.
- Require drivers that horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach.
- If specific noise complaints are received during construction, the contractor may be required to implement one or more of the following noise mitigation measures, as directed by the project manager:
 - Locate stationary construction equipment as far from nearby noise-sensitive properties as possible.
 - Shut off idling equipment.
 - Reschedule construction operations to avoid periods of noise annoyance identified in the complaint.
 - Notify nearby residents whenever extremely noisy work will be occurring.
- Follow Noise Pollution (Regulation and Control) Rules, day time ambient noise levels should not exceed 65 dB(A) in commercial areas, 55 dB(A) in residential areas, and 50 dB(A) in silence zone.²
- Ensure vehicles comply with Government of India noise limits for vehicles. The test method to be followed shall be IS:3028-1998.

72. Impacts on Flora and Fauna. As per preliminary design, tree-cutting is not required. This will be reassessed during detailed design phase. There are no protected areas in the direct and indirect impact zones and no diverse ecological biodiversity as vegetation and animals found in the construction zones are common in built up/urban areas. The contractor will be required to:

- Conduct site induction and environmental awareness.
- Limit activities within the work area.
- Replant trees in the area using minimum ratio of 2 new trees for every 1 tree cut, if any. Replacement species must be approved by District Forest Department.

73. Impacts on Physical Cultural Resources. There may be inconvenience to tourists,

² Day time shall mean from 6.00 am to 10.00 pm. Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by HPSPCB. Mixed categories of areas may be declared as one of the above mentioned categories by HPSPCB.

residents, businesses, and due to construction activities. This potential impact is site-specific, short-term and can be mitigated. The contractor will be required to:

- Ensure no damage to structures/properties near construction zone.
- Provide sign boards to inform nature and duration of construction works and contact numbers for concerns/complaints.
- Implement good housekeeping. Remove wastes immediately. Prohibit stockpiling of materials that may obstruct/slow down pedestrians and/or vehicle movement.
- Ensure workers will not use nearby/adjacent areas as toilet facility.
- Coordinate with DSC for transportation routes and schedule. Schedule transport and hauling activities during non-peak hours. Communicate road detours via visible boards, advertising, pamphlets, etc.
- Ensure heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites.
- Provide instructions on event of chance finds for archaeological and/or ethno-botanical resources. Works must be stopped immediately until such time chance finds are cleared by experts.

74. Impact due to Waste Generation. Construction activities will produce moderate excavated soils, construction materials, and solid wastes (such as removed concrete, vegetation, packaging materials, empty containers, oils, lubricants, and other similar items). These impacts are negative but short-term and reversible by mitigation measures. The contractor will need to adopt the following mitigation measures:

- Prepare and implement a waste management plan. Manage solid waste according to the following hierarchy: reuse, recycling and disposal. Include in waste management plan designated/approved disposal areas.
- Coordinate with Local Municipal Authority for beneficial uses of excavated soils/silts/sediments or immediately dispose to designated areas.
- Recover used oil and lubricants and reuse; or remove from the sites.
- Avoid stockpiling and remove immediately all excavated soils, excess construction materials, and solid waste (removed concrete, wood, trees and plants, packaging materials, empty containers, oils, lubricants, and other similar items).
- Prohibit disposal of any material or wastes (including human waste) into drainage, *nallah*, or watercourse.

75. Impacts on Occupational Health and Safety. Workers need to be mindful of occupational hazards which can arise from construction works. Exposure to work-related chemical, physical, biological and social hazard is typically intermittent and of short duration, but is likely to reoccur. Potential impacts are negative and long-term but reversible by mitigation measures. Overall, the contractor should comply with IFC EHS Guidelines on Occupational Health and Safety (this can be downloaded from <http://www1.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES>). The contractor will be required to:

- Disallow worker exposure to noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. The use of hearing

protection shall be enforced actively.

- Develop/Implement comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project.
- Include in H&S plan measures such as: (i) type of hazards during excavation works; (ii) corresponding personal protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents.
- Provide H&S orientation training to all new workers to ensure that they are apprised of the rules of work at the site, personal protective protection, and preventing injury to fellow workers.
- Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site as well as at construction camps.
- Provide medical insurance coverage for workers.
- Secure construction zone from unauthorized intrusion and accident risks.
- Provide supplies of potable drinking water.
- Provide clean eating areas where workers are not exposed to hazardous or noxious substances.
- Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted.
- Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas.
- Ensure moving equipment is outfitted with audible back-up alarms.
- Mark and provide sign boards in the construction zone, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate.

76. Impacts on Socio-Economic Activities. Manpower will be required during the 18 months construction phase. This can help generate contractual employment and increase in local revenue. Thus potential impact is positive and long-term. As per detailed design, land acquisition and closure of roads are not required; therefore no negative impact is expected. However, the contractor will need to adopt the following mitigation measures:

- Leave space for access between mounds of soil.
- Provide walkways and metal sheets where required to maintain access to shops/businesses along trenches.
- Consult businesses and institutions regarding operating hours and factoring this in to work schedules.
- Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.
- Employ at least 50% of the labour force, or to the maximum extent, local persons within the 2-km immediate area if manpower is available.

77. Summary of Mitigation Measures during Construction. Table 4 provides summary of mitigation measures to be considered by the contractor during construction phase. The detailed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related implementation arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators are provided in the EMP.

Table 4: Summary of Mitigation Measures during Construction Phase

Potential Impact	Mitigation Measures
Erosion hazards	<ul style="list-style-type: none"> Save topsoil removed during excavation and use to reclaim disturbed areas, as soon as it is possible to do so. Use dust abatement such as water spraying to minimize windblown erosion. Provide temporary stabilization of disturbed/excavated areas that are not actively under construction. Apply erosion controls (e.g., silt traps) along the drainage leading to the water bodies. Maintain vegetative cover to prevent erosion. Clean and maintain catch basins, drainage ditches, and culverts regularly. Conduct routine site inspections to assess the effectiveness of and the maintenance requirements for erosion and sediment control systems.
Impacts on water quality	<ul style="list-style-type: none"> Schedule civil works during non-monsoon season, to the maximum extent possible. Ensure drainages and water bodies within the construction zones are kept free of obstructions. Keep loose soil material and stockpiles out of drains, flow-lines and watercourses. Avoid stockpiling of excavated and construction materials (sand, gravel, cement, etc.) unless covered by tarpaulins or plastic sheets. Re-use/utilize, to maximum extent possible, excavated materials. Dispose any residuals at identified disposal site (PIU/DSC will identify approved sites). Dispose waste oil and lubricants generated as per provisions of Hazardous Waste (Management and Handling) Rules, 1989. Develop a spill prevention and containment plan, educate workers about the plan, and have the necessary materials on site prior to and during construction. Refuel equipment within the designated refueling containment area away from drainages, nallahs, or any water body. Inspect all vehicles daily for fluid leaks before leaving the vehicle staging area, and repair any leaks before the vehicle resumes operation.
Impacts on air quality	<ul style="list-style-type: none"> Conduct regular water spraying on earth piles, trenches and sand piles. Conduct regular visual inspection along alignments and construction zones to ensure no excessive dust emissions. Spreading crushed gravel over backfilled surfaces if re-surfacing of disturbed ROWs cannot be done immediately. Maintain construction vehicles and obtain "pollution under control" certificate from HPSPCB. Obtain CFE and CFO for hot mix/batching plants, crushers, diesel generators, etc., if to be used in the project.
Noise and vibrations impacts	<ul style="list-style-type: none"> Limit construction activities in project sites to day time only. Plan activities in consultation with the PIU/DSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will

Potential Impact	Mitigation Measures
	<p>result in least disturbance.</p> <ul style="list-style-type: none"> Minimize noise from construction equipment by using vehicle silencers and fitting jackhammers with noise-reducing mufflers. Avoid loud random noise from sirens, air compression, etc. Require drivers that horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach. If specific noise complaints are received during construction, the contractor may be required to implement one or more of the following noise mitigation measures, as directed by the project manager: (i) locate stationary construction equipment as far from nearby noise-sensitive properties as possible; (ii) shut off idling equipment; (iii) reschedule construction operations to avoid periods of noise annoyance identified in the complaint; and/or (iv) notify nearby residents whenever extremely noisy work will be occurring. Follow Noise Pollution (Regulation and Control) Rules, day time ambient noise levels should not exceed 65 dB(A) in commercial areas, 55 dB(A) in residential areas, and 50 dB(A) in silence zone.³ Ensure vehicles comply with Government of India noise limits for vehicles. The test method to be followed shall be IS:3028-1998.
Impacts on flora and fauna	<ul style="list-style-type: none"> Conduct site induction and environmental awareness. Limit activities within the work area. Replant trees in the area using minimum ratio of 2 new trees for every 1 tree cut, if any. Replacement species must be approved by District Forest Department.
Impacts on physical resources	<ul style="list-style-type: none"> Ensure no damage to structures/properties near construction zone. Provide sign boards to inform nature and duration of construction works and contact numbers for concerns/complaints. Implement good housekeeping. Remove wastes immediately. Prohibit stockpiling of materials that may obstruct/slow down pedestrians and/or vehicle movement. Ensure workers will not use nearby/adjacent areas as toilet facility. Coordinate with PIU/DSC for transportation routes and schedule. Schedule transport and hauling activities during non-peak hours. Communicate road detours via visible boards, advertising, pamphlets, etc. Ensure heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites. Provide instructions on event of chance finds for archaeological and/or ethno-botanical resources. Works must be stopped immediately until such time chance finds are cleared by experts.
Impacts on waste generation	<ul style="list-style-type: none"> Prepare and implement a waste management plan. Manage solid waste according to the following hierarchy: reuse, recycling and disposal. Include in waste management plan designated/approved disposal areas. Coordinate with Town Municipal Authority for beneficial uses of excavated soils/silts/sediments or immediately dispose to designated areas. Recover used oil and lubricants and reuse; or remove from the sites. Avoid stockpiling and remove immediately all excavated soils, excess construction materials, and solid waste (removed concrete, wood, trees and plants, packaging materials, empty containers, oils, lubricants, and other similar items). Prohibit disposal of any material or wastes (including human waste) into drainage,

³ Day time shall mean from 6.00 am to 10.00 pm. Silence zone is, an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by HPPCB. Mixed categories of areas may be declared as one of the above mentioned categories by HPPCB.

Potential Impact	Mitigation Measures
	<i>nallah</i> , or watercourse.
Impacts on occupational health and safety	<ul style="list-style-type: none"> • Comply with IFC EHS Guidelines on Occupational Health and Safety • Disallow worker exposure to noise level greater than 85 dB(A) for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively. • Develop/implement comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project. • Include in H&S plan measures such as: (i) type of hazards during excavation works; (ii) corresponding personal protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents. • Provide H&S orientation training to all new workers to ensure that they are apprised of the rules of work at the site, personal protective protection, and preventing injury to fellow workers. • Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site as well as at construction camps. • Provide medical insurance coverage for workers. • Secure construction zone from unauthorized intrusion and accident risks. • Provide supplies of potable drinking water. • Provide clean eating areas where workers are not exposed to hazardous or noxious substances. • Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted. • Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas. • Ensure moving equipment is outfitted with audible back-up alarms. • Mark and provide sign boards in the construction zone, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate.
Impacts on socio-economic activities	<ul style="list-style-type: none"> • Leave space for access between mounds of soil. • Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints. • Employ at least 50% of the labor force, or to the maximum extent, local persons within the 2-km immediate area if manpower is available. • "Mobility Plan" has to be chalked out in consultation with the District Administration prior to start of work.

78. The construction related impacts due to proposed subproject components are generic to construction activities, and are typical of small-scale construction projects. The potential impacts that are associated with construction activities can be mitigated to standard levels without difficulty through incorporation or application of the recommended mitigation measures and procedures.

D. Post-Construction Impacts and Mitigation Measures

79. Site clean-up is necessary after construction activities. The contractor will be required to:

- Backfill any excavation and trenches, preferably with excess excavation material generated during the construction phase.
- Use removed topsoil to reclaim disturbed areas.
- Re-establish the original grade and drainage pattern to the extent practicable.
- Stabilize all areas of disturbed vegetation using weed-free native shrubs, grasses, and trees.
- Restore access roads, staging areas, and temporary work areas.
- Restore roadside vegetation.
- Remove all tools, equipment, barricades, signs, surplus materials, debris, and rubbish. Demolish buildings/structures not required for O&M. Dispose in designated disposal sites.
- Monitor success of re-vegetation and tree re-planting. Replace all plants determined to be in an unhealthy condition.
- Request in writing from PIU/DSC that construction zones have been restored.

E. Anticipated Operations and Maintenance (O&M) Impacts and Mitigation Measures

80. Impacts on environmental conditions associated with the O&M of the subproject components pertain to impacts related to increased tourists in the areas resulting to increased vehicular movement along the roads, increased demands for services, and increased solid waste generation. These impacts can be mitigated by:

- Increased vehicular movement along the roads - speed restrictions, provision of appropriate road signage and well located rest points for pedestrians shall minimize impacts on safety of the people
- Increase demands for services – addressed through the subproject design
- Increase solid waste generation – Municipal Committee to put in place solid waste management programs.

VI. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

A. ADB Disclosure Policy

81. Public consultation was undertaken as per ADB SPS requirements. All the five principles of information dissemination, information solicitation, integration, coordination and engagement into dialogue were incorporated during the task. A framework of different environmental impacts likely from the project was prepared based on opinions of all those consulted, especially at the micro level, by setting up dialogues with the local people, businessman's, visitors and tourists from whom information on site facts and prevailing conditions were collected.
82. As per ADB safeguard requirement, public consultation is to be carried out before and after impact identification. Public consultation was therefore carried out thrice, once at the time of conceptualization of the project with the key stakeholders particularly with district administration, temple Samiti, local community, tourists and nearby shopkeepers/ vendors etc, secondly to discuss mitigating measures and get concurrence of stakeholders and thirdly to seek more information to strengthen the document.

B. Process for Consultation followed

83. During project preparation (June to August 2014), consultations have been held with the HP Department of Tourism, tourists of Bilaspur, members of Shri Markandeya Prabhandhak Avam Vikas Samiti, and State District Administration, District Municipal Administration, local community representatives, etc. regarding issues pertaining to the selection of subprojects and i
84. Identification of key issues including addressing the current gaps in provision of basic services and improvement of tourist infrastructure. Records of the consultations with photographs and attendance are provided in **Annexure-5**. Key issues raised and action agreed are given below;

Consultation:

Place: Markandeya Temple Premises District: Bilaspur Date: June, 2014 Participants: Members of Temple Trust, Villagers, shopkeepers <i>etc.</i>	
1.	Issues Discussed: Discussion among stakeholders for sharing of information related to project (Environmental safeguard policy, direct and indirect impacts of improvement options on environmental). <ul style="list-style-type: none"> • Impact on the local environment due to construction activities under project • Scope of employment generation for the local people during construction phase. • Construction activity whether causing any type of health hazard or not? • Any loss of land or property due to construction activity? • Any damage to historical or cultural monuments along project road? • Problems faced by the local people in their daily activities due to improper amenities?
2	Stakeholder's Response: <ul style="list-style-type: none"> • People are interested in amenities development and want parking improvements • Proper shops and landscaping.

