



TOURISM FOR ECONOMIC GROWTH

Environmental and Social Management Plan

Widening/Rehabilitation/Improvement of Road from Kallar Kahar to
Manara District Boundary of Chakwal, Total Length 28 Km, District
Chakwal

(July, 2023)



Project Management Unit (PTEGP)
Planning and Development Board
Government of Punjab

Table of Content

Contents	Executive Summary	6
1.	Introduction	9
	1.1 Overview	9
	1.2 Project Environmental and Social Management Framework	9
	1.3 Introduction of Sub-Project.....	10
	1.4 Purpose of this Document.....	10
	1.5 Methodology of the Study	11
2.	Applicable Regulatory and Legal Framework	12
	2.1 National and Provincial Legislative Framework.....	12
	2.1.1 Environment Protection Agency	13
	2.1.2 National Environmental Policy 2005	13
	2.1.3 Punjab Environmental Quality Standards (PEQS), 2016	13
	2.1.4 Pakistan Penal Code, 1860	13
	2.1.5 Motor Vehicle Rules 1969	13
	2.1.6 Pakistan Labour Policy, 2010.....	13
	2.1.7 The Bonded Labour System (Abolition) ACT 1992.....	14
	2.1.8 The Land Acquisition Act (LAA), 1894	14
	2.1.9 Provincial Wildlife Act, 1974	14
	2.1.10 Pakistan Antiquities Act 1975 and Punjab Antiquities Amendment Act 2012....	14
	2.1.11 The Forest Act, 1927 (and Provincial Acts and Rules)	14
	2.1.12 Employment of Child Act, 1991 and Punjab Restriction of Employment of Children Ordinance, 2016	14
	2.2 International Laws/Treaties	14
	2.2.1 UNESCO World Heritage Convention	15
	2.2.2 World Bank Operational Policies.....	15
3.	Project Description	17
	3.1 Introduction.....	17
	3.2 Proposed Intervention	17
	3.3 Labour Requirement	18
	3.4 Water Supply	18
	3.5 Source of Construction material.....	18
	3.6 Source of Material	19
	3.7 Construction Schedule	19
	3.8 Labour Residence.....	19
	3.9 Vegetation Removal/Tree Cutting	20
	3.10 Project Summary	21
4.	Baseline Conditions	22
	4.1 Physical Environment.....	22
	4.2 Biological Environment	28
	4.3 Social Environment	29
5.	Stakeholder Consultations	34
	5.1 Consultation Process and Technology	34
	5.2 Consultation Session with Women of the Area.....	45
	5.3 Pictorial View of Stakeholder & Public Consultation	46

6.	Environmental & Social Screening.....	49
	6.1 Findings of E&SS	49
7.	Mitigation Measures and Implementation Plan	Error! Bookmark not defined.
8.	Waste Management Plan	66
	8.1 Solid Waste Management	66
	8.2 Liquid Waste Management	67
9.	Training Plan.....	68
10.	Illustrated Traffic Management Plan.....	70
11.	Environmental & Social Monitoring Plan	72
12.	ESMP Implementation Cost.....	74
13.	Grievance Redress Mechanism.....	76
14.	Conclusion	77
ANNEXURES	78
Annexure A:	Checklist Completed for Environmental & Social Screening.....	79
Annexure B:	Chance Find Procedure	84
Annexure C:	COVID-19 SOPs for Construction Sites.....	84
Annexure D:	Environment and Social Monitoring Checklist.....	86
Annexure E:	Wildlife Protected Areas Details of District Chakwal	90
Annexure F:	Request of Imposing Section 4.....	97
Annexure G:	Communication Record Communication Record Regarding Require NOC from Punjab Forest Department	100
Annexure H:	Environmental Guidelines for the Contractor.....	102

List of Tables

Table 1:	Source of Raw Materials
Table 2:	Vegetation and Tree Plantation Need to be Cleared
Table 3:	Project Summary
Table 4:	Groundwater Test Results
Table 5:	Surface Water (Canal Water) Test Results
Table 6:	Ambient Air Quality Monitoring near Kalar Kahar
Table 7:	24 Hours Noise Monitoring at two Locations along the Road
Table 8.1:	Stakeholder and Public Consultation
Table 8.2:	Consultation Details of Session with Women of the Area
Table 9:	Environmental Management and Monitoring Plan
Table 10:	Proposed Training Plan
Table 11:	Environmental Monitoring Plan
Table 12:	Estimated ESMP Implementation Cost

List of Figures

Figure 1:	Location Map Kalar Kahar to Manara Road
Figure 2:	District Chakwal Land Use Map
Figure 3:	Procedure for Registering Complain

List of Abbreviations

Acronym	Definition
ARAP	Abbreviated Resettlement Action Plan
DG	Director General
EP	Environmental Protection
EPA	Environmental Protection Agency
ESMF	Environment and Social Management Framework
ESMP	Environment and Social Management Plan
E&S	Environmental and Social
E&SS	Environmental and Social Screening
BHU	Basic Health Unit
EA	Environmental Assessment
EIA	Environment Impact Assessment
GOP	Government of Pakistan
GOPb	Government of Punjab
GRC	Grievances Redress Committee
GRM	Grievances Redress Mechanism
GRO	Grievances Redress Officer
IEE	Initial Environment Examination
L/S	Lump Sum
MSDS	Material Safety Data Sheet
MVE	Motor Vehicle Examiners
NA	Not Applicable
NOC	No objection certificate
OHS	Occupational Health and Safety
OP	Operational Policy
PDO	Project Development Objective
P&DD	Planning & Development Department
PMU	Project Management Unit
PTEGP	Punjab Tourism for Economic Growth Project
RAP	Resettlement Action Plan
RHC	Rural Health Centre
R/I	Rehabilitation/Improvement
RPF	Resettlement Policy Framework
ROW	Right of Way
SAA	Same as Above
SDO	Sub-Divisional Officer
TMA	Tehsil Municipal Administration
UNESCO	United Nation, Education, Scientific and Cultural Organization
USD	United States of America, Dollar
WB	World Bank

Executive Summary

The Planning & Development Department, Government of Punjab (GOPb) with the financial assistance of the World Bank (WB) has launched the Punjab Tourism for Economic Growth Project (PTEGP) to increase the contribution of the tourism and related sectors to the local economic development of the province. The objectives of the project are to strengthen institutional capacity, increase private sector participation and improve infrastructure services for the tourism sector growth in the Province of Punjab. The total funding of the Project is 55 Million USD with a World Bank contribution of USD 50 million over the five-year time frame.

The project is being implemented by a dedicated Project Management Unit (PMU) PTEGP since October 2017. The project is financing some low-scale physical interventions to provide improved access, better road conditions and public convenience facilities in selected tourists destinations located throughout the Punjab Province.

The detail of sub-projects to be executed under the PTEGP was not available during the project initiation, so an Environmental and Social Management Framework (ESMF) was prepared for PTEGP in December 2016.

The road proposed for widening/improvement/rehabilitation under PTEG Project is a part of the road called Chakwal-Khushab road or locally known as Kallar Kahar road which extends from Chakwal to Khushab. The first 28 Km length of the road from Kallar Kahar to Manara town is studied under this sub-project. This road plays an important role of linking Chakwal and Khushab districts which are home to many popular and potential tourist destinations such as Kallar Kahar Lake, Neela Wahn Ponds, Swaika lake and famous lakes of Soon Sakesar Valley, District Khushab including Uchali lake, Khabeki lake.

Present condition of the road is deteriorated. Steep gradient of the road near kalar Kahar cause problems for heavy vehicles including busses, trucks etc. and speedup deterioration of the road. The part of the road will be reconstructed and additional loop is added for reducing the gradient of the road.

This document forms ESMP report for the proposed work scheme. It is envisaged that the sub-project falls under category B project from environmental and social point of view. This is mainly because of rehabilitation of the existing busy road and acquisition of 31 kanal of land for the addition of new length of the road. ARAP will be submitted as a separate report.

This ESMP report is prepared in accordance to the approved ESMF of the project. The data required for this report has been obtained from both primary (field visit/s, laboratory based monitoring/testing, consultations, project engineering document/s, designs etc.) and secondary sources (literature including documents/ reports/ papers/ dissertations/ encyclopedias both available online and in printed format/s etc.).

Following two World Bank Operational Policies are triggered:

OP 4.01 – Environment Assessment; and

OP4.12 – Involuntary Resettlement.

Local environmental protection acts and rules/regulations including Punjab Environmental Protection Act 1997 (Amendment 2012), Review of IEE & EIA Regulation 2000 etc. will also adhere for all sub-project being executed under PTREGP.

Physical environmental parameters including water quality, ambient air quality and noise level were monitored/tested for developing baseline conditions of the area by an approved laboratory from EPA Punjab. The monitoring/test results indicate that if the contractor use existing source of the groundwater (tube-well, hand-pump etc.) than it should be ensured that it meets the required criteria, as microbial contamination are recorded in both groundwater samples. However, it is

envisaged that the presence of microbial contamination in groundwater is possibly because of poor installation or maintenance of installed pipework. Microbial contamination is considered to be eliminated by increasing the extraction depth of groundwater. Neela Wahan hill torrent water quality meets the FAO irrigation standards and bathing purpose but not fit for drinking purpose due to elevated microbial contamination. The hill torrent water can be used for drinking after boiling or other necessary treatment for microbial contaminations. Ambient air quality and noise monitoring along the road meets the Punjab Environmental Quality Standards for commercial area.

The project area lies in the semi-arid climatic zone and has two well-defined seasons, summer and winter. Due to a higher elevation than Central Punjab, the district Chakwal experiences lower temperatures during the winter. Winter temperatures normally range between 4° C and 25° C, and summer temperatures average between 17° C and 28° C.

Salt Range of District Chakwal and Khushab provides habitat of game birds including Partridges, Chakor and Hubara Bustard and locally protected mammals i.e. Urial, Hare and Deer. Kallar Kahar lake provides habitat of waterfowl and is protected from hunting or poaching of wildlife by Punjab Wildlife Department. However, the lake is open for the tourists for boating, bird watching etc. Whole tahsil of Kalar Kahar is closed for any hunting or poaching by Punjab Wildlife Department from more than last 15 years. The tehsil provides rich wildlife habitat, mainly for partridges and Urial. However, the road right of way (ROW) is in the possession of Punjab C&W Department. Khshab – Chakwal road is a busy highway of the area and accommodate local light traffic (cars, motorbike) and heavy traffic (busses, dumpers etc.). Source of heavy traffic is mainly due to the local mining industry. Because of intensive human activities along the road (living and commercial area), the ROW does not provide habitat of wildlife, further details of the ROW is provided under chapter 4 of this report. The concern length of the road (sub-project area) does not falls in environmentally sensitive site e.g. Game reserve, Wildlife Century, National Park etc. No known wildlife crossing located within the concern length of the road.

Common vegetation found along the road include Jhand (*Prosopis cineraria*), Bari (*Zizyphus mauritiana*) Frash (*Tamarix aphylla*), Snatha (*Dodonaea viscosa*) and Mesquite (*Prosopis juliflora*), Neem (*Azadirachta indica*), Indian Rosewood/ Shisham trees (*Dalbergia sissoo*), Kiker (*Acacia nilotica*) and Safaida (*Eucalyptus citriodora*). No protected species were observed.

Social conditions of the area summarized below:

Language: Urdu and Punjabi languages are commonly spoken in the community as mode of communication in all villages/towns of the sub-project area.

Health Facilities: Chakwal district has six hospitals in total including five hospitals in the government sector and one private hospital. The government hospitals have 360 beds in total and private hospitals have a capacity of 10 beds. Nearest THQ hospital to the sub-project area is located in Kalar Kahar.

Communication: The sub-project area connected with other part of the country through M2 motorway and national highways. Pakistan Telecommunication Line (PTCL) available in Kalar Kahar, however local community more rely on mobile networks of the area.

Local Industries: Chakwal is a predominantly rural district with an agrarian economy. The industrial sector does exist but is relatively small and agro-based mainly comprising textile and spinning mills and some feed and flour mills. Other major industries of the area include cement factories, ICI and mining industry (salt and coal mines).

Population of District Chakwal: The district Chakwal has a population of 1,083,725 as per the 1998 census of Pakistan. The urban population at the time was 12.2% of the total population and 87.8% population was rural population. The population density is 166.1 per Sq. Km.

Education: Chakwal has a total of 1,199 government schools out of which 52 percent (627 schools) are for girl students. The district has an enrolment of 181,574 in public sector schools, according to Punjab Annual School Census Data 2014-15.

Vegetation: The main crops of the district are Wheat, Groundnut, Oil Seeds, Grams, Lentils, Masoor, Mung, Mash, Maize, Miliers, Jawar and Vegetables. Due to lack of irrigation and surface water sources, around half of the land area in Chakwal is used for rain fed agriculture cultivating mainly wheat and groundnut.

