Draft Initial Environmental Examination

October 2014

IND: Infrastructure Development Investment Program for Tourism Tranche 3 – Establishment of Tourism Facilities and Infrastructure for showcasing Sikh Culture (Punjab)

Prepared by the Government of Punjab for the Asian Development Bank.

CURRENCY EQUIVALENTS

(as of 7 October 2014)

Currency unit	–	Indian rupee/s (Re/Rs)
Re1.00	=	$0.0163
$1.00	=	Rs61.326

ABBREVIATIONS

ADB –	Asian Development Bank
BPL –	Below Poverty Line
CPCB –	Central Pollution Control Board
DSC –	Design and Supervision Consultants
DoT –	Department of Tourism
EA-	Executing Agency
EAC –	Expert Appraisal Committee
EARF –	Environmental Assessment Review Framework
EIA –	Environmental Impact Assessment
EMP –	Environmental Management Plan
GoI –	Government of India
GoP-	Government of Punjab
PHTPB-	Punjab Heritage and Tourism Promotion Board
PPCB –	Punjab Pollution Control Board
IDIPT –	Infrastructure Development Investment Program for Tourism
IEE –	Initial environmental examination
MC –	Municipal Corporation
MINARS -	Monitoring of Indian National Aquatic Resources Series
MLD –	Million Litres per day
MOEF –	Ministry of Environment and Forests
MSL –	Mean Sea Level
NGO –	Non-Governmental Organization
O&M –	Operations and Management
PIU –	Project Implementation Unit
PMC-	Project Management Consultants
PMU –	Project Management Unit
PWD –	Public Works Department
REA –	Rapid Environmental Assessment
SEAC –	State Expert Appraisal Committee
SPM –	Suspended Particulate Matter
SPS –	Safeguards Policy Statement
TCP –	Town and Country Planning
TMP-	Traffic Management Plan
TDS –	Total Dissolved Solids
TSS –	Total Suspended Solids

NOTES

In this report, "$" refers to US dollars.

This initial environmental examination is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

ANNEXES

EXECTUVE SUMMARY

- **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.

- Rupnagar district falls between north latitude 30°32' and 31°24' and east longitude 76°18' and 76°55'. Rupnagar (formerly known as Rupnagar) town, the district headquarters is 42 kilometres (km) from Chandigarh, the state capital. The district comprises of 4 Tehsils[1]: Rupnagar, Anandpur Sahib, Nangal and Chamkaur Sahib, and includes 624 villages and 6 towns(Rupnagar, Chamkaur Sahib, Anandpur Sahib, Morinda, Kiratpur Sahib and Nangal). The Chamkaur Sahib has rich historical background, there are number of historical *gurudwaras* [2]located within the town and are interlinked by roads. The presence of the *gurudwaras* attracts people from various parts of the state and country. Hence to promote local tourism, Department of Tourism (DOT) has initiated to improve the basic infrastructure facilities surrounding the *gurudwaras*.

Implementation arrangements.

The implementation agency for the project is the Punjab Heritage and Tourism Promotion Board (PHTPB), Chandigarh.

PHTPB has specialized persons and project managers catering to the needs of project aspects. Several specialized branches are created within the department as part of institutional strengthening. However, during the implementation if there will be a need, the institutional strengthening of PHTPB will be done by creating the implementation units within the department as suggested by the UNWTO Report. This will include:

Tourism Cultural Heritage Unit (TCHU) that will implement the state tourism cultural heritage policy and provide support to the proposed Punjab Heritage Buildings and Sites Commission. (PHB&SC); a Community-Based Tourism Unit (CBTU) to implement CBT and ecotourism policies; and a Tourism Investment Promotion Unit (TIPU) to implement policy to enhance the role of the private sector in the provision, operation and maintenance of tourist infrastructure and facilities and services including partnerships with local communities and cultural and heritage site managers. Attached to the PHTPB should be a Punjab Heritage Buildings and Sites Commission (PHB&SC) to focus on revitalization and valorization of private and publicly-owned cultural heritage assets; and

[1] A tehsil (also known as tahsil, tahasil, taluka, taluk, or taluq) is a unit of government i in the Republic of India - it is similar to a county. It usually consists of a town (possibly more towns) and the villages around the towns.

[2] A gurdwara (Punjabi: ਗੁਰਦੁਆਰਾ, *gurduārā* or , *gurdwārā*), meaning *the gateway to the guru*, is the place of worship for Sikhs;[1]however, people of all faiths are welcomed in the Sikh Gurdwara.

a Public Private Sector Partnership (PPP)-based Tourism Marketing and Promotion Board (TMPB) to implement public-private partnership-based development and marketing and promotions initiatives.

The need for the support staff for provision of services and implementation of subproject would be detailed in the DPR stages.

- RupnagarRupnagarRupnagar

- **Categorization**. Rupnagar town subproject Package No. PHTPB/ IDIPT/ T3/ 07/08 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 as per preliminary design and assesses the environmental impacts and provides mitigation and monitoring measures to ensure no significant impacts as a result of the subproject.

Subproject Scope. The major scope of this subproject as per Summary Appraisal Report (SAR) 7 - Package No. PHTPB/ IDIPT/ T3/ 07/08 are: Sikh Valour Park, Chamkaur Sahib, Infrastructure development for promotion of Rural Tourism. The subproject package no PHTPB / IDIPT/ T3/ 07/08 will involve the following:

- Saka Chamkaur Di Garhi, Chamkaur Sahib, Vada Ghallughara interpretation centre, Chota Ghalluaghara interpretation centre
- Interpretation Centre at Wada Ghallughara
- Interpretation Centre at Chhota Ghallughara
- Development of Maharaja Ranjit Singh's Treaty Signing sites

The detailed design will be completed by PHTPB / IDIPT/ T3/ 07/08 2014, procurement process is scheduled to commence in _____2014, and construction is expected to start in construction period is months). The subproject components are expected to be fully operational by_____ .

- **Description of the Environment.** Subproject components are located in rural and urban areas of Rupnagar town. RupnagarThe present ecological setting of the subproject areas is an agricultural landscape dominated by rice paddies. For rural tourism components, the villages are outside the Rupnagar wetland. There are no protected areas, wetlands, mangroves, or estuaries within or adjacent the subproject components sites.

- **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) grievance redress mechanism. A number of impacts and their significance have already been avoided by environmental considerations in the designs. The EMP will be included in civil work bidding and contract documents.

- 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 (vi) 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.

- During the construction phase, impacts mainly arise from the need to dispose of moderate quantities of waste soil. 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.

- 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.

- The tourists, villagers, business people (organizations) and citizens of Rupnagar town area will be the major beneficiaries of the project. Rupnagar is located between the Outer Himalayas and the Punjab plains.

- The most noticeable net environmental benefits to the tourists and population of the town will be positive and large as the proposed subproject will improve access to reliable and adequate tourism facilities and propagate the local traditions and cultural heritage of the state. This subproject will also support the home stays and bread and breakfast schemes of Department of Tourism by managing the rural environment. This subproject will also provide a common platform for local traditions and values; provide and improve business opportunities for local communities, linked to the cultural and natural heritage tourism.

- **Consultation, Disclosure and Grievance Redress.** 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 PHTPB 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. Public consultations will be done in the preparation of the detailed design and final IEE. A grievance redress mechanism is described within the IEE to ensure any public

grievances are addressed quickly.

- **Monitoring and Reporting.** The PMU, PIU, PMC and DSC will be responsible for environmental monitoring. The PIU, with support from the DSC, will submit monthly, quarterly and semi-annual monitoring reports to the PMU. The PMU will consolidate the reports with assistance of PMC and will send semi-annual monitoring reports to ADB. ADB will post the environmental monitoring reports on its website.

- **Conclusions and Recommendations.** The subproject package PHTPB / IDIPT/ T3/ 07/08 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.

INTRODUCTION

- **Background.** The Infrastructure Development Investment Program for Tourism (IDIPT) 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.

1. The impact of IDIPT is enhanced contribution of the tourism sector to sustainable and inclusive economic growth, and the outcome is increased volume of domestic and international tourists to destinations within participating states. The outputs are: (i) enhanced quality of natural and cultural tourist attractions to ensure convenience and safety for visitors; (ii) greater participation by local communities in tourism-related economic and livelihood activities; (iii) improved basic urban infrastructure and incidental services at existing and emerging tourist destinations and gateways; (iv) improved connectivity to tourist attractions focusing on the improvement of last-mile connectivity; and (v) strengthened capacity of concerned sector agencies and local communities for planning, development, management, and marketing of tourist destinations and attractions, and promoting private sector participation and small businesses.

2. **Implementation arrangements.** The Department of Tourism (DOT), Government of Punjab is the executing agency. The Punjab Heritage and Tourism Promotion Board (PHTPB) is the implementing agency with a fully staffed Project Management Unit (PMU). Two PIUs (Amritsar and Rupnagar) are established and to be fully staffed shortly (Amritsar

PIU to mobilize a project manager by 10 October 2014). A State-Level Empowered Committee (SLEC) was established to take all decisions related to the Investment Program on behalf of the State. A team of consultants including the Project Management Consultant (PMC), and the Design Supervision Consultant (DSC) are supporting the PMU and PIUs in project implementation, along with one package for Tourist Statistics, and two packages for Interpretive Materials (under recruitment).

3. **Proposed sub-project**. The subproject package number PB/IDIPT/T3/07/07 is part of eastern circuit. The objective of this subproject is to improve, conserve and manage physical and environmental image of the historical sites/route with planned interventions consistent to its historic status, revitalization of walled city along with sustainable model for citizens and tourists, to educate visitors about the historical structures, culture and the values of city, providing tourist infrastructure facilities along with protecting the heritage value of the property and to enhance tourist attractions with all facilities.

4. The major scope of this subproject as per Summary Appraisal Report (SAR) 7 - Package No. PB/IDIPT/T3/07/07 are: There are number of historical *gurudwaras* that are located within the Chamkaur Sahib. These *gurudwaras* attracts people from various parts of the state and country, the existing infrastructure is found to be ineffective to cater the tourist needs. The basic facilities like quality approach roads, shelters on the pathway and other beautification of the surroundings are not available, due to this the local people/ tourist are finding it difficult and it also creates a negative impact to the local tourism growth. Hence to promote local tourism, DOT has initiated to improve the link roads to the *gurudwaras*. With the following objectives, the subproject has been designed to implement.

a. Saka Chamkaur Di Garhi, Chamkaur Sahib, Vada Ghallughara interpretation centre, Chota Ghalluaghara interpretation centre

- There will be seven blocks, of which 2 will showcase the story of Chamkaur Sahib, four blocks will showcase four different crafts of Punjab (Metal work, Wood work, Weaving and Paintings) and one will be used as Tourist Reception Centre.
- Improving the area around the existing building and the entire site (approximate 14 Acres) with planned interventions and landscaping.
- Provision of garden lighting and high mast lighting.
- Construction of the main entrance gate.
- Construction of the incomplete components like display hall, sculpture court area (50'-0"radius) audio-visual and static interpretation centre. (Area for each components is approximate 25'-0"radius).
- Provision of visitor facilities like toilets, drinking water facilities etc approximate area 12'-0" radius.
- Construction of the musical fountain which will be given at PPP mode
- Provision of internal signages of uniform design for interpretation.
- Use of the building will have three components :
- Provision of Interpretative materials including multimedia content
- Fitting and fixtures
- Display materials
- Provision Services such as electrical, plumbing, HVAC etc

b. Interpretation Centre at Wada Ghallughara - Use of the building will have three components :

- Provision of Interpretative materials including multimedia content
- Fitting and fixtures
- Display materials

c. Interpretation Centre at Chhota Ghallughara - Use of the building will have three components :

- Provision of Interpretative materials including multimedia content
- Fitting and fixtures
- Display materials

d. Development of Maharaja Ranjit Singh's Treaty Signing sites:

- Improvement of Maharaja Ranjit Singh treaty signing site where historical treaty was signed between Maharaja Ranjit Singh and Lord William Bentick.
- Improvement of the treaty signing path approximates 1000m X 5m.
- Site Development and Landscaping
- Landscaping and site development at Treaty site for about 3000 sq m along the the banks of river.
- Provision of dustbins on the interlocking paver path and installation of small plants pots approximate at a distance of 3 ft to enhance the beauty of the area.
- Provision of benches (Spheroidal Graphite Cast Iron), approximately at 10 ft interval.
    - Provision of appropriate internal signages of uniform design within and outside site area.