	<ul style="list-style-type: none"> • They want proper bathing places with change rooms for women especially • Local inhabitant's wants employment of local people during road construction. • Shopkeeper's wants proper shops located within premises and project authority will help while displaced during construction.
3	Recommendations & Suggestions: <ul style="list-style-type: none"> • Special attention is required during Baisakhi festival in April. • Proper drainage is required for water during rainy season. • Efforts should be taken for the generation of employment for local people n during construction.

Other Consultations are:

Date	Participants	Issue Discussed	Remarks
23.08.2014	Markandeya Parbandhank Seva Samiti, Shopkeepers	<ul style="list-style-type: none"> • An informal FGD/Individual interviews were done with various stakeholders at that site to discuss the scope of work alongwith the additional requirement from them. 	<ul style="list-style-type: none"> • The inputs were taken from the participants and were incorporated in the SAR and DPR.
29.02.2016	Markandeya Parbandhank Seva Samiti	<ul style="list-style-type: none"> • Scope of work were discussed as per the DPR and the requirements for the preparation of Social/ Environmental documents 	<ul style="list-style-type: none"> • The Samiti members requested to have a detailed discussion with the Samiti members and the shopkeepers.
04.03.2016	Markandeya Parbandhank Seva Samiti, Village Panchayat, Shopkeepers.	<ul style="list-style-type: none"> • Awareness and scope of the project and development components, • Type of Losses and Entitlement Provision, • Mitigation measures to avoid temporary losses. • Procedure of Grievances Redress Mechanism, 	<ul style="list-style-type: none"> • The shopkeepers informed that they are paying Rs 800/m as a rent in the month of April (Baishakhi) and rest of the month rent is Rs100/meter. They are involved in these activities from 5 to 20 years. • The Samiti members were aware of the scope of work and the same was reiterated. They showed the 11 months Contract that the existing shopkeepers have signed on renewable basis regularly. The MoU clearly states that for any developmental work the shop owner would temporarily shift the shop till the work is completed. • The shopkeepers were already aware of the proposed project. The existing MoU signed with the shopkeepers and the Samiti members were discussed. They all in unison are agreeable to temporarily shifting during the construction phase without asking for any shifting cost. The only assurance they required from the Committee in written was that they would be offered on

Date	Participants	Issue Discussed	Remarks
			preference once the permanent shops were built.
19.04.2016	Markandeya Parbandhank Seva Samiti, Village Panchayat, Shopkeepers.	<ul style="list-style-type: none"> Alternate Location for Tenants, Allotment of new shops of the Tenants, Operation and Maintenance of Project Assets. 	<ul style="list-style-type: none"> Shopkeepers informed that they all are agreed to shift the new location identified by the Committee and requested to provide new shops (Will be constructed by the project). Committee members informed that alternate location will be provided to them till the construction of new shops and one month rent will not be taken from them during shifting. The alternate location was identified and the shopkeepers showed their consent to temporarily shift to the new location. The decision was taken for considering their temporary disruption of livelihood during shifting.

C. Plan for continued public participation

85. To ensure continued public participation, stakeholder engagement at main stages of work during the project design and implementation is proposed. A grievance redress cell has been set up within the PIU at field office and PMU, Shimla office. To ensure an effective disclosure of the project proposal to the stakeholders and the community living in the vicinity of the sub-project location, information regarding grievance redress mechanism shall be published in local newspapers. This information is also made available on Himachal Tourism website.
86. The IA will submit to ADB the following documents for disclosure on ADB's website: (i) the final IEE; (ii) a new or updated IEE and corrective action plan prepared during project implementation, if any; and (iii) the semi-annual environmental monitoring reports.
87. For the benefit of the community, relevant information in the IEE (Executive Summary) will be translated in Hindi and made available at: (i) Office of the PMU; and, (ii) Office of the District Commissioner, Bilaspur District. These copies will be made available free of cost to any person seeking information on the same. Hard copies of the IEE will be available in the PMU/PIU at Shimla, and accessible to citizens as a means to disclose the document and at the same time creating wider public awareness. On demand, the person seeking information can obtain a hard copy of the complete IEE document at the cost of photocopy from the office of the PMU/PIU, on a written request and payment for the same to the Project Director. Electronic version of the IEE will be placed in the official website of the Tourism Department and the website of ADB after approval of the documents by Government and ADB.

VII. GRIEVANCE REDRESS MECHANISM

88. The affected person/aggrieved party can give their grievance verbally or in written to the grievances committee. Grievances of affected person will first be brought to the attention of the PIU who can resolve the issue at site level. If the matter is not solved within 7 days period by the PIU, it will be brought to the Grievance Redress Committee constituted for the purpose in PIU. This GRC shall discuss the issue in its monthly meeting and resolve the issues within one month of time after receiving the grievance. If the matter is not resolved by GRC at PIU level within stipulated time, it shall be referred to GRC at PMU level by Executive Engineer of PIU.
89. GRC at PMU shall discuss the issue and try to resolve it and inform the PIU accordingly. If the matter is not resolved by the GRC at PMU level within one month of time, the aggrieved person/party can bring the matter to The Court of Law. The PIU shall keep records of all grievances received including contact details of complainant, date of receiving the complaint, nature of grievance, agreed corrective actions and the date these were affected and final outcome. The grievance redress process is shown below.

A. Composition and Functions of GRC

90. **First Level Grievance Redress Committee (GRC) at PIU.** In each PIU there shall be one GRC, which will include Project Manager (PIU), District Tourist Officer of Department of Tourism of Govt. of Himachal Pradesh, Community Development Officer of PIU, nominated representative of District Magistrate and nominated representative committee shall be headed by Project Manager (PIU). PIU can associate NGO as per his decision. The committee will meet at least once in every month. Agenda of meeting shall be circulated to all the members and affected persons/aggrieved party along with venue, date and time; informed in written at least 7 days in advance of meeting. The matters shall remain with GRC at PIU level for one month and if grievance is not resolved within this time period, the matter shall be referred to GRC at PMU.
91. **Second Level Grievance Redress Committee (GRC) at PMU.** There shall be one GRC in PMU. The matters not resolved by the GRC at PIU level within one month shall come under GRC at PMU. GRC at PMU will include Community Development Expert of PMU, Safeguard Specialist of PMU and Additional Project Director (APD) of PMU. The Committee shall be headed by APD of PMU. This committee shall look the matters, which are referred to and not resolved by GRC at PIU level. GRC at PMU will resolve the issue within one month.
92. **Third Level Grievance Redress Committee (GRC) at SLEC.** If the matter is not resolved by the GRC at PMU level within one month of time, the aggrieved person/party can bring the matter to The Executive Committee/State Level Empowered Committee (SLEC).
93. The details are attached as **Annexure 6**.

B. Approach to GRC.

94. Affected person/aggrieved party can approach to GRC for redress of his/their grievances through any of the following modes:

- Through Grievance Redress Form: Aggrieved person/party can give their grievance in Grievance Redress Form available at PIU and PMU. Sample Grievance Redress Form is attached as **Annexure-7**.
- Telecom based: The Project Manager office no. is displayed at various construction sites so that general public can register their complaint through telephone / mobile phone to the PIU office.

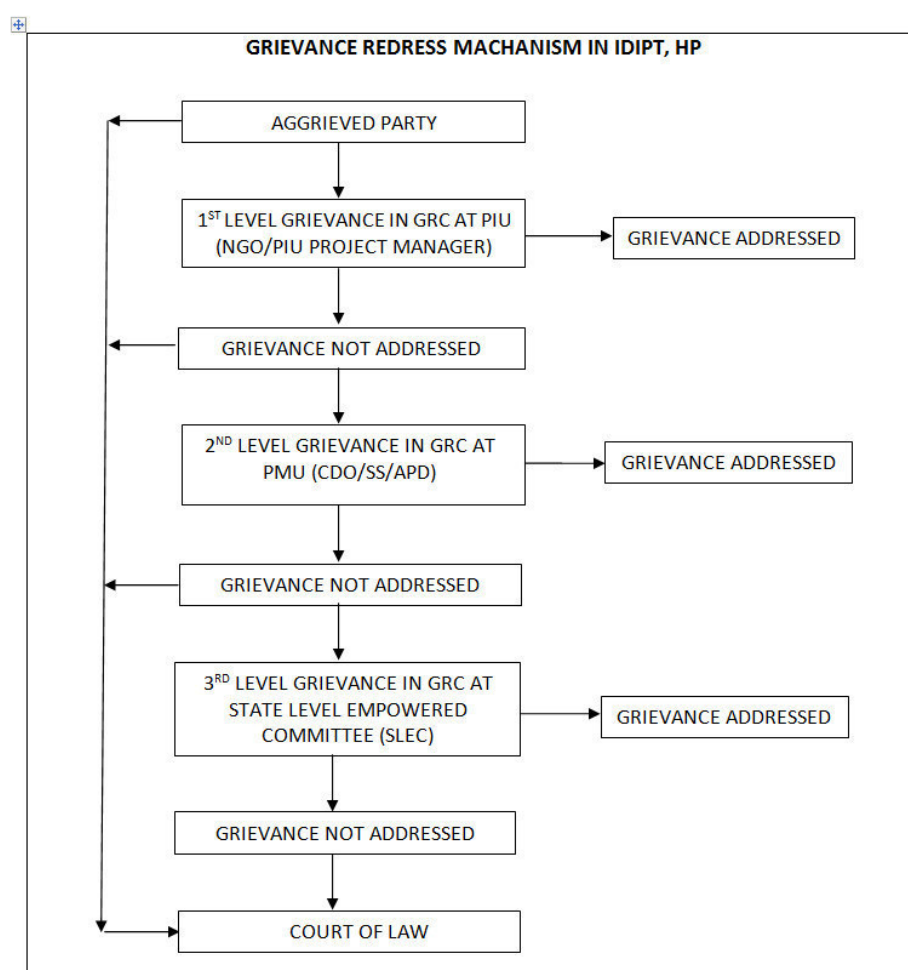


Figure 4: Grievance Redress Mechanism in IDIPT, Himachal Pradesh

Note: LGC -NGO, SHG, Line Agency, Representative of Gram Panchayat, Special invitee GRC – PM, CDO, Engineer, DFO, DTO, SDM GRC in Environment and Social Management Cell (ESMC) –PMU (APD, SS, CDS, FS), PMC (EE, CDE)

VIII. ENVIRONMENTAL MANAGEMENT PLAN

95. The purpose of the environmental management plan (EMP) is to ensure that the activities are undertaken in a responsible, non-detrimental manner with the objectives of: (i) providing a proactive, feasible, and practical working tool to enable the measurement and monitoring of environmental performance on-site; (ii) guiding and controlling the implementation of findings and recommendations of the environmental assessment conducted for the project; (iii) detailing specific actions deemed necessary to assist in mitigating the environmental impact of the project; and (iv) ensuring that safety recommendations are complied with.
96. A copy of the EMP must be kept on work sites at all times. This EMP will be included in the bid documents and will be further reviewed and updated during implementation. The EMP will be made binding on all contractors operating on the site and will be included in the contractual clauses. Non-compliance with, or any deviation from, the conditions set out in this document constitutes a failure in compliance.
97. The contractor will be required to (i) establish an operational system for managing environmental impacts (ii) carry out all of the monitoring and mitigation measures set forth in the EMP; and (iii) implement any corrective or preventative actions set out in safeguards monitoring reports that PMU and PIU will prepare from time to time to monitor implementation of this IEE and EMP. The contractor shall allocate a budget for compliance with these EMP measures, requirements and actions.

A. Responsibilities for EMP Implementation

98. The following agencies will be responsible for EMP Implementation:
 - The Department of Tourism and Civil Aviation (DoTCA), Government of Himachal Pradesh, is the Executing Agency.
 - The implementing agency is the Himachal Pradesh Tourism Development Board (HPTDB).
 - The Project Management Unit (PMU) has been established in Shimla for the overall project management and
 - Project Implementation Unit (PIU) has been established in Kullu.
 - Environmental Specialist has been deputed by the PMU, who will be responsible for implementation of the environmental safeguard provisions. The Project Management Consultants (PMC) and Design and Supervision Consultant (DSC, Kullu) have been recruited to provide assistance to the PMU/PIUs in project implementation.
 - Within the PMC team, an Environmental Specialist provides overall direction for management of environmental issues, and provides technical support to the PMU including implementation of the environmental safeguards according to ADB requirements, and assist in monitoring impacts and mitigation measures associated with subprojects.
 - The Environmental Specialist of the DSC team is responsible for preparation of the Environmental assessment documents in line with the EARF and supervises

the implementation of the EMP provisions in the subprojects. The DSC Safeguards specialist supports environmental management functions including updating IEEs with respect to sub-project Environmental Management Plans, and assist in monitoring impacts and mitigation measures associated with subprojects. He/she will be required to include mitigation measures in designs where appropriate, and to specify other measures in construction contracts. Contractors will be required by their contracts to implement all specified mitigation, monitoring, and reporting assigned to contractors as presented in the EMP.

- The PMU, oversees the implementation of the environmental provisions related to subproject implementation, its responsibilities include preparation and updation of IEEs consistent with the ADBs Safeguards Policy Statement and the environmental compliance requirements of the Government of Himachal Pradesh and the Government of India. Environmental monitoring will be undertaken by the PMU supported by the DSC - Safeguards Specialist.
- The project includes upfront and on-going supervision and training assistance for environmental monitoring reporting in project management structures. The effective implementation of the measures proposed will be ensured through the building up of capacity towards environmental management within the PMU supplemented with the technical expertise of a Safeguards Specialist as part of the PMC/DSC.