No significant adverse environmental impact of the project is envisaged. All the anticipated adverse impacts are mitigable and localized. About 31 kanal of land will be acquired for the execution of proposed work scheme. ARAP will be prepared to compensate the affected persons according to World Bank and national policy. Other adverse impacts are mainly construction-related impacts such as air pollution, noise and use of community resources, these impacts can be well mitigated through the proper implementation of the ESMP, which has been discussed in this report.

On the other hand, the project will accommodate thousands of the road users (including tourists of the area) and improve travelling comfort and the road safety. The proposed work scheme will help in minimizing traffic blocking and congestion this will improve overall environment of the area by reducing vehicle emission, dust and noise pollution in the area. It is envisaged that the project will facilitate and attract more visitor/tourist in the area and subsequently improve the local economy and help poverty alleviation.

1. Introduction

1.1 Overview

The Government of Pakistan (GOP) development agenda (Vision 2025) stresses the objectives of boosting economic growth, job creation and regional cooperation in addition to bolstering the country's image abroad. Tourism is highlighted as one of the sectors of the economy that could help stimulate economic growth. Cultural and heritage tourism is a large and growing international market that Pakistan could leverage to create more and better jobs¹.

The Planning & Development Department, Government of Punjab (GOPb) with the financial assistance of the World Bank (WB) has launched the Punjab Tourism for Economic Growth Project (PTEGP) to increase the contribution of the tourism and related sectors to the local economic development of the province. The objectives of the project are to strengthen institutional capacity, increase private sector participation and improve infrastructure services for the tourism sector growth in the Province of Punjab². The total funding of the Project is 55 Million USD with a World Bank contribution of USD 50 million over the five-year time frame³.

The Project consists of four major components⁴:

- Component 1: Policy, Institutions and Governance for Tourism Development
- Component 2: Private Investment and Entrepreneurship Promotion
- Component 3: Public Investment Facility
- Component 4: Project Management, Monitoring and Evaluation

The project is being implemented by a dedicated Project Management Unit (PMU) PTEGP since October 2017. The project is financing some low-scale physical interventions to provide improved access, better road conditions and public convenience facilities in selected tourists destinations located throughout the Punjab Province.

1.2 Project Environmental and Social Management Framework

The detail of sub-projects to be executed under the PTEGP was not available during the project initiation, so an Environmental and Social Management Framework (ESMF) was prepared for PTEGP in December 2016 according to WB Operational Policy (OP) 4.01.

The project ESMF has been approved by the WB and is available on the WB and PTEGP website for public disclosure (refer to footnote no. 4 and 5 for the web link to ESMF available on PTEGP and WB website respectively). The overall project has been assigned Category B, due to the limited environmental and social impacts only during the construction phase. The ESMF concluded that;⁵

- Environmental and Social Screening (E&SS) shall be carried for each sub-project intervention/s in order out to determine the appropriate Environmental and Social category as per WB Operation Policies.

¹ Combined project information documents / integrated safeguards data sheet (PID/ISDS) concept stage, May 23, 2016. The document is available at <https://documents1.worldbank.org/curated/en/841201468290413656/text/PIDISDS-CON-Print-P158099-05-29-2016-1464517363920.txt>

² Financing Agreement PTEGP between Islamic Republic of Pakistan and International Development Association, dated; August 2, 2017. The document is available at <https://documents1.worldbank.org/curated/en/337281506350830259/pdf/ITK171540-201708251045.pdf>

³ Adapted from https://ptegp.punjab.gov.pk/project_overview

⁴ <https://ptegp.punjab.gov.pk/system/files/ESMF%20Manual.pdf>

⁵ <https://documents1.worldbank.org/curated/en/916261483004112382/pdf/SFG2802-EA-P158099-Box396342B-PUBLIC-Disclosed-12-28-2016.pdf>

- Category-A sub-project will not be financed under this project. If Category-A sub-project is identified, sub-project will be either dropped or replaced with a Category B or C sub-project.
- Environmental and Social Management Plans (ESMPs) will be prepared for category 'B' sub-projects and clearance from WB will be a prerequisite before initiating the sub-project. The guidelines for the preparation of ESMPs are attached as Annex-8 of project ESMF.
- Sub-projects categorized as Category C, no further activity beyond screening would be required.
- PMU PTEGP will obtain necessary NOCs from the relevant departments before commencing works of any sub-project.

1.3 Introduction of Sub-Project

The road proposed for widening/improvement/rehabilitation under PTEG Project is a part of the road called Chakwal-Khushab road or locally known as Kallar Kahar road which extends from Chakwal to Khushab. The first 28 Km length of the road from Kallar Kahar to Manara town is studied under this sub-project. The concern length of the road falls in the Chakwal District. This road plays an important role of linking Chakwal and Khushab districts which are home to many popular and potential tourist destinations such as Kallar Kahar Lake, neela wahn ponds, Swaika lake and the famous lakes Uchali lake, Khabeki lake in Soon Sakesar Valley, District Khushab.

Present condition of the road is deteriorated and very steep gradient near Kalar Kahar. Heavy vehicles including busses, trucks etc. struggle in steep slope of the road and needs to be reconstructed to the traffic particularly heavy vehicles. The part of the road needs to be reconstructed. Widening and rehabilitation are required for whole considered length of the road.

1.4 Purpose of this Document

The proposed sub-project "Widening/Rehabilitation/Improvement of Kalar Kahar to Manara Road of approximate length 28km" triggered two World Bank's operational policies OP4.01, and OP4.12. It is envisaged that the sub-project falls under category B project, mainly because of carrying out road construction activities on existing busy road of the area and acquiring private land for the project execution.

Environmental and Social Screening (E&SS) for the project was completed during September 2022. As per the requirement of category B projects Environmental and Social Management Plan (ESMP) need to be submitted to the WB in accordance to the OP4.01. This report presents Environmental & Social Management Plan for the sub-project Widening/Rehabilitation/Improvement of the access existing road from Kalar Kahar to Manara town.

The ESMP provides a mechanism to address the anticipated adverse environmental and social impacts during construction and operational phase of the sub-project. Objectives of the ESMP are:

- Identify project's adverse impacts, suggest environmentally friendly and socially acceptable control measures to avoid, eliminate or reduce magnitude of their adverse impacts;
- Provide environmental management plan and facilitate implementation of control measures;
- Propose the institutional arrangements required to implement the ESMP and define responsibilities of different parties of the project (proponent, contractor and supervision consultant);
- Develop an environmental and social monitoring plan to ensure the mitigation measures are implemented during the sub-project execution and timely corrective actions are taken where required; and

- Develop training plan for project execution team.

About 31 kanal of private land will be acquired for realignment of the existing road. A separate ARAP will be prepared to compensate affected people (land owners).

1.5 Methodology of the Study

Methodology for ESMP are already defined in the project ESMF. While the relevant forms/checklists to be adopted for environmental and social studies have been provided in the following sections of the project ESMF;

- Environmental and social screening form has been provided as Annexure-6.
- An involuntary resettlement screening checklist has been provided as Annexure-9.
- Guidelines for an environmental management plan EMP/ESMP has been provided as Annexure-8.
- Chance find procedures (if required) has been provided in Annexure-10.

The data required for completing above mentioned forms/checklist has been obtained from both primary (field visit/s, laboratory based monitoring/testing, consultations, project engineering document/s, designs etc.) and secondary sources (literature including documents/ reports/ papers/ dissertations/ encyclopedias both available online and in printed format/s etc.).

Stakeholder's consultations have been conducted with relevant person/s and organisation/s during the field surveys according to WB and Pakistan Environmental Protection Agency (EPA) guidelines. Moreover, relevant applicable legislation and policies have been reviewed according to the scope of the sub-project.

The baseline data was analyzed to identify potential environmental impacts of the project. A risk based methodology was adopted to identify high risk activities and suggest their mitigation measures. Where possible, eliminating the risk by altering the scope of work, method of executing work activities etc. rather than minimizing the risk with control measures. However, where the risk cannot be managed during design phase of the project, environmentally friendly and socially acceptable control measures are proposed to mitigate the adverse impacts of proposed work scheme during construction and operational phase of the project.

2. Applicable Regulatory and Legal Framework

Based on findings of the sub-project screening, following national/ provincial legislation, regulations, EPA guidelines, World Bank Operational Policies and guidelines which are relevant and applicable to the sub-project.

2.1 National and Provincial Legislative Framework

The 1973 Constitution of Pakistan had included the subject of Environment Pollution and Ecology in the concurrent legislative list. The parliament and provincial governments were empowered to formulate necessary laws under article 142. The Federal Environmental Ministry was established for promulgation of the Environmental Protection Ordinance of Pakistan in 1983. It was the first comprehensive legislation prepared in the country. In March 1992 Pakistan prepared National Conservation Strategy (NCS), which provides a broad framework for addressing environmental concerns in the country. The Pakistan Environmental Protection Act was enacted on 6th December 1997, repealing the Pakistan Environmental Protection Ordinance 1983. The Act stands at the apex of statutory law on environmental issues in Pakistan and takes precedence over all preceding federal and provincial legislations in setting nationwide environmental standards and in laying down policies and procedures under the Pakistan National Conservation Strategy.

In April 2010, National Assembly amended the Constitution of Islamic Republic of Pakistan 1973. Among the changes introduced by the Constitution (Eighteenth Amendment) Act 2010 is one having effect on environmental protection legislation of the country. Under the 18th amendment, the subject of environment and natural ecology is devolved to province government from federal government. Punjab Law Department has issued Gazette notification of the **Punjab Environmental Protection Act 1997 (Amendment) Act, 2012** in result of the 18th Amendment. Consequently, the responsibility to legislate upon and regulate the environment and natural ecology vests in the provinces. Punjab province has enacted the Punjab Environmental Protection (Amendment) Act, 2012, adopting the Pakistan Environment Protection Act, 1997, a Federal legislation, to the framework of the province. This has allowed the Provincial Government to constitute its own Environment Protection Tribunal and appoint its members.

Other Environmental Rules and Regulations

Other environmental Rules & Regulations of Pakistan include:

- Environmental Tribunal Rules, 1999
- Review of IEE & EIA Regulation, 2000
- Certification of Environmental Laboratories Regulation, 2000
- Provincial Sustainable Development Fund Board (Procedure) Rules, 2001
- Environmental Samples Rules, 2001
- NEQS SMART Rules, 2001
- Pollution Charge Rules, 2001
- Environmental Tribunal Rules, 2012
- Punjab Environmental Protection Administrative Penalty Rules, 2013
- Punjab Hospital Waste Management Rules, 2014

2.1.1 Environment Protection Agency

The Pakistan Environmental Protection Council (PEPC) and Provincial Environmental Protection Agencies (EPAs) are the primary organizations responsible for administering the provisions of the Pakistan Environmental Protection Act.

Under the provision of the Act, provincial EPAs are responsible to manage the environmental concerns of their respective provinces, which is in this case is EPA Punjab. The provincial EPAs can frame environmental regulations tailored to the requirements of their provinces, provided these regulations meet or exceed the minimum standards set by EPA. They are also required to review and approve environmental studies of development projects undertaken in their respective provinces, including those projects implemented by federal agencies.

2.1.2 National Environmental Policy 2005

It aims to protect, conserve, and restore the environment in order to improve quality of the life of citizens through sustainable development and resource conservation.

2.1.3 Punjab Environmental Quality Standards (PEQS), 2016

The PEQS, 2016 specify the

- Maximum allowable concentration of pollutants in municipal and liquid industrial effluents discharged into inland waters, sewage treatment facilities, and the sea.
- Maximum allowable concentration of pollutants (16 parameters) in gaseous emissions from industrial sources.
- Maximum allowable concentration of pollutants (two parameters) in gaseous emissions from vehicle exhaust and noise emission from vehicles.
- In addition, PEQS has also been issued for drinking water, ambient air, motor vehicle exhaust and noise, municipal and liquid industrial effluents, noise and treatment of liquid and disposal of biomedical waste.

2.1.4 Pakistan Penal Code, 1860

This Act defines the penalties for violations concerning pollution of air, water bodies and land.

2.1.5 Motor Vehicle Rules 1969

It defines powers and responsibilities of Motor Vehicle Examiners (MVEs). The establishment of MVE inspection system is one of the regulatory measures that can be taken to tackle the ambient air quality problems associated with the vehicular emissions during operation phase.

2.1.6 Pakistan Labour Policy, 2010

Pakistan's Labour Policy aims at attaining its objectives in a manner best suited to the resources of the country and the present state of economy. Equitable adjustment of rights between workers and employers should be ensured in an atmosphere of harmony, mutually beneficial to workers and the management. It prohibits the use of Child Labour.

2.1.7 The Bonded Labour System (Abolition) ACT 1992

According to this act, forced labour is any type of work or kind of service in which someone engages involuntarily and under implied coercion a manifest threat of a party or oppression measures. The bonded labor can exist in following forms under different situations:

- Bonded labor in exchange of advance/an amount of money given before services are rendered, received by a person or his family.
- Bonded labor as a consequence of some social or customary obligations.
- Bonded labor in exchange of an economic benefit/consideration received by a person or his family,
- Bonded labor of a guarantor in exchange for debtor who was unable to pay off his debt.
- Bonded labor is prevalent in agriculture sector, brick kilns, domestic work and begging.