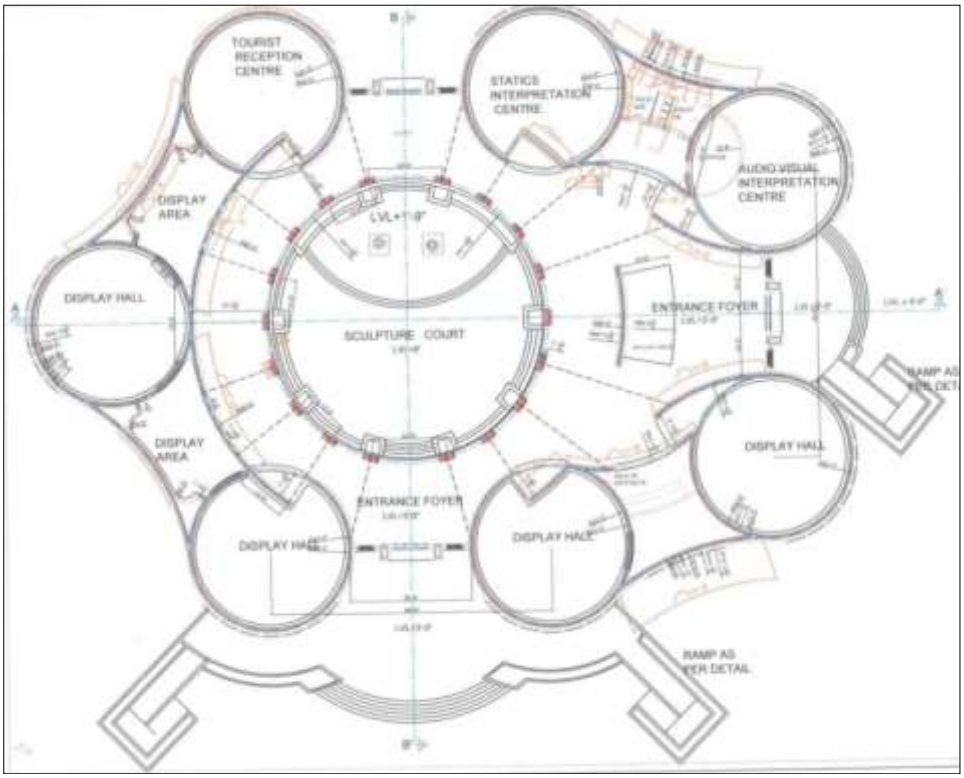


Figure 7 Layout plan of Saka Chamkaur Di Garhi

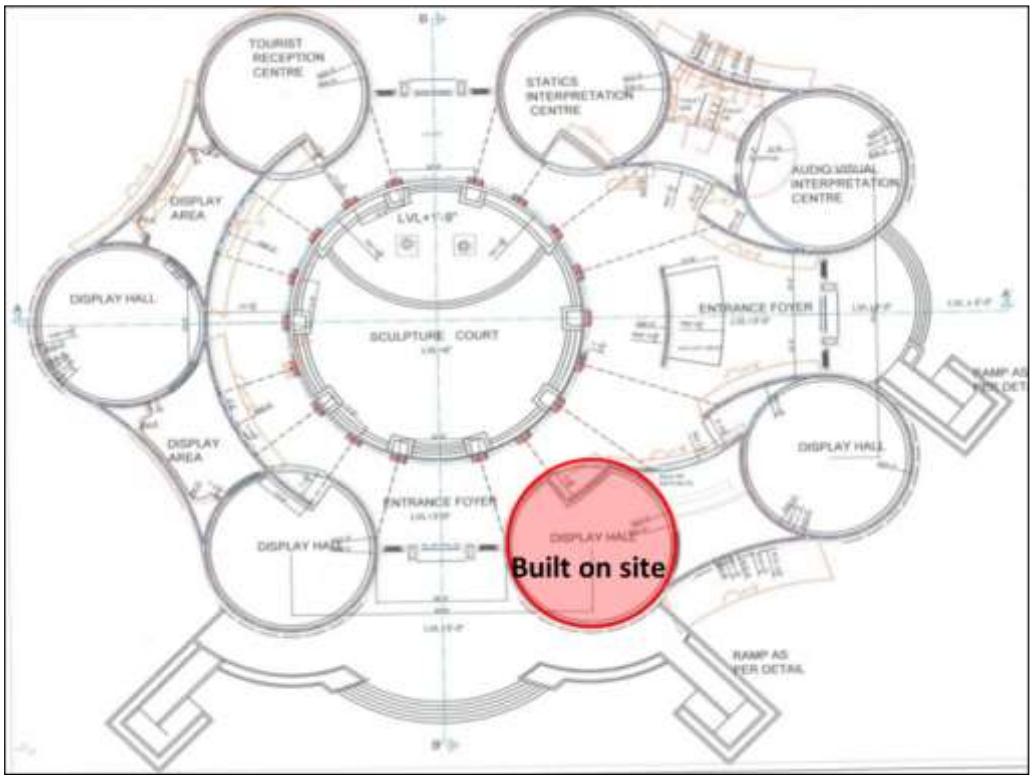
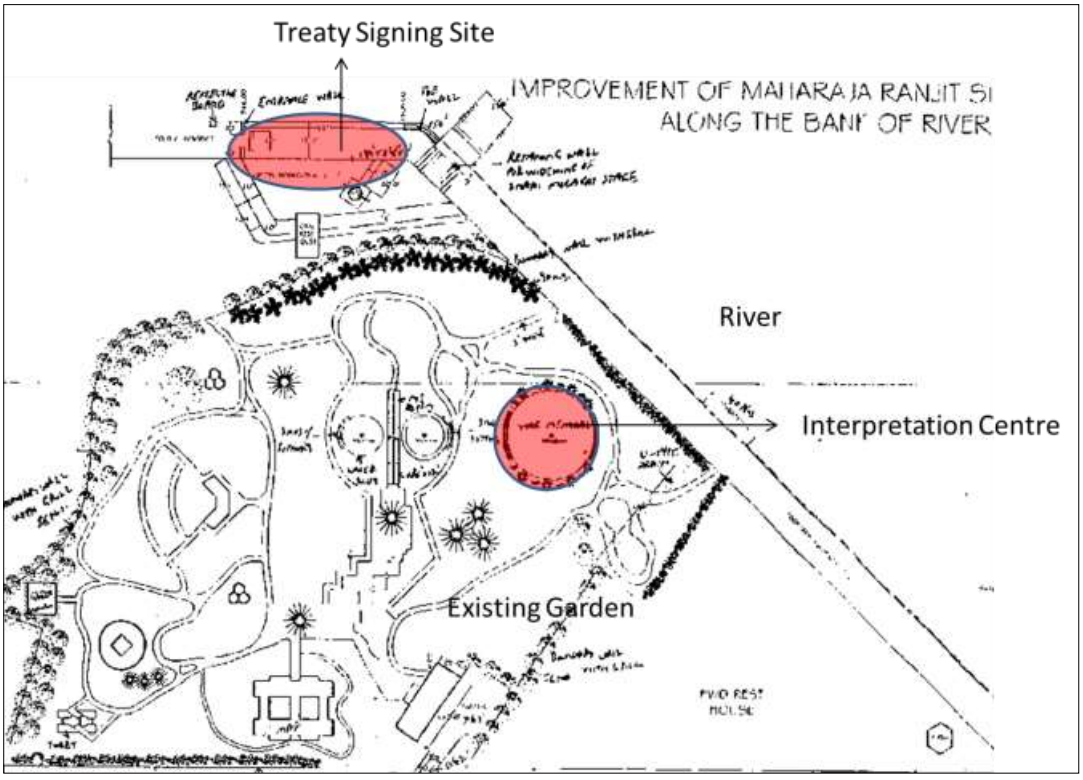


Figure 8: Existing Built - Up Area at Saka Chamkaur Di Garhi



5. **Categorization.** As per the Asian Development Bank's (ADB) Safeguard Policy Statement 2009, and in line with the Environment Assessment & Review Framework (EARF) for the project, the sub-project "Establishment of Tourism Facilities and infrastructure, showcasing Sikh Culture" are categorized as 'B' and an Initial Environmental Examination (IEE) prepared. The IEE was based on a review of sub-project site plans and reports; field

visits, and secondary data to characterize the environment and identify potential impacts; and interviews and discussions with stakeholders.

6. **Purpose of the IEE.** This report gives an account of the initial environmental examination (IEE) of subproject as per SAR-7 and preliminary design. The adverse environmental impacts for this contract package are primarily related to construction activities. The proposed construction activity is selected considering historical and cultural value of the city. There will be construction impacts associated with proposed civil and conservation works but these will be of limited intensity and of short duration. Therefore, as per the Asian Development Bank's (ADB) Environmental Assessment Guidelines (SPS 2009), the sub-project components are categorized as 'B' and an IEE carried out. This IEE provides mitigation measures for impacts related to location, design, construction, operation, and maintenance. The REA checklist is attached as **Annexure- 1** with this report.

II. DESCRIPTION OF THE SUB PROJECT

7. **Location:** The proposed project sites of Package No. ---- located within the urban and rural areas of Rupnagar city. The sub-project area falls under the Rupnagar District, which is located in the eastern part of the Punjab State and geographically it lies between North latitudes of 76°19'00'' and 76°45'00'' and East longitudes of 30°44'00'' and 31°25'00''. The geographical extent of the area is 1440sq.km. The area is bounded by Himachal Pradesh in the north and north east. Hoshiarpur, Nawanshahr and Ludhiana district in the west, Fatehgarh Sahib District in the South and Mohali district in the south east. The district comprises of 4 Tehsils, Rupnagar, Anandpur Sahib, Nangal and Chamkaur Sahib and includes 624 villages and 6 towns namely Rupnagar, Chamkaur Sahib, Anandpur Sahib, Morinda, Kiratpur Sahib and Nangal. The Sutlej river passes close (2 to 5 km) to the towns of Nangal, Rupnagar and Anandpur Sahib.

8. **Brief History:** All the subprojects are within the Rupnagar District, each of the subprojects description and the subproject activities are described below:

Subproject area comprises sites located within a radius of 30 km in Rupnagar district. Tourist potential can be tapped due to proximity of these sites along with their historical and natural resource importance. Further, the subproject sites leverages on good road proximity to other tourist destinations including Chandigarh, Mohali, Rupnagar, Anandpur Sahib, Kiratpur Sahib, Manali, Bhakra Nangal, Kangra and Dharmshala.

Sikh Valour Park Chamkaur Sahib

- **Description:** Chamkaur Sahib is located in the Rupnagar District, Rupnagar. It is a place of paramount religious and historical importance. Here Shri Guru Gobind Singh Ji the 10th Guru of Sikh along with his two elder sons and 40 followers had come from Kotla Nihang. The Gurudwara Katalgarh Sahib occupies a unique place among all the religious places located at Chamkaur Sahib. It is built at the site where Baba Ajit Singh and Baba Jhujjar Singh, elder sons of Guru Gobind Singh along with their followers fell while fighting against the Mughal army. A big fair known a Sheheedi Jor Mela lasting for three days is held in the month of December at Chamkaur Sahib to commemorate the martyrdom of the elder sons of Shri Guru Gobind Singh Ji. Religious dewans are also organized. Dushehra festival at Chamkaur Sahib is also celebrated with great enthusiasm by the people of the area.

B. Proposed Subproject

9. There are number of historical *gurudwaras* that are located within the Chamkaur Sahib. These *gurudwaras* attracts people from various parts of the state and country, the existing infrastructure is found to be ineffective to cater the tourist needs. The basic facilities like quality approach roads, shelters on the pathway and other beautification of the surroundings are not available, due to this the local people/ tourist are finding it difficult and it also creates a negative impact to the local tourism growth. Hence to promote local tourism, Department of Tourism, Punjab has initiated to improve the link roads to the *gurudwaras*. With the following objectives, the subproject has been designed to implement.

- Existing Conditions: Sikh Valour Park, Chamkaur Sahib

- Presently the Sikh Valour park comprises few structures. There are structures which are not fully built/ partially built like display halls, interpretation centre, reception centre and toilets.
- Lack of maintenance of existing structures and area around the existing building and open air theatre.
- Absence of entrance gate to the site.

- The areas surrounding the river Sutlej contains variety of natural, historic and cultural resources with good potential for the creation of attractive packages of products and tourism infrastructure. As per the existing situation infrastructure is found inadequate to cater the tourist needs in proposed subproject sites. Basic facilities like approach roads, shelters, proper linking of roads to Gurudwara with street furniture is not available, and due to this the local people / tourists find it difficult and creates a negative impact to the local tourism growth.