99. The contractor's conformity with contract procedures and specifications during construction will be carefully monitored by the PIU. Safeguard Specialists are deputed in PMU, PMC and DSC, who will monitor the environmental performance of contractors. Terms of References of Safeguards Specialists are given in boxes below-

Box 1: Terms of Reference of Safeguards Specialist – PMU

- Review the IEE document and ensure adequacy under Safeguard Policy Statement, 2009 and identify any areas for improvement.
- Ensure that the project design and specification adequately reflect the IEE, co-ordinate the obtaining of requisite environmental clearances for the project
- Monitor construction activities to ensure that identified and appropriate control measures are effective and in compliance with the IEE and advise PIU for compliance with statutory requirements.
- Develop training programme for the PMU/PIUs staff, the contractors and others involved in the project implementation, in collaboration with the Environmental Specialist of the PMC and DSC
- Review and approve the Contractor's Implementation Plan for the environmental measures, as per IEE.
- Liaise with the Contractors and Consultants on the implementation of the Environmental management measures proposed in the IEE
- Liaise with the various Government agencies on environmental and other regulatory matters
- Continuously interact with the NGOs and Community groups to be involved in the project

Box 2: Terms of Reference of Safeguards Specialist – PMU

- Establish dialogue with the affected communities and ensure that the environmental concerns and suggestions are incorporated and implemented in the project.
- Review the environmental performance of the project through an assessment of the periodic environmental monitoring reports submitted by the DSC; provide a summary of the same to the Project Director, and initiate necessary follow-up actions
- Provide support and assistance to the Government Agencies and the Asian Development Bank to supervise the implementation of the IEE during the construction as well as operation stage of the project
- Document the good practices in the project on incorporation and integration of environmental issues into engineering design and on implementing measures in the construction, and dissemination of the same

Box 3: Terms of Reference of Safeguards Specialist (Environment) of DSC

- Review the IEE document and ensure adequacy under ADB SPS, 2009.
- Interact on a regular basis with the sector specialists of the DSC and integrate environmentally sound practices into the detailed design of project components.
- Advise PMU/PIU for compliance with statutory clearances.
- Work out the site specific mitigation measures for components as required and integrate the same into contractual provisions.
- Develop, organise and deliver environmental training programmes and workshops for the staff of the PIU and Contractors and in accordance to the Capacity Building Programme as specified in the IEE.
- Preparation of Activity Plans as identified in IEE (these include Site Management Plans, Waste Management Plans, Sludge Management and Disposal Plans, Occupational Safety Plans etc).
- Supervise the implementation of the Environmental provisions by the Contractors.
- Review and approve site specific environmental enhancement/mitigation designs worked out by the Contractor. Hold regular consultation meetings with the Environmental specialist of the PMU
- Review the Contractors' Environmental Implementation Plans to ensure compliance with the IEE.
- Develop good practice construction guidelines to assist the contractors in implementing the provisions of IEE.
- Prepare and submit regular environmental monitoring and implementation progress reports.
- Assist Environmental Specialist of the PMU to prepare good practice dissemination notes based on the experience gained from site supervision.

Box 3: Terms of Reference of Safeguards Specialist (Environment) of PMC

Support and Advice the PMU and Consultants team in-

- Best Environmental Practices for responding to environmental issues involved with implementation of the projects on a sustainable basis
- Assistance and advice on institutional strengthening and capacity building at the PMU and PIU levels in regards to environmental practices.
- Ensure that baseline surveys, environmental monitoring plans and programs, initial environmental examinations (IEE) as may be required are carried out.
- Preparation of ADB procedure compliant environmental safeguard actions including impact

Box 3: Terms of Reference of Safeguards Specialist (Environment) of PMC

assessment if any during the design stage

- Management plan and mitigation measures
- Oversight of implementation of environmental standards and safeguards as part of project implementation
- Participate in preparation of Master Plan for additional sites and contribute to the environmental safeguards to the plan and sub components
- Preparation of performance monitoring reports

100. Responsibility for updating IEE during detailed design. DSC updated this IEE and submitted to PMU for submission to ADB.

101. Responsibility for monitoring. During construction, DSC's Environmental Specialist and the designated representative engineer of the PIU will monitor the contractor's environmental performance on day to day basis while PMC expert will randomly monitor the performance for corrective measures if required. During the operation phase, monitoring will be the responsibility of the Temple Samiti.

102. Responsibility for reporting. The PMU, PIU, PMC and DSC will be responsible for environmental monitoring. PIU in coordination with DSC will submit monthly monitoring report to PMU thereafter the reports will be submitted to ADB on semi-annual basis. ADB will post the environmental monitoring reports on its website. Any major accidents having serious environmental consequences will be reported immediately. PMC environmental expert will help in preparing progress reports including environmental closure report. The sample field monitoring report and semi-annual environmental monitoring templates are attached as **Annexure- 8 & 9**.

B. EMP Tables

103. Table 5 to 7 show the potential adverse environmental impacts, proposed mitigation measures, responsible parties, and cost of implementation. This EMP will be included in the bid documents and will be further reviewed and updated during implementation.

Table 5: Pre-Construction EMP Table

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
Consents, permits, clearances, no objection certificate (NOC), etc.	<ul style="list-style-type: none"> Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works. 	Consents, permits, clearance, NOCs, etc.	PMU	EA o report to ADB in environmental monitoring report (EMR)	check CFEs, permits, clearance, prior to start of civil works	PMU
	<ul style="list-style-type: none"> Acknowledge in writing and provide report on compliance of all obtained consents, permits, clearance, NOCs, etc. 	Records and communications	PMU	EA to report to ADB in EMR	Acknowledge upon receipt Send report as specified in CFE, permits, etc.	PMU
	<ul style="list-style-type: none"> Include in detailed design drawings and documents all conditions and provisions if necessary 	Detailed design documents and drawings	Contractor	PMU and PMC PIU and DSC	Upon submission by contractor	PMU
Establishment of baseline environmental conditions prior to start of civil works	<ul style="list-style-type: none"> Conduct documentation of location of components, areas for construction zone (camps, staging, storage, stockpiling, etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates. Prior to start of civil works ambient air quality and ambient noise level will be generated (once at one site except monsoon period). 	Records/Ambient air Parameter's (PM10, PM2.5, SO ₂ , NO ₂ ,) & ambient noise level	PMU	PIU and DSC	Baseline data will be generated prior to start of civil work.	PMU
Erosion control	<ul style="list-style-type: none"> Develop an erosion control and re-vegetation plan to minimize soil loss and reduce 	Erosion control and re-vegetation plan covering	Contractor	PIU and DSC	Included in updated IEE report	Contractor

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	<p>sedimentation to protect water quality.</p> <ul style="list-style-type: none"> Minimize the potential for erosion by balancing cuts and fills to the extent feasible. Identify and avoid areas with unstable slopes and local factors that can cause slope instability (groundwater conditions, precipitation, seismic activity, slope angles, and geologic structure). Minimize the amount of land disturbed as much as possible. Use existing roads, disturbed areas, and borrow pits and quarries when possible. Minimize vegetation removal. Stage construction to limit the exposed area at any one time. Minimize the amount of land disturbed as much as possible. Use existing roads, disturbed areas, and borrow pits and quarries when possible. Minimize vegetation removal. Stage construction to limit the exposed area at any one time. 	construction phase				
Utilities	<ul style="list-style-type: none"> Identify and include locations 	List and maps	- DSC to	PIU and DSC	Included in	DSC – preliminary

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	<p>and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during the construction phase.</p> <ul style="list-style-type: none"> Require contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services. Obtain from the PIU and/or DSC the list of affected utilities and operators; If relocations are necessary, contractor will coordinate with the providers to relocate the utility. 	<p>showing utilities to be shifted</p> <p>Contingency plan for services disruption</p>	<p>prepare preliminary list and maps of utilities to be shifted</p> <p>- During detailed design phase, contractor to (i) prepare list and operators of utilities to be shifted; (ii) contingency plan</p>		updated IEE report	<p>design stage</p> <p>Contractor – detailed design stage</p>
Social and Cultural Resources	<ul style="list-style-type: none"> Consult Archaeological Survey of India (ASI) or HP State Archaeology Department to obtain an expert assessment of the archaeological potential of the site. Consider alternatives if the site is found to be of medium or high risk. Include state and local archaeological, cultural and historical authorities, and 	Chance find protocol	<p>- PMC to consult ASI or HP State Archaeology Department</p> <p>- PMC to develop protocol for chance finds</p>	PMU	Included in updated IEE report	PMU

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	<p>interest groups in consultation forums as project stakeholders so that their expertise can be made available.</p> <ul style="list-style-type: none"> Develop a protocol for use by the construction contractors in conducting any excavation work, to ensure that any chance finds are recognized and measures are taken to ensure they are protected and conserved. 					
Sites for construction work camps, areas for stockpile, storage and disposal	<ul style="list-style-type: none"> Will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems, etc. Residential areas will not be considered so as to protect the human environment (i.e., to curb accident risks, health risks due to air and water pollution and dust, and noise, and to prevent social conflicts, shortages of amenities, and crime). Disposal will not be allowed near sensitive areas which will inconvenience the community. 	<p>List of pre-approved sites for construction work camps, areas for stockpile, storage and disposal</p> <p>Waste management plan</p>	<p>- DSC to prepare list of potential sites</p> <p>DSC to inspect sites proposed by contractor if not included in pre-approved sites</p>	PIU/DSC	Monthly	DSC

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	<ul style="list-style-type: none"> The construction camp, storage of fuel and lubricants should be avoided at the river bank. The construction camp site for intake well should be finalized in consultation with DSC and PIU. 					
Sources of construction materials	<ul style="list-style-type: none"> Use quarry sites and sources permitted by government. Verify suitability of all material sources and obtain approval from PIU. If additional quarries are required after construction has started, obtain written approval from PIU. Submit to DSC on a monthly basis documentation of sources of materials. 	Permits issued to quarries/ sources of materials	Contractor PMC and DSC to verify sources (including permits) if additional is requested by contractor	PMU/PIU	Upon submission by contractor, monthly	PMC and DSC
Access	<ul style="list-style-type: none"> Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites. Schedule transport and hauling activities during non-peak hours. Locate entry and exit points in areas where there is low potential for traffic congestion. 	Traffic management plan	Contractor	PIU and DSC	Continuous during construction	Contractor

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	<ul style="list-style-type: none"> Keep the site free from all unnecessary obstructions. Drive vehicles in a considerate manner. Coordinate with the Traffic Police Department for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours. Notify affected sensitive receptors by providing sign boards with information about the nature and duration of construction works and contact numbers for concerns/ complaints. Provide free access to households along the alignments of raw and clear water transmission routes during the construction phase. 					
Occupational health and safety	<ul style="list-style-type: none"> Plan to comply with IFC EHS Guidelines on Occupational Health and Safety Develop comprehensive site-specific health and safety (H&S) plan. The overall objective is to provide guidance to contractors on 	Health and safety (H&S) plan	Contractor	PIU and DSC	Continuous during construction	Contractor

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	<p>establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project.</p> <ul style="list-style-type: none"> • Include in H&S plan measures such as: (i) type of hazards in the intake wells site; (ii) corresponding personal protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents. • Provide medical insurance coverage for workers. 					
Public consultations	<ul style="list-style-type: none"> • Continue information dissemination, consultations, and involvement/participation of stakeholders during project implementation. 	<ul style="list-style-type: none"> - Disclosure records - Consultations 	PMC and DSC	PMU and PMC	<ul style="list-style-type: none"> - During updating of IEE Report - During preparation of site- and activity-specific plans as per EMP - Prior to start of construction - During construction 	PMU/PMC/DSC

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
Identification of Muck disposal site	<ul style="list-style-type: none"> Identify muck disposal areas in consultation with MC, Bilaspur to dispose off construction wastes of the project. Utilize the dismantle material as much as possible. 	-Identified disposal sites	PIU and DSC	PMU and PMC	- Prior to start of construction - During construction	PMU/PIU/Contractor

Table 6: EMP Table During Construction Phase

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
Erosion hazards	<ul style="list-style-type: none"> Save topsoil removed during excavation and use to reclaim disturbed areas, as soon as it is possible to do so. Use dust abatement such as water spraying to minimize windblown erosion. Provide temporary stabilization of disturbed/excavated areas that are not actively under construction. Apply erosion controls (e.g., silt traps) along the drainage leading to the water bodies. Maintain vegetative cover within road ROWs to prevent erosion and periodically monitor ROWs to assess erosion. Clean and maintain catch basins, drainage ditches, and culverts regularly. Conduct routine site inspections to assess the effectiveness of and the maintenance requirements for erosion and sediment control systems. 	Erosion control and re-vegetation plan	Contractor	PIU and DSC PIU to submit EMP monitoring report to PMU	<ul style="list-style-type: none"> - daily visual inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC 	Contractor

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
Impacts on water quality	• During construction, surface water quality testing will be done at two sites (quarterly except monsoon period for 18 month at two sites)	pH, TDS, DO, BOD, Total coliform and Oil & Grease	PMU/ PMC	PMC/DSC	- Data will be generated during the construction phase.	Contractor
	• Schedule construction activities during non-monsoon season, to the maximum extent possible	Work schedule	Contractor	PIU and DSC PIU to submit EMP monitoring report to PMU	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	
	• Ensure drainages and water bodies within the construction zones are kept free of obstructions.	Visual inspection				
	• Keep loose soil material and stockpiles out of drains and flow-lines.	Visual inspection				
	• Avoid stockpiling of excavated and construction materials (sand, gravel, cement, etc.) unless covered by tarpaulins or plastic sheets.	Visual inspection				
	• Re-use/utilize, to maximum extent possible, excavated materials.	condition in waste management plan				
	• Dispose any residuals at identified disposal site (PIU/DSC will identify approved sites).	condition in waste management plan				
	• Dispose waste oil and lubricants generated as per provisions of Hazardous Waste (Management and Handling) Rules, 1989.	condition in waste management plan				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	<ul style="list-style-type: none"> Refuel equipment within the designated refueling containment area away from drainages, <i>nallahs</i>, or water body. 	condition in list of pre-approved sites for construction work camps, areas for stockpile, storage and disposal				
	<ul style="list-style-type: none"> Inspect all vehicles daily for fluid leaks before leaving the vehicle staging area, and repair any leaks before the vehicle resumes operation. 	Vehicle inspection report				
Impacts on air quality	During construction ambient air quality testing will be done at one site (quarterly except monsoon period for 18 month at one site)	PM10, PM2.5, SO ₂ , NO ₂ ,	PMU/ PMC	PMC/DSC	- Data will be generated during the construction phase.	Contractor
	<ul style="list-style-type: none"> Conduct regular water spraying on stockpiles. 	<ul style="list-style-type: none"> - Visual inspection - No complaints from sensitive receptors - Records 	Contractor	PIU and DSC	<ul style="list-style-type: none"> - daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during dry season and if corrective action is required) - random inspection by PMU, PIU, PMC 	Contractor
	<ul style="list-style-type: none"> Conduct regular visual inspection in the construction zones to ensure no excessive dust emissions. 	Visual inspection				
	<ul style="list-style-type: none"> Maintain construction vehicles and obtain "pollution under control" certificate from 	PUC certificates				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	HPSPCB. • Obtain CFE and CFO for hot mix plants, crushers, diesel generators, etc., if to be used in the project.	CTE and CTO			and/or DSC	
Noise and vibrations impacts	• During construction noise quality testing will be done at one site (quarterly except monsoon period for 18 month)	Noise Level	PMU/ PMC	PMC/DSC	- Data will be generated during the construction phase	Contractors
	• Limit construction activities in temple complexes and other important areas to day time only. • Plan activities in consultation with PIU/DSC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.	Work schedule	Contractor	PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during noise-generating activities and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	Contractors
	• Minimize noise from construction equipment by using vehicle silencers and fitting jackhammers with noise-reducing mufflers.	Report on ambient noise level monitoring within direct impact zones				
	• Avoid loud random noise from sirens, air compression, etc.	zero incidence				
	• Require drivers that horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach.	feedback from receptors within direct and direct impact zone				
	• If specific noise complaints are received during construction, the contractor may be required to	- Complaints addressed satisfactory				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	implement one or more of the following noise mitigation measures, as directed by the project manager: <ul style="list-style-type: none"> • Locate stationary construction equipment as far from nearby noise-sensitive properties, such as the hospital, as possible. • Shut off idling equipment. • Reschedule construction operations to avoid periods of noise annoyance identified in the complaint. • Notify nearby residents whenever extremely noisy work will be occurring. 	- GRM records				
Impacts on flora and fauna	• Conduct site induction and environmental awareness.	Records	Contractor	PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	Contractor
	• Limit activities within the work area.	Barricades along excavation works				
	• Replant trees in the area using minimum ratio of 2 new trees for every 1 tree cut. Replacement species must be approved by District Forest Department.	Number and species approved by District Forest Department				
Impacts on physical and cultural resources	• Ensure no damage to structures/properties adjacent to construction zone.	- Visual inspection - any impact should be addressed by	Contractor In coordination with PIU and DSC for any structures within	PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist	Contractor