2.1.8 The Land Acquisition Act (LAA), 1894

It is the key legislation that has direct relevance to resettlement and compensation in Pakistan. For the acquisition of land, the above-mentioned Act, rules and regulations are followed whether the acquisition is for Government of Punjab or any other agency. The LAA is, however, limited to a cash compensation policy for the acquisition of land and built-up property, and damage to other assets, such as crops, trees, and infrastructure. The LAA does not consider the rehabilitation and resettlement of disrupted population and the restoration of their livelihoods.

2.1.9 Provincial Wildlife Act, 1974

This law helps in eliminating any trespassing into wildlife habitat area. Under this law, all site workers will be prohibited to disturb any wildlife habitat area.

2.1.10 Pakistan Antiquities Act 1975 and Punjab Antiquities Amendment Act 2012

The current Antiquities Act 1975 (amended in 1990), redefined as ancient any object that is at least 75 years old. The Act relates to the protection, preservation and conservation of archaeological/historical sites and monuments. It prohibits construction (or any other damaging) activity within 200 feet of such sites unless prior permission is obtained from the Department of Archaeology and Museums. The Antiquities Act also binds the project proponent to notify the department anything of archaeological value be excavated during project construction.

The proposed sub-project involved rehabilitation/improvement of the existing and no formal NOC require from Archeological department for this sub-project.

2.1.11 The Forest Act, 1927 (and Provincial Acts and Rules)

The Act, inter alia, deals with the matters related with protection and conservation of natural vegetation/habitats. Trees located within ROW belongs to the Forest Department.

Prior approval will be obtained for any tree uprooted for the project execution from Forest Department, Govt. Punjab. It is planned to get approval of uprooting of trees (if require) from the Forest department in pieces, during execution of work on site.

2.1.12 Employment of Child Act, 1991 and Punjab Restriction of Employment of Children Ordinance, 2016

Article 11(3) of the constitution of Pakistan prohibits employment of children below the age of 14 years in any factory, mine, or any other hazardous employment. In accordance with this article, the ECA 1991 disallows such child labor in the country.

2.2 International Laws/Treaties

Pakistan is signatory to a number of international conventions and protocols relating to the

environment. The list of international conventions/protocols signed and ratified by Pakistan is given below:

- Ramsar Convention on Wetlands
- Convention on Migratory Species (CMS)
- Convention on International Trade in Endangered Species (CITES)
- Convention on the Law of Seas
- Vienna Convention on the Protection of Ozone Layer
- Montreal Protocol on Ozone Layer Depleting Substances
- Basel Convention on the Control of Transboundary Movement of Hazardous Waste
- Convention on Biological Diversity (CBD)
- United Nations Convention to Combat Desertification
- United Nations Framework Convention on Climate Change (UNFCCC)
- UNESCO World Heritage Convention
- Kyoto Protocol
- Rotterdam Convention on Prior Informed Consent (PIC) for certain hazardous chemicals and pesticides
- Cartagena Protocol on Biosafety to the CBD
- Stockholm Convention on Persistent Organic Pollutants (POPs)

2.2.1 UNESCO World Heritage Convention

Pakistan is a State Party to the World Heritage Convention. State Parties agree to identify and nominate properties on their national territory to be considered for inscription on the World Heritage List. When a State Party nominates a property, it gives details of how a property is protected and provides a management plan for its upkeep. They are also expected to protect the World Heritage values of the properties inscribed and are encouraged to report periodically on their condition.

2.2.2 World Bank Operational Policies

World Bank Operational Policy 4.01 (Environment Assessment)

The major objective of this policy is to address all activities which may potentially cause negative environmental and social impacts and to suggest safeguard instruments accordingly. Under this policy, projects are categorized as "A, B, C" depending upon their impacts, severity, nature and frequency.

Category "A": Significant or irreversible impacts

Category "B": Reversible or moderate impacts that can be mitigated

Category "C": Minimal impacts

Under PTEG Project, World Bank will not finance any Category A sub-project. If the sub-project classified as category A project than the project will be either dropped or replaced with a Category B or C sub-project.

Environmental and Social Management Plan (ESMP) will be prepared for Category B project and for Category C sub-project no further study E&S study require beyond E&S Screening process. Identified adverse environmental and social impacts pertain to the proposed rehabilitation/improvement of existing road are mild to moderate because the nature of envisaged impacts are temporary, localized, reversible and mitigable. The sub-project is classified as category B. About 31 kanal of land acquisition is required, however no resettlement involve in the project execution. ARAP will be prepared and implement before commence work on site in order to compensate the affected persons from the project.

World Bank Operational Policy 4.11 (Physical Cultural Resources)

World Bank assist countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it financed.

World Bank Operational Policy 4.12 (Involuntary Resettlement)

OP 4.12 sets out the Bank's policies relating to involuntary taking of land and involuntary restrictions of access to legally designated parks and protected areas and resettlement of population disrupted by the project. The priority of the policy is the avoidance of displacement of the population; however, if it is unavoidable it should be kept to a minimum. The policy provides guidelines for conducting census surveys, preparing resettlement action plan and reporting procedures.

About 31 kanal of private land need to be acquired for execution of the project. no resettlement require for the project. As the total affected persons are well below the 200, it is proposed to prepare an ARAP instead of full RAP for compensating the affected people.

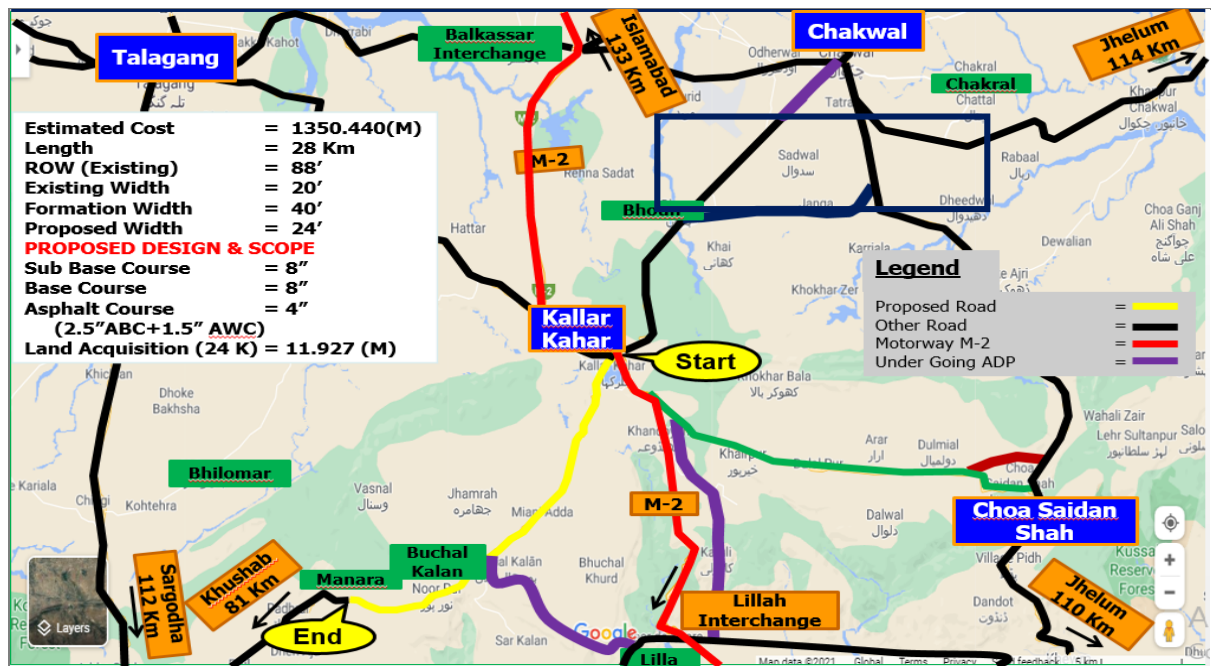
3. Project Description

3.1 Introduction

The road proposed for widening/improvement/rehabilitation is a part of the road called Chakwal-Khushab road or locally known as Kallar Kahar road which extends from Chakwal to Khushab. The first 28 Km length of the road from Kallar Kahar to Manara town is studied under this sub-project. All the concern length of the road falls in the Chakwal District. This road plays an important role of linking Chakwal and Khushab districts which are home to many popular and potential tourist destinations such as Kallar Kahar Lake, neela wahn ponds, Swaike lake and the famous Uchali lake, Khabeki Lake in Soon Sakesar Valley, Khushab.

Total estimated Cost of the sub-project amounts to Rs. 1811.720 Million. It will take 18 months to complete the work.

Figure 1: Location map Kalar Kahar to Manara Road



3.2 Proposed Intervention

Mandra Chakwal Khushab (MCK) is major road that passes through jurisdiction of three districts i.e. District Rawalpindi, District Chakwal and District Khushab. The proposed work scheme is part of MCK road from Kalar Kahar (near M2-Moterway Interchange) to Manara (Chakwal district boundary). Total length of the considered road is 27.25 Km, however additional loop of 0.75 Km has been added as new construction to smoothen steep gradients making total length 28 Km.

The MCK road is located in the strategically important area and considered length of MCK road shares huge quantum of HTV traffic generated from three cement factories (Bestway Cement factory, DG Khan Cement factory and Dandot Cement factory) or from different type of quarries in the area. The importance of the road becomes more as number of tourist places situated in the surrounding area including famous Kalar Kahar Lake, Uchali Lake, Neela Wahun Lake etc. The road also located in the hilly terrain hence creating scenic view and attract tourist in the area.

The initial screening of the sub-project area shows that most of the ROW is clear, however adding new construction for smoothening the steep gradient of the road will require land acquisition of about 31 kanal of private land. Total number of project affected persons are well below 200 persons and therefore an Abbreviated Resettlement Plan (ARAP) will be prepared to document

the impacts of private land losses as a result of proposed road widening work. The ARAP will also ensure that the land acquisition will follow the due process and determine eligibility for compensation under OP 4.12 Involuntary Resettlement and project's RPF.

3.3 Labour Requirement

It is envisaged that at the peak of the construction activities, up to 100 persons are likely to be employed for the works at site. Approximately 75% of the workforce will be available from the local resources while 25% of labour (particularly skilled labour) would be hired from other part of the country. Contractor will arrange living place for his migrated work force by renting a house near the project area.

3.4 Water Supply

Groundwater quality was tested by an authorized laboratory from EPA Punjab i.e. Green Crescent Environmental Consultants Pvt Ltd. Two groundwater samples were collected from the existing source of groundwater i.e. tube-wells or hand pumps along the road. Contractor should ensure the water quality of existing source of the groundwater meets the required criteria, if it is utilized by the contractor for site workers consumption or project activities.

Streams are the common surface water source of the area and often used as source of water supply by conveying the sweet water of streams or hill torrents through pipe network. Water samples were collected from Neela Wahan (major hill torrent of the area) and open drain located in Noorpur town. The test results indicate that the surface water quality of Neela Wahan is contaminated with microbial contaminations and can only be used as drinking water after boiling or other appropriate treatment.

It is recommended that the contractor should install a self-hydrant /boring or lay down water conveying pipeline with the approval of relevant authority for fulfilling the project's water requirement on site. If the contractor utilize any private source of water (existing tube wells etc.) or existing water supply for his requirement and disposal of wastewater (generate from site offices or construction activities) to the existing local wastewater disposal arrangements then a contract agreement should be made with the owner or the local water and sanitation agency authority.

3.5 Source of Construction material

Crushed stone aggregates (sub-base+ base, asphalt and concrete material) can be obtained from local existing certified quarries or from Sargodha quarry (in case it needs to match with certain criteria). Crush material testing will be arranged and carried out by the contractor as per the requirement of the supervision consultant. The contractor is bond to take stones and concrete material from only Government/supervision consultant approved quarry/factory.

Fill material can be obtained locally from the surrounding area of the project site. Contractor should get the approval of the borrow area from the supervision consultant based on suitability of the soil, safety and environmental & social assessment of the area before commence excavation. Borrow area should be restored at the completion of the excavation according to the envisaged usage of the area i.e. agriculture purpose, developing fish farms, reducing level for building construction etc. If the borrow area is planned to be re-used for agriculture purpose than the land should be restored by re-spreading the top soil after completion of the excavation. It is recommended to limit the excavation level to 3 feet from ground level because of safety and environmental reasons e.g. ponding of rain water, soil erosion, abstraction in surface drainage etc. If more than 3 feet excavation require than additional environmental, health and safety assessment should be conducted by the Supervision Consultant and give approval of the work.

3.6 Source of Material

The common source of material require for the civil works is described in below table 1.