- Narrow roads and poor connectivity impedes vehicular movement. The existing road network is in bad shape.
- Inadequate capacity of culverts and bridges
- Lack of street furniture i.e. street lights, signages
- During Mela season visitors visit Mata Gujri Ji Gurudwara in huge number. Poor conditions of road causes inconvenience for traffic and people movement.
- The bad condition of road also hinders daily vehicular movement of local residents.

10. All sites for subproject (Package No. ----) are owned by PHTPB and Department of Cultural Affairs and Museums) and NOCs and undertakings have been obtained from all the line agency departments thus no land acquisition is required (Annexure 11). The sites are located in Rupnagar city urban and rural areas which were converted into urban use for many years ago, and there is no natural habitat left at these sites. The sites are not within or adjacent to any protected areas. Location map of proposed site is shown in Figure-1.

11. 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.

12. The earth backfill, if any will be done from the site excavated material. Stone, aggregate, sand and other raw materials required are available within 50 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.

13. Water supply during construction will be provided by Municipal Corporation and its Public Health Division (IPH) 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 through Municipal Corporation.

14. Site plan for the proposed sub project area is shown in Figure 2. Annexure 2 shows photo illustration of the project site.

C. Implementation Schedule

15. Preliminary design of the subproject has been completed. The detailed design will be completed by PHTPB / IDIPT/ T3/ 07/08 2014, procurement process is scheduled to commence in 2014, and construction is expected to start in 2015. It is estimated that construction period will cover 24 months. The subproject components are expected to be fully operational by.

16. The final detailed implementation schedule will be provided in the updated IEE once the detailed design phase is completed.

III. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

A. ADB Policy

17. 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.

18. **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.

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

20. **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/Punjabi for the project affected people and other stakeholders shall also be disclosed. 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:

- For environmental category A projects, a draft EIA report at least 120 days before Board consideration;
- Final or updated EIA and/or IEE upon receipt; and
- Environmental monitoring reports submitted by the Project Management Unit (PMU) during project implementation upon receipt.

B. National and State Laws

21. 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.

22. 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 categories[3] - Category A and Category B, based on the spatial extent 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
Establishment of Tourism Facilities and infrastructure showcasing Sikh Culture	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. As a result, the categorization, and the 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 and developing required level of environmental assessment for each component. Categorized as B and IEE prepared

[3] All 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 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
	The Wildlife Conservation Act, 1972, amended in 2003 and 2006, provides for protection and management of Protected Areas.	Not applicable. No wildlife protected area.
	The Forest Conservation Act, 1980 and its subsequent amendments necessitate obtaining clearance from the MoEF for diversion of forest land for non-forest purposes.	Project site is not located within forest area. No tree felling is required.
	Water (Prevention and control of pollution) Act, 1974 and; Air (prevention and control of pollution) Act, 1981	Consent for Establishment (CFE) and Consent for Operation (CFO) from the PPCB for setting up of diesel generators (if any) and batching plant to be obtained by the Contractor, prior to commencement of construction works at site. Apart from this CFE and CFO is also required for stone crushers and quarry sites if exclusively setting up for this project, otherwise it has to be ensured that the construction materials is to be procured from approved quarry sites and stone crushers.
	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.	No sites under the subproject are covered under The Ancient Monuments and Archaeological Sites and Remains Act, 1958, and the rules, 1959 Act.

23. The above Table indicates that the proposed sub-project does not need to go through a full-scale environmental assessment process; as the scale of impacts and categorization of the sub-project components will not require consent/ clearances from Competent Authorities. Therefore, any further approvals or clearances from the GoI or GoP are not envisaged. The ADB guidelines, stipulate addressing environmental concerns, if any, of a proposed activity in the initial stages of Project preparation. For this, the ADB Guidelines categorizes the proposed components into categories (A, B or C) to determine the level of environmental assessment required to address the potential impacts. The sub-project has been categorized as B. Accordingly this IEE is prepared to address the potential impacts, in line with the recommended IEE content and structure for Category B projects.

24. Table 2 below shows the asset owners and details of no objection certificates (NOC) (scanned copies attached as Annex 11

	Subproject Component	**Asset Owner**	**Date of NOC**
1.	Interpretation Centre at Wada Ghallugara	Director, Cultural Affairs Archaeology & Museums, Punjab, Chandigarh	11/09/14
2.	Maharaja Ranjit Singh Treaty Signing Site	Director, Cultural Affairs Archaeology & Museums, Punjab, Chandigarh	16/12/13
3.	Chotta Ghallughara site	Director, Cultural Affairs Archaeology & Museums, Punjab, Chandigarh	11/09/14
4.	Saka Chamkaur Di Garhi	Director, Cultural Affairs Archaeology & Museums, Punjab, Chandigarh	27/08/14

IV. DESCRIPTION OF ENVIRONMENT

A. Physical Environment

25. **Climate.** The climate of Rupnagar District is characterized by its general dryness (except in the south-west monsoon season), a hot summer and a bracing cold winter. The year may be divided into four seasons. The period from about middle of November to February is the cold season. This is followed by the summer season from March to about the end of June. The south-west monsoon season commences late in June and continues up to about middle of September. The period from mid-September to the middle of November constitute the post-monsoon or transition season. The temperature ranges from a minimum of 4°C in winter to 45°C in summer. May and June are generally hottest months and December and January are the coldest months. Relative humidity is high, averaging about 70 percent during monsoon. The average annual rainfall in the district is about 775.6 mm. About 78 percent of the annual rainfall is received during the period from June to September.

26. **Geology & Soil.** The rock formations in the district include river terraces, gravel beds, alluvial fans and calc tufa beds of recent origin and conglomerates, sandstones and claystones of Upper Shiwalik. The Upper Shiwalik mostly comprises boulder conglomerate beds with poorly to moderately sorted sandstone beds. The conglomerate bands are usually poorly cemented and include cobbles and pebbles with some boulders of quartzite, sandstone and siltstone with stray fragments of coarse and fine grained granites, banded quartzite, limestone, trap rock, claystone, carbonaceous phyllite, schist and purple shale. Sub-recent to recent deposits include mainly gravel beds, alluvial fans, river terraces and calc tufa beds.

27. **Surface water.** River Sutlej is the main river traversing through the Rupnagar District and it is supported by many tributaries. The irrigation system in the district is fed by two canals namely Sirhind and Bhakra main canal. The water quality information obtained from Central Pollution Control Board (CPCB), New Delhi has been taken to describe the pollution status/ surface water quality of the Sutlej River. The furnished information in the
28. Table **2** is based on a study under MINARS (Monitoring of Indian Aquatic Resources Series) conducted across India to monitor the pollution levels of all the perennial river systems.

Table 2: River Sutlej Surface Water Quality

Parameters	1km downstream to Rupnagar (Station Code : 1293)	Upstream Headwork's Rupnagar (Station Code : 1019)	1km downstream Rupnagar (Station Code : 1380)	CPCB Norms for Surface Waters
Temperature (°C)	18.7	18.5	18.8	40
Dissolved Oxygen(D.O.) (mg/l)	7.6	7.8	8.4	> 4
pH	7.7	7.5	7.9	6.5-8.5
Conductivity (µmhos/cm)	431	290	284	-
Biochemical oxygen demand (B.O.D.) (mg/l)	1.6	0.9	0.6	< 3 mg/l
Nitrate- N (mg/l)	2.8	2.2	2.3	-
Nitrite-N (mg/l)	1.33	1.15	1.2	-
Fecal Coliform (MPN/100ml)	305	83	50	< 2500
Total Coliform (MPN/100ml)	1533	483	403	< 5000

Source: MINARS, CPCB Delhi

29. From the given information, the water quality of River Sutlej at all sampling locations is observed to be good in comparison with CPCB surface water norms. However, when

compared among them, it is observed that the station code 1293 has relatively high concentration of pollutants particularly those comprising of Fecal Coliforms and Total Coliforms, which clearly indicates that the river water in that location has been polluted by due to the influx of sewage.

30. **Ambient Air Quality.** Under the National Ambient Monitoring program (National Ambient Air Quality Monitoring (NAAQM) Program conducted by the Central Pollution Control Board (CPCB), New Delhi all the state pollution control boards are requested to conduct the ambient air quality monitoring for the selected industrial and residential areas. In Punjab, the Punjab Pollution Control Board (PPCB) has taken the initiative to conduct NAAQM Program. The monitored results are shared by preparing the overall air quality status report. For this assignment, the air quality information for the Rupnagar area has been taken from the status report for discussion. The monitoring has been conducted for industrial and residential areas and the outcome of the analysis is shown in the Table 3.

Table 3: National Ambient Air Quality Monitoring Programme (NAMP)

Location: Rupnagar		Industrial area	Residential area	CPCB,AAQ standards
Sulphur Dioxide SO_2µg/m^3 (Annual)	Max	8	12	50
	Min	6	6	
	Avg	7	9	
Oxides of Nitrogen NO_2µg/m^3 (Annual)	Max	22	45	40
	Min	11	25	
	Avg	7	31	
RSPM µg/m^3 (Annual)	Max	123	268	40
	Min	40	168	
	Avg	94	225	

Source: NAMP Report, CPCB, Delhi

31. It is observed from the analysis, that the key noxious air pollutants like sulphur di-oxide and oxides of nitrogen are well within the permissible limits set by the CPCB. However, the concentration of RSPM is relatively high in comparison with the standard. This may be due to the moving traffic and other anthropogenic activities.

32. **Ambient Noise Quality.** The information on the noise quality for the district was very limited. The secondary information on ambient noise quality has been taken from the Environmental Assessment report carried out for Punjab State Road Sector Projects (PSRSP) in Rupnagar for discussion. The noise quality information is depicted in the Table 4.

Table 4: Ambient Noise Quality

Location		Commercial area	Sensitive area	CPCB Noise Standards
Rupnagar	Day time	68.14	62.73	65
	Night time	58.24	52.22	55

Source: Environmental Assessment, PSRSP

33. From the analysis it is observed that the day time and night time noise levels for commercial areas exceeds the standards stipulated by CPCB. The increase may be likely due to the movement of traffic and commercial activities. However, for sensitive locations the noise quality was observed to be within the limits.

B. Ecological Environment

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34. **Flora.** The floral diversity consists of scattered Khair (Acacia catechu), Chhal (Anogeisus *latifolia*), Jhingan (*Lanea grandis*), Kikar (*Acacia nilotica*) Phalahi (*Acacia modesta*), Ber (*Zizyphus mauritiana*), shisham (*Dalbergia sisoos*), neem (*Azadirachta Indica*), mango(*Mangifera indica*), dhak (*Butea monosperma*) etc., Shrubs such as garna

(*Carissa spinarum*), mehnder (*Dodona viscasa*), mallah (*Zizyphus nummularia*) gandhala (*Marraya koenigil*), basuti (*Adathoda vasica*), jhav(*Artemesia spp*), hins (*Capparis decidua*), panwar (*Cassia tara*), phul buti (*Lantana camara*), etc. and grasses such as (*Saccharum bengalenese*).

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35. The forest strips have mostly artificially raised plantations like shisham (Dalbergia sissoo), eucalyptus (*Edcalyptus spp*), siris (*Albizzia lebbek*), mango (*Mangifera indica*) jaman (*Syzygium communi*) tun (*Cedrela toona*) neem (*Azadiachta indica*). Some of the mixed plantations are amaltas (*Cassia fistula*) jacranda (*Jacranda ovalifolia*), kachnar (*Bauhinca variegata*), bottle brush (*Callistemon vimnalis*) gulmohar (*Delomix rigia*) amla (*Emblica officivalis*) etc.

36. **Fauna**: The main animals found in these areas are Blue Bull (*Boselaphus tragocamelus*), Wild boar (*Sus scrofa*), Sambhar (*Cervas unicolor*), Jackal (*Canis aureus*), Common Mongoose (*Herpestes spp.*), Indian Porcupine (*Hystrix indica*) and Rhesus Monkey (*Macaca mulatta*) etc.

37. The common birds found in the district are :Phalacrocorax niger (vieillot), Butorides striatus chloriceps (Bonaparte), Ardeola grayii (sykes), Bubulcus ibis coromandus (Boddaert), Egretta alba modesta (Gray), E. garzetta (Linnaeus), Anastomus oscitans (Boddaert), C. ciconia (Linnaeus), C. migra (Linnacus), Tadorna ferruginea (pallas), T tadorna(Linnaeus), Nettapus coromandelianus (Gmelin), Haliaeetus leucoryphus (Pallas), Coturnix coromandelica (Gmelin), T. stagnatili (Bechastein), S. pagodrum(Gmelin), Chrysomma sinense (Gmelin).