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
		project resettlement plan	proposed site and construction zone		- weekly visual inspection by DSC (more frequent if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	
	<ul style="list-style-type: none"> • Provide sign boards to inform nature and duration of construction works and contact numbers for concerns/complaints. 	<ul style="list-style-type: none"> - no complaints received - photo-documentation 				
	<ul style="list-style-type: none"> • Increase the workforce near the school and other sensitive receptors. 	<ul style="list-style-type: none"> - Records of workers deployment - Work schedule 				
	<ul style="list-style-type: none"> • Implement good housekeeping. Remove wastes immediately. 	<ul style="list-style-type: none"> - Visual inspection - No stockpiled/ stored wastes 				
	<ul style="list-style-type: none"> • Ensure workers will not use nearby/adjacent areas as toilet facility. 	<ul style="list-style-type: none"> - No complaints received - Sanitation facilities for use of workers 				
	<ul style="list-style-type: none"> • Coordinate with PIU/DSC for transportation routes and schedule. Schedule transport and hauling activities during non-peak hours. Communicate road detours via visible boards, advertising, pamphlets, etc. • Ensure heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites. 	<ul style="list-style-type: none"> - Approved routes in traffic management plan 				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	<ul style="list-style-type: none"> Provide instructions on event of chance finds for archaeological and/or ethno-botanical resources. Works must be stopped immediately until such time chance finds are cleared by experts. 	condition in chance find protocol				
Impact due to waste generation	<ul style="list-style-type: none"> Prepare and implement a waste management plan. Manage solid waste according to the following hierarchy: reuse, recycling and disposal. Include in waste management plan designated/approved disposal areas. Coordinate with PIU/DSC for beneficial uses of excavated soils or immediately disposal to designated areas. Recover used oil and lubricants and reuse; or remove from the site. Avoid stockpiling and remove immediately all excavated soils, excess construction materials, and solid waste (removed concrete, wood, trees and plants, packaging materials, empty containers, oils, lubricants, and other similar items). Prohibit disposal of any material or wastes (including human 	condition in waste management plan	Contractor	PIU and DSC	<ul style="list-style-type: none"> - daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC 	Contractor

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	waste) into drainage, <i>nallah</i> , or watercourse.					
Impacts on occupational health and safety	<ul style="list-style-type: none"> • Comply with IFC EHS Guidelines on Occupational Health and Safety 	<ul style="list-style-type: none"> - Visual inspection - Records 	Contractor	PIU and DSC	<ul style="list-style-type: none"> - daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC 	Contractor
	<ul style="list-style-type: none"> • Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively. 	<ul style="list-style-type: none"> - Visual inspection - Work schedule - Noise level monitoring in work area 				
	<ul style="list-style-type: none"> • Provide H&S orientation training to all new workers to ensure that they are apprised of the rules of work at the site, personal protective protection, and preventing injury to fellow workers. 	<ul style="list-style-type: none"> - Records - Condition in H&S plan 				
	<ul style="list-style-type: none"> • Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site as well as at construction camps. 	<ul style="list-style-type: none"> - Visible first aid equipment and medical supplies - Condition in H&S plan 				
	<ul style="list-style-type: none"> • Provide medical insurance coverage for workers. 	Records				
	<ul style="list-style-type: none"> • Secure construction zone from unauthorized intrusion and accident risks. 	<ul style="list-style-type: none"> - Area secured - Trenches barricaded 				
	<ul style="list-style-type: none"> • Provide supplies of potable drinking water. 	<ul style="list-style-type: none"> - Supply of water 				
	<ul style="list-style-type: none"> • Provide clean eating areas 	<ul style="list-style-type: none"> - Workers area 				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	where workers are not exposed to hazardous or noxious substances.					
	<ul style="list-style-type: none"> Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted. 	Records - Condition in H&S plan				
	<ul style="list-style-type: none"> Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas. 	<ul style="list-style-type: none"> - Visual inspection - Condition in H&S plan 				
	<ul style="list-style-type: none"> Ensure moving equipment is outfitted with audible back-up alarms. 	<ul style="list-style-type: none"> - Construction vehicles - Condition in H&S plan 				
	<ul style="list-style-type: none"> Mark and provide sign boards in the construction zone, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate. 	<ul style="list-style-type: none"> - Visible and understandable sign boards in construction zone - H&S plan includes appropriate signs for each hazard present 				
Impacts on socio-economic activities	<ul style="list-style-type: none"> Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints. 	Visible and understandable sign boards in construction zone	Contractor	PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist	Contractor

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	<ul style="list-style-type: none"> Employ at least 50% of the labor force, or to the maximum extent, local persons within the 2-km immediate area if manpower is available. 	Employment records			<ul style="list-style-type: none"> weekly visual inspection by DSC (more frequent if corrective action is required) random inspection by PMU, PIU, PMC and/or DSC 	

Table 7: EMP Table During Post-Construction Phase

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
Solid waste (debris, excavated soils, etc.)	<ul style="list-style-type: none"> Backfill any excavation and trenches, preferably with excess excavation material generated during the construction phase. 	Pre-existing condition Construction zone has been restored	Contractor within defect liability period	PIU and DSC PIU to submit EMP monitoring report to PMU	<ul style="list-style-type: none"> visual inspection by contractor supervisor and/or environment specialist 	Contractor
	<ul style="list-style-type: none"> Use removed topsoil to reclaim disturbed areas. 	-DO-	-DO-	-DO-	-DO-	-DO-
	<ul style="list-style-type: none"> Re-establish the original grade and drainage pattern to the extent practicable. 	-DO-	-DO-	-DO-	-DO-	-DO-
	<ul style="list-style-type: none"> Stabilize all areas of disturbed vegetation using weed-free native shrubs, grasses, and trees. 	-DO-	-DO-	-DO-	-DO-	-DO-
	<ul style="list-style-type: none"> Restore access roads, staging areas, and temporary work areas. 	-DO-	-DO-	-DO-	-DO-	-DO-
	<ul style="list-style-type: none"> Restore roadside vegetation, if 	-DO-	PIU/PMU*	-DO-	-DO-	PMU

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds
	removed					
	<ul style="list-style-type: none"> Remove all tools, equipment, barricades, signs, surplus materials, debris, and rubbish. Demolish buildings/structures not required for O&M. Dispose in designated disposal sites. 	-DO-	Contractor within defect liability period	-DO-	-DO-	Contactor
	<ul style="list-style-type: none"> Monitor success of re-vegetation and tree re-planting. Replace all plants determined to be in an unhealthy condition. 	Construction zone has been enhanced	PIU/PMU*	-DO-	-DO-	PMU
	<ul style="list-style-type: none"> Request in writing from PIU/DSC that construction zones have been restored. 	Certificate	PMU	PMC/PMU	-DO-	PMU
Environmental conditions	<ul style="list-style-type: none"> Ambient air quality- During construction ambient air quality testing will be done at one site (quarterly except monsoon period for 18 months at one site) 	PM10, PM2.5, SO ₂ , NO ₂ ,	PMU	PMU/PMC	Data will be generated after the work is completed	PMU
	<ul style="list-style-type: none"> Noise testing- During construction noise quality testing will be done at one sites (quarterly except monsoon period for 18 months at one site) 		PMU	PMU/PMC	Data will be generated after the work is completed	PMU

* The site will be handed over to the asset owner (Temple Samiti) after the restoration of the site and consent form asset owner will be taken to maintain the area with provisions of required solid waste management and aesthetic value

C. Summary of Site and Activity-Specific Plans as per EMP

104. Table 8 summarizes site and activity-specific plans to be prepared as per EMP tables.

Table 8: Site- and Activity-Specific Plans/Programs as per EMP

To be Prepared During	Specific Plan/Program	Purpose	Responsible for Preparation	Responsible for Implementation
Detailed Design Phase	Environmental monitoring program as per detailed design	Indicate sampling locations, methodology and parameters	PMC/DSC	Contractor
Detailed Design Phase	Erosion control and re-vegetation plan	Mitigate impacts due to erosion	PMC/DSC	Contractor
Detailed Design Phase	List and maps showing utilities to be shifted	Utilities shifting	DSC during preliminary stage Contractor as per detailed design	Contractor
Detailed Design Phase	Contingency plan	Mitigate impacts due to interruption of services during utilities shifting	Contractor	Contractor
Detailed Design Phase	Chance find protocol	Address archaeological or historical finds	PMC/DSC	Contractor
Detailed Design Phase	List of pre-approved sites	Location/s for work camps, areas for stockpile, storage and disposal	PIU and DSC	Contractor
Detailed Design Phase	Waste management plan	Mitigate impacts due to waste generation	Contractor	Contractor
Detailed Design Phase	Traffic management plan	Mitigate impacts due to transport of materials and pipe laying works	Contractor	Contractor
Detailed Design Phase	H&S plan	Occupational health and safety	Contractor	Contractor
Detailed Design Phase	Spill prevention and containment plan	Mitigate impacts of accidental spills of oil, lubricants, fuels, concrete, and other hazardous materials	Contractor	Contractor

D. Environmental Monitoring Program

105. Through integration of mitigation measures in project design, impacts are mostly insignificant, temporary in nature and can be properly avoided or mitigated by following proposed mitigation measures given in the EMP of this IEE report.

106. Table 9 provides the indicative environmental monitoring program which includes relevant environmental parameters, with a description of the sampling stations, frequency of monitoring, applicable standards, and responsibility. This will be updated during detailed design to ensure EMP and monitoring program is commensurate to the impacts of the subproject.

Table 9: Indicative Environmental Monitoring Program

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
1. Detailed Design Phase							
Consents, permits, clearances, no objection certificate (NOC), etc.	<ul style="list-style-type: none"> - Consents, permits, clearance, NOCs, etc. - Records and communications - Detailed design documents and drawings 	n/a	Visual inspection	<p>check CFEs, permits, clearance,</p> <p>Acknowledge upon receipt</p> <p>Send report as specified in CFE, permits, etc.</p>	<p>Obtained prior to start of civil works</p> <p>Conditions of consents, permits, clearance, NOCs, etc incorporated in detailed design</p>	already covered under PMU and PIU	PMU
Establishment of baseline environmental conditions prior to start of civil works and monitoring during-construction time	Ambient air quality – PM10, PM2.5, SO ₂ , NO ₂ ,	One location proposed as under: 1. At Markandeya Temple	Collection of air samples (continuously 24 hours)	<p>1. Prior to start of civil works (once at one site except monsoon period)</p> <p>2. During construction (quarterly except monsoon period for 18 months at one site)</p> <p>-First quarter during January to March)</p> <p>-Second quarter during April to June)</p> <p>-Third quarter during October to December)</p> <p>3. During post construction (once at site sites except monsoon period)</p>	<p>1. Baseline data will be generated prior to start of civil work.</p> <p>2. Data will be generated during the construction phase.</p> <p>3. Data will be generated after the work is completed</p>	<p>7,800 per sample (total 7 samples)</p> <p>Transportation charges extra (1,000/- per sample)</p>	PMU

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
	Noise levels – day time	One location proposed as under: 1. At Markandeya Temple	Use of noise meters (once hourly) 8	1. Prior to start of civil works (once at one site except monsoon period) 2. During construction (quarterly except monsoon period for 18 month at one site) -First quarter during January to March) -Second quarter during April to June) -Third quarter during October to December) 3. During post construction (once at one site except monsoon period)	1. Baseline data will be generated prior to start of civil work. 2. Data will be generated during the construction phase. 3. Data will be generated after the work is completed	4,000 per sample (total 7 samples) Transportation charges extra (1,000/- per sample)	PMU
	Water Testing- pH, TDS, DO, BOD, Total coliform and Oil & Grease	Two locations proposed as under: 1. Bathing water source at Temple 2. Bathing water source (for skin	As per IS code	1. Prior to start of civil works (once at two sites except monsoon period) 2. During construction (quarterly except monsoon period for 18 months at two sites) -First quarter during	1. Baseline data will be generated prior to start of civil work. 2. Data will be generated during the construction phase.	6,000 per sample (total 14 samples) Transportation charges extra (1,000/- per sample)	PMU

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
		diseases) at Temple		January to March) -Second quarter during April to June) -Third quarter during October to December) 3. During post construction (once at two sites except monsoon period)	3. Data will be generated after the work is completed		
Erosion control	Erosion control and re-vegetation plan covering construction phase	n/a	Checking of erosion control and re-vegetation plan	Upon finalization of detailed design	Included in updated IEE report The contractor will submit a plan before any excavation work will take place during construction phase.	already covered under PMU /PIU and Contractor	Contract or
Utilities	List and maps showing utilities to be shifted Contingency plan for services disruption	n/a	Checking of list and maps showing utilities to be shifted Checking of contingency plan for services disruption	Upon finalization of detailed design	included in updated IEE report Will be provided to contractor before start of civil work.	already covered under PMU/PIU /PMC/DSC and Contractor	PMU
Social and Cultural Resources	Chance find protocol	n/a	Checking of chance find protocol	Upon finalization of detailed design and during construction	included in updated IEE report Copy of the list will be provided to contractor, if any.	already covered under PMU/PIU and PMC/DSC	NA
Sites for construction work	List of pre-approved sites for construction	sites for construction	Visual inspection	Upon approval of site/s	included in updated IEE report		NA

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
camps, areas for stockpile, storage and disposal	work camps, areas for stockpile, storage and disposal	work camps, areas for stockpile, storage and disposal			The contractor will submit a plan before the civil work starts.		
	Waste management plan	n/a	Checking of waste management plan	Upon finalization of detailed design	included in updated IEE report The contractor will submit a plan before the civil work starts.	already covered under PMU/PIU and PMC/DSC	NA
Sources of construction materials	Permits issued to quarries/sources of materials	n/a	Checking of permits	Upon submission by contractor	contractor's submission	already covered under PMU/PIU and PMC/DSC	NA
Access	Traffic management plan	n/a	Checking of traffic management plan as per detailed design (alignment, routes, etc)	Prior to start of civil works	contractor's submission	contractor's cost	Contract or
Occupational health and safety	Health and safety (H&S) plan	n/a	Checking of H&S plan	Prior to start of civil works	contractor's submission	contractor's cost	Contract or
Public consultations	- Disclosure records - Consultations	- locations of affected persons - locations of stakeholders	Documentation of (minutes of consultations, date/s, location/s, issue/s raised, photographs, etc.)	- During updating of IEE Report - During preparation of site- and activity-specific plans as per EMP - Prior to start of construction - During construction	included in updated IEE	already covered under PMU/PIU and PMC/DSC	NA