Table 1: Source of Raw Materials

Sr. #	Construction Material	Source
1.	Earth Material	Available locally, borrowed from the lands temporarily leased by the contractor for the purpose
2.	Coarse Aggregate	Available from local quarries and from quarry at Sargodha
3.	Rip-rap material	Available from quarries at Sargodha and Sakhi Sarwar
4.	Sand	Sand can be obtained from Lawrence Pur, District Attock.
5.	Water for preparation of concrete and other utilization at site during construction phase	Local Groundwater and surface water sources are available. The contractor can obtain required supply from the existing groundwater tube well(s) by making an agreement with the tube well(s) owner. The water quality must be tested and ensured it meets the required standards according to the monitoring plan provided later in this report. Considering ample source of available groundwater in the area, the impact of using groundwater for project's activities i.e. preparing concrete at site based batching plant, watering fresh concrete structure for curing etc. will have negligible impact on groundwater aquifer as the estimated per day water requirement for the project activities will range from 5m ³ to 10m ³ .
6.	Cement	Portland cement is available from local cement factories such as; Bestway Cement factory, DG Cement Factory, Dandot Cement factory, Maple Leaf Cement etc.
7.	Reinforcement steel	Grade 60 / Grade 40 reinforcement steel is available from re-rolling mills at Karachi , Lahore, Rawalpindi and Faisalabad to be used / selected with approval of the supervision consultant
8.	Brick and tough tile	From local brick kiln and tough tile / precast construction blocks factories

3.7 Construction Schedule

From the beginning of the construction to the commissioning of the sub-project is estimated to take approximately 20 months (including 2 months of pre-construction phase for tendering process).

3.8 Labour Residence

Approximately 75% of the workforce will be from the sub-project area while some 25% of labour (mainly skilled) would be hired from outside the sub-project area. Contractor will have rented out house(s) for non-local site workers, which is about 25 persons, near the project area. The site workers must follow a site specific code of conduct (prepared by the contractor and approved by supervision consultant). The project's staff must respect local values and privacy of the local community. A training will be delivered to all site workers on Sexual abuse, privacy issue and exploitation. Pick and drop facilities will be provided by the contractor from their living place to the

work area, occupational health and safety issues related to the workers living place and work area will be addressed by the contractor through implementation of monitoring plan, provision of first aid box, drinking water, hot & cold running water, clean source of energy i.e. gas supply or gas cylinder, provision of appropriate PPE and welfare facilities etc. (further suggested control measures are provided in table no. 9).

3.9 Vegetation Removal/Tree Cutting

Vegetation clearance or tree cutting will be required for the proposed road widening/rehabilitation work. It is envisaged that vegetation and tree plantation located within 5 feet from the edges of the road and within proposed additional loop of the road for smoothing the road gradient will need to be cleared/uprooted. Table 2 provides current status of vegetation and tree plantation in the proposed work area which need to be uprooted.

Table 2: Vegetation and Tree Plantation Need to be Cleared

Sr. No	Location	Type	Number of Mature Trees
1	Within proposed new loop of the Road	Safaida (<i>Eucalyptus citriodora</i>)	12
		Shisham (<i>Dalbergia sissoo</i>)	2
		Mesquite (<i>Prosopis juliflora</i>) (Bushes)	
2	Within 5 feet of first 4Km of the road (from kalar Kahar)	Bari (<i>Zizyphus mauritiana</i>)	1
		Shahtoot (<i>Morus alba</i>)	1
3	Within 5 feet from edges of the road Length 4 to 8Km from Kalar Kahar	Jhand (<i>Prosopis cineraria</i>) (also known as Phali locally)	3
		Safaida (<i>Eucalyptus citriodora</i>)	1
		Bushes; Mesquite (<i>Prosopis juliflora</i>)	Thick vegetation of bushes along the road located in non-built-up area
4	Within 5 feet from edges of the road Length 8Km to 13Km from Kallar Kahar	Jhand (<i>Prosopis cineraria</i>)	1
		Shisham (<i>Dalbergia sissoo</i>)	2 (possibly dead trees)
5	Within 5 feet from edges of the road length 13 to 17Km from Kalar Kahar	Jhand (<i>Prosopis cineraria</i>)	3
		Bushes; mainly Mesquite (<i>Prosopis juliflora</i>) also	

		<i>identified Aik</i>	
6	Within 5 feet from edges of the road length 17 to 20Km from Kalar Kahar	Jhand (<i>Prosopis cineraria</i>)	2
7	Within 5 feet from edges of the road length 20 to 28Km from Kalar Kahar	Pipal (<i>Ficus religiosa</i>) Next to the small mosque located on the road	2

Above table provides details of vegetation which likely to be uprooted for the project. However, this should be minimized or avoided, where possible, by altering slight change in road layout on site. All the plantation located within ROW of the road belongs to Punjab Forest Department. C&W Department will obtain No Objection Certificate (NOC) from Punjab Forest Department and letters from the PMU to C&W Department regarding require NOC from the Forest Department are attached as an Annexure G.

3.10 Project Summary

Surrounding area of the road which need to be rehabilitated/improved under proposed work scheme is provided in table 3.

Table 3. Project Summary

Name of Sub-Project	Total length	Physical Co-ordinates	Scope of Work	Total Cost (million)
Rehabilitation/Improvement of existing road from Kalar Kahar to Manara District Boundary Chakwal	28 Km	North Side: M2 Motorway and Hilly Terrain beyond South Side: Road leading to Khshab city and comparatively flat agricultural area East Side: Comparatively Hilly Terrain with patches of agricultural fields. West Side: less Hilly area with more patches of agricultural fields.	Widening/ Rehabilitation/ Improvement of existing road. Total 4 feet widening of the road is proposed, where the width of the road is less than 24 feet. Minimum existing road width identified at few locations is 20 feet and 4 feet in total will be extended	PKR. 1811.720

4. Baseline Conditions

This section provides an overview of the baseline of environmental and social aspects along the route of proposed rehabilitation and improvement works.

The concern length of the road lies in District Chakwal. The road was constructed 10-15 years ago using Triple Surface Treatment (TST) construction technique. The road deteriorated due to different type of distresses including disintegration and cracking of layers of construction, pot holes etc. Moreover, the road is having a serious traffic safety concerns and need realignment to address issues stopping sight distance (SSD) and passing sight distance (PSD) at certain point along the road. Tahsil Kallar Kahar is famous for Kallar Kahar lake, archeological site Takht-e-Babri, presence of beautiful species of peacocks in the area and religious site tomb (Darbar) of Hazarat Ho Ba Ho (grandson of Hazarat Sheikh Abdul Qadir Jilani).

4.1 Physical Environment

Water Quality

Groundwater sources in the area include tube-well, hand pumps and open wells. Common utilization of groundwater is for domestic water requirements and agricultural purposes. Other usage include pumping for industrial activities by cement factories, ICI and mining industry. For evaluating groundwater quality of the area, two groundwater samples were collected from the existing groundwater sources. Samples were collected from existing pump at Pizza Shop in Miani Ada and near NBP Noor Pur town on 22nd November 2022. The test results were compared with WHO and PEQS drinking water standard in below table 4.

Streams, hill torrents and storm water drains are major surface water bodies of the area. Surface water is being utilize for domestic/drinking and agricultural purposes in brackish groundwater zones. Neela Wahan is a major hill torrent of the area. It flows whole year with significant variation in flow discharges during rainy and dry seasons. For evaluating surface water quality of the area, samples were collected from Neela Wahan Ponds site and from open drain located along the road in Noor Pur town on 22nd of November 2022. Test results are compared with PEQS Drinking water and FAO irrigation standards.

Groundwater and surface water test results are provided in table 4 and 5 respectively.

Table 4. Groundwater Test Results

Sr. No.	Parameters	Unit	Test Results		WHO	PEQS (Drinking Water Standards)
			Pizza Shop Miani Ada	NBP Bank Noor Pur		
1.	E Coli	MPN	04	0	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample
2.	Total Coli-form	MPN	06	04	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample
3.	Fecal Coliform	MPN	04	0	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample
4.	Color	TCU	<1.0	<1.0	≤ 15	≤ 15
5.	Taste	-	Sweet	Sweet	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable
6.	Odor	-	Odorless	Odorless	Non-	Non-Objectionable

Sr. No.	Parameters	Unit	Test Results		WHO	PEQS (Drinking Water Standards)
			Pizza Shop Miani Ada	NBP Bank Noor Pur		
					Objectionable / Acceptable	/ Acceptable
7.	Turbidity	NTU	ND	ND	< 5	< 5
8.	Total Hardness	mg/L	276.0	452.0	-	<500
9.	Total Dissolved Solids	mg/L	597.0	619.0	< 1000	< 1000
10.	pH	-	7.29	7.02	6.5-8.5	6.5-8.5
11.	Aluminum (Al)	mg/L	<0.028	<0.028	0.2	≤ 0.2
12.	Antimony (Sb)	mg/L	ND	ND	0.02	≤0.005
13.	Arsenic (As)	mg/L	<0.01	<0.01	0.01	≤ 0.05
14.	Barium (Ba)	mg/L	<0.031	0.0034	0.7	0.7
15.	Boron (B)	mg/L	<0.1	<0.1	0.3	0.3
16.	Cadmium (Cd)^	mg/L	<0.0028	<0.0028	0.003	0.01
17.	Chloride (Cl ⁻¹)	mg/L	65.58	60.26	250	< 250
18.	Chromium (Cr)^	mg/L	<0.0054	<0.0054	0.05	≤ 0.05
19.	Copper (Cu)^	mg/L	<0.0045	<0.0045	2	2
20.	Fluoride (F)	mg/L	<0.01	<0.01	1.5	≤ 1.5
21.	Lead (Pb)^	mg/L	<0.013	<0.013	0.01	≤ 0.05
22.	Manganese (Mn)	mg/L	<0.0016	<0.0016	0.5	≤ 0.5
23.	Mercury (Hg)	mg/L	<0.0008	<0.0008	0.001	≤ 0.001
24.	Nickle	mg/L	<0.008	<0.008	0.02	≤ 0.02
25.	Nitrate	mg/L	6.6	2.0	50	≤ 50
26.	Nitrite	mg/L	<0.01	<0.01	3	≤ 3
27.	Selenium (Se)	mg/L	ND	ND	0.01	0.01
28.	Residual Chlorine (Cl ₂)	mg/L	<0.1	<0.1	-	0.2-0.5 at consumer end 0.5-1.5 at source
29.	Zinc (Zn)^	mg/L	0.9321	0.9917	3	5.0
30.	Phenolic Compound (As Phenol)	mg/L	<0.01	0.01	0.002	-
31.	Sodium (Na)	mg/L	51.07	49.36	200	-
32.	Potassium (K)	mg/L	<0.0009	<0.0009	200	-
33.	Calcium Hardness	mg/L	96.0	280.0	-	<500
34.	Magnesium Hardness	mg/L	180.0	164.0	-	<500
35.	Carbonates	mg/L	<0.12	<0.12	-	-
36.	Bicarbonates	mg/L	321.6	364.8	-	-
37.	Calcium (Ca)	mg/L	38.4	112.0	-	-
38.	Magnesium (Mg)	mg/L	43.92	40.01	-	-
39.	Total Suspended Solids (TSS)	mg/L	<1.0	<1.0	-	-
40.	Sulphate (SO ₄ ²⁻)	mg/L	43.62	39.92	250	-
41.	Sulphide (S ²⁻)	mg/L	<0.4	<0.4	-	-
42.	Ammonia (NH ₃)	mg/L	<0.002	<0.002	-	-
43.	Total Alkalinity	mg/L	268.0	304.0	-	-
44.	Electric	μS/cm	937.0	969.0	-	-

Sr. No.	Parameters	Unit	Test Results		WHO	PEQS (Drinking Water Standards)
			Pizza Shop Miani Ada	NBP Bank Noor Pur		
	Conductivity					
45.	Total Plate Count	CFU	TNTC	TNTC	-	-
46.	Greases & Oil	mg/L	<0.2	<0.2	-	-

PEQS: Punjab Environmental Quality Standards WHO: World Health Organization
TNTC: Too Numerous to Count ND: Not Detected