C. Social Profile

38. **Demographic Profile.** The total population in Rupnagar district were estimated to be 5,83,478, which includes the rural and urban population. The Rupnagar constitutes 30.8% to the total population followed by Anandpur Sahib (25.7), NurpurBedi (16.5), Morinda (14.8%) and Chamkaur Sahib (12.2%). The following Table 5 depicts the census information for the Rupnagar District. The total SC population in Rupnagar District were estimated to be 22.43% of the total population. Rupnagar has 28.8% of SC population which is followed by Chamkaur Sahib (18.97%), Anandpur Sahib (18.80%), Morinda (18.07%) and Nurpur Bedi(15.29%).

Table 5: Rupnagar District Statistics

Sl.No	Particulars	Anandpur Sahib	Chamkaur Sahib	Morinda	NurpurBedi	Rupnagar	Total
1	**Rural Population**						
	Male	70661	38100	34520	50123	70236	263640
	Female	65284	33179	29449	45960	60283	234155
	No. Of Families	24183	12165	10439	16685	22764	86236
	No. Of S.Cs	24599	24830	23643	20016	37781	130869
2	**Urban Population**						
	Male	7400	-	11945	-	26057	45402
	Female	6489	-	10690	-	23102	40281

Source: Rupnagar District Statistics, Rupnagar Administration

39. **Population density.** As per the census 2011, the population density of Rupnagar is 505 people per sq. km. In 2001, the population density was about 449 people per sq. km. In comparison with 2001 census, the population density has an increased by 12.47%.

40. **Literacy rate.** Average literacy rate of Rupnagar in 2011 were 82.19% compared to 76.10% of 2001. Gender wise, male and female literacy were 87.50% and 76.42%

respectively. For 2001 census, same figures stood at 82.70% and 68.70%. Total literates were 502,731 of which male and female were 278,534 and 224,197 respectively.

41. **Sex ratio.** With regards to sex ratio in Rupnagar, it stood at 915 per 1000 male compared to 2001 census of 889 per 1000 male. The average national sex ratio in India is 940 per 1000 male. The child sex ratio is 863 girls per 1000 boys compared to a figure of 799 girls per 1000 boys of 2001 census.

42. **Employment.** Non-agricultural workers are edging over the agricultural workers. As per the census information, the Anandpur Sahib constitutes 27.26% of worker populace, followed by Rupnagar (24%), NurpurBedi (21.42%), Morinda (13.92%) and Chamkaur Sahib (13.4%).

Table 6: Rupnagar Employment Statistics

	Particulars	Anandpur Sahib	Chamkaur Sahib	Morinda	Nurpur Bedi	Rupnagar	Total
1	**Agriculture workers**	21989	11360	13098	18005	15585	80037
2	**Non-agriculture workers**	34880	16611	15963	26664	34429	128547

Source: Rupnagar District Statistics, Rupnagar Administration

D. Socio-Cultural

IV. 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. The proposal envisages medium scale construction activity in the adjoining area of existing buildings and facilities on the site. This would result in some environmental impacts typical to small construction activity even though the proposed facility is compatible with the existing activities taking place at these sites. The plot of land for development of proposed facilities is available inside the existing premises free from any encumbrances and with easy accessibility for the visitors.

- The site is located within densely populated area of city. Gaining free access and movement of workers, vehicles and other construction related machinery would be an issue that will be dealt with by obtaining requisite permissions before commencement of construction works on site. Identity cards & vehicle permits shall be provided by the contractor for all such movement to and from the site.
- Other impacts related to construction activities such as generation of dust and noise, removal of construction debris and demolition wastes etc are envisaged which shall be minimized and addressed by adopting safe engineering practices and appropriate building design. Caution will be exercised in planning for safe construction and operations phase to minimize disturbance to the adjoining existing

activities.

- Provision for water for construction will be made through municipal water supply or through mobile water tankers.

45. **Land Acquisition and Resettlement and cultural Impacts.** The proposed sites of subproject package no. ---- are located within existing fort, and the creation of such a facility does not have any adverse cultural impact. Also, as per the resettlement framework, the proposed categorization for this project is Category C for involuntary resettlement (IR) as it do not result in any physical or economic displacement due to involuntary acquisition of land, or involuntary restrictions on land use or access to the site.

46. **Design Considerations to Avoid Environmental Impacts** The following are design considerations to avoid environmental impacts:

- Incorporation of adequate storm water 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.
- Natural tree species in the proposed landscape.
- Use of local stone in the proposed walkways and built structures thus maintaining a rustic architectural character

47. 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 emphasising use of local materials (wood, stone, etc.) as defined in the management plan of the area.

A. Assessment of Environmental Impacts

48. **Determination of Area of Influence.** The primary impact areas are (i) sites for proposed project 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 Rupnagar district in terms of over-all environmental improvement.

49. In the case of this subproject 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

50. Consents, permits, clearances, NOCs, etc. Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works.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. **Utilities.** Interruption of services (water supply, electricity, toilets 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/DSC will coordinate with the providers/line agencies to relocate the utility.

- **Social and Cultural Resources.** There is a risk that any work involving ground disturbance can uncover and damage archaeological and historical remains. Although no such sites have been identified. For this subproject, excavation will occur in and around existing sites, RoWs and specified government 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.
- 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.
- See chance find protocol (Annex 10) 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. The protocol has been prepared by prepared by Cultural Heritage Conservation Specialist (CHCS) intl. PMC, Thomas Addyman (Simpson and Brown Architects, Edinburg.

- **Sites for construction work camps and areas for stockpile, storage and disposal.** The subproject site is within Chamkaur Sahib and rural tourism cluster premises, where there is enough vacant space for construction work camps including labour camps. However, the contractor will be required to meet the following criteria for selection of the construction sites:

- 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.
- The construction camp, storage of fuel and lubricants should be avoided at the river bank. Any construction camp site will be finalized in consultation with DSC and PIU.

52. **Sources of construction materials.** Moderate 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.

53. It will be the construction contractor's responsibility to verify the suitability of all material sources and to obtain the approval of PIU/DSC. If additional quarries are required after construction is started, then the contractor obtains written approval of PIU.

54. **Erosion control.** Most of the impacts will occur due to excavation and earth movements during construction phase. Prior to commencement of civil works, the contractor will be required to:

- Develop an erosion control and re-vegetation 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 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

55. **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 roads 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.

56. Summary of pre-construction activities is presented in **Table 4.** The responsibilities, monitoring program and costs are provided in detail in the EMP. The contractor is required to update the information during detailed design phase. Sample waste/spoils management plan, traffic management plan, and Chance find protocol etc. are attached as **Annexure 3 & 4 & 10**

Table 4: Summary of Pre-Construction Mitigation Measures

Parameters	Mitigation Measures
Consents, permits, clearances, no objection certificate (NOC), etc.	• 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	• Develop an erosion control and re-vegetation 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 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.
Utilities	• 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	• Consult Archaeological Survey of India or State Department of Archaeology 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 interest groups in consultation forums as project stakeholders so that their expertise can be made available. • Use chance find protocol (Annex 10) 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	• 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 cause inconvenience to the community. • 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	• 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 DSC on a monthly basis documentation of sources of materials.
Access	• 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

Parameters	Mitigation Measures
	concerns/complaints. • Provide free access to households and businesses/shops along ROWs during the construction phase.

B. Anticipated Construction Impacts and Mitigation Measures

57. The impacts during the proposed construction works are generic to the construction activities and not expected to be significant. The EMP specifies the necessary mitigation measures to be strictly followed by the contractor and supervised by the DSC. Key impacts during construction are envisaged on the following aspects: (i) transportation of materials, (ii) dust generation, air and noise pollution from construction activities, (iii) handling of construction materials at site and, (iv) adoption of safety measures during construction.

58. **Construction Schedule and Method.** As per preliminary design, construction activities will cover approximately 2 years. The exact implementation schedule will be updated during detailed design phase and will be reflected in this IEE.

59. The infrastructures will be constructed manually according to design specifications. Demolished 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 the temple complexes 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. Night works may be considered in commercial areas and high day-time traffic as per prevailing conditions at the time of construction.

60. 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.

61. Although construction of these project components involves quite simple techniques of civil work, the invasive nature of restoration works and the subproject sites in built-up areas where there are a variety 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.

62. **Erosion Hazards.** The sites are in the built up area of the town therefore risk of erosion is low, limited during construction activities and not expected to have any negative impact on the drainage and hydrology of the area. However, the contractor will be require 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 drains.
- Maintain vegetative cover within unused land to prevent erosion and periodically monitor the area 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
-

63. **Impacts on Water Quality.** There are no surface water sources near the subproject site therefore impacts on water quality is negligible. Nevertheless, the contractors will be required to:

- Schedule civil works during non-monsoon season, to the maximum extent possible.
- Ensure drainages within the construction zones are kept free of obstructions.
- Keep loose soil material and stockpiles out of drains and flow-lines.
- 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.

64. **Impacts on Air Quality.** There is potential for increased dust particularly during summer/dry season due to various construction activities including stockpiling of construction materials. Emissions from vehicles transporting workers, construction materials and debris/materials to be disposed may cause increase 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 areas cannot be done immediately.
- Maintain construction vehicles and obtain “pollution under control” (PUC) certificate from PSPCB.
- Obtain CFE and CFO for hot mix plants, crushers, diesel generators, etc., if to be used in the project.

65. **Noise and Vibration Impacts.** Most of the activities during proposed works shall be done manually and no big equipments are supposed to be used therefore no noise and vibration impacts are expected. Nevertheless the contractor will be required to:

- Limit construction activities near sensitive areas and other important sites to daytime 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.
- 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.

- Ensure vehicles comply with Government of India noise limits for vehicles. The test method to be followed shall be IS: 3028-1998.

66. **Impacts on Flora and Fauna.** As per preliminary design, tree-cutting is not required. This will be reassessed during detailed design phase. The project components defined under the project are not covered under the Schedule of list of project activities requiring an environment clearance **under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986** thus the subproject does not required an Environment Clearance (EC). The project has no direct and indirect impact zones and no diverse ecological biodiversity is found within project area thus no impacts on flora and fauna will be envisaged. But in general the contractor will be required to:

- Conduct site induction and environmental awareness.
- Limit activities within the work area.
- Do not remove or harm existing vegetation except required under proposed contract.
- Strictly instruct workers not to cut trees for fuel wood.
- 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.

67. **Impacts on Physical and Cultural Resources.** There may be inconvenience to tourists, residents, businesses, and other road users due to construction activities in the proposed complexes and slower flow of traffic in areas with narrow roads. 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 walkways and metal sheets where required to maintain access of people and vehicles.
- 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 (Annexure 10) for archaeological and/or ethno-botanical resources. Works must be stopped immediately until such time chance finds are cleared by experts.

68. **Impact due to Waste Generation.** Demolished structures will be reused to the maximum extent possible. Construction activities will produce excess excavated soils, excess construction materials, and solid wastes (such as removed concrete, wood, 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 Municipal Authorities for beneficial uses of demolished materials or immediately dispose to designated areas.
- Recover used oil and lubricants and reuse; or remove from the sites.
- Avoid stockpiling and remove immediately all demolished materials, excess construction materials, and solid waste (removed concrete, wood, 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.

71. **Impacts on Occupational Health and Safety**. Residential accommodation for workers is not proposed. Workers need to be mindful of occupational hazards which can arise from excavation works in high-traffic and busy areas. 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 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.
- 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 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.

72**. Impacts on Socio-Economic Activities.** Manpower will be required during the 24 months construction phase. This can help generate contractual employment and increase in local revenue. Thus potential impact is positive and long-term. As per preliminary design, land acquisition and closure of roads are not required. However, construction activities may impede access of residents and customers to shops. The potential impacts are negative and moderate but short-term and temporary. The contractor will need to adopt the following mitigation measures:

- Provide sign boards for visitors to inform nature and duration of construction works and contact numbers for concerns/complaints.
- Employ to the maximum extent, local persons within the 20-km immediate area if manpower is available.

73. **Summary of Mitigation Measures during Construction. Table 5** 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 5: Summary of Mitigation Measures during Construction Phase

Potential Impact	Mitigation Measures
Impacts on water quality	• Schedule civil works during non-monsoon season, to the maximum extent possible. • Ensure drainages within the construction zones are kept free of obstructions. • Keep loose soil material and stockpiles out of drains and flow-lines. • 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.
Impacts on air quality	• 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 areas cannot be done immediately. • Maintain construction vehicles and obtain “pollution under control” (PUC) certificate from PPCB. • Obtain CFE and CFO for hot mix plants, crushers, diesel generators, etc., if to be used in the project.
Noise and vibrations impacts	• Limit construction activities in proposed complexes and other important sites to daytime 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: (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)

Potential Impact	Mitigation Measures
	in silence zone.4 • 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	• Conduct site induction and environmental awareness. • Limit activities within the work area. • Do not remove or harm existing vegetation except required under proposed contract • Strictly instruct workers not to cut trees for fuel wood. • 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	• Ensure no damage to structures/properties near construction zone. • Provide walkways and metal sheets where required to maintain access of people and vehicles. • 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	• 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 Municipal Authorities for beneficial uses of demolished materials/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 demolished materials, excess construction materials, and solid waste (removed concrete, wood, 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.
Impacts on occupational health and safety	• Comply with IFC EHS Guidelines on Occupational Health and Safety • 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. • 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 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

[4] 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 PPCB. Mixed categories of areas may be declared as one of the above mentioned categories by PPCB.