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
Identification of Muck disposal site	<ul style="list-style-type: none"> Identify muck disposal areas in consultation with MC, Shimla to dispose off dismantle wastes of the building Utilize the dismantle material as much as possible. 	To be identified with Temple Trust	PIU and DSC	PMU and PMC	<ul style="list-style-type: none"> - Disclosure records - Consultations 	PMU/PIU/Contractor	
2. Construction Phase							
Erosion hazards	Erosion control and re-vegetation plan	<ul style="list-style-type: none"> - Construction zone - storage areas 	Visual inspection	<ul style="list-style-type: none"> - daily visual inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC 	<ul style="list-style-type: none"> - no erosion - erosion control in place - measures in erosion control and re-vegetation plan implemented 	Contractor's cost	Contract or
Impacts on water	- Any construction	Adjacent	Visual	- daily visual	- no visible change in pre-	Contractor's	Contract

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
quality	related materials - visible seepage of paints, oils, silts, etc. from storage areas - complaints related to water quality	bodies of water including drainages, canals/nallahs, etc.	inspection	inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	construction quality of adjacent bodies of water including drainages, canals/nallahs, etc. - no disposal and/or seepage to adjacent bodies of water including drainages, canals/nallahs, etc.	cost	or
Impacts on air quality	- water spraying on stockpiles - excessive dust emissions - vehicles "pollution under control" certificate from Himachal Pradesh SPCB - CFE and CFO for hot mix plants, crushers, diesel generators, etc., if to be used in the project - complaints related to air quality	- Construction zone - Sensitive receptors site/s	Visual inspection	- daily visual inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during summer season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	- no excessive dust emissions - no complaints from sensitive receptors - Valid pollution under control certificate/s. CFE, and/or CFO	Contractor's cost	Contract or
Noise and vibrations impacts	- work schedule (limit to day time only in temple complexes and other important	- Construction zone - Sensitive	Visual inspection	- daily visual inspection by contractor supervisor and/or	- no complaints from sensitive receptors	Contractor's cost	Contract or

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
	areas) - activities with the greatest potential to generate noise (conducted during periods of the day which will result in least disturbance) - vehicle silencers and noise-reducing mufflers - complaints related to noise and vibrations	receptors site/s - silence zone/s		environment specialist - weekly visual inspection by DSC (more frequent during machine operation and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC			
Impacts on flora and fauna	- site induction and environmental awareness - number of trees cut - number of trees replanted - survival rate of trees planted	- construction zone - sites approved by Forest Department for replanting, if any	Visual inspection	- daily visual inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	- all contractor's employees have undertaken site induction and environmental awareness prior to mobilization - approved trees to be cut - approved tree species for replantation	Contractor's cost	Contract or
Impacts on physical and cultural resources	- damage to structures/properties adjacent to construction zone - sign boards to inform nature and	- construction zone	Visual monitoring	- daily visual inspection by contractor supervisor and/or environment specialist	- no damage to structures/properties adjacent to construction zone - sign boards understandable by local people - sufficient number of workforce	Contractor's cost	Contract or

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
	duration of construction works and contact numbers for concerns/complaints - number of workforce near the school/s and other sensitive receptor/s - housekeeping practices, wastes around construction zones - toilet facilities for workers - transportation routes and schedule - chance find procedure			- weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	near the school/s and other sensitive receptor/s - wastes managed according to waste management plan - clean and usable toilet facilities for workers - transportation routes and schedule followed - no complaints from sensitive receptors - chance find procedures followed, as necessary		
Impact due to waste generation	- provisions of the waste management plan - quantity of excavated soils - quantity of used oil and lubricants - excess construction materials, and solid waste (removed concrete, wood, trees and plants, packaging materials, empty containers, oils, lubricants, and other similar items)	- construction zone	Visual monitoring	- daily visual inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	- wastes managed according to waste management plan - no complaints from sensitive receptors	Contractor's cost	Contract or
Impacts on	- IFC EHS	-	- visual	- daily visual	- conditions in H&S plan	Contractor's	Contract

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
occupational health and safety	Guidelines on Occupational Health and Safety - noise level and duration of exposure - PPEs, high visibility vests, hearing protection, etc. - conduct of H&S orientation training - qualified first aider and equipped first aid stations - medical insurance coverage for workers - security in construction zone - potable drinking water supply - clean eating areas - conduct of visitor orientation - audible back-up alarms for vehicles - sign boards in the construction zone - site accident records	construction zone	monitoring - checking of records	inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent during monsoon season and if corrective action is required) - random inspection by PMU, PIU, PMC and/or DSC	- all workers oriented on H&S plan - use of PPEs, etc at all times - max of 80 dBA and 8 hours exposure - visible first aid equipment and medical supplies - areas secured - trenches barricaded - adequate potable drinking water - clean eating areas away from hazardous or noxious substances - visible and understandable sign boards in construction zone	cost	or
Impacts on socio-economic activities	- % of locals in labor force - complaints/grievances	- construction zone	checking of records	- random inspection by PMU, PIU, PMC and/or DSC - during complaints/grievance redressal	- least 50% of the labor force, or to the maximum extent, local persons within the 2-km immediate area if manpower is available - complaints/grievance addressed as per GRM	Contractor's cost	Contract or
3. Post-construction Phase							

Potential Impact	Parameter to be monitored	Proposed Locations	Method of Monitoring	Frequency of monitoring	Indicator of Compliance	Cost	Source of Funds
Solid waste (debris, excavated soils, etc.)	- disturbed areas	- construction zone	visual inspection	upon completion of civil works prior to turn over to asset owner	<ul style="list-style-type: none"> - backfilled any excavation and trenches - reclaimed disturbed areas. - Re-established original grade and drainage pattern to the extent practicable. - stabilized all areas of disturbed vegetation using weed-free native shrubs, grasses, and trees - restored access roads, staging areas, and temporary work areas. - restored roadside vegetation, if removed - removed all tools, equipment, barricades, signs, surplus materials, debris, and rubbish. - demolished buildings/structures not required for O&M. - disposed in designated disposal sites. 	Contractor's cost	Contract or
					<ul style="list-style-type: none"> - success of re-vegetation and tree re-planting. Replaced all plants determined to be in an unhealthy condition. - documentation from PIU/DSC that construction zones have been restored. 	PMU cost	PMU

E. Capacity Building

107. The Environmental Specialist of the DSC will provide the basic training required for environmental awareness followed by specific aspects of infrastructure improvement Projects along with Environmental implications for projects. Specific modules customized for the available skill set will be devised after assessing the capabilities of the members of the Training Programme and the requirements of the project. The entire training will cover basic principles of environmental assessment and management; mitigation plans and programmes, implementation techniques, monitoring methods and tools. The proposed training program along with the frequency of sessions is presented in Table 10 below. This training program is intended for the entire destination and is not just specific to this package.

Table 10: Training Modules for Environmental Management (Common for Entire Project)

Program	Description	Participants	Form of Training	Duration/ Location	Training Conducting Agency
A. Pre-Construction Stage					
Sensitization Workshop	Introduction to Environment: Basic Concept of environment Environmental Regulations and Statutory requirements as per Govt. of India and ADB	Tourism / Forest / Roads / Culture Department Officials, Project Director (PD) and Environmental Specialist (ES) of the PMU/PIU	Workshop	½ Working Day	Environmental Specialist of the PMC and DSC
B. Construction Stage					
Module 1	Roles and Responsibilities of officials / contractors / consultants towards protection of environment Implementation Arrangements	Engineers and staff of line depts. of GoHP, and PMU/PIU (including the ES)	Lecture / Interactive Sessions	½ Working Day	Safeguards Specialist of the PMC and DSC
Module 2	Monitoring and Reporting System	Engineers and staff of implementing agencies and PMU/ PIU (including ES)	Lecture / Interactive Sessions	½ Working Day	Safeguards Specialist of the PMC and DSC

F. EMP Implementation Cost

108. As part of good engineering practices in the project, there have been several measures as safety, signage, dust suppression, procurement of personal protective equipment, provision of drains, etc. and the costs for which will be included in the

design costs of specific subprojects. Therefore, these items of costs have not been included in the IEE budget. Only those items not covered under budgets for construction are considered in the IEE budget.

109. This is a small construction project and it is not expected to cause much significant air, water and noise pollution. The main EMP cost will arise from monitoring of environmental parameters (air, water and noise) and training.

110. The costs of water sprinkling for dust suppression and providing personal protective equipment's to construction workers shall borne by contractor as part of conditions of contract. In addition the sources of funds for Mitigation measures during construction stage including monitoring during construction stage are also to be borne by the contractor. These are deemed to be included as part of the contract price amount quoted by the contractor for the works. The costs of components for monitoring in operation stage and the capacity building costs are to be funded by the PMU. The EMP cost is given in the **Table 11** below.

Table 11: Indicative EMP Budget

S.N.	Particulars	Stages	Unit	Total number	Rate (INR)	Cost (INR)	Source of fund
A. Monitoring Measures							
1.	Air quality monitoring- 24 hourly (PM10, PM2.5, SO2, NO2) (One Location)	1. Prior to start of civil works (once at one site except monsoon period)	Per sample	7	7,800	54,600	PMU
	Transportation & sampling cost	2. During construction (quarterly except monsoon period for 18 month at one site)		7	1,000	7,000	
2.	Noise Levels -Day time by noise meter (One Location)	-First quarter during January to March)	Per sample	7	4,000	28,000	
	Transportation & sampling cost	-Second quarter during April to June)		7	1,000	7,000	
3.	Water Tests- pH, TDS, DO, BOD, Total coliform and Oil & Grease-IS code (Two Locations)	-Third quarter during October to December)	Per sample	14	6000	84,000	
	Transportation & sampling cost	3. During post construction (once at one site except monsoon period)		14	1000	14,000	
Sub- Total (A)						1,94,600	
B. Capacity Building – Training cost							
1	Sensitization Workshop	Pre-Construction	L.S			1,50,000	PMU
2	Training Session I	Construction	L.S			1,50,000	
3	Training Session II	Construction	L.S			1,50,000	
Sub -Total (B)						4,50,000	
Total (A+B) INR						6,44,600	

IX. FINDINGS AND RECOMMENDATIONS

- 111.** The proposed components as part of the package are in line with the sub-project selection criteria for the program. The subproject conforms to all GoI and ADB regulations, policies, and standards including all necessary government permits and clearances
- 112.** The specific management measures laid down in the IEE will effectively address any adverse environmental impacts due to the sub-project. The effective implementation of the measures proposed will be ensured through the building up of capacity towards environmental management within the PMU supplemented with the technical expertise of a Safeguards Specialist as part of the DSC Consultants. Further, the environmental monitoring plans provide adequate opportunity towards course correction to address any residual impacts during construction or operation stages.

X. CONCLUSIONS

- 113.** The IEE carried out for the sub-project show that the proposed sub-components will result in net environmental benefits, and that any adverse environmental impact can be addressed through proper location, planning and design of the proposed sub-project; control of construction activity and mitigation measures. The EMP provides for mitigation of all identified impacts and the Contract clauses for the environmental provisions will be part of the civil works contracts. Further, the proposed designs have been consulted with the stakeholders and no significant issues requiring redress in terms of environmental safeguards are known to exist at present.
- 114.** Based on the findings of the IEE, there are no significant impacts and the classification of the subproject as Category “B” is confirmed. No further special study or detailed environmental impact assessment (EIA) needs to be undertaken to comply with ADB SPS (2009).

Annexure-1

RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST

Subproject: Rejuvenation of the Markandeya Temple Precinct and Provision of visitor facilities Markandeya, Bilaspur.

Country/Project Title: India/Infrastructure development Investment program (IDIPT-HP)

Sector Division: Urban Development.

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area...			
Densely populated?	✓		The project locations comprise the town centre and its vicinity which is the hub of business, education, entertainment and tourist activity.
Heavy with development activities?		✓	No, moderate developments.
Adjacent to or within any environmentally sensitive areas?			
Cultural heritage site		✓	
Protected Area		✓	No protected area nearby
Wetland		✓	No wet land near to subproject locations.
Mangrove		✓	The areas are well developed with building structures and no mangrove near to the site.
Estuarine		✓	No estuarine nearby.
Buffer zone of protected area		✓	None. The project sites do not fall under any buffer zone.
Special area for protecting biodiversity		✓	None. The project sites do not fall under any special area for protection biodiversity.
Bay		✓	No bay near the site
B. POTENTIAL ENVIRONMENTAL IMPACTS Will the Project cause...			
▪ Impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services.		✓	Temporary. Minor impact is anticipated during construction for which adequate measures will be taken and other urban services are found adequate.

Screening Questions	Yes	No	Remarks
▪ Deterioration of surrounding environmental conditions due to rapid urban population growth, commercial and industrial activity, and increased waste generation to the point that both manmade and natural systems are overloaded and the capacities to manage these systems are overwhelmed?		✓	However, during construction activities some waste may generate for which adequate measures will be included in the EMP and cost of monitoring will be envisaged in the DPR to accommodate for the additional capacities required in handling the waste generation.
▪ Degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watersheds and forests)?		✓	The subproject aims to restore the cultural and heritage value by proposed improvements and facilitate. No such impact (land/eco degradation) envisaged. Not a coastal zone or a forest area.
▪ Dislocation or involuntary resettlement of people?		✓	Not required as no land acquisition involved and all the project activities are restricted within the existing lands and right of way.
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable group?		✓	No such impacts are anticipated. The sub project will generate the employment opportunity to such groups.
▪ Degradation of cultural property, and loss of cultural heritage and tourism revenues?		✓	On completion of the subproject the cultural heritage value will enhance and thereby influx of tourists will increase and revenue increase.
▪ Occupation of low-lying lands, floodplains and steep hillsides by squatters and low-income groups, and their exposure to increased health hazards and risks due to pollutive industries?		✓	Dose not arise as there is no such groups seen at in the project sites and more over the project has no pollutive industrial activities.
▪ Water resource problems (e.g. depletion/degradation of available water supply, deterioration for surface and ground water quality, and pollution of receiving waters?	✓		The project site is located in the core area of the town. May experience water shortage especially during summer months. Some water resource problem may emerge due to construction activity and its duration. Adequate alternative provisions to meet the increased water demand for construction may be made through rain water collection and waste water recycling through proper documentation at the bidding stage. Measures will be included on deterioration and pollution issues in EMP.
▪ Air pollution due to urban emissions?		✓	Though not directly, but during the construction phase anticipated if any, this will be addressed properly in the EMP

Screening Questions	Yes	No	Remarks
▪ Risks and vulnerabilities related to occupational health and safety due to physical, chemical and biological hazards during project construction and operation?	✓		During execution stage, workers may face occupational health and safety related issues if personal protection measures are not used properly. No such impacts are anticipated during the operation stage. Contractor will be required to adopt safety measures such as use of personal protective wear, cautionary signage and proper material storage.
▪ Road blocking and temporary flooding due to land excavation during rainy season?	✓		Temporary road blockage for construction work is envisaged, however not due to land excavation but due to carriage of materials. The same can be remedied by implementing works in a phased manner opening alternative routes if permitted or bifurcating existing roads. Due care shall be taken to carry out the works during rainy seasons to avoid incidence of temporary flooding in the sub project area for taking up construction activity during extreme weather conditions (like rain or snow) to avoid accidents and injury either to the general public or workers on site.
▪ Noise and dust from construction activities?	✓		Minor increase in noise levels and dust generation from construction activities is anticipated but shall be temporary in nature coinciding only with the duration of construction activities and will be of site specific. This shall be minimized by adopting suitable mitigation measures during implementation.
▪ Traffic disturbances due to construction material transport and wastes?		✓	However, traffic diversion plan, if required, will be prepared by contractor in consultation with Engineer to avoid traffic disturbances.
▪ Temporary silt runoff due to construction?	✓		Temporary silt run off possible, coinciding with rainy season. Majority works shall be carried out during dry periods to avoid such impacts. To avoid silt flow in drain during rainy seasons, silt barrier will be provided at the sides of the drains. Appropriate material storage will help mitigate temporary silt run-off. Other project components such as landscaping shall also help minimize silt run-off in the long term.
▪ hazards to public health due to ambient, household and occupational pollution, thermal inversion, and smog formation?		✓	Not foreseen due to the nature of works involved.
▪ Water depletion and/or degradation?		✓	Degradation may be expected while working at temple ponds site but measures will be taken and incorporated in the EMP for implementation during execution and the cost in DPR. The bid document will be prepared accordingly.