Table 5. Surface Water Test Results

Sr. No.	Parameters	Unit	Test Results		PEQS (Inland Water quality Standards)	FAO (Irrigation Water Quality Standards)
			Neela Wahan	Noorpur Drain		
1.	Temperature	°C			-	-
2.	pH ^	---	7.33	7.07	6-9	-
3.	Biological Oxygen Demand (BOD ₅ at 20 °C)	mg/L	<1.0	1962	80	30
4.	Chemical Oxygen Demand (COD)	mg/L	06	4905	150	50
5.	Total Suspended Solids (TSS)	mg/L	15.0	3005	200	45
6.	Total Dissolved Solids (TDS)	mg/L	540.0	1615	3500	2000
7.	Greases & Oil	mg/L	<0.2	<0.2	-	-
8.	Phenolic Compound (As Phenol)	mg/L	<0.01	<0.01	-	-
9.	Chloride (as Cl ¹⁻)	mg/L	56.72	505.16	1000	250
10.	Fluoride (F ¹⁻)	mg/L	<0.01	<0.01	10	
11.	Sulphate (SO ₄ ²⁻)	mg/L	37.45	283.16	600	500
12.	Sulphide (S ²⁻)	mg/L	<0.4	<0.4	-	-
13.	Cadmium (Cd)	mg/L	<0.0028	<0.0028	0.1	0.01
14.	Chromium-Total (Cr)	Mg/L	<0.0054	0.0063	1	0.1
15.	Copper (Cu)	mg/L	0.0061	0.1822	1	0.2
16.	Lead (Pb)	mg/L	<0.013	0.0231	-	2.0
17.	Mercury (Hg)	mg/L	<0.0008	<0.0008	0.01	0.02
18.	Nickel (Ni)	mg/L	<0.008	0.0311	1	0.2
19.	Ammonia	mg/L	<0.002	1.3	40	5.0
20.	Zinc (Zn)	mg/L	0.4166	2.8302	5	2.0
21.	Arsenic (As)	mg/L	<0.01	<0.01	1	0.1
22.	Barium (Ba)	mg/L	<0.031	0.1039	1.5	-
23.	Manganese (Mn)	mg/L	<0.0016	0.0139	1	-
24.	Boron (B)	mg/L	<0.1	0.3112	-	0.75
25.	Chlorine (Cl ₂)	mg/L	<0.1	<0.1	-	-
26.	Sodium	mg/L	47.04	537.88	-	-
27.	Cyanide-Total	mg/L	<0.01	<0.01	1	-
28.	E-coli	MPN	13	57	-	-
29.	Total Coli-form	MPN	27	86	-	1000
30.	Total Plate Count	CFU	TNTC	TNTC	-	-
31.	Calcium Hardness	mg/L	212.0	400.0	-	-
32.	Magnesium Hardness	mg/L	172.0	360.0	-	-
33.	Carbonates	mg/L	<0.12	<0.12	-	-
34.	Bicarbonates	mg/L	312.0	1185.6	-	-
35.	Total Hardness	mg/L	384.0	760.0	-	-
36.	Calcium (Ca)	mg/L	84.8	160.0	-	-
37.	Magnesium (Mg)	mg/L	41.96	87.84	-	-
38.	Potassium (K)	mg/L	<0.0009	0.1520	-	-

Sr. No.	Parameters	Unit	Test Results		PEQS (Inland Water quality Standards)	FAO (Irrigation Water Quality Standards)
			Neela Wahan	Noorpur Drain		
39.	Nitrate	mg/L	6.9	8.2	-	15
40.	Nitrite	mg/L	<0.01	<0.01	-	-
41.	Total Alkalinity	mg/L	260	988.0	-	-
42.	Electric Conductivity	µS/cm	908.0	3050.0	-	2000
43.	Nickel (Ni)	mg/L	<0.008	0.0311	1	0.2

Elevated concentration of microbial contamination is recorded in the groundwater samples. Possible reason of presence of aerobic bacteria in the groundwater samples may be because of poor installation or maintenance of the tube well and allowing surface run-off trickle down to the extraction depth along the installed tube well pipework. Microbial contamination can be eliminated by increasing the extraction depth of groundwater.

Surface water quality tests compared with PEQS for Inland Water Quality Standards and FAO Irrigation Standards. The inland water quality standards applies on water sources use for water sports, bathing and discharging treated effluent to controlled surface water bodies (river, canals etc.). Test results of Neela Wahan hill torrent indicates that the water quality is fit for irrigation and bathing purpose but not fit for human consumption due to elevated microbial contaminations. The hill torrent water can be used for drinking purpose after boiling or other suitable treatment for microbial contamination. The open drain located in Noorpur town collect domestic sewage and contaminated surface run-off. Elevated concentration of BOD, COD, suspended solids, chloride and electric conductivity were recorded in the drain water against the PEQS for Inland water quality standards and FAO irrigation water quality standards.

Ambient Air Quality

No obvious source of ambient air pollution identified at site. Brick kiln identified in the surrounding area of the project site, however the adverse impact on ambient air quality is low because of the nature of the area i.e. hilly terrain of the area generating persistent gently breeze and higher precipitation than surrounding floodplains. Percentage of forest cover in districts Chakwal and Khushab are also higher than other districts of the province which improves overall ambient air quality of the area. Topsoil in the area is also more granular than clayey nature and therefore lesser dust pollution is observed in the area. Dust pollution usually observed in the traffic congested area (builtup area) during summer in the persistent dry weather conditions.

Cement factories are the major source of ambient air pollution. Periodic cleaning of chimneys of cement factories by blowing them at high pressure cause dust particle pollution in the surrounding area. Nearest cement factory to the project area is Bestway Cement Factory which is about 20 Km away and therefore it is unlikely to cause any impact on the project area.

The envisaged ambient air quality along the concern length of the road i.e. from Kalar Kahar to Manara town road is similar and therefore 24 hours ambient air quality was monitored at one location only i.e. at proposed new loop of the road. 24 hours ambient air quality monitoring was conducted between 22 and 23 of October at next to the most affected area of the road due to the traffic i.e. the road with steep gradient (just outside the Kalar Kahar town) and likely to deteriorate the air quality of the area during construction phase of the project. The 24 hours monitoring results and their comparison with PEQS standards are presented in table 6.

Table 6. Ambient Air Quality Monitoring near Kalar Kahar

Sr. No.	Time	CO	NO	NO ₂	NO _x	SO ₂	PM ₁₀	PM _{2.5}	O ₃	Lead	CO ₂
		mg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1.	12:00	1.03	13.71	20.3	34.01	14.3	123	20	12.1	0.11	453.6
2.	13:00	0.9	13.2	18.15	31.35	15.3	135	23			
3.	14:00	0.85	14.7	17.36	32.06	16.6	130	29			
4.	15:00	0.45	13.26	18.3	31.56	17.5	124	16			
5.	16:00	0.69	10.5	20.3	30.8	16.3	119	21			
6.	17:00	0.88	14.15	22.6	36.75	14.5	115	23			
7.	18:00	0.45	16.13	16.3	32.43	13.6	132	24			
8.	19:00	0.47	15.2	19.3	34.5	12.5	126	20			
9.	20:00	0.68	13.15	18.4	31.55	10.5	127	15			
10.	21:00	0.53	13.16	13.6	26.76	11.4	131	18			
11.	22:00	0.49	14.38	17.6	31.98	12.6	114	19			
12.	23:00	0.65	13.5	13.06	26.56	14.6	105	21			
13.	0:00	0.46	15.24	18.3	33.54	15.6	116	17			
14.	1:00	0.53	10.2	19.5	29.7	13.6	118	15			
15.	2:00	0.49	14.2	21.6	35.8	12.3	123	20			
16.	3:00	0.68	9.32	22.8	32.12	10.5	125	16			
17.	4:00	0.74	9.2	23.9	33.1	11.6	125	20			
18.	5:00	0.73	9.4	26.4	35.8	12.6	134	24			
19.	6:00	0.88	8.24	27.3	35.54	11.7	124	23			
20.	7:00	1.05	9.32	29.4	38.72	10.6	136	25			
21.	8:00	0.54	10.32	28.13	38.45	11.9	124	29			
22.	9:00	0.68	11.48	22.7	34.18	12.6	119	31			
23.	10:00	1.06	10.26	27.6	37.86	13.9	123	34			
24.	11:00	1.1	11.26	26.5	37.76	14.6	107	24			
Average (24 Hours)		0.71	12.2	21.2	33.5	13.38					
PEQS		5 8hours	40 24hours	80 24hours	120 24hours	120 24hours	150 24hours	35 24hours	130 1hour	1.5 4hour	-

Noise Monitoring

Traffic is the major source of noise pollution in the area. Sensitive receptors of noise pollution were identified along the road including schools, basic health centers, mosque and residential areas. Noise pollution should be controlled through recommended control measures provided later in this report. 24 hours noise monitoring were conducted at two locations along the road.

Table 7. 24 Hours Noise Monitoring at two Locations along the Road

Sr. No.	Time	Noise Monitoring near Govt. Hospital Manara	Noise Monitoring near Govt. High School Buchal Kalan
		dB (A)	dB (A)
1.	23:00	50.3	40.5
2.	00:00	42.3	42.3
3.	01:00	42.5	44.6
4.	02:00	40.3	44.7
5.	03:00	41.5	40.2
6.	04:00	42.9	39.6
7.	05:00	40.8	41.5
8.	06:00	42.5	42.5

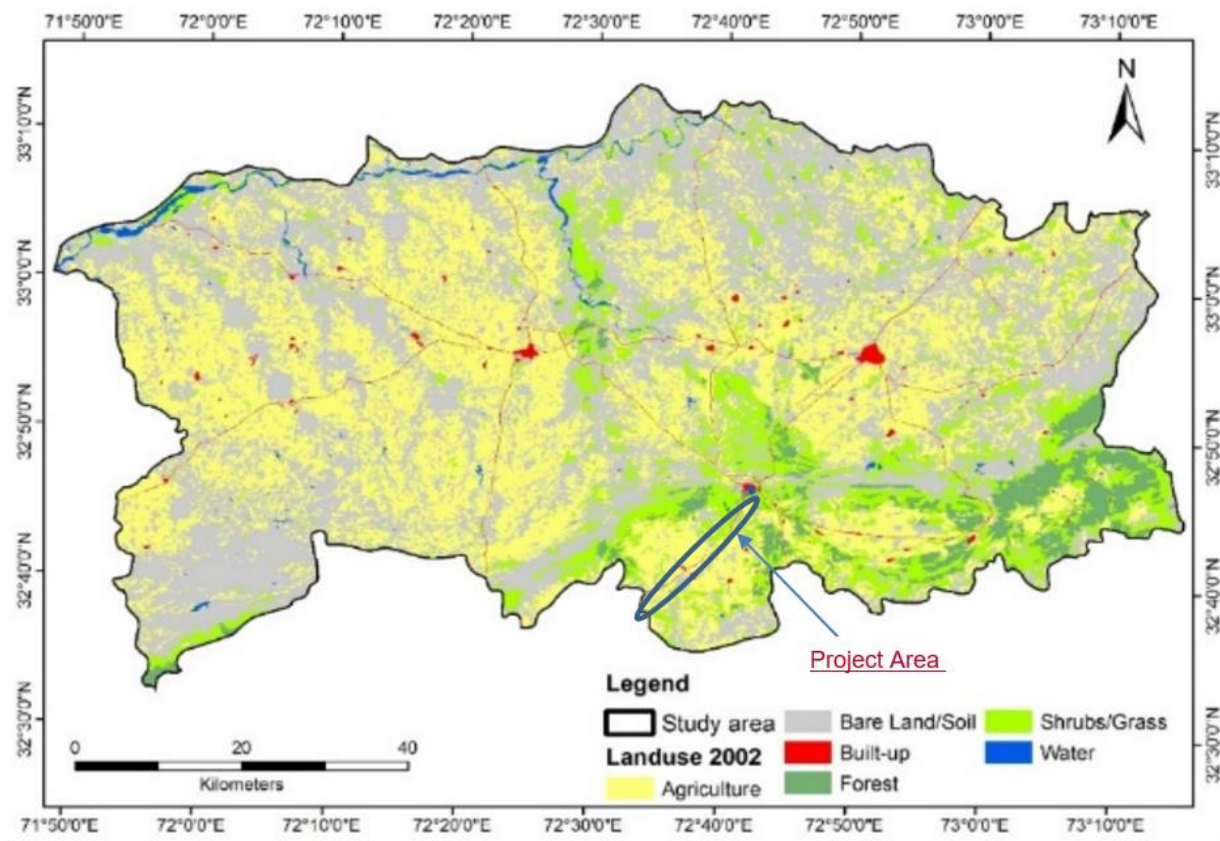
Sr. No.	Time	Noise Monitoring near Govt. Hospital Manara	Noise Monitoring near Govt. High School Buchal Kalan
		dB (A)	dB (A)
9.	07:00	50.3	40.7
10.	08:00	53.2	43.6
11.	09:00	54.6	50.6
12.	10:00	52.6	52.6
13.	11:00	50.4	54.6
14.	12:00	53.6	52.3
15.	13:00	54.3	50.1
16.	14:00	50.3	52.6
17.	15:00	50.3	54.9
18.	16:00	49.3	54.1
19.	17:00	51.3	50.9
20.	18:00	50.3	50.3
21.	19:00	48.3	49.6
22.	20:00	40.6	51.3
23.	21:00	42.3	52.3
24.	22:00	44.0	44.6

Noise level PEQS's for commercial area during day and night times are 75dB and 65dB respectively. 24 hours noise monitoring results along the road indicate that the noise levels are within the standards of commercial area noise level.

Soil Profile and Land Use

Soil of sub-project area can be described as silty, gravelly Sand. Patches of agricultural terraces are located along the road sides. The soil in the sub-project area is generally classified as alluvial composed of silty sandy Clay with no visible signs of contamination. The sub-component may require the excavation of earth from borrow areas, which may result in topsoil removal, holes that get filled with rainwater and/or agricultural runoff, creating a site for vectors to breed and community health and safety risks. Land use patterns show agriculture as the primary land use, followed by range land, forest area and built up area respectively. About half of the land in District Chakwal is used for rain-fed agriculture. Figure 2 (taken from ESMF) shows the land use of district Chakwal. The concerned length of the road does not pass through designated forest area. However, all plantation in the ROW of the road is owned by Punjab Forest Department and any vegetation clearance/tree cutting need to be get approved by Punjab Forest Department.