Potential Impact	Mitigation Measures
	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	• Provide sign boards for visitors 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.

74. The construction related impacts due to proposed subproject components are generic to construction activities, and are typical of building and other 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.

C. Post-Construction Impacts and Mitigation Measures

75. 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.

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

76. 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 Corporation to put in place solid

waste management programs.

V. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

A. ADB Disclosure Policy

77. 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 and fishermen from whom information on site facts and prevailing conditions were collected.

- As per ADB safeguard requirement, public consultation is to be carried out before and after impact identification. Public consultation was therefore carried out twice, once at the time of start of work with the key stakeholders particularly with wild life authorities and NGOs, and secondly to discuss mitigating measures and get concurrence of stakeholders.

B. Process for Consultation followed

- During project preparation (June to August 2014), consultations have been held with the Department of Tourism, tourists of Amritsar and District administration, District Municipal Administration, local community representatives, 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. Records of the consultations are provided in **Annexure-5**. Topics/issues discussed Annexure 5 which have been addressed in the design of the subproject and in this IEE where applicable.

C. Plan for Continued Public Participation

- 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/DSC at field office and PMU, Chandigarh 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 PHTPB website.

- The EA 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 environmental monitoring reports.

- For the benefit of the community, relevant information in the IEE (Executive Summary) will be translated in Hindi/Punjabi and made available at: (i) Office of the PMU; and, (ii) Office of PIU, Amritsar; (iii) Office of the District Commissioner, Amritsar District (iv) District/Public libraries of the Chandigarh/Amritsar towns. These copies will be made available free of cost to any person 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 PHTPB and the website of ADB after approval of the documents by Government and ADB. The PMU will issue notification on the disclosure mechanism in

local newspapers, ahead of the initiation of implementation of the project, providing information on the project, as well as the start date and expected completion dates etc. The notice will be issued by the PMU in local newspapers one month ahead of the implementation works.

VII. GRIEVANCE REDRESS MECHANISM

- The affected person/aggrieved party can give their grievance verbally or in written to the local 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.

- 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

- **Local Grievance Committee (LGC).** In this LGC has worked with NGO, SHG, Line Agency, Special invitee.

- **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 Punjab, Community Development Officer of PIU, nominated representative of District Magistrate and nominated representative, committee shall be headed by Project Manager (PIU). 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.

- **GRC within Environmental and Social Management Cell (ESMC) 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. 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). Sample Grievance Redress Form is attached as **Annexure-6.**

B. Approach to GRC

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

- Web based: A separate corner will be developed at the program website so that public / community/ affected person can register their complaint in the online column.
- Telecom based: A toll free no. Will be issued by the PMU/ PIU so that general public can register their complaint through telephone / mobile phone to the PIU/PMU office.

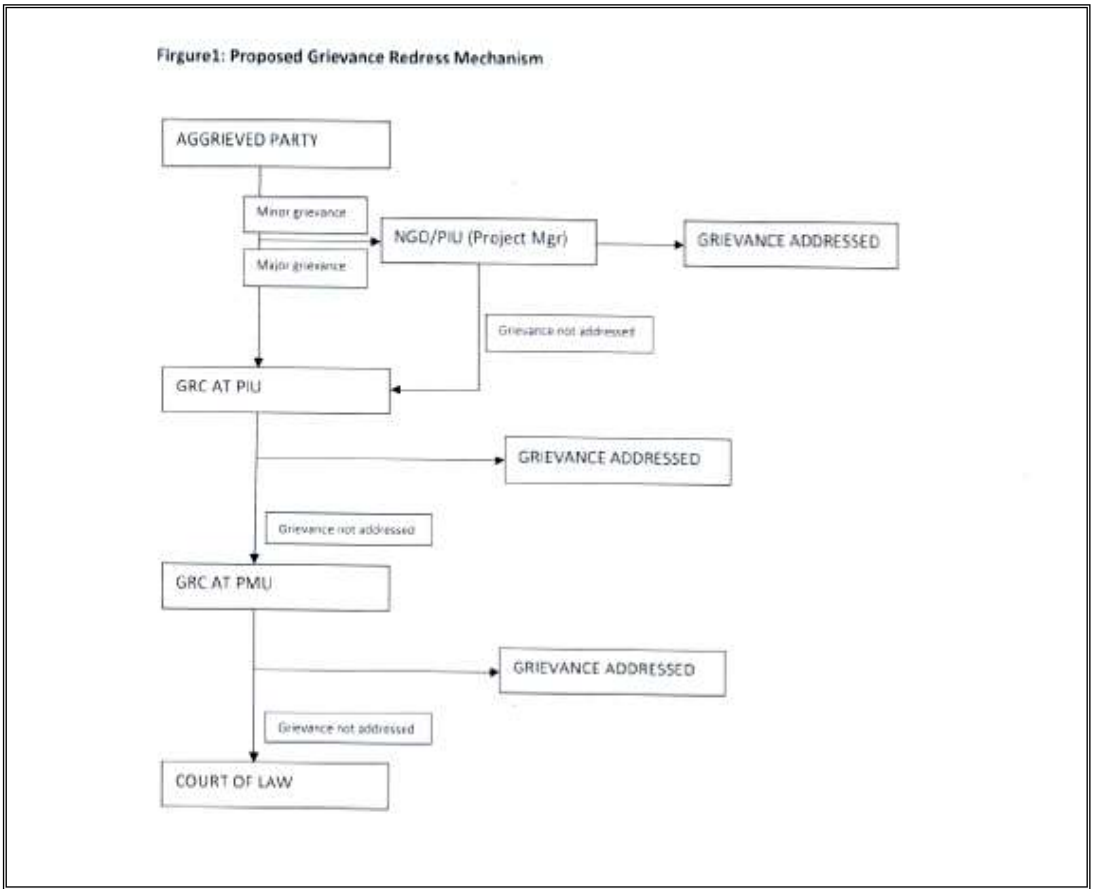


Figure 3: Grievance Redress Mechanism in IDIPT, Punjab

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)

VI .ENVIRONMENTAL MANAGEMENT PLAN

- 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 (Table 5).

- 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.

- 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. Implementation Arrangement

- **Responsibilities for EMP Implementation**: The following agencies will be responsible for EMP Implementation:

  - Punjab Heritage and Tourism Promotion board (PPunjabB). is the Executing Agency (EA) responsible for overall management, coordination, and execution of all activities funded under the loan;
  - PIU,Rupnagar will be the Implementing Agency (IA) responsible for coordinating procurement and construction of the project. PIU through its Project Management Unit (PMU) at Chandigarh will be implementing the project;
  - PMC assists PMU in managing the project including procurement and assures technical quality of design and construction;
  - DSC will prepare the DPR of the project and will carry out construction supervision during project implementation. Their responsibility will also include EMP implementation supervision;
  - PIU shall be established in Rupnagar This PIU will look into progress and coordination of day to day construction works with the assistance of DSC; and
  - The contractor will be responsible for execution of all construction works. The contractor will work under the guidance of the PIU Amritsar and DSC. The environmental related mitigation measures will also be implemented by the contractor.

- 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 1: 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 2: 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 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

- **Responsibility for updating IEE during detailed design.** DSC will be responsible for preparation of IEE and updating it time to time, when required during detailed design and implementation phase.

- **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 Municipal Authority and Department of Tourism.

- **Responsibility for Reporting.** PIU in coordination with DSC will submit monthly, quarterly and semi-annually monitoring report to PMU. On the basis of it PMU will submit to ADB semi-annual monitoring 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. Any major accidents having serious environmental consequences will be reported immediately. PMC environmental expert will help in preparation and finalization of quarterly, semi-annual and annual progress reports. The sample environmental monitoring template is attached as **Annexure-7 to 9.**

B. EMP Tables

- **Tables 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 7: 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.	- Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works.	- Consents, permits, clearance, NOCs, etc.	- PMU	- EA to report to ADB in environmental monitoring report (EMR)	- check CFEs, permits, clearance, prior to start of civil works	PMU
	- Acknowledge in writing and provide report on compliance 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
	- Include in detailed design	- Detailed design documents and	- Contractor	- PMU and	- Upon submi	Contractor

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	drawings and documents all conditions and provisions if necessary	drawings		PMC - PIU and DSC	ssion by contractor	
Establishment of baseline environmental conditions prior to start of civil works	- 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	- Records	- Contractor	- PMU and PMC - PIU and DSC	- to be included in updated IEE report	PMU
Utilities	- Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of	- List and maps showing utilities to be shifted	- DSC to prepare preliminary list and maps of	- PMU and PMC - PIU and DSC	- to be included in updated IEE report	DSC – preliminary design stage Contractor – implementation stage

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	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; - If relocations are necessary, contractor will coordinate with the providers to relocate the utility.	- Contingency plan for services disruption	utilities to be shifted - - During detailed design phase, contractor to (i) prepare list and operators of utilities to be shifted; (ii) contingency plan			
Social and	- Consult	- Chan	- PMC	- PMU	- to be	PMC

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
Cultural Resources	Archaeological Survey of India (ASI) or Punjab 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 interest groups in consultation forums as project stakeholders so that their expertise can be made available.	ce find protocol (Annex 10)	to consult ASI or Punjab State Archaeology Department - PMC to develop protocol for chance finds		included in updated IEE report	

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	- 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	- 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	- List of pre-approved sites for construction work camps, areas for stock pile, storag	- DSC to prepare list of potential sites - DSC to inspect sites proposed by	- PMU - PIU	- to be 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
	(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 sensitive zones. The construction camp site should be finalized in consultation with DSC and PIU.	e and disposal - Waste management plan	contractor if not included in pre-approved sites			
Sources of construction materials	- Use quarry sites and sources permitted by	- Permits issue	- Contractor	- PMU - PIU	- Upon submission	Contractor

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	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.	d to quarries/sources of materials	- PMC and DSC to verify sources (including permits) if additional is requested by contractor		by contractor	
Access	- Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites. - Schedule transport and	- Traffic management plan	- Contractor	- PIU and DSC	- to be 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
	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					

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	receptors by providing sign boards with information about the nature and duration of construction works and contact numbers for concerns/complaints.					
Occupational health and safety	- 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	- Health and safety (H&S) plan	- Contractor	- PMU and PMC - PIU and DSC	- to be 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
	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 construction 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.					