Screening Questions	Yes	No	Remarks
▪ Overpaying of ground water, leading to land subsidence, lowered ground water table, and salinization?		✓	Water for construction will be made through transportation from external sources wherever required.
▪ Contamination of surface and ground waters due to improper waste disposal?	✓		Contamination of surface and ground water is possible from improper material handling and storage such as paints and fuels. Appropriate material storage and handling practice can help mitigate this risk for which instructions shall be caused to the Contractor.
▪ Pollution of receiving waters resulting in amenity losses, fisheries and marine resource depletion, and health problems?		✓	Disposal to receiving water bodies are not envisaged.
▪ Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		✓	Negligible quantum only which can be addressed in the EMP
▪ Social conflicts if workers from other regions or countries are hired?		✓	Not applicable as the demand for labour category is much high.
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during operation and construction?		✓	The construction activity needs to be well planned & executed in a phased manner so as to minimize community health and safety risks especially with respect to seasonal challenges, mobility issues and impact on local businesses.
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	✓		The subproject is located in seismic zone V. Due to the natural topography of hilly terrain landslides are a common phenomenon. In addition, the project site is located in the core area of the town that is heavily congested and a major public access in the town connecting almost all commercial, residential and office areas. Safety risks due to accidents and natural causes cannot be ruled out and can become a major hazard if the project execution is not carried out in a well-planned and phased manner. The most vulnerable among the proposed activities is the area of the Ridge and those that are located north of it.

PRELIMINARY CLIMATE RISK SCREENING CHECKLIST FOR SAMPLE SUBPROJECT TOWNS

Screening Questions		Score	Remarks ⁴
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related	1	The proposed sites are not anticipated to be

⁴ If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

Screening Questions		Score	Remarks ⁴
	events such as floods, droughts, storms, landslides?		affected from extreme weather events. However, landslide protection measures near hills may be considered.
	Will the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc)?	0	Works proposed does not need to address these parameters
Materials and Maintenance	Will weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity, and hydro-meteorological parameters) affect the selection of project inputs over the life of project outputs (e.g. construction material)?	0	Works proposed may not be affected however, appropriate materials and methodology should be adopted in planning phase
	Will weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)?	1	Normal weathering conditions of Himachal shall be considered.
Performance of project outputs	Will weather/climate conditions and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?	0	No issues pertaining to project output is envisaged.

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

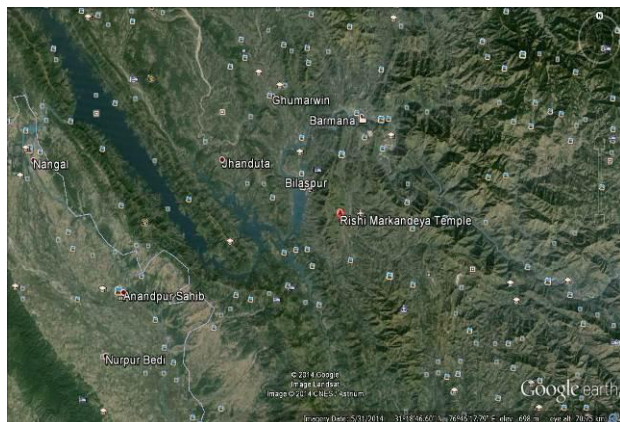
Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response will be categorized as high risk project.

Result of Initial Screening (Low, Medium, High): Medium

Other Comments: None

Annexure-2

Photo Illustration



Google image



Markandeya Temple Premises



Markandeya Temple premises



Existing Building



Existing shops



Existing shops

Annexure-3**Sample Outline of Spoil Management Plan (SMP)****1.0 Purpose and application:**

SMP is to describe how the project will manage the spoil generated and reuse related to design and construction works. This is an integral part of EMP. The objective of SMP is to reuse of spoil from works in accordance with the spoil management hierarchy outlined in this document.

2.0 Objectives of SMP:

The objectives of SMP are:

- To minimize spoil generation where possible
- Maximize beneficial reuse of spoil from construction works in accordance with spoil management hierarchy
- Manage onsite spoil handling to minimize environmental impacts on resident and other receivers
- Minimize any further site contamination of land, water, soil
- Manage the transportation of spoil with consideration of traffic impacts and transport related emissions

3.0 Structure of SMP:

Section 1: Introduction of SMP

Section 2: Legal and other requirements

Section 3: Roles and responsibilities

Section 4: Identification and assessment of spoil aspects and impacts

Section 5: Spoil volumes, characteristics and minimization

Section 6: Spoil reuses opportunities, identification and assessment

Section 7: On site spoil management approach

Section 8: Spoil transportation methodology

Section 9: Monitoring, Reporting, Review, and Improvements

4.0 Aspects and Potential Impacts

The key aspects of potential impacts in relation to SMP are listed in table below

Aspects	Potential Impacts
Air Quality	Potential for high winds generating airborne dust from the stock piles
Sedimentation	Potential for sediment laden site runoff from spoil stockpiles and potential for spillage of spoil from truck on roads
Surface and Groundwater	Contamination of water (surface and ground water)
Noise	Associated with spoil handling and haulage and storage
Traffic	Impacts associated with spoil haulage
Land Use	Potential for spoil to be transported to a receivable site that doesn't have permission for storage/disposal
Design specifications	Limitations on opportunities to minimize spoil generation

Sustainability	Limited sites for storage, reuse opportunities
----------------	--

5.0 Spoil volumes, characteristics and minimization

5.1 Spoil volume calculations: Estimate the volumes of spoils produced from each of the construction sites.

5.2 Characterization of spoil: Based on the type of spoil; characterization is done (sand stone, mud mix materials, reusable materials)

5.3 Adopt Spoil Reduce, Reuse Opportunities

An overview of the assessment methodology to be used is mentioned below.

Consideration of likely spoil characteristics

Identification of possible reuse sites

Screening of possible reuse opportunities

5.4 Identification of possible safe disposal sites for spoil: Those spoils which can't be reuse shall be properly disposed in designated areas, such disposal areas should be identified in project locations. Such disposal areas should be safe from environmental aspects and there should be any legal and resettlement related issues. Such areas need to be identified and prior cliental approval should be obtained to use it as spoil disposal area. The local administration must be consulted and if required permission should be obtained from them.

5.5 Storage and stock piling

5.6 Transportation and haulage route

6.0 Based on the above, the contractor will prepare a SMP as an integral part of EMP and submit it to the PIU/DSC for their review and approval.

Annexure-4

Sample Traffic Management Plan (TMP)

A. Principles

1. One of the prime objectives of this TMP is to ensure the safety of all the road users along the work zone, and to address the following issues:

- the safety of pedestrians, bicyclists, and motorists travelling through the construction zone;
- protection of work crews from hazards associated with moving traffic;
- mitigation of the adverse impact on road capacity and delays to the road users;
- maintenance of access to adjoining properties
- Avoid hazards in addressing issues that may delay the project.

B. Operating Policies for TMP

2. The following principles will help promote safe and efficient movement for all road users (motorists, bicyclists, and pedestrians, including persons with disabilities) through and around work zones while reasonably protecting workers and equipment.

- Make traffic safety and temporary traffic control an integral and high-priority element of every project from planning through design, construction, and maintenance.
- Inhibit traffic movement as little as possible.
- Provide clear and positive guidance to drivers, bicyclists, and pedestrians as they approach and travel through the temporary traffic control zone.
- Inspect traffic control elements routinely, both day and night, and make modifications when necessary.
- Pay increased attention to roadside safety in the vicinity of temporary traffic control zones.
- Train all persons that select, place, and maintain temporary traffic control devices.
- Keep the public well informed.
- Make appropriate accommodation for abutting property owners, residents, businesses, emergency services, railroads, commercial vehicles, and transit operations.

C. Analyze the impact due to street closure, if required

3. Apart from the capacity analysis, a final decision to close a particular street and divert the traffic should involve the following steps:

- approval from the PIU, local administration to use the local streets as detours;
- consultation with businesses, community members, traffic police, PWD, etc, regarding the mitigation measures necessary at the detours where the road is diverted during the construction;
- determining of the maximum number of days allowed for road closure, and incorporation of such provisions into the contract documents;
- determining if additional traffic control or temporary improvements are needed along the detour route;
- considering how access will be provided to the worksite;
- contacting emergency service, school officials, and transit authorities to determine if there are impacts to their operations; and
- developing a notification program to the public so that the closure is not a surprise. As part of this program, the public should be advised of alternate routes that commuters can take or will have to take as result of the traffic diversion.

D. Public awareness and notifications

5. As per discussions in the previous sections, there will be travel delays during the constructions, as is the case with most construction projects, albeit on a reduced scale if utilities and traffic management are properly coordinated. There are additional grounds for travel delays in the area, as most of the streets lack sufficient capacity to accommodate additional traffic from diverted traffic as a result of street closures to accommodate the works.

6. The awareness campaign and the prior notification for the public will be a continuous activity which the project will carry out to compensate for the above delays and minimize public claims as result of these problems. These activities will take place sufficiently in advance of the time when the roadblocks or traffic diversions take place at the particular streets. The reason for this is to allow sufficient time for the public and residents to understand the changes to their travel plans. The project will notify the public about the roadblocks and traffic diversion through public notices, ward level meetings and city level meeting with the elected representatives.

7. The PIU will also conduct an awareness campaign to educate the public about the following issues:

- (i) traffic control devices in place at the work zones (signs, traffic cones, barriers, etc.);
- (ii) defensive driving behaviour along the work zones; and
- (iii) reduced speeds enforced at the work zones and traffic diversions.

8. It may be necessary to conduct the awareness programs/campaigns on road safety during construction.

9. The campaign will cater to all types of target groups i.e. children, adults, and drivers. Therefore, these campaigns will be conducted in schools and community centers. In

addition, the project will publish a brochure for public information. These brochures will be widely circulated around the area and will also be available at the PIU, and the contractor's site office. The text of the brochure should be concise to be effective, with a lot of graphics. It will serve the following purpose:

- (i) explain why the brochure was prepared, along with a brief description of the project;
- (ii) advise the public to expect the unexpected;
- (iii) educate the public about the various traffic control devices and safety measures adopted at the work zones;
- (iv) educate the public about the safe road user behaviour to emulate at the work zones;
- (v) tell the public how to stay informed or where to inquire about road safety issues at the work zones (name, telephone, mobile number of the contact person; and
- (vi) indicate the office hours of relevant offices.

E. Vehicle Maintenance and Safety

10. A vehicle maintenance and safety program shall be implemented by the construction contractor. The contractor should ensure that all the vehicles are in proper running condition and it comply with roadworthy and meet certification standards of GoI. All vehicles to be used at STWSSP shall be in perfect condition meeting pollution standards of GoI. The vehicle operator requires a pre state of shift checklist. Additional safety precautions will include the requirement for:

- Driver will follow the special code of conduct and road safety rules of Government of India.
- Drivers to ensure that all loads are covered and secured drivers to ensure operation equipment can't leak materials hauled
- Vehicles will be cleaned and maintained in designed places.

F. Install traffic control devices at the work zones and traffic diversion routes

10. The purpose of installing traffic control devices at the work zones is to delineate these areas to warn, inform, and direct the road users about a hazard ahead, and to protect them as well as the workers. As proper delineation is a key to achieve the above objective, it is important to install good traffic signs at the work zones. The following traffic control devices are used in work zones:

- Signs
- Pavement Markings
- Channelizing Devices
- Arrow Panels
- Warning Lights

11. Procedures for installing traffic control devices at any work zone vary, depending on road configuration, location of the work, construction activity, duration, traffic speed and volume, and pedestrian traffic. Work will take place along major roads, and the minor internal roads. As such, the traffic volume and road geometry vary. The main roads carry considerable traffic; internal roads in the new city areas are wide but in old city roads very narrow and carry considerable traffic. However, regardless of where the construction takes place, all the work zones should be cordoned off, and traffic shifted away at least with traffic cones, barricades, and temporary signs (temporary “STOP” and “GO”).

12. The work zone should take into consideration the space required for a buffer zone between the workers and the traffic (lateral and longitudinal) and the transition space required for delineation, as applicable. For the works, a 30 cm clearance between the traffic and the temporary STOP and GO signs should be provided. In addition, at least 60 cm is necessary to install the temporary traffic signs and cones.

13. Traffic police should regulate traffic away from the work zone and enforce the traffic diversion result from full street closure in certain areas during construction..

14 In addition to the delineation devices, all the construction workers should wear fluorescent safety vests and helmets in order to be visible to the motorists at all times.

15. The PIU and contractor will coordinate with the local administration and traffic police regarding the traffic signs, detour, and any other matters related to traffic. The contractor will prepare the traffic management plan in detail and submit it along with the EMP for the final approval.