Figure 2: District Chakwal Land Use Map



Climate

The project area lies in the semi-arid climatic zone and has two well-defined seasons, summer and winter. Climate data for District Chakwal was obtained during preparation of ESMF. The climate of District Chakwal is subtropical. Due to a higher elevation than Central Punjab, the district experiences lower temperatures during the winter. Winter temperatures normally range between 4° C and 25° C, and summer temperatures average between 17° C and 28° C. Chakwal lies within the monsoon range, and apart from occasional rainfall, there are two rainy seasons: the first, caused by the monsoon winds originating from the Bay of Bengal, begins from 15th of July and continues up to 15th of September; the second, caused by Mediterranean winds lies in the last two weeks of December and the first two weeks of January. The average rainfall is 22 to 25 inches. Choa Saidan Shah sub-division has the maximum rainfall in the district.

4.2 Biological Environment

Salt Range of District Chakwal and Khushab provides habitat of game birds including Partridges, Chakor and Hubara Bustard and locally protected mammals i.e. Urial, Hare and Deer. There are number of protected sites (National Park, Game Reserve and Wildlife Sanctuaries) located in district Chakwal and Khushab. However, it was informed by the Wildlife department, during the stakeholder consultation, that the nearest wildlife protected area to the sub-project site is Kallar Kahar Wildlife Sanctuary and it is about 500m away from the work area. Kallar Kahar Lake is open for leisure activities (boating, bird watching etc.) but prohibited for hunting or bird poaching. Considering the proposed work scheme and the project area i.e. existing road, which is already exposed to human activities, it is envisaged that there is low risk of adversely impacting the protected areas due to the execution of proposed work scheme. List of protected sites located in the surrounding area of the sub-project site are given below (copies of notifications are included

as an Annexure E):

- Kallar Kahar Wildlife Sanctuary
- Simbli (North) Reserve Forest Wildlife Sanctuary
- Chumbi Surla Wildlife Sanctuary
- Chinji Reserve Forest Wildlife Sanctuary
- Noorpur Reserve Forest Wildlife Sanctuary

The considered length of the road is a busy national highway of the area and therefore the ROW of the road does not provide habitat of wildlife of the area. Kallar Kahar lake provides habitat of waterfowl and is protected from hunting or poaching of wildlife by Punjab Wildlife Department. However, the lake is open for the tourists for boating, bird watching etc. Whole tahsil of Kallar Kahar is closed for any hunting or poaching by Punjab Wildlife Department since 2005. The tehsil provides rich wildlife habitat, mainly for partridges and Urial. Flora and fauna of the area are described below.

Flora

Jhand (*Prosopis cineraria*), Bari (*Zizyphus mauritiana*) Frash (*Tamarix aphylla*), Snatha (*Dodonaea viscosa*) and Mesquite (*Prosopis juliflora*), Neem (*Azadirachta indica*), Indian Rosewood/ Shisham trees (*Dalbergia sissoo*), Kiker (*Acacia nilotica*), Safaida (*Eucalyptus citriodora*), White mulberry (*Morus alba*) are mainly found along the road sides. No protected species were observed.

Fauna

Mammal – Urial (*Ovis vignei*), Jackel (*Canis aureus*), Hare (*Lepus nigricollis*), Porcupine (*Hystrix indica*), Mouse (*Funambulus pennant*), Mongoose (*Herpestes auropunctatus*), Squirrel (*Funambulus pennant*); Chinkara (*Gazella bennettii*), Hog Deer (*Hyelaphus porcinus*), Wild Boar (*Sus scrofa*) and Wildcat (*Felis lybica*). IUCN classification for Urial is Vulnerable other mammals are classified as least concern.

Reptiles & Amphibian - Common Indian Monitor (*Varanus bengalensis*), Lizard, Indian Krait (*Bungarus caeruleus*) and Common Frogs

Birds – Houbara Bustard (*Chlamydotis undulata*), Chakor (*Alectoris chukar*), Grey & Black Francolin (Bohra & Kala Tetor (*Francolinus Francolinus*)), Peacock (*Pavo cristatus*) Rock Pigeon (*Columba livia domestica*), Common Myna (*Acridotheres tristis*), Dove (*Zenaida macroura*) and different species of waterfowl.

Fish – Three indigenous fish species identified in the Kallar Kahar Lake:

Cyprinion watsoni locally known as Sabzug
Crossocheilus latius locally known as Dogra
Puntius vittatus locally known as Popra

Recently, following two exotic species have been introduced in the Kallar Kahar lake for commercial utilization:

Cyprinus carpio locally known as Common Carp
Oreochromis mossambicus locally known as Tilapia

4.3 Social Environment

During initial screening of the sub-project area it was observed that the road passes through built up area (Kallar Kahar city and other villages located along the road) and also along agricultural land. The built up areas mostly comprises of commercial structures such as shops, banks, schools, basic health units, marble cutting/crushing factories, community structures such as mosques, graveyards and public infrastructure like electricity poles and transformers. 4 to 5 feet wide storm water/domestic sewage drain also recorded along the road, mainly in the built up. The identified drain is partially covered.

Language: Urdu and Punjabi languages are commonly spoken in the community as mode of communication in all villages where roads rehabilitation sub-project has been started.

Health Facilities: Chakwal district has six hospitals in total including five hospitals in the government sector and one private hospital. The government hospitals have 360 beds in total and private hospitals have a capacity of 10 beds. Nearest hospital to the sub-project area is THQ Hospital Kalar Kahar.

Communication: The sub-project area connected with other part of the country through M2 motorway and national highways. Pakistan Telecommunication Line (PTCL) available in Kalar Kahar, however local community more rely on mobile networks of the area.

Local Industries: Chakwal is a predominantly rural district with an agrarian economy. The industrial sector does exist but is relatively small and agro-based mainly comprising textile and spinning mills and some feed and flour mills. Other major industries of the area include cement factories, ICI and mining industry (salt and coal mines).

The small industries sector is relatively larger and broader. This sector comprises a large number of brick kilns, gypsum factories, poultry farms, cattle farms, marble factories, furniture manufacturing units, shoe manufacturing units and clay crockery manufacturing units. Like most of the other rural districts of the Punjab, the cottage industry is fairly large, traditional and under developed. The concerns in this sector mainly comprise embroidery, stitching, khusa making, wood work, clay utensils, clay toys, dying, metal works etc.

Population of District Chakwal: The district Chakwal has a population of 1,083,725 as per the 1998 census of Pakistan. The urban population at the time was 12.2% of the total population and 87.8% population was rural population. The population density is 166.1 per Sq. Km.

Education: Chakwal has a total of 1,199 government schools out of which 52 percent (627 schools) are for girl students. The district has an enrolment of 181,574 in public sector schools, according to Punjab Annual School Census Data 2014-15.

Vegetation: The main crops of the district are Wheat, Groundnut, Oil Seeds, Grams, Lentils, Masoor, Mung, Mash, Maize, Miliers, Jawar and Vegetables. Due to lack of irrigation and surface water sources, around half of the land area in Chakwal is used for rain fed agriculture cultivating mainly wheat and groundnut.

Pictorial View of Sub-Project Area

	
<p>Kallar Kahar Lake View from TDCP Office</p>	<p>Water Supply Pipeline – Convey Spring Water of Darbar Spring to Kallar Kahar City Centre</p>
	
<p>Congested Part of the Road at Miani Ud-Dah</p>	<p>Open Drain along the Road in Noorpur Town</p>
	
<p>Brick Kiln Identified Along the Road near Miani Ada</p>	<p>Coal Mine Identified Along the Road Near Manara</p>

	
<p>Nela Wahan Stream (Ponds Site)</p>	<p>Access Road to Nela Wahan Ponds Site</p>
	
<p>Heavy Traffic Struggle on Steep Gradient of the Road and Cause Wear & Tear and Dust Pollution</p>	<p>The Road Deteriorated and Needs Rehabilitation</p>
	
<p>Darbar (Tomb) of Hazarat Ho Ba Ho Sarkar</p>	<p>Privately Owned Chair Lift Next to the Darbar</p>



Mosque Located next to the Road at about 4Km from Manara Town



Saint Grave Identified next to the road in Kalar Kahar Town

5. Stakeholder Consultations

Timely and broad-based stakeholder involvement is an essential element for an effective environmental assessment, as it is linked with Project planning, appraisal and development in general. Public involvement during Environmental Assessment (EA) has a tendency to improve project design environmental soundness and social acceptability. The public consultation is well illustrated under the heading “Pictorial View of Public Consultation”

5.1 Consultation Process and Technology

Public Consultation has been conducted during the early stage, reconnaissance survey and during the preparation of ESMP Report. Consultation with stakeholders will also be carried out throughout the Project cycle and by different members of the team at different stages of the study. Consultation process includes focus group discussion, village meetings and semi-structured interviews and one to one meeting or interviews in the case of government, private and civil society institutions. During the consultation process, the stakeholders were briefed about the project objectives and scope. Their fears and suggestions were recorded. Women consultations were undertaken, under Gender Analysis and explained about the benefits of the project.

The consultation process was carried out in accordance with World Bank’s policy and guidelines. The stakeholder consultation summarized in table 8.1 followed by pictorial views of the consultation process.

Table 8.1: Stakeholder and Public Consultation Record

Date	Venue	Participants	Discussion	PMU Response
01/04/2022	Built up area along the road	Muhammad Ilyais – Local Shopkeeper	<ul style="list-style-type: none"> Congested traffic is common problem during public holidays and weekends. It was agreed that the project will have significant positive E&S impact of the area. Concerns were expressed in case the acquisition of private land require for the project execution. 	PTEGP team explained that the preparation and implementation of ARAP will be completed before commencing work on site. The shopkeeper appreciated the compensation plan (based on market rate).
01/04/2022	Miani Ada	Gul Khan – Local resident	<ul style="list-style-type: none"> Project scope was explained to the participant. Need of the project in the area was emphasized. Positive impacts of the project were highlighted including improvement in road safety, (particularly during busy hours), 	PMU’s team informed the participants that the contractor will follow solid and wastewater disposal plans prepared for the project and it will be ensured that no project

Date	Venue	Participants	Discussion	PMU Response
			<p>improvement in environment of the area by reducing vehicle emission, job opportunities for local population etc.</p> <ul style="list-style-type: none"> It was informed that current solid waste management system for the area need to be improved and implement more strictly. Current practice of waste disposal is mostly rely on dumping the waste into the open drain which cause blockage, nuisance and bad smell in the area. 	<p>activities cause any disturbance to the local community due to disposal of waste or wastewater of the project. It was also informed by the PMU's team that the project scope of work include rehabilitation of the drains and it will improve overall drainage of storm and foul sewer of the area.</p>
01/04/2022	Miani Ada	<p>Nigaht Bibi – Local resident</p> <p>Fazela Bibi – Local Residence</p>	<ul style="list-style-type: none"> Scope of work and project details share with the participants. The proposed work schem was very much appreciated and informed that the road is often has traffic congestion, particularly during school off time. Concerns were raised by the participants regarding movement of women and children during execution of work in the area. Participant women showed interest in learning IT skills and are keen to become professional and contribute in raising their house income. Both women asked not to collect photographs of the consultation. 	<p>PMU's team also informed that maximum local human resources will be utilized to minimize presence of strangers (migrant labour from other part of the country).</p> <p>PMU's staff informed them that equal opportunity will be adopted to hire local skilled male or female human resources for project execution. In addition it was informed to the participants that local community privacy and day to day activities will not be</p>

Date	Venue	Participants	Discussion	PMU Response
				<p>affected due to the project activities in the area.</p> <p>PMU's team replied that the contractor will ensure that there is no adverse impact on women and children day to day activities by planning his work activities and keep the sufficient part of the road clear for their movement.</p>
18/08/2022	Kallar Kahar Lake Site	<p>Sarmad – SDO Highway Department</p> <p>Asim - Sub-Engineer Highway Department</p>	<ul style="list-style-type: none"> • Kallar Kahar to Manara Road is the busiest road of the area during weekend and public holidays (Eid' holidays, Independence Day etc.) mainly because of tourists from other parts of the country. • The road width need to widen in the built up area to maintain smooth flow of traffic. • Part of the road, just outside of Kallar Kahar city, has high gradient and it is difficult for heavy traffic (busses, trucks etc.) to drive on this this section. Often external support is required to pull the heavy vehicle in this secti • It was suggested to include additional work of constructing an access road to the ponds of Nela Wahan nullah in the proposed sub-project. 	<ul style="list-style-type: none"> • . PMU's staff informed participants that the proposal will be shared with the concern authorities and may include under this project or initiate a separate project.