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
	- Provide medical insurance coverage for workers.					
Public consultations	- Continue information dissemination, consultations, and involvement/participation of stakeholders during project implementation.	- Disclosure records - - Consultations	- PMU and PMC - PIU and DSC - Templ e administrators - Contractor	- PMU and PMC	- During updating of IEE Report - During preparation of site- and activity-specific plans as per EMP - Prior to start of construction	PMU Contractor to allocate funds to support

Parameters	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of monitoring	Source of Funds to Implement Mitigation Measures
					- - During construction	

Table 8: 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 to Implement Mitigation Measures
Impacts on water quality	- 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 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	• Visual				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	of excavated and construction materials (sand, gravel, cement, etc.) unless covered by tarpaulins or plastic sheets.	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				
	- Inspect all	• Vehicle inspection report				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	vehicles daily for fluid leaks before leaving the vehicle staging area, and repair any leaks before the vehicle resumes operation.					
Impacts on air quality	- Conduct regular water spraying on stockpiles.	- Visual inspection - No complaints from sensitive receptors • - Records	• Contractor	• PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more	Contractor
	- Conduct regular visual inspection in the construction zones to ensure no excessive dust emissions.	• Visual inspection				
	- Maintain construction vehicles and obtain "pollution under control" certificate from PPCB.	• PUC certificates				
	- Obtain CFE and CFO for hot mix plants, crushers,	• CTE and CTO				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	diesel generators, etc., if to be used in the project.				frequent during dry season and if corrective action is required) • - random inspection by PMU, PIU, PMC and/or DSC	
Noise and vibrations impacts	- Limit construction activities in proposed complexes and other important areas to daytime only. - Plan activities in consultation with PIU/DSC so that activities with the greatest potential to generate noise are	• Work schedule	• Contractor	• PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekl	Contractors

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	conducted during periods of the day which will result in least disturbance.				y 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	
	- 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	- Complaints addre				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	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, 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	ssed satisf actory • - GRM records				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	work will be occurring.					
Impacts on flora and fauna	- Conduct site induction and environmental awareness. - Strictly instruct workers not to cut trees for fuel wood - Do not harm existing vegetation in the area except indicated in site plan	• 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 requir	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 Himachal State Forest Department				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
					ed) • - random inspection by PMU, PIU, PMC and/or DSC	
Impacts on physical cultural resources	- Ensure no damage to structures/properties adjacent to construction zone.	- Visual inspection • - any impact should be addressed by project resettlement plan	• Contractor • In coordination with PIU and DSC for any structures within WTP site and construction zone	• PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if corrective action	Contractor
	- Provide sign boards to inform nature and duration of construction works and contact numbers for concerns/complaints.	- no complaints received • - photo-documentation				
	- Implement good housekeeping. Remove wastes immediately.	- Visual inspection • - No stockpiled/ stored wastes				
	- Ensure workers will not use nearby/adjacent areas as toilet facility.	- No complaints received • - Sanitation facilities for use of workers				
	- Coordinate with PIU/DSC for	• - Approved routes in traffic				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	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.	management plan			is required) • - random inspection by PMU, PIU, PMC and/or DSC	
	- Provide instructions on event of chance finds for archaeological and/or ethno-botanical resources. Works must be stopped immediately until	• condition in chance find protocol (Annex 10), prepared by Cultural Heritage Conservation Specialist (CHCS) intl. PMC, Thomas Addyman (Simpson and Brown Architects, Edinburg.				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	such time chance finds are cleared by experts.					
Impact due to waste generation	- 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 dispose to designated areas. - Recover used oil	• condition in waste management plan	• Contractor	• PIU and DSC	- daily inspection by contractor supervisor and/or environment specialist - weekly visual inspection by DSC (more frequent if corrective action	Contractor

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	and lubricants and reuse; or remove from the site. - Avoid stockpiling and remove immediately all excavated soils, excess construction materials, and solid waste (remove concrete, wood, 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.				is required) • - random inspection by PMU, PIU, PMC and/or DSC	
Impacts on occupational health and safety	- Comply with IFC EHS Guidelines on Occupational Health and	- Visual inspection • - Records	- Contractor	• PIU and DSC	- daily inspection by	Contractor

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	Safety				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	
	- Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	- Visual inspection - Work schedule • - Noise level monitoring in work area				
	- 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 equipment, and preventing injury to fellow workers.	- Records - - Condition in H&S plan				
	- Ensure that qualified first-aid	- Visible first				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site as well as at construction camps.	- aid equipment and medical supplies - - Condition in H&S plan				
	- Provide medical insurance coverage for workers.	- Records				
	- Secure construction zone from unauthorized intrusion and accident risks.	- Area secured • - Trenches barricaded				
	- Provide supplies of potable drinking water.	• - Supply of water				
	- Provide clean eating areas where workers are not exposed to hazardous or	• - Workers area				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
	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.	- Records • - Condition in H&S plan				
	- Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas.	- Visual inspection • - Condition in H&S plan				
	- Ensure moving equipment is outfitted with audible back-up alarms.	- Construction vehicles				

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
		- - Condition in H&S plan				
	- 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.	- Visible and understandable sign boards in construction zone - - H&S plan includes appropriate signs for each hazard present				
Impacts on socio-	- Provide sign boards for	- Visible and	• Contractor	• PIU and DSC	- daily inspe	Contractor

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
economic activities	pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints. - Employ to the maximum extent, local persons within the 20-km immediate area if manpower is available.	understandable sign boards in construction zone - Employment records			ction by contractor supervisor - weekly visual inspection by DSC (more frequent if corrective action is required) • - random inspection by PMU, PIU, PMC	

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 to Implement Mitigation Measures

Potential Impact	Mitigation Measures	Parameter/ Indicator of Compliance	Responsible for Implementation	Responsible for Supervision	Frequency of Monitoring	Source of Funds to Implement Mitigation Measures
Solid waste (debris, excavated soils, etc.)	- 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, if removed - 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.	Pre-existing condition Construction zone has been restored	Contractor	PIU and DSC PIU to submit EMP monitoring report to PMU	- visual inspection by contractor supervisor and/or environment specialist	Contractor

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

- **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	IPIU/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	PMU and PMC	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

D. Environmental Monitoring Program

78. 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.

a. **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[5]

	Field	Phase	Parameters	Location	Frequency	Responsibility
1.	Air quality	Detailed design phase to establish baseline	Particulate matter	At each of the project sites.	24 hours (once)	PMU
		Construction	Particulate matter	At each of the project sites.	24 hours (six monthly except mansoon	Contractor

[5] As per discussions during FFM, no Environment Monitoring is required during Operation and Management of the buildings/ assets under the project.

	Field	Phase	Parameters	Location	Frequency	Responsibility
					season)	
2.	Noise	Detailed design phase to establish baseline	Day time dB(A)	At each of the project sites.	Once before construction	Contractor
		Construction	Day time dB(A)	At each of the project sites.	During noise-generating activities	Contractor

E. Capacity Building

79. 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 would 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	• Work shop	• 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 GoPunjab, 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

a. 80. 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.

b. 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.

c. 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.

d.

Table 11: Indicative EMP Budget[6]

S.N.	Particulars	Stages	Unit	Total number	Rate (INR)	Cost (INR)	Source of fund
A. Monitoring Measures							
1	Air quality monitoring	Detailed design	Per sample	1	10,000	10,000	PMU
2	Noise Levels	Detailed design	Per location	1	4,000	4,000	PMU
3	Ambient Air Quality	Construction	Per Sample	4	10,000	40,000	Contractor budget
4	Ambient Noise Quality	Construction	Per Sample	4	4,000	16,000	Contractor budget
					Sub- Total (A)	**70,000**	
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	PMU
3	Training Session II	Construction	L.S			1,50,000	PMU
					Sub -Total (B)	**4,50,000**	
					Total (A+B) INR	**5,20,000**	

[6] O&M is not expected to cause significant air, water and noise pollution there monitoring will be conducted through visual inspection and costs will be included as part of O&M activities of asset owner.

IX. FINDINGS and RECOMMENDATIONS

e. 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

f. 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

g. 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.

h. 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).

Appendix 1: Rapid Environmental Assessment (REA) Checklist

Instructions:
This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title: **IDIPT – Punjab: Infrastructure Development Investment Program for Tourism (IDIPT) — Establishment of Tourism facilities and infrastructure for showcasing Sikh Culture.**

Sector Division: **SARD (Urban Development and Water Division)**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Densely populated?		✓	The project site of Chamkaur Sahib is in the Rupnagar Town, and is surrounded by settlements; however, the project interventions will be limited inside the site itself.
▪ Heavy with development activities?		✓	It's a small town with not much development activities, or large scale construction work, most of the activities in the project area is only during the annual fair activities, the project work will be carried out to avoid any interference with any regular event in the project site.
▪ Adjacent to or within any environmentally sensitive areas?			
Cultural heritage site	✓		The project area is having four famous *gurudwaras*, and historical site of Maharaja Ranjit Singh's Treaty Signing Sites which are considered as culturally and historically significant heritage sites.
Protected Area		✓	
Wetland	✓		Rupnagar Wetlands, which is a Ramsar site, is located within 5 km from the propose project site of Maharaja Ranjit Singh Treaty Signing Site, however, the activities proposed are outside the wetlands and have interventions which are not covered under the Wetland Rules 2010 and EIA Notification, 2006.
Mangrove		✓	
Estuarine		✓	
Buffer zone of protected area	✓		A section of the subproject area falls under the buffer (10km areal distance) of the Wetland. However, being an up- gradation of the existing rural road, the subproject is exempted from the environmental clearance.
Special area for protecting biodiversity		✓	
B. Potential Environmental Impacts Will the Project cause…			

SCREENING QUESTIONS	Yes	No	REMARKS
Encroachment on historical/cultural areas; disfiguration of landscape by road embankments, cuts, fills, and quarries?		✓	The project activities do not involve any encroachment on historical/cultural areas; disfiguration of landscape by road embankments, cuts, fills, and quarries.
Encroachment on precious ecology (e.g. sensitive or protected areas)?		✓	
Alteration of surface water hydrology of waterways crossed by roads, resulting in increased sediment in streams affected by increased soil erosion at construction site?		✓	The project interventions have been designed to cause no alteration of surface water hydrology of waterways crossed by roads, resulting in increased sediment in streams affected by increased soil erosion at construction site.
Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		✓	Guidelines for siting the labor based camps and construction sites and the site specific criteria needs to be worked out to avoid silt run - off and sanitary wastes onto the surface water bodies.
Increased local air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing?		✓	All technologies and materials used for the construction activities will be selected to cause least air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing.
Noise and vibration due to blasting and other civil works?		✓	Noise impacts from other civil works will be a limited short term impact due to the movement of construction equipments and operation.
Dislocation or involuntary resettlement of people		✓	
Other social concerns relating to inconveniences in living conditions in the project areas that may trigger cases of upper respiratory problems and stress?		✓	
Hazardous driving conditions where construction interferes with pre-existing roads?	√		As the existing road will be operational during the construction, hazardous driving conditions may exist, there is a proper traffic management plan for regulating the traffic flow, incorporating adequate traffic safety measures and signage's or provisions of alternative routes.
Poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations?	√		To the extent local labour shall be employed for the construction purposes. In absence of the local labours, the construction laborers` camp shall be located away from the habitation and from major water bodies. Proper toilets will be established for labour camps to avoid any water pollution surface or groundwater.
Creation of temporary breeding habitats for mosquito vectors of disease?		✓	The project envisages the adoption of good engineering practices that will prevent temporary puddle formation around the construction sites. Rehabilitation of the borrow areas in accordance with the prevalent IRC guidelines, IRC: 10-1951 and siting these borrow areas away from the settlements will ensure the addressal of this impact.
Dislocation and compulsory resettlement of people living in right-of-way?		✓	

SCREENING QUESTIONS	Yes	No	REMARKS
Accident risks associated with increased vehicular traffic, leading to accidental spills of toxic materials and loss of life?		✓	Due to the improved safety conditions, the risks associated with accidental spills and loss of life will be minimized. Improved emergency response systems will ensure that accidental spills, if any, are addressed.
Increased noise and air pollution resulting from traffic volume?		✓	There will be an increased exposure to air and noise pollution, but the impact is not likely to be significant, as the key determinants of the air and noise pollution, as improved surface roughness, facilitation of continuous movement at a constant speed without frequent changing of gears, lesser honking will enable lowering of the pollutant concentrations.
Increased risk of water pollution from oil, grease and fuel spills, and other materials from vehicles using the road?		✓	Such risks may be minimise due to improved traffic management and road conditions.

A CHECKLIST FOR PRELIMINARY CLIMATE RISK SCREENING

Country/Project Title: IDIPT – Punjab — Establishment of Tourism facilities and infrastructure for showcasing Sikh Valour and Traditional Culture
Sector: SARD (Urban Development and Water Division)
Sub sector:
Division/Department:

Screening Questions		Score	Remarks[7]
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by the climate conditions including extreme weather related events such as floods, droughts, storms, landslides?	0	The proposed sub project shall not have any impact on the climatic conditions, due to low impact construction activities and mitigation through EMP plan.
	Would 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	
Materials and Maintenance	Would 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 hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?	0	The construction materials used for this project shall not have any impact on the climate change due to short term local project activities.
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)?	0	Does not arise
Performance of project outputs	Would 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	Does not arise

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): Low

Other Comments: The proposed subproject is to provide improvement to the existing tourism infrastructure available in the Maharaja Ranjit Singh's Treaty Signing Site, Rupnagar. The proposed construction, operation and maintenance of the project do not have any impact on the climatic condition.

Prepared by: Department of Tourism, Punjab

[7] 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.

Annex 2

Photo Illustration

Existing conditions at the Project sites

EXISTING SITE CONDITIONS SAKA CHAMKAUR DI GARHI CHAMKAUR SAHIB

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:

i.

The objectives of SMP are:

j. To minimize spoil generation where possible
k. Maximize beneficial reuse of spoil from construction works in accordance with spoil management hierarchy
l. Mange onsite spoil handling to minimize environmental impacts on resident and other receivers
m. Minimize any further site contamination of land, water, soil
n. 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.

o. Consideration of likely spoil characteristics
p. Identification of possible reuse sites
q. 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:

r. the safety of pedestrians, bicyclists, and motorists travelling through the construction zone;
s. protection of work crews from hazards associated with moving traffic;
t. mitigation of the adverse impact on road capacity and delays to the road users;
u. maintenance of access to adjoining properties
v. Avoid hazards in
w. 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.