Annexure-5

Public Consultations

During project preparation (June to August 2014), consultations have been held with the HP Department of Tourism, tourists of Bilaspur, Commissioner of temples, HP and State District administration, District Municipal Administration, local community representatives, various Self-Help-Groups/ Mahila Mandal etc., tourism officers, and tourist guides/photographers regarding issues pertaining to the selection of subprojects and identification of key issues including addressing the current gaps in provision of basic services and improvement of tourist infrastructure. The key issues are-

- ✓ With the growing tourist activities, the temple precincts are stressed due to the lack of proper facilities & delineation of appropriately defined areas for various religious activities and tourism. Hence an integrated approach to the development of tourists facilities, conservation & restoration of the place is urgently needed for the temple precincts.
- ✓ The significant growth of surrounding structures has created many harms which are evident while visiting the site.
- ✓ The original temple structure is deteriorating with time.
- ✓ The scared ponds don't have proper drainage system.
- ✓ The pilgrimage shrines are also not in good condition and needs renovation
- ✓ The path leading to the pond requires surface improvement, signage, railings and seating facilities.
- ✓ The main street leading up to the temple has shops on both sides. The road edges are not properly defined.

Date of Visit: 23rd August 2014.

Objectives: To develop a common consensus on the feasibility of the scope of work /status of land ownership etc.

Procedure: An informal FGD/Individual interviews were done with various stakeholders at that site.

The PMC/PMU/PIU team members described the proposed scope of work for the project. The Committee members elaborated there way of functioning /financial transactions. A joint visit was undertaken to develop a common consensus on the feasibility of the scope of work /status of land ownership etc.

Shopkeepers (Temporary kiosks): In depth interaction was done with the shopkeepers (temporary kiosks. They informed that there was a regular flow of visitors to the Temple but it increased considerably on weekends/religious festivals etc. The shopkeepers unanimously welcomed the proposal of being provided with a permanent Kiosk with better amenities on a rental basis.

Temple Committee members: The Temple Committee members have a long term vision for development which co ordinates with our scope of work. Their financial management system would also lend a hand in the sustainability of the project. The development of the site would act as a focal point for encouraging tourism to nearby sites as well – increased livelihood of local community.



Photos of Public Consultation

Date of Visit: 4th March, 2016

Objective of the Consultation:

To discuss the scope of work of the proposed Project.

To discuss with both the Samiti members and the shopkeepers the modalities involved in temporarily shifting the shopkeepers for a short period during construction work.

To review the tenancy papers of the shopkeepers.

To discuss the strategies to be adopted to ensure that the livelihoods of the shopkeepers are not adversely impacted during construction work.

To ascertain the fate of the shopkeepers at the end of the construction work.

To document all issues and concerns regarding the project implementation.

Consultation with the Samiti members and Shopkeepers dated 04.03.2016

CONSULTATION WITH SAMITI MEMBERS

The Samiti members were aware of the scope of work and the same was reiterated. They were in agreement with it and keeping the future development in mind has stalled their previously agreed construction work to avoid any duplication. This certainly is a very welcome and practical move.

They showed the 11 months Contract that they sign with the shopkeepers on renewable basis regularly. The MoU clearly states that for any developmental work the shop owner would temporarily shift the shop till the work is completed.

The present contract is ending in March'16. We would have to refer to the new contract in April'16.

They assured that they would shift the shopkeepers within the premises temporarily (without any financial implications) and once the work was over they would on preference provide permanent shops to the present (11) shop owners only.

It was proposed unanimously that proper written documentation for the same would be administered any time after 20/04/16 since till then it will be the peak season with increased visitation due to Ram Navmi etc. Thus organizing them for an hour or so to document all modalities would affect their livelihood. All the shopkeepers would be given notice in advance to be present in person as well as the Management Committee members.

CONSULTATIONS WITH SHOPKEEPERS

The shopkeepers were already aware of the proposed project.

We reiterated with them the proposed project activities.

We also triangulated with them the MoU signed by them with the Committee and found it to be as per in the Committee records.

They all in unison are agreeable to temporarily shifting during the construction phase without asking for any shifting cost.

The only assurance they required from the Committee in written was that they would be offered on preference once the permanent shops were built.



04/3/16

S. H. Consultation
with AP (Shopkeepers)
Markandeya

- 1- परियोजना के कार्य का संक्षिप्त विवरण बताया गया।
- 2- सभी दुकानदारों ने कार्य श्रम में अपनी दुकानों को देकर गये निष्कारित स्थान पर बिफर को पल अपनी-सहमति प्रदान की।
- 3- सभी दुकानदारों ने बिफर कोलाहल अपने स्तर पर कोले को लीज लिया (without any financial assistance)
- 4- पक्के निर्माण पश्चात समिति द्वारा पूर्व दुकानदारों को की प्राथमिकता दी जाएगी।

Ramesh Choud (3)

Balbeer (2)

रजेंद्र प्रसाद (1)

Roop Chell (11)

ग्यारस देवी (8)

सुनील बेगम (9)

असिनी (10)

राम प्रसाद (7)

प्रमिला कुमारी (6)

दीपा राय (5)

Attendance Sheet AP - Markandey (4/3/16)			
क्रमांक	नाम / दुकान का नाम	हस्ताक्षर	फोन नं.
1.	रजिन्दपाल (Tea stall) - 01	रजिन्दपाल	98170680
2.	सुभाष चन्द्र - 02 (Tea stall)	Balveer	98171-1923
3.	रमेश चन्द्र - 03 (General)	Ramesh Choud	9817637110
4.	शशिपाल (मनिचारी) - 04	दीप शशि	98255 33586
5.	मोला राम (मनिचारी) - 05		
6.	अनंतराम (मनिचारी) - 06	प्रमिला कुमारी	9625533324
7.	रामचारी (Tea stall) - 07		
8.	व्यासा देवी (Tea stall) - 08	व्यासा देवी	8263095298
9.	सुनील बेगम (मनिचारी) - 09	सुनील बेगम	8261073009
10.	असिन (मनिचारी) - 10	असिन	01978321654
11.	रूपमाल (मनिचारी) - 11	Rupmali	97362 29877

Page 1

रजि० न०: 5901/87

"जय ऋषि मारकण्डेय"

श्री मारकण्डेय प्रबन्धक एवम् विकास समिति

मारकण्ड, जिला बिलासपुर (हि०प्र०)

क्रमांक

दिनांक 4/3/16

S. M. Consultation with
Samiti

① Brief introduction of the scope of work and the members are agreeable to it.

② There are 10 Temp Shops let out by the Committee for a period of 11 months with an agreed man that the Comm. may get the shops vacated as an when required - Anny copy of the Agreement - Annex 1

③ The Comm. agrees to get the shops vacated & relocated during the

Page 2

रजि० नो: 5901/87

“जय ऋषि मारकण्डेय”

श्री मारकण्डेय प्रबन्धक एवम् विकास समिति

मारकण्ड, जिला बिलासपुर (हि०प्र०)

क्रमांक

दिनांक

the Project Implementation +
 the are would be provided
 be Committee clear from
 all encumbrances.

(4) There would be no
 financial implication for
 relocation as per the
 Committee agreement.

(5) It was decided that
 a proper meeting and final
 documentation would be
 done giving prior information
 to all concerned by April's
 End.

P.T.O

“जय ऋषि मारकण्डेय”

रजि. नं: 5901/87

श्री मारकण्डेय प्रबन्धक एवम् विकास समिति

मारकण्ड, जिला बिलासपुर (हि०प्र०)

क्रमांक: तिनांक: 4/3/16

Stakeholder Consultation

No	Name / Designation	Contact	Sign
1	G. BHARDWAJ PARDHAN SAMITI	92184 96403	G. Bhardwaj
2	BABOO RAM THAKUR VICE. PRESIDENT	94184 86,260	Baboo Ram
3	S. R. KASHYAP FINANCIAL ADVISOR.	94181 15768	S. R. Kashyap
4	R. L. SHARMA ADVISOR.	94184 80512	R. L. Sharma
5	KAMAL DEY THAKUR. VICE PRESIDENT. GRAM PANCHAIT. MARK. MARKAND. CO.ORDINATOR. SMITI.	94185 28198	Kamal Dey
6	M. R. SHARMA. AUDITOR.	98170 65558	M. R. Sharma

Date of Visit: 19th April, 2016

दिनांक 13.04.2016 को आम भाकरी (भारकपट्ट) के मंदिर परिसर में श्री भारकपट्ट प्रबन्धक दलम विद्यालय समिति के सदस्यों से परियोजना के बारे में विस्तृत चर्चा की गई और सा.प.टी. सा.अ. अंदर गंगान में व्यवस्थापन करने में उकाशदारी पर प्रभाव को कम करने के लिए कार्य से पूर्व स्वीकृतिपत्र एवं परियोजना से बन रहे नई उकाश उपलब्ध करने पर विस्तृत चर्चा की गई।

क्र.सं.	नाम	पद	हस्ताक्षर
1	मुख्यम आरक्षण	प्रधान समिति/मार्कण्डेय	Pradhan
2	तृप्ता देवी	प्रधान समिति/मार्कण्डेय	
3	बबू राम	उप प्रधान/संचालक	
4	वीर राम	उप प्रधान/संचालक	
5	मनसा राम शर्मा	संयोजक/मार्कण्डेय	
6	संदीप राम शर्मा	संयोजक/मार्कण्डेय	
7	राम पाल	संयोजक/मार्कण्डेय	
8	श्रीराम शर्मा	संयोजक/मार्कण्डेय	
9	सुनील कौल	टीएल/टीएम	
10	प्रीतिका	PMU	Priyanka
11	अरुण सूद	PMU	
12	ज्योतिषादी सिंह	Mktg & Finng Office	

Transcript

On dated 19.04.2016, meeting was held with the members of Markandeya Parbandhank Seva Samiti and discussed about the proposed works and how to minimize the impact on commercial establishments and needs to be relocated prior to the dismantling of shops.

Tripta Devi	Pradhan, Village Panchayat
S.P Bhardwaj	Member, Markandeya
Baboo Ram	Parbandhank Seva Samiti
S.R. Kashyap	
R.C. Sharma	
M.R. Sharma	
Mr. Sunil Kaul	TL,PMC
Ms. Priyanka	PMU
Mr. Arun Sood	PMU
Mr. J.D. Singh	DSC



Annexure-6

GRC at PMU level

PMU

Infrastructure Development Investment Program for Tourism
(ADB Loan No. 2676-IND.)
Himachal Pradesh Tourism Development Board
Department of Tourism and Civil Aviation, Himachal Pradesh,
PMU Office U. S. Club, Shimla-1.

TEL (0177)2659962. Fax. (0177)2659925.
No.: IDIPT-HP/3223-IND/GRC-PIU /2015- 647- 670 Dated: 09.05.2016.

Office Order

In supersession of this office order No. IDIPT-HP/2676-IND/GRC-PMU/2013-326-52 dated 02.05.2013 wherein the Grievance Redress Committee (PMU, IDIPT-HP) has been constituted for the registration of grievances/ complaints/ suggestions/ comments/ questions/ feedback etc. of the general public on the IDIPT-HP projects (ADB Loan No. 2676-IND). Now the said committee is re-structured as under for the registration of grievances/ complaints/ suggestions/ comments/ questions/ feedback etc. of the general public on the IDIPT-HP projects under Loan No.2676-IND as well as Loan No. 3223-IND and further reviewing/recommending appropriate action on the same to the competent authority:-

1. The Technical Consultant, PMU, IDIPT-HP.
2. The Executive Engineer, PMU, IDIPT-HP.
3. The Community Development Officer, PMU, IDIPT-HP.
4. The Deputy Director (Tourism), Shimla Division.
5. The Representative of Line Agencies, IDIPT-HP Projects in HP.
6. The Safeguard Specialists, PMU/PMC/DSC, Shimla.

g/c, Commissioner (Tourism)-cum-
Mission Director,
IDIPT-HP
Dated: 09.05.2016.

Endst. No. As above.

Copy to the following alongwith a Grievance Registration Form and Grievance Redress Mechanism for information and necessary action please:

1. The Additional Chief Secretary (Tourism), to the Govt. of H.P., Shimla-2.
2. All the Deputy Commissioner in H.P.
3. All the Deputy Directors (Tourism) in HP.
4. The Commissioner, Municipal Corporation Shimla
5. All the concerned members of the above Committee for initiating further necessary action at their level.
6. The Technical Consultant, PMU, IDIPT-HP, U. S. Club, Shimla.
7. The Executive Engineer, PMU, IDIPT-HP, U. S. Club, Shimla.
8. The Team Leader, PMC/DSC, IDIPT-HP.

Received
Arbitrator
10/5/16

Received
Super Technical
10/5/16 g/c

Commissioner (Tourism)-cum-
Mission Director,
IDIPT-HP

GRC at PIU Kullu

Infrastructure Development Investment Program for Tourism
(ADB Loan No. 2676-IND.)
Himachal Pradesh Tourism Development Board
Department of Tourism and Civil Aviation, Himachal Pradesh,
PMU Office U. S. Club, Shimla-1.

TEL (0177)2659962.

Fax. (0177)2659925.


No.: IDIPT-HP/3223-IND/GRC-PIU /2015-

Dated: 09.04.2016.

Office Order

In supersession of this office order No. IDIPT-HP/2676-IND/GRC-PIU/2015-1023-47 dated 24.06.2015 wherein the Grievance Redress Committee (PIU, Kullu, IDIPT-HP) has been constituted for the registration of grievances/ complaints/ suggestions/ comments/ questions/ feedback etc. of the general public on the IDIPT-HP projects (ADB Loan No. 2676-IND). Now the said committee is re-structured for the registration of grievances/ complaints/ suggestions/ comments/ questions/ feedback etc. of the general public on the IDIPT-HP projects under ADB Loan No. 2676-IND as well as Loan No. 3223-IND and further reviewing/recommending appropriate action on the same to the competent authority as following:

1. The Project Manager, PIU, IDIPT-HP, Kullu.
2. The Deputy Director (Tourism), Kullu at Manali, HP.
3. The Community Development Officer, PMU/PIU, IDIPT-HP.
4. Representative of Line Agency, IDIPT-HP Projects.
5. The Safeguard Specialist, PMU/PMC/DSC.

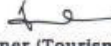

**Commissioner (Tourism)-cum-
Mission Director,
IDIPT-HP**

Dated: 09.04.2016.

Endst. No. As above. 633

Copy to the following alongwith a Grievance Registration Form and Grievance Redress Mechanism for information and necessary action please:

1. The Additional Chief Secretary (Tourism), to the Govt. of H.P., Shimla-2.
2. All the Deputy Commissioner in H.P.
3. All the concerned members of the above committee.
4. The Technical Consultant, PMU, IDIPT-HP, Shima.
5. The Executive Engineer, PMU, IDIPT-HP Shimla.
6. The Project Manager, PIU, IDIPT-HP, Kullu. HP. He is directed to install a box for Loan No. 3223-IND as did for Loan No. 2676-IND.
7. The Team Leader, PMC/DSC, IDIPT-HP.


**Commissioner (Tourism)-cum-
Mission Director,
IDIPT-HP**

Annexure-7

Sample Grievance Redress Form

(To be available in Local Language and English)

The _____ Project welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback. Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing ***(CONFIDENTIAL)*** above your name. Thank you.