Date	Venue	Participants	Discussion	PMU Response
			<p>Currently, there is an earthen track for an access to the Nela Wahan Ponds site from Kalar Kahar – Manara road. The approximate length of the earthen track is about 500m and is situated within hilly terrain.</p>	
18/08/2022	Kalar Kahar Lake Site	<p>Nor Khan – Govt. employee (head clerk at TDCP)</p> <p>Azhar Hussain – Electrician working privately and local Govt. offices</p>	<ul style="list-style-type: none"> • Kalar Kahar lake is overcrowded during public holidays and weekends. Local welfare facilities and road network should be improved. • Traffic issue is common problem during peak time in the city. • Groundwater quality in the city is brackish. The local community fulfil their water requirement mainly from Darbar Wala Spring. Sweet water of the nullah is transported to the city through steel pipes. <p>In addition to the Kalar Kahar lake, there are few other tourist places in the close vicinity of the area including Swaki Lake, Darbar Dam, Nela Wahan nullah, Darbar Hazarat Ho ba Ho etc.</p> <ul style="list-style-type: none"> • Pockets of sweet groundwater exist along Talagang Road in the outskirts of Kalar Kahar city. Couple of private tube wells pump sweet water and consumed by the local population. 	<p>PMU's staff informed the participants that the contractor will strictly follow site specific traffic management and waste management plans during construction phase of the project (illustrated plans are provided as section 8 and 10 of this report).</p>

Date	Venue	Participants	Discussion	PMU Response
18/08/2022	Forest Department Rest house / office	Muhamad Arshad – Gardner at Rest house Jamil – Rest House Caretaker	<ul style="list-style-type: none"> • Common fruit trees of the area are Loquat (Eriobotrya Japonica), Pomegranate (Punica Granatum), Pear (Pyrus Communis) and Jamun (Syzygium Cumini). • Common local wood trees are Safeda (Eucalyptus), Frash (Tamarix Aphylla) and Mesquite (Prosopis Juliflora). • Water of Darbar nullah is utilized for carrying out plantation in the area. • Bab Safa (historical garden developed by first Mughal Empire Zaher-u-din Babar locate next to the forest rest house. • Water supply pipeline carrying sweet water of Darbar nullah to the kalar kahar city center runs along the boundary wall of the rest house. 	PMU's staff informed the participants that minimum hurdle will cause to the local community during project activities by maintaining the provision of access to the properties and community centers located along the road. Local water resources will be protected by the contractor from wastewater generate from project activities.
18/08/2022	Wildlife Office Kalar Kahar	Muhammad Khan – Wildlife Inspector Kasur Mahmood – Head Cleark	<ul style="list-style-type: none"> • The proposed rehabilitation/improvement of the road work located within Tahsil Kalar Kahar which holds rich population of wild life including game birds (Partridges, Chakor, Peacock and water fowl) and locally protect mammals Urial, Hare and Deer. • It was informed that the Tahsil Kalar Kahar is closed for any hunting or poaching of wildlife from more than last 15 years. • Kalar Kahar lake provides habitat of 	<ul style="list-style-type: none"> • PMU's staff informed the participants that all site workers will strictly follow the wildlife protection rules and regulations.

Date	Venue	Participants	Discussion	PMU Response
			<p>migratory water fowl (ducks, flamingos, geese etc.) and it is a protected area under wildlife department. However, fishing is allowed under permit or contract with Punjab Fishing Department.</p> <ul style="list-style-type: none"> CBO also active in the area. Chairman of CBO is Malik Mukhtar Haider. 	
18/08/2022	Kalar Kahar city	Malik Aslam – local earthwork contractor	<ul style="list-style-type: none"> There is no proper storm water draining system for the city and cause flooding during rain, particularly since new construction carried out along road sides in the city without considering drainage issue, in recent past. There are good education facilities and health services in the city. There is Fouji Foundation Hospital and an Askri College in the city. 	<ul style="list-style-type: none"> PMU's staff respond to the participants that redesigning and rehabilitation of drains are included in the project and will improve drainage issue of the area.
15/12/2022	Kalar Kahar Wildlife Check Post	Muhammad Khan Wildlife Inspector from Punjab Wildlife Department	<ul style="list-style-type: none"> Wildlife department identified hotspots along the road from the previous reports, information from local community and observations made by their staff. These hotspots include occasional seeing of wildlife crossing the road. It was informed that no such hotspot identified within the concern length of the road i.e. from Kallar Kahar to Manara Road. The nearest hotspot recorded about 7km from the start point 	<p>PMU's informed that new plantation is planned to be undertaken along the road and in the project vicinity for improvement of the area. Minimum 10 new trees will be planted for every one tree uprooted on site due to the project execution. New plantation area will be identified with the collaboration of</p>

Date	Venue	Participants	Discussion	PMU Response
			<p>of the considered length of the road (towards Chakwal city from Kallar Kahar).</p> <ul style="list-style-type: none"> • Boundaries of Neela Wahan and Sardi Wildlife centuries are about 3Km from the road. • Common wildlife along the road include partridges, hare, peacock, wild boar and occasional seeing of urial. • New plantation along the road will help flourishing of wildlife in the area. • Phulai and Shesham are recommended trees for new plantation. 	<p>Forest Department during construction phase of the project.</p>
15/12/2022	Hazarat Sakhi Ho Ba Ho Shrine	<p>Muhammad Asif Supervisor of the Darbar from Department of Auqaf</p>	<ul style="list-style-type: none"> • Darbar is a tomb of grandson of Sheikh Abdul Qadar Jalani. • The saint also known as mora (peacock) wali 40arkar and arrived in the area around 700 to 800 years ago. • Annual gathering held at the darbar every year during June. A bath is given to the tomb and after bath two to three days <i>mahfil</i> (gathering) occurs. • People visit the darbar from all parts of the country including other provinces Sindh and Balochistan. 	<ul style="list-style-type: none"> • PMU informed that the contractor will ensure the access to the Darbar will be maintained to minimum existing level or better. Working area will be barricading with hard fence to stop entrance of unauthorized persons in the work area.
15/12/2022	Farmhouse situated next to the road jst outside	<p>Malik Hashim Malik Qasim</p>	<ul style="list-style-type: none"> • There is lot of potential of tourism in the area which can be explore with some efforts by the 	<ul style="list-style-type: none"> • PMU informed the participants that any land

Date	Venue	Participants	Discussion	PMU Response
	Kalar Kahar	Local landlord	<p>government. Kalar Kahar lake, Hazarat Ho Ba Ho tomb, Takht-e-Babri and Nela Wahan ponds are known tourist places of the area.</p> <ul style="list-style-type: none"> • Sui gas supply in the area is not very good, particularly during winter and therefore local community often depends on using wood as source of fuel. This rapidly depleting vegetation/forest cover in the area. • The landlord is planning to develop a housing society in the area using his own land. 	<p>acquisition will be made through the national laws and World Bank's policies. ARAP will be prepared and compensation will be made before commencement construction activities on site.</p>
15/12/2022	Privately owned chair lift station located just outside the Hazarat Ho Ba Ho Datbar	Naik Ahmad Chair Lift Owner	<ul style="list-style-type: none"> • The lift is busy during weekends. • There is no proper waste disposal arrangement at the darbar and most of the waste are tipped on hill's slopes in the surrounding of the darbar. 	<p>PMU informed that the contractor will ensure that access to all facilities and properties during construction phase are maintained as per routine.</p>
16/12/2022	Miani Ada (a small town situated on the road about 12Km from Kalar Kahar)	Rahmat Ullah – Rikshaw (taxi) Driver Noor Muhammad – Rikshaw Driver	<ul style="list-style-type: none"> • There is lot traffic on road because of the vegetable market of Miani Ada. Relocating of vegetable market or provision of separate route for the market traffic will help to ease out the traffic on main highway. PMU's staff informed that there will be site specific traffic management plan which will be followed by the contractor during 	<p>PMU's staff informed that the suggestion will be communicated to the concern authorities for developing a parking area for the improvement of traffic conditions of the area as a separate project.</p>

Date	Venue	Participants	Discussion	PMU Response
			<p>construction phase of the project.</p> <ul style="list-style-type: none"> • Parking of rikshaw and vans on the main road cause traffic issue. Government land available in the outskirts of Miani Ada which can be developed as parking area for rikshaws and vans. • Between 12:30 and 14:30 is busiest time and experience highest load of traffic on the road, mainly because of the school timings. 	
16/12/2022	Bochal Kala (a small town located on the road about 15Km from Kalar Kahar)	Malik Bilal – Distributor of Next Cola drink Tasavar Iqbal – Driver	<ul style="list-style-type: none"> • The road is very busy during school timings i.e. between 11:30 to 13:00 on Friday and 13:45 to 14:30 on other working days. • State land is available in the area which should be utilize for parking area for taxi stand, vans collecting school kids (if possible) and public transport • Existing drains along the road need to be constructed to the final disposal point i.e. to nearest water channel or soaking pit. Currently wastewater of the drains often accumulate in the low line area of the road as soon as they come out from the built up area. 	PMU's staff informed that rehabilitation of drains are included in the project scope of work and will improve drainage arrangements in the area.
16/12/2022	Boys High School Nur Pur (a small town located	Abdul Ghafor Shah Principal Boys High	<ul style="list-style-type: none"> • School timing during winter is 8:30 to 2:30 and during summer 7:30 to 1:30. 	PMU's staff informed that the contractor will follow site

Date	Venue	Participants	Discussion	PMU Response
	at about 22Km from Kalar Kahar)	School Nur Pur	<ul style="list-style-type: none"> • Students walk along the road for commuting to the school. It will be useful to provide suitable foot path along the road and designated road crossing area for the students. • There is drainage problem during rainy season in the area surface runoff need to be channelized to the water bodies of the area i.e. Nela Wahan or other streams. • Inside the school, walking tracks need to be constructed as students face difficulties to walk to their classes during rain and wet weather. Construction of overhead water tank for running water supply to the students and washrooms repair work also in the list of the school infrastructure improvement works. • Parking area can be developed at front of the school for pick and drop of the students along the road. • 	specific traffic management plan during construction phase of the project.
16/12/2022	Stone crusher factory located on the road near Manara Town	Malik Farooq Supervisor at stone crusher site	<ul style="list-style-type: none"> • Heavy vehicles deteriorate the road due to poor drainage system along the road. • Parking areas should be developed in the outskirts of the buildup area along the road. 	PMU informed that the suggestion about developing parking area in the outskirts of the towns (Miani Adda, Bochal Kala and Noor pur towns etc.) will be shared

Date	Venue	Participants	Discussion	PMU Response
			<ul style="list-style-type: none"> Speed breakers should be introduced in the buildup area and near schools and other community centers (health centers, mosques, heavy vehicles entrance or exit points etc. 	with the concern authority.
16/12/2022	Nela Wahan Ponds Site (about 500m off road from the considered road for rehabilitation /improvement)	Dilawar Hussain Resident of local village called Balwal	<ul style="list-style-type: none"> The Nela Wahan pond site is a tourist place and quite busy during spring i.e. March/April every year. At about 200m upstream from the ponds area, there is a place on Nela Wahan streams called Ab-e-Shafa, which is known as a place where skin disease can be cured if bath is taken by a sick person. People believe that saints pray a lot at Ab-e-Shafa point and therefore there is a cure in the water at that point. The access to the ponds area is a jeep track from the main road i.e. Khushab road, it will attract more visitors if the access road is repaired and appropriate for cars. 	PMU informed that the suggestion will be shared with concern authority regarding developing new access road to the Ponds Site.
16/12/2022	Manara Town (end point of the concern length of the road from Kalar Kahar to Manara)	Khalid Javed – private goods vehicle driver	<ul style="list-style-type: none"> Parking issue inside the Manara town is major issue of the area. There is no organized drainage system of domestic wastewater disposal in the area. Wastewater collected through open channels (nalis) and release to the downhill slop. Often it 	PMU informed that drains rehabilitation work is included in the scope of work of this project and will help to improve drainage arrangement in the area.

Date	Venue	Participants	Discussion	PMU Response
			accumulate on road and cause road deterioration.	
16/12/2022	Manara Town	Ghazi Sagher Resident of Manara Town	<ul style="list-style-type: none"> Participant works in construction industry as plant operator (digger driver) It was emphasized that local human resources should be preferred for hiring for the project. Storm and foul sewage water drainage issue highlighted by the participant. 	PMU informed that local human resources will be preferred in hiring of this project.
02/01/2022	Head Office Wildlife Department, Lahore	Jnaid Alam Deputy Director Wildlife Headquarter , Lahore	<ul style="list-style-type: none"> Proposed scope of work was explained to the participant. The importance of protecting the wildlife of the area was highlighted and it was informed that the area hold unique environment of salt range. Wildlife protected areas i.e. Wildlife Sanctuaries, Game Reserve and National Park details were shared (copies of the notifications of the protected areas are attached as Annexure E). 	PMU's representative informed that contractor will be restricted through safeguard plans and site workers code of conduct to protect the environment including wildlife of the area. Wildlife protection rules and regulation will be strictly adhere by the project staff.