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

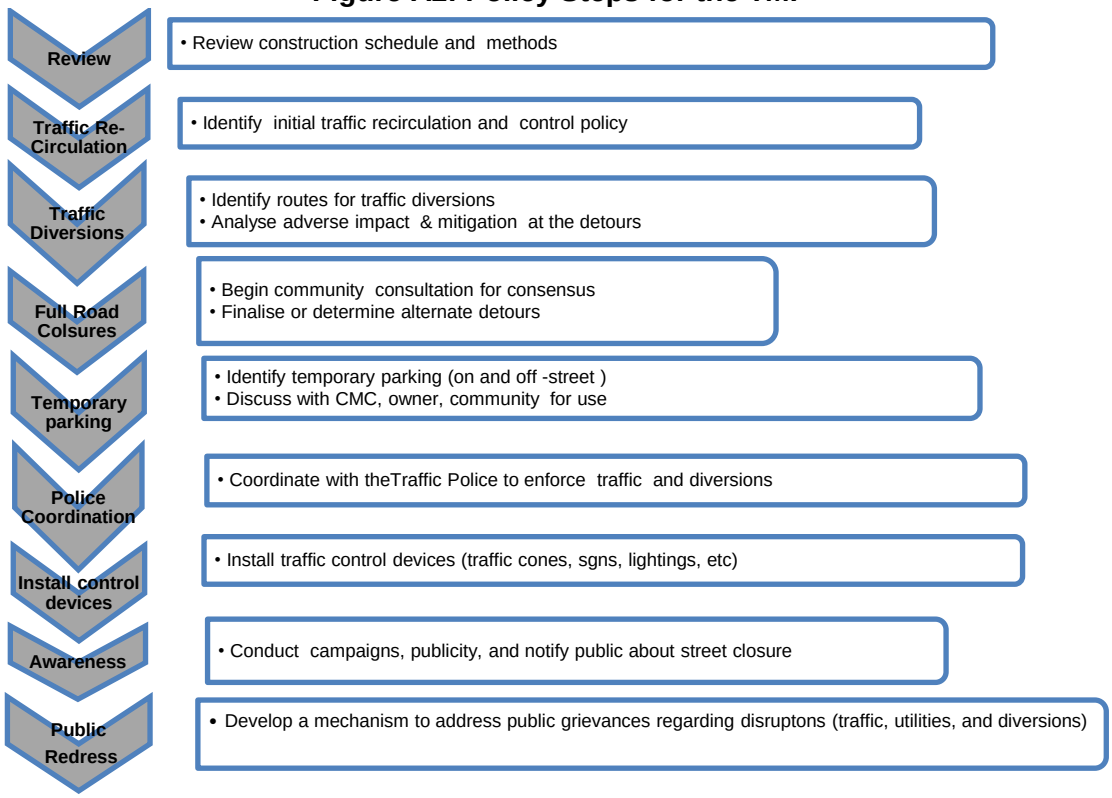
C. Analyze the impact due to street closure, if required

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

ff. approval from the PIU, local administration to use the local streets as detours;
gg. 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;
hh. determining of the maximum number of days allowed for road closure, and incorporation of such provisions into the contract documents;
ii. determining if additional traffic control or temporary improvements are needed along the detour route;
jj. considering how access will be provided to the worksite;
kk. contacting emergency service, school officials, and transit authorities to determine if there are impacts to their operations; and
ll. 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.

4. If full road-closure of certain streets within the area is not feasible due to inadequate capacity of the Detour Street or public opposition, the full closure can be restricted to weekends with the construction commencing on Saturday night and ending on Monday morning prior to the morning peak period.

Figure A1: Policy Steps for the TMP



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 GoN. All vehicles to be used at STWSSP shall be in perfect condition meeting pollution standards of GoN. The vehicle operator requires a pre state of shift checklist. Additional safety precautions will include the requirement for:

mm. Driver will follow the special code of conduct and road safety rules of Government of Nepal.
nn. Drivers to ensure that all loads are covered and secured drivers to ensure operation equipment can't leak materials hauled
oo. 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:

pp. Signs
qq. Pavement Markings
rr. Channelizing Devices
ss. Arrow Panels
tt. 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. Flaggers/ personnel should be equipped with reflective jackets at all times and have traffic control batons (preferably the LED type) for regulating the traffic during night time.

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. There should be provision for lighting beacons and illumination for night constructions.

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

Public Consultations shall be done during detailed design phase and included in final IEE report

Many stakeholder consultations have been done wherein all stakeholders and line agencies have been consulted through physical visits at site by many officials of the department since 2012, the latest records are provided below:

S. No.	Date of Site Visit	Sites Visited	Name of the officials met	Issues Discussed
uu.	05.11.13	All Sub Project Sites of Tranche III	Owners of the site, SDM, DC office, stakeholders, community people, Panchayat members, women groups around the site.	vv. Ownership of the assets under the site and accessibility to the sites. ww. Development activities required at the site for its enhancement/ or adaptive reuse. xx. Responsible agencies for the O & M of the site. yy. Confirmation and consensus for the required interventions through the agencies. zz. Key gender issues and requirements of the local women groups in the area. aaa. Income generating activities which can be taken up by the local community. bbb. Expected benefits of the project by the local community and the stakeholders. ccc. NoC and undertakings required for development of the site.
ddd.	19.11.13	All Sub Project Sites of Tranche III	Regarding NoCs and undertakings	
eee.	20.11.13	All Sub roject Sites of Tranche III	Regarding NoCs and undertakings	
fff.	28.13.13	All Sub Project Sites of Tranche III	Regarding NoCs and undertakings	
ggg.	21.05.14	Rupnagar Wetland Nangal Wetland Parking at Gurudwara Patalpuri Tranche III		
hhh.	14.07.14	"		

Annexure-6

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:	

Annex-7

Sample Semi-Annual Environmental Monitoring Report Template

This template must be included as an Annex in the EIA/IEE that will be prepared for the project. It can be adapted to the specific project as necessary.

INTRODUCTION

iii. Overall project description and objectives
jjj. Description of sub-projects
kkk. Environmental category of the sub-projects
lll. Details of site personnel and/or consultants responsible for environmental monitoring
mmm. Overall project and sub-project progress and status

No.	Sub-Project Name	Status of Sub-Project				List of Works	Progress of Works
		Design	Pre-Construction	Construction	Operational		
		☐	☐	☐	☐		
		☐	☐	☐	☐		
		☐	☐	☐	☐		

COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS

No.	Sub-Project Name	Statutory Environmental Requirements	Status of Compliance	Action Required

COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS

No. (List schedule and paragraph number of Loan Agreement)	Covenant	Status of Compliance	Action Required

COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

nnn. Provide the monitoring results as per the parameters outlined in the EMP. Append supporting documents where applicable, including Environmental Site Inspection Reports.
ooo. There should be Reporting on the following items which can be incorporated in the checklist of routine Environmental Site Inspection Report followed with a summary in the semi-annual Report send to ADB. Visual assessment and review of relevant site documentation during routine site inspection needs to note and record the following:
ppp. What are the dust suppression techniques followed for site and if any dust was noted to escape the site boundaries;
qqq. If muddy water was escaping site boundaries or muddy tracks were seen on adjacent roads;
rrr. adequacy of type of erosion and sediment control measures installed on site, condition of erosion and sediment control measures including if these were intact following heavy

rain;

sss. Are their designated areas for concrete works, and refuelling;

ttt. Are their spill kits on site and if there are site procedure for handling emergencies;

uuu. Is there any chemical stored on site and what is the storage condition?

vvv. Is there any dewatering activities if yes, where is the water being discharged;

www. How are the stockpiles being managed;

xxx. How is solid and liquid waste being handled on site;

yyy. Review of the complaint management system;

zzz. Checking if there are any activities being under taken out of working hours and how that is being managed.

Annexure-8

Summary Monitoring Table

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring
Design Phase						
Pre-Construction Phase						
Construction Phase						
Operational Phase						

Overall Compliance with CEMP/EMP

No.	Sub-Project Name	EMP/CEMP Part of Contract Documents (Y/N)	CEMP/EMP Being Implemented (Y/N)	Status of Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfactory)	Action Proposed & Additional Measures Required

APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

aaaa. Brief description on the approach and methodology used for environmental monitoring of each sub-project

MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS (AMBIENT AIR, WATER QUALITY AND NOISE LEVELS)

bbbb. Brief discussion on the basis for monitoring

cccc. Indicate type and location of environmental parameters to be monitored

dddd. Indicate the method of monitoring and equipment to be used

eeee. Provide monitoring results and an analysis of results in relation to baseline data and statutory requirements

As a minimum the results should be presented as per the tables below.

Air Quality Results

Site No.	Date of Testing	Site Location	Parameters (Government Standards)		
			PM10 (µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)

Site No.	Date of Testing	Site Location	Parameters (Monitoring Results)		
			PM10 (µg/m3)	SO2 (µg/m3)	NO2 (µg/m3)

Water Quality Results

Site No.	Date of Sampling	Site Location	Parameters (Government Standards)					
			pH	Conductivity (µS/cm)	BOD (mg/L)	TSS (mg/L	TN (mg/L)	TP (mg/L)

Site No.	Date of Sampling	Site Location	Parameters (Government Standards)					
			pH	Conductivity (µS/cm)	BOD (mg/L)	TSS (mg/L	TN (mg/L)	TP (mg/L)

Noise Quality Results

Site No.	Date of Testing	Site Location	LA_{eq} (dBA) (Government Standard)	
			Day Time	Night Time

Site No.	Date of Testing	Site Location	LA_{eq} (dBA) (Government Standard)	
			Day Time	Night Time

SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS
ffff. Summary of follow up time-bound actions to be taken within a set timeframe.

Annexes
gggg. Photos
hhhh. Summary of consultations
iiii. Copies of environmental clearances and permits
jjjj. Sample of environmental site inspection Report
kkkk. Other

Annex-9

SAMPLE ENVIRONMENTAL SITE INSPECTION REPORT

Project Name
Contract Number

NAME: _____ DATE: _____
TITLE: _____ DMA: _____
LOCATION:_____ GROUP: _____

WEATHER CONDITION:
_____

INITIAL SITE CONDITION:
_____

CONCLUDING SITE CONDITION:

Satisfactory _____ Unsatisfactory_____ Incident_____ Resolved _____ Unresolved _____

INCIDENT:
Nature of incident:
_____

Intervention Steps:
_____

Incident Issues

Resolution

Project Activity Stage	Survey	
	Design	
	Implementation	
	Pre-Commissioning	
	Guarantee Period	

Inspection

Emissions	Waste Minimization
Air Quality	Reuse and Recycling
Noise pollution	Dust and Litter Control
Hazardous Substances	Trees and Vegetation

Site Restored to Original Condition	Yes	No			

Signature
_____

_____ _____
Name **Position**

Annexure 10

Protocol for Design and Supervision Consultants (DSC)

RECORDING WHEN HISTORIC FEATURES ARE REVEALED DURING EXCAVATIONS IN ARCHEOLOGICALLY SIGNIFICANT BUILDINGS AND STRUCTURES.

1.1 Introduction
When historic features such as walls, brick constructions and other features are encountered during excavation the excavation must be stopped immediately and the DSC must be informed immediately.

1.2 Cleaning
When a feature is discovered it must be defined by careful cleaning. Roots must be removed and dirt must be carefully cleaned away and brickwork revealed and carefully scraped clean. The section or trench base should also be cleaned back for a little distance around the feature.

1.3 Record photography
When the feature is clean good photography should be taken – vertical and face-on shots and a few general shots of the feature, also showing its position in relation to surrounding features, buildings, etc. The red and white photographic scale should be in each photograph. The scale should be parallel to the top and bottom of each camera shot. The photographic scale should be kept in the store room in the northern bastion on site when not in use [ADD EXAMPLE PHOTOS].
When test excavations / investigations are made at the fort (to examine historic floor levels, etc) these should also be recorded photographically. The photographic scale should be used.
The photographed should be catalogued (date, location, direction of shot)

1.4 Drawn record
When features are revealed a drawn record should also be made.
lllll. General location record – measuring its position and orientation within the fort / in relation to surrounding structures
mmmm. Record drawings – detail drawings made in plan and section/profile. The extent (edges) of the feature should be drawn and the level of the existing ground surface and the top and base of the feature should be recorded. These levels should be marked on the drawings. The drawings should include detail of the construction of the feature. Perspective sketches could also be made if necessary. Explanatory notes can also be put on the drawings.
1.5 Reporting finds
When finds are made these should be reported to PMC (for the attention of Tom Addyman). Photographs and record drawings should be sent.