Date		Place of registration			
Contact Information/Personal Details					
Name		Gender	* Male * Female	Age	
Home Address					
Place					
Phone no.					
E-mail					
Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below:					
If included as attachment/note/letter, please tick here:					
How do you want us to reach you for feedback or update on your comment/grievance?					

FOR OFFICIAL USE ONLY

Registered by: (Name of Official registering grievance)	
Mode of communication: Note/Letter E-mail Verbal/Telephonic	
Reviewed by: (Names/Positions of Official(s) reviewing grievance)	
Action Taken:	
Whether Action Taken Disclosed:	Yes No
Means of Disclosure:	

Annexure-8

Sample Field Environmental Monitoring Report Template

ADB LOAN NO.3223-IND

India: Infrastructure Development Investment Program for Tourism
Himachal Pradesh

ENVIRONMENTAL MONITORING CHECKLIST (Note: To be filled in separately for each package)				
Project no.				
Site location				
Date & Time of visit				
Stage	Pre-construction/Construction/Post construction phase			
Activity	Parameter monitored	Observation		Remark/s, if any
		Yes	No	
Activity 1: Signage & display	Is the content & design of project related signage on site found correct?			
	Is the signage/display appropriately located?			
	Is there proper cautionary & directional signage on site?			
	Has the surrounding population been informed about the nature and duration of the works?			Note: Give dates & method of communication
Activity 2: Ambient Air Quality	Is the emissions testing done as specified in the EMP?			Note: Give dates
	Is the testing record being maintained as specified?			
	Were there any fumes, bad odour or dust observed on site?			
	If yes, has this been communicated to the Contractor for him to take appropriate measures to redress the issue?			
	Is the dust suppression/sprinkling being done adequately/as prescribed in the EMP?			
	If not, has the contractor been informed to improve the situation?			
Activity 3: Solid Waste	Are litter bins provided on site for solid waste collection?			

Management & Debris Disposal	Is there any litter found lying around on site or nearby the site but originating from the site that creates unsafe or unhealthy working conditions (e.g. risk of slipping, falling over, or mosquito breeding)?			
	Is the frequency of waste removal from site adequate?			
	Is the mode of waste disposal appropriate e.g. recycling, composting, removal to MC bin etc.?			
	Are the debris/ muck from earthwork/excavation being properly disposed off in a pre-designated disposal site?			
	Is the demolition or construction waste being properly carried out & disposed off from site as specified in the EMP?			
Activity 4: Water & drainage	Is the water quality testing done as specified in the EMP?			Note: Give dates
	If standards were exceeded: has this been communicated to the Contractor directly after the results were available, for him to take appropriate action?			
	Is the testing record being maintained as specified?			
	Is there any water-logging at site?			
Activity 5: Noise	Is the noise testing done as specified in the EMP?			Note: Give dates
	If standards were exceeded: has this been communicated to the Contractor directly after the results were available, for him to take appropriate action?			
	Is the testing record being maintained as specified?			
	Is the generator set being housed in an insulated enclosure to prevent noise pollution on site?			
	Is there any other undue noise activity or noise source observed on site?			
Activity 6: Site	Is the site being inspected by			Note: Attach a copy of site

operations management	&	field staff on regular basis or as required by the EMP?			inspection record
		Are the work areas properly barricaded or fenced?			
		Is there proper pedestrian and vehicular access to site?			
		Is the alternate mobility route/decongestion plan being followed on site, if applicable?			
		Is there proper storage arrangement for construction materials & supplies on site? e.g. preventing water logging or water pollution			
		Are the hazardous substances like fuel – (diesel, LPG, kerosene, oil) or paints or asbestos being properly stored and used on site/as specified in the EMP?			
		Are there adequate fire safety precautions being maintained onsite?			
		Are the machinery & other construction implements being maintained properly on site?			
		Are the vehicles carrying raw material/supplies and heavy equipment parked at the designated area within or near the site?			
		Is there any incidence of soil/water contamination from toxic substances observed on site? e.g. from oil spill or waste engine oil			Note: If yes, please specify date and describe incident, how was it resolved and how to avoid in future
		Is the oil /waste oil disposal being done safely and properly <u>away</u> from site?			Note: Safe disposal should be done on sealed ground preventing leakage and run-off, away from direct sunlight and combustible products.
Activity	7:	Is the OHS plan being			

Occupational Health & Safety	followed and record being maintained as specified?			
	Is proper safety gear being used by workers on site? E.g. gloves, shoes, helmets & hearing protection equipment			
	Is there provision of safe drinking water on site?			
	Are there proper and clean toilets for workers on or near the site?			
	Is the provision for First Aid & Emergency Services available on site?			Note: Check the availability, accessibility and completeness of the first aid kit (e.g. are band-aids, disinfectant?).
	Is there any accident reported on site?			Note: If yes, please provide detailed report on any incident, accident, or fatality during the reporting period. Specify what and how it happened and what will be done to avoid a similar situation to occur again
	Is the accident record being properly maintained on site?			
	Is there any incidence of water borne disease or exposure to toxic substance on site?			
	Are disease preventive measures such as inoculation, sprays etc. being carried out on site?			
	Are there any labour camps established within or in close proximity to protected areas or heritage sites?			
As per Loan covenant 6 under Schedule 5 for HPIDIPT: "The State shall ensure that civil works Contracts under the projects follow all applicable labour laws of the Borrower and the State and that these further include provisions to the effect that Contractors				
	... (i) carry out HIV/AIDS awareness programs for labour and disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures			Note: Give dates & a brief report on compliance where applicable
	... (ii) follow and implement all statutory			Note: Attach an undertaking from the Contractor

	provisions on labour, health, safety, welfare, sanitation and working conditions.			
Concluding remarks	Environmental compliance of this sub-project: <ul style="list-style-type: none"> <input type="checkbox"/> Fully compliant <input type="checkbox"/> Nearly compliant <input type="checkbox"/> Partially compliant <input type="checkbox"/> Non-compliant 			
Checked by				
Designation				

Annexure-9

Sample EMR Template

Environmental Monitoring Report

Loan Number: -----
Reporting period: (month/year to month/year)

(Title of Project)

Prepared by: -----
Implementing Agency: -----
Executing Agency: -----
Date: (dd/ mm/ yyyy)

Project Title /Loan number /report reference number /date of report

TABLE OF CONTENTS

(page no.)

1. Introduction
2. Compliance status with National /State /Local statutory environmental requirements
3. Compliance status with the environmental covenants as stipulated in the Loan Agreement
4. Compliance status with environmental management and monitoring plans and environmental assessment and review framework/procedures as stipulated in the environmental documentation as agreed with ADB
5. Approach and methodology engaged for environmental monitoring of the project
6. Monitoring of environmental receptors/ attributes (e.g. ambient air, surface water, ground water, land, ecological aspects, noise, hazardous/toxic wastes, etc.)
7. Any other environmental aspects, impacts observed during implementation which were not covered earlier
8. Details of complaints received from public and actions taken thereof to resolve
9. Follow-up actions and conclusions

Project Title /Loan number /report reference number /date of report

1. Introduction

- overall project description;
- project objectives;
- environmental category;
- environmental performance indicators, if any;
- overall project progress, agreed milestones and implementation schedules;
- any other information useful for assessing environmental performance of the project

(Limited to 3/4 of a page)

2. Compliance status with National /State /Local statutory environmental requirements

- Tabular presentation of statutory environmental requirements for the project at national, state and local levels (applicable to the borrower, sub-borrowers, contractors, vendors, etc. as the case may be), and the status of compliance thereof.
- If the project is not in compliance with any of those requirements, the report would provide actions proposed for achieving compliance within an agreed time frame duly approved by the respective regulatory agencies.

(Limited to 1/2 to 1 page)

3. Compliance status with the environmental covenants as stipulated in the Loan Agreement

- Tabular presentation of environmental covenants as stipulated in the Loan Agreement and the status of compliance thereof.
- If the project is not in compliance with any of those requirements, the report would provide actions proposed for achieving compliance within a time frame to be reviewed and approved by the ADB.

(Limited to 3/4 of a page)

4. Compliance status with environmental management and monitoring plans as stipulated in the environmental documentation as agreed with ADB

- Tabular presentation of environmental management and monitoring plans and environmental assessment and review framework/procedures as agreed and the status of implementation thereof.
- The status chart would provide details of actions proposed to be taken by various agencies, including contractors/vendors for implementation, the current status of compliance.
- In case any corrective measures are warranted, the status chart would outline the corrective action plan with an agreed time frame duly agreed by all those agencies concerned for ADB's review and concurrence.
- In case of corrective measures are implemented based on the earlier monitoring, the status chart would elaborate clearly the improvements noticed and further steps required if any.

(Limited to 2 pages)

5. Approach and methodology engaged for environmental monitoring of the project

- Monitoring basis
 - rationale for selection of sampling/ monitoring locations,
 - selection of environmental receptors /attributes for monitoring,
 - linkage with environmental performance indicators agreed upon,
 - phases of project – design, construction, operation
- Standards /monitoring methods to be employed for assessment
- Monitoring Quality Control

(Limited to 1 page)

6. Monitoring of environmental receptors/ attributes (e.g. ambient air, surface water, ground water, land, ecological aspects, noise, hazardous/toxic wastes, etc.)

- Type of environmental receptor/attribute to be monitored (for each type)
 - Method of monitoring
 - Duration and frequency of monitoring
 - Equipment /instrumentation to be used for monitoring
 - Sampling locations/ sites for monitoring (linked with Appendix 1 – location map)
 - Reporting monitoring results (provide tabular presentation)
 - Detailed analyses of monitoring reports and conclusions (use histograms or any other methods)
 - Correlate the monitoring results with statutory requirements at national/state/local levels
 - Corrective actions proposed in case on non-compliance /improvements noticed due to corrective actions taken during the reporting period, and further actions required if any.
 - Recommendations /Suggestions.

(Limited to 2 pages)

7. Any other environmental aspects, impacts observed during implementation which were not covered earlier

(Limited to 1/2 page)

8. Details of Grievance Redress Committee and complaints received from public and actions taken thereof to resolve

(Limited to 1 page)

9. Follow-up actions and conclusions

(Limited to 1/2 to 1 page)

Signed by:

Monitoring agency:
(name, title, date)

Authorized signatory from Implementing Agency /Executing Agency:
(name, title, date)

APPENDIX 1

Location Map for Environmentally Sensitive Sites and Monitoring Stations

Annexure-10

Non Objection Certificate (NoC)

जरीकृत संख्या 5901/87

श्री मारकण्डेय प्रबन्धक एवं विकास समिति

चैतन्य कुमार
(सचिव)
98572-00264

मारकण्ड, जिला बिलासपुर (हि0 प्र0) 174033

राजेन्द्र कुमार
(वरिष्ठ उप-प्रधान)
98160-80045सुखराम भारद्वाज
(प्रधान)
92188-96403

संदर्भ क्रमांक

दिनांक ...30.12.2014...

To

The Mission Director
I.D.I.P.T. H.P.
U.S. Club Shule - 1

Sub:- No objection Certificate.

Sir,

this is with reference to the visit of Sh. R.P. Thakur Assistant Engineer; on to day the 30th August 2014. Regarding Proposed Development & beautification of Sh. Markandeya Temple Complex. by the Deptt. of Tourism / A.D.B. The Committee Unanimously passed a resolution that if the above said work is carried out by the above agency the Committee has no objection subject to condition that the infrastructure after completion shall be the property of the Temple Committee.

Thanking you.

Yours Sincerely

Signature
श्री मारकण्डेय प्रबन्धक एवं विकास समिति
मारकण्ड, जिला बिलासपुर (हि0 प्र0)

Annexure-11

MoU

MOU for Operation & Maintenance

(Undertaking from Assets Owner)

I, S. R. Bhardwaj, Pradhan, Shri Markandeya Prabandhak avam Vikas Samiti, Bilaspur, HP, on behalf of said Samiti agree to undertake the operation and maintenance for the assets which will be constructed, renovated, restored and etc. by the HPTDB under Tranche 3 of the IDIPT program together with other assets currently maintained by us. All works to be constructed i.e. **Rejuvenation of the Markandeya Temple Precinct and Provision of Visitor Facilities, Bilaspur** under Tranche 3 including but not limited to landscape works, pathways, railings, toilets, car parking and etc. will be maintained by us, with our own funds generated from operations or received from various sources.

We have no objection for any work being taken up by HPTDB under Tranche 3 of the IDIPT program within the boundary premises and pathway, access to the premises from main road and etc. We assure you that the operation and maintenance of the assets will be done by us from our own resources.

Signature of S. R. Bhardwaj of 25-07-2014
 श्री मार्कण्डेय प्रबन्धक एवम् विकास समिति
 Designation: प्र. प्रबन्धक, बिलासपुर (Asset Owner)

Annexure 12

Salient Features of Major Labor Laws Applicable to Establishments Engaged in Construction/Civil Works

- (i) Workmen Compensation Act, 1923 - The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- (ii) Payment of Gratuity Act, 1972 - Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death at the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- (iii) Employees' PF and Miscellaneous Provisions Act, 1952 - The Act provides for monthly contributions by the employer plus workers @10 % or 8.33 %. The benefits payable under the Act are:
 - (a) Pension or family pension on retirement or death as the case may be; (b) deposit linked insurance on the death in harness of the worker; (c) payment of PF accumulation on retirement/death etc.
- (iv) Maternity Benefit Act, 1951 - The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- (v) Contract Labour (Regulation and Abolition) Act, 1970 - The Act provides for certain welfare measures to be provided by the Contractor to contract labor and in case the Contractor fails to provide, the same are required to be provided by the Principal Employer by Law. The principal employer is required to take Certificate of Registration and the Contractor is required to take a License from the designated Officer. The Act is applicable to the establishments or Contractor of principal employer if they employ 20 or more contract labor.
- (vi) Minimum Wages Act, 1948 - The employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employment.
- (vii) Payment of Wages Act, 1936 - It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- (viii) Equal Remuneration Act, 1979 - The Act provides for payment of equal wages for work of equal nature to Male and Female workers and not for making discrimination against Female employees in the matters of transfers, training and promotions etc.
- (ix) Payment of Bonus Act, 1965 - The Act is applicable to all establishments employing 20 or more workmen. The Act provides for payments of annual bonus subject to a minimum of 8.33 % of wages and maximum of 20 % of wages to employees drawing Rs. 3,500/- per month or less. The bonus to be paid to employees getting Rs. 2,500/- per month or above up to Rs.3,500/- per month shall be worked out by taking wages as Rs.2,500/- per month only. The Act does not apply to certain establishments. The newly set up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of the Act.

- (x) Industrial Disputes Act, 1947 - The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- (xi) Industrial Employment (Standing Orders) Act, 1946 - It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the employer on matters provided in the Act and get the same certified by the designated Authority.
- (xii) Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996 - - Applicable to all construction works in the project, Contractor to obtain license from designated labour officer, Contractor shall register with Labour Department, GOR if Inter-state migrant workmen are engaged, Adequate and appropriate amenities and facilities shall be provided to workers including housing, medical aid, traveling expenses from home and back, etc.