1.6 Discovery of historic objects
When clearance and excavation takes place artefacts and historic objects are sometimes found. These should be recovered and kept in a safe place. The place of discovery should be recorded and each find given a number and tag tied to the find with the same number on it. A list of the finds should be kept (with the find No. And place of discovery and date of discovery recorded). Tom Addyman will inspect the finds in the store when he does site inspections to decide which are important and should be kept.

1.7 Contractors' instruction: mechanical excavation of services trenches at Gobindgarh Fort
Contractors working at Gobindgarh Fort must take additional care not to destroy or damage historic features during excavations. There are many buried historic features inside the fort

– wells, ancient drains, remains of buildings, other walls, grain pits, etc. Every care must be made not to destroy these during excavations.
Excavator drivers need to be instructed to be aware of hitting buried features and that they must be investigated before continuing work.
When features are encountered during mechanical excavation work should stop and the DSC must be informed immediately so that they can be inspected at the first opportunity.

NO OBJECTION CERTIFICATE AND UNDERTAKING FOR OPERATION AND MAINTENANCE OF SAKA CHAMKAUR DI GARHI, CHAMKAUR SAHIB

NO OBJECTION CERTIFICATE

It is certified that there is no objection if the proposed project .....

CHAMKAUR SAHIB, SAKA CHAMKAUR DI GARHI
(name of the project)

is executed by PHTPB of the Tourism Department (Punjab) as per the guide lines of Govt. of India and ADB loan funded projects under IDIPT at .....

CHAMKAUR SAHIB
(details of land/area/ building)

.....

Place: Chandigarh
Date: 27/8/14

Signature .....
Department /owner

(Official Stamp)

Counter Signed

Cultral Affairs, Archaeology & Museums, Punjab, Chandigarh

Deputy Commissioner

(Official Stamp)

CERTIFICATE AND UNDERTAKING

It is certified that: -

1. The ...CHAMKAUR SAHIB...
(details of land/area/ building)
..... Where
the ...SAKA....CHAMKAUR....DI....GARHI.....
(name of the project)
..... project is proposed, for execution by PHTPB of the Tourism Department (Punjab), is under the ownership of DEPARTMENT OF CULTURAL AFFAIRS, ARCHAEOLOGY & MUSEUMS and is
(Details of the owner)
under the possession of .....
.....Dept. of Cultural Affairs.....
(Details of possessor)

2. There is NO encroachment and NO resettlement/displacement/rehabilitation of people involved in the above Proposed Project area/building/land.

3. The proposed Project is not Partially/Fully part of any other project funded under any other scheme/programme of the State/Central Govt. or any external funding.

4. The assets created as a result of the execution of above stated project will be taken over for operation and maintenance by .....
(Name of the department/organization
.....Dept of Cultural Affairs.....

Place: Chandigarh
Date: 27/8/14

Signature .....
Department/Organisation/Owner
(Official Stamp)

Director,
Cultral Affairs Archaeology &
Museums, Punjab, Chandigarh

Counter Signed

Deputy Commissioner
(Official Stamp)

No Objection Certificate and Undertaking for Operation and Maintenance of Chhotta Ghallughara Interpretation Centre

NO OBJECTION CERTIFICATE

It is certified that there is no objection if the proposed project .....

Interpretation Center at Chota Ghallughara
(name of the project)

is executed by PHTPB of the Tourism Department (Punjab) as per the guide lines of Govt. of India and ADB loan funded projects under IDIPT at Gurdaspur

.....
(details of land/area/ building)

.....

Place: Chandigarh

Date: 11/9/14

Signature .....
Department /owner

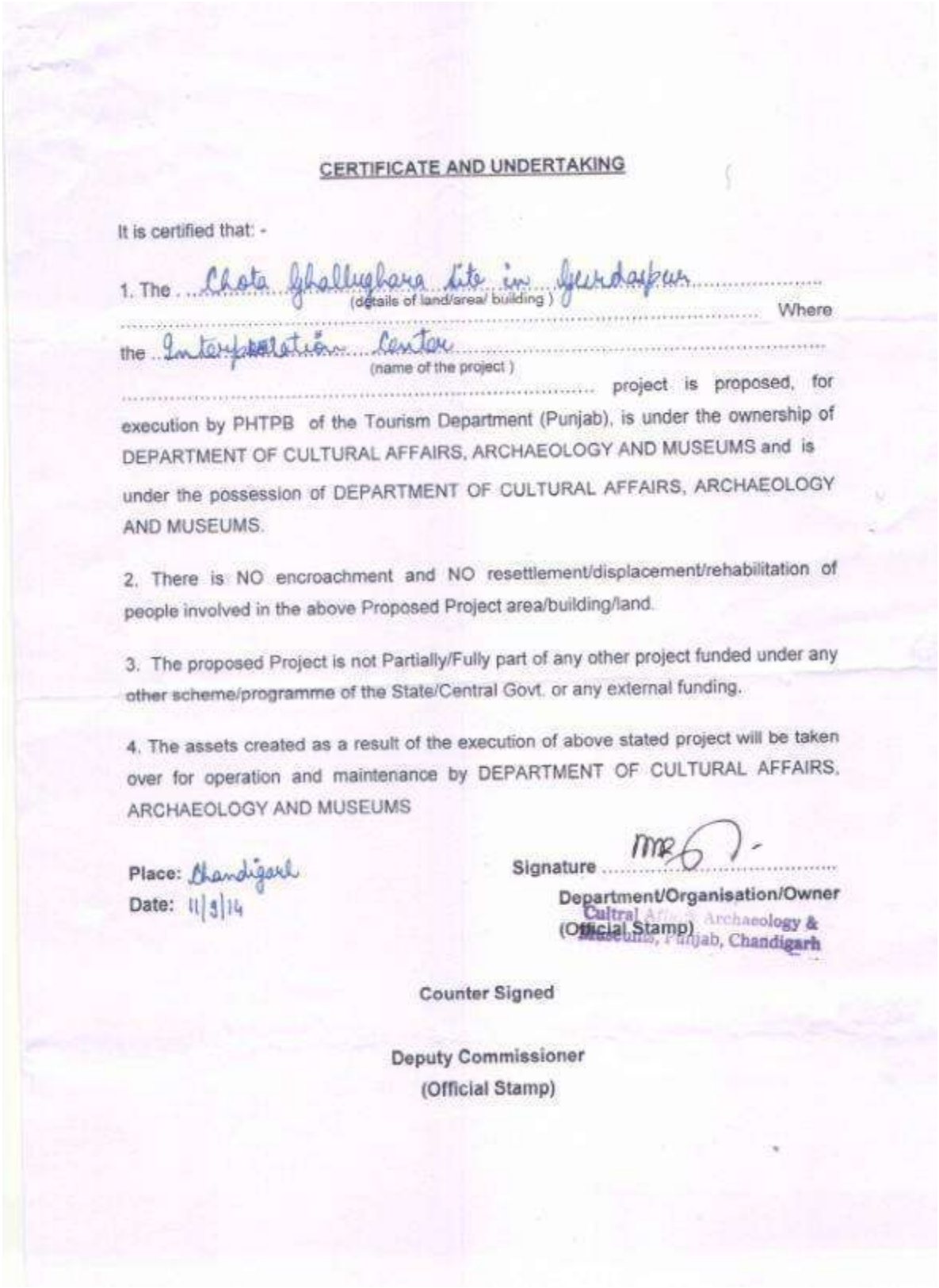
Director,
Cultral Affairs Archaeology &
Museums, (Official Stamp) garh

Counter Signed

Deputy Commissioner

(Official Stamp)

Objection Certificate and Undertaking for Operation and Maintenance of Chotta Ghallughara Interpretation Centre



CERTIFICATE AND UNDERTAKING

It is certified that: -

1. The Chota Ghallughara Site in Gurdaspur (details of land/srea/ building) Where the Interpretation Center (name of the project) project is proposed, for execution by PHTPB of the Tourism Department (Punjab), is under the ownership of DEPARTMENT OF CULTURAL AFFAIRS, ARCHAEOLOGY AND MUSEUMS and is under the possession of DEPARTMENT OF CULTURAL AFFAIRS, ARCHAEOLOGY AND MUSEUMS.

2. There is NO encroachment and NO resettlement/displacement/rehabilitation of people involved in the above Proposed Project area/building/land.

3. The proposed Project is not Partially/Fully part of any other project funded under any other scheme/programme of the State/Central Govt. or any external funding.

4. The assets created as a result of the execution of above stated project will be taken over for operation and maintenance by DEPARTMENT OF CULTURAL AFFAIRS, ARCHAEOLOGY AND MUSEUMS

Place: Chandigarh
Date: 11/9/14

Signature .....
Department/Organisation/Owner
(Official Stamp)
Cultral Affairs, Archaeology & Museums, Punjab, Chandigarh

Counter Signed

Deputy Commissioner
(Official Stamp)

No Objection Certificate and Undertaking for Operation and Maintenance of Maharaja Ranjit Singh Treaty Signing Site

Department of Cultural Affairs, Archaeology & Museum, Punjab
Plot No. 3, Sector 38-A, Chandigarh.

DCAM/ACRH/No. 7200 Dated: 16-12-13

Subject:- **No Objection Certificate and undertaking for the Interpretation centre at Maharaja Ranjit Singh is treaty site. Development of treaty site, approach road/Track to the top of (Maharaja Ranjit Singh artillery position) Distt. Saheed Bhagat Singh Nagar (Nawanshar) by PHTPB.**

It is certified that there is no objection if the proposed project Interpretation centre Maharaja Ranjit Singh is treaty site. Development of treaty site, approach road/Track to the top of hill (Maharaja Ranjit Singh artillery position) Distt. Saheed Bhagat Singh Nagar (Nawanshar) is executed by PHTPB of the Tourism Department (Punjab) as per the guide lines of Govt. of India and ADB loan funded project under IDIPT at village Aasro, Tehsil Balachaur, Distt. Saheed Bhagat Singh Nagar (Nawanshar). This site contains a total area of 63 Kanal 2 marle protected vide notification No. 10/28/06-4 TC/1806 dated 09-07-2008. The conservation should be done as per archaeological principals. The Department of Cultural Affairs undertakes that:-

1. There is no encroachment and no resettlement/ displacement/rehabilitation of people involved in the above Proposed Project area/building/land.
2. The proposed project is not partially/fully part of any other project funded under any other scheme/programme of the State/Central Govt. or any external funding.
3. The assets created as a result of the execution of above stated project will be taken over for operation and maintenance by Department of Cultural Affairs, Archaeology & Museums, Punjab.

A management plan of the monument/building may please be made.

Place: Director

No Objection Certificate and Undertaking for Operation and Maintenance of Wadda Ghallughara Interpretation Centre

NO OBJECTION CERTIFICATE

It is certified that there is no objection if the proposed project .....

....Interpretation Center at Wada Ghallughara.....
(name of the project)

is executed by PHTPB of the Tourism Department (Punjab) as per the guide lines of Govt. of India and ADB loan funded projects under IDIPT at .Malerkotla.....

....dist. Sangrur.....
(details of land/area/ building)

.....

Place: Chandigarh
Date: 11/9/14

Signature .....
Department /owner

Director,
Cultral Affairs Archaeology &
Museums, Punjab, Chandigarh
(Official Stamp)

Counter Signed

Deputy Commissioner

(Official Stamp)

CERTIFICATE AND UNDERTAKING

It is certified that: -

1. The Wada Ghalughara site in Malerkotla, Sangrur
(details of land/area/ building)
..... Where
the Interpretation Centre
(name of the project)
..... project is proposed, for execution by PHTPB of the Tourism Department (Punjab), is under the ownership of DEPARTMENT OF CULTURAL AFFAIRS, ARCHAEOLOGY AND MUSEUMS and is under the possession of DEPARTMENT OF CULTURAL AFFAIRS, ARCHAEOLOGY AND MUSEUMS.

2. There is NO encroachment and NO resettlement/displacement/rehabilitation of people involved in the above Proposed Project area/building/land.

3. The proposed Project is not Partially/Fully part of any other project funded under any other scheme/programme of the State/Central Govt. or any external funding.

4. The assets created as a result of the execution of above stated project will be taken over for operation and maintenance by DEPARTMENT OF CULTURAL AFFAIRS, ARCHAEOLOGY AND MUSEUMS

Place: Chandigarh
Date: 11/9/14

Signature .....

Department/Organisation/Owner
(Official Stamp)

Director,
Cultural Affairs, Archaeology & Museums, Punjab, Chandigarh

Counter Signed

Deputy Commissioner
(Official Stamp)