5.2 Consultation Session with Women of the Area

A public consultation session with women was arranged on 16 December 2022 at Basic Health Unit, Nurpur. The session was facilitated by Ms. Shahida, Health and Nutrition Supervisor at BHU. She is also a resident of the same area. On her request the session was not photographed and identity of participants is kept anonymous. 12 women participated in the session. The women ages ranged from early twenties to mid-fifties. Most of the women were residents of nearby villages and use either private vehicle or public transport mainly rickshaw for commuting. The summary of discussion is presented below table 8.2:

Table 8.2: Consultation Session Held with Women

Sr.	Comments	PMU Response
1	Women collectively agreed that the improvement in road will improve their daily lives as commuting will become easier.	
2	Ms. Shahida, H&N Supervisor said that the access to BHU facility should be clear at all times as people from nearby areas come here to get primary health care.	SS & GS from PMU made it clear that the contractors and onsite engineer will ensure clear access to community structures like BHU during construction. Road obstruction and its mitigation measures provided under section 10 of ESMP were explained to the participant.
3	A participant highlighted that an alternate route should be provided for schools in the area so that studies of children are not disrupted. She added that timings of the construction work may be managed according to the school timings.	PMU elaborated that diversions and alternate routes will be provided. The timings will be set according to the community needs.
4	Few local women expressed their concerns that in other development activities in the are, some roads have been dismantled and left as it is mid way causing havoc for the residents and commuters. Will this project be completed in time?	The women were assured that it is a World Bank funded project, and the entire team is fully conscious of impacts on local community hence the work will not be left unattended at any stage. All stakeholders will ensure timely completion of the project.

5.3 Pictorial View of Stakeholder & Public Consultation





Consultation with Wildlife and Public Member



Consultation with TDCP Kalar Kahar



Consultation with Local Shopkeeper



Consultation with staff of Forest Department



Consultation with Wildlife Inspector at Kalar Kahar



Consultation with Supervisor of Hazrat Ho Ba Ho Darbar



Consultation with Private Chair Lift Owner



Consultation with Rikshaw (taxi) Drivers at Miani

	<p style="text-align: center;">Ada</p> 
<p style="text-align: center;">Consultation with Local Residence at Miani Ada</p>	<p style="text-align: center;">Consultation with Locals at Bochal Kala</p>
	
<p style="text-align: center;">Consultation with Shop Owner at Nur Pur Town</p>	<p style="text-align: center;">Consultation with Principal of Boys High School Nur Pur</p>
	
<p style="text-align: center;">Consultation with Stone Crusher Unit Located along the Road</p>	<p style="text-align: center;">Consultation at Nela Wahan Pond site with local resident (Balwal village)</p>

6. Environmental & Social Screening

Environmental & Social Screening (E&SS) for proposed work scheme was carried out during August 2022. The proposed rehabilitation/improvement/widening of the existing road is designed to improve the road safety factor and to achieve smooth flow of traffic. Most of the proposed work will be retained within the ROW of the road, except an additional loop of 0.75 Km as new construction to smoothen steep gradients. 31 kanal of private land will be acquired for this sub-project and an Abbreviated Resettlement Action Plan (ARAP) will be prepared as a separate document for the land acquisition process.

No permanent or significant adverse environmental or social impact anticipated pertains to this sub-project. Envisaged adverse environmental impacts are related to the construction activities including earthwork activities, excavating existing road, repair and new construction of drains along the road etc. Identified impacts are localized and temporary in nature and can be mitigated through implementation of safeguard plans i.e. traffic management plan, waste management plan, training plan etc. Abbreviated Resettlement Action Plan (ARAP) will be prepared and implemented before commencement of the construction activities on site to address private land acquisition impacts of the sub-project. Environmental and Social Checklists completed as a part of the screening process of the sub-project is attached as an Annexure A.

6.1 Findings of E&SS

Following are the findings of the E&SS process;

- The sub-project is located in vicinity of a religious site, but will not result in any negative impact whatsoever i.e. destruction, wear, removal, burial, modification, change of use, neglect, denial of access and desecration. Following religious sites and mosques identified along the road.
 - Hazrat Ho Ba Ho Tomb located just outside Kalar Kahar town, approximately 150 to 200m from the sub-project area (from Kalar Kahar to Manara road).
 - A Saint grave also recorded next to the road inside Kalar Kahar town. However, free space available on other side of the road to avoid relocation of the grave for widening of the road.
 - A small mosque also identified within the ROW of the road about 4 to 5Km from Manara town. Free land available opposite to the mosque and the road can be widened without relocating of the mosque.
- The sub-project is a rehabilitation/improvement of an existing road, however, locally widening of the road to make the existing gradient more safer will require land acquisition. The World Bank O.P 4.12 on involuntary Settlement is triggered and an ARAP will be prepared and implemented as per the requirements of World Bank's Operational Policies and Punjab Environmental Protection Act 1997 (Amendment 2012) before commencement of any work on site.
- The execution of the sub-project likely to require tree cutting and removal of vegetation and therefore NOC from Punjab Forest Department will require which will be obtained as work progresses on site in steps.
- Major features identified just outside of the ROW of the road (or otherwise specified approx. distance from the ROW) along the road starting from Kalar Kahar are described below:
 - Waste dumping site located at left side at about 1Km from start point (Kalar Kahar Chowk)

- School on right side of the road at about 1Km from starting point. The school located outside the ROW of the road. The road width expansion is not required near the school because the road width is already more than 24 feet.
- Plants nursery located at right side of the road at about 1.5Km from starting point, outside the ROW of the road.
- Grave of Saint on left side of the road at about 2Km from starting point. Sufficient space available on other side (right side) of the road for proposed expansion of the road width.
- Hazarat Ho Ba Ho Tomb (Darabar) located at left side of the road (about 200m from the road) just outside the Kalar Kahar.
- Girls Cadet College on Left and Army Cadet College on right of the road at about 5Km from the starting point.
- Army Public School on left side of the road at about 7Km from the starting point.
- Petrol Pump and vehicle dept. for renting van/vehicles on left side of the road at about 7.5Km from the starting point. The petrol pump and the vehicle dept. are well outside the ROW of the road (more than 50m)
- The road passes through small town called Miani Ada small and vegetable market at about 10 to 11Km from the starting point. The road width expansion is not required for the length located within the buildup area because the road already more than 24 feet wide.
- People living in camps outside ROW of the road along both sides at about 13-14Km from the starting point. People use to setup their camps in the area during summer and move to warmer area during winter. Their common profession are labour or livestock business.
- The road passes through Buchal Kalan small town at about 14 to 15Km from starting point.
- Darbar of Hazarat Baba Syeed Lal Shah Bukhari at about 250m on right side of the road at about 20Km from starting point of the road.
- The road passing through the small town Nur Pur at about 21-22Km from the starting point. Waste dumping identified in the drains located along both sides of the road.
- A mosque and stone crushing unit identified at left side of the road at about 24Km from the starting point (about 4Km from Manar Town). Space available along both sides of the road for the proposed road expansion work.

7. Mitigation Measures and Implementation Plan

This section outlines the potential environmental impacts and their associated mitigation measures of the proposed sub-project. It also assigns the responsibilities for implementation, supervision and frequency of suggested mitigation measures.

Table 9: Environmental & Social Management and Monitoring Plan

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
1	Soil erosion; Loss of fertile soil and obstruction in natural drainage due to project execution and Borrowing fill material from the surrounding area	1.1 Avoid unnecessary land clearance/excavation. Contractor will get approval of land clearance and excavation (area and depth) from the supervision consultant before commencement of work on site.	Contractor	Supervision Consultant PTEGP	Clear marking of land on site which need to be cleared or excavated. Documentation record of approval from supervision consultant.	Once before start of clearing land or excavation
		1.2 Maintain photographic record of the area being used by the contractor before and after the work completion in order to confirm the restoration work completed to satisfactory level by the contractor.	Contractor	Supervision Consultant PTEGP	Photographs records	At the start of the work then after restoration.
		1.3 Contractor will ensure that appropriate drainage facilities is provided to control the surface run off	Contractor	Supervision Consultant PTEGP	Compliances with Specification	Check once a week on typical working day
		1.4 Ensure that the movement of earth moving machinery is limited to the work area	Contractor	Supervision Consultant PTEGP PTEGP	Compliance with traffic management record Site inspections record	Daily
		1.5 Contractor will ensure that erosion protection measures are taken, such as retaining wall (if required), avoidance of steep cut etc.	Contractor	Supervision Consultant PTEGP	Visible signs of any soil erosion	Weekly and Once after rain

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		1.6 if the Contractor obtain borrowing material from the surrounding area, the Contractor will excavate the material from the specified, approved and demarcated borrow area only and restricted to specified depth.	Contractor	Supervision Consultant PTEGP	Marking of borrow area on site, site inspection record	Before excavating material from borrow area, weekly during excavation and restoration of the area
		1.7 Contractor will level the borrow area and edges of the pit(s) be given flat slopes as far as possible and as per the satisfaction of the land owner and top soil will be restored after leveling the pit(s). Borrow area restoration plan should be developed and implemented by the contractor. Borrow areas should be restored as soon as excavation is completed and borrow pit is no longer required. Contractor should ensure the excavated areas do not cause unacceptable safety risk.	Contractor	Supervision Consultant PTEGP	Site inspect, Site observation record, Borrow area restoration plan is developed by the contractor and approved by Supervision consultant	During excavation and the borrow area restoration process
		1.8 Contractor will maintain the complete documentation for the excavated areas i.e. volume excavated, date of excavation, leveling date after completion of excavation	Contractor	Supervision Consultant PTEGP	Site Records	At the start of the excavation; During excavation.
2	Soil and water contamination; obstruction in natural drainage;	2.1 Hazardous material e.g. fuel, chemicals etc. should be avoided to keep on site by arranging periodic deliveries. If the hazardous material need to be kept on site then it should be stored in the bunded area with additional suitable container to collect liquid material/waste in case of leakage or accidental spill of the material. The additional container should have capacity to hold minimum total store	Contractor	Supervision Consultant PTEGP	Site Records Inspection report of fuel storage area	At the start of work Weekly during construction phase

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		volume or ideally 1.10 times the total quantity of liquid store.				
		2.2 Waste produces from the project activities should be collected in the suitable waste bins and arrange collection of waste from the site with local authority on regular basis. Construction and inert waste should be collected separately as the disposal of construction waste is different than domestic waste (further details are provided in section 8 Waste Management Plan).	Contractor	Supervision Consultant PTEGP	Photographs record Waste collection record	Once before start and When required
		2.3 Contractor will ensure that all trucks used for the transportation of waste or construction material are covered and waste/material should not escape to the environment during transportation.	Contractor	Supervision Consultant PTEGP	Hiring approved waste carrier from supervision constlant	Once at the start of work When required
		2.4 Supervision Consultant will ensure that the Contractor's fulfill contractor's obligations regarding disposal of construction waste material including waste concrete, spoil, empty drums, packing material etc.	Supervision Consultant	PTEGP	Compliance with Waste Management Plan	Daily
		2.5 Hazardous material (fuel, cement etc.) should be kept away from the water body (streams, hill torrents, canal, drain, groundwater source etc.)	Contractor	Supervision Consultant PTEGP	Site Set up Plan	Daily When required
		2.6 Contractor will ensure that surface drainage is not blocked due to the piling of the material or plant & equipment	Contractor	Supervision Consultant PTEGP	Site Inspection Record	Daily Once a month after each rain
		2.7 Contractor will maintain leak / spill record for each incident of spill or damaged vehicles. Damaged / defective vehicles will not be operated unless repaired	Contractor	Supervision Consultant PTEGP	Maintain Site Incident Record	Daily When required

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		2.8 Contractor will ensure that the material is stock piled at the designated area only.	Contractor	Supervision Consultant PTEGP	Compliance with agreed site setup plan; photographs	At the time of establishment of batching plant. Randomly
		2.9 Ensure work activities do not block public path or access to the local facilities e.g. religious place (mosque, Tomb, church etc.) shop, washroom, entrance/exit etc.	Contractor	Supervision Consultant PTEGP	Site Inspection, Compliance with Site set up plan agreed with client and consultant	Daily
		2.10 If temporary latrine/washroom provided on site then it must be at least 50m away from the water body i.e. stream, canal, groundwater source (hand pump, tube well).	Contractor	Supervision Consultant PTEGP	Site record, site setup plan	Before start of construction phase,
3	Loss of natural vegetation; Damage to habitat and wildlife	3.1 Ensure that no fire arms are carried by any of the employees or labour.	Contractor	Supervision Consultant PTEGP	Site inspection record	DC Daily When required
		3.2 When aligning the access tracks ensure that the chosen route requires minimum vegetation loss and no tree cutting. Minimum ten new trees will be planted in the project vicinity for every one tree uprooted on site due to the project activities.	Contractor	Supervision Consultant PTEGP	Site inspection; Public Consultation; photographs Compliance	After any reported traffic accident involving project vehicle At completion of works and after de-mobilisation of the contractor. BC Once at the time of aligning of access road
		3.3 Contractor will ensure that safe driving practices are adopted on site so that the	Contractor	Supervision Consultant PTEGP		

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		accidental killing of reptiles or small animals crossing the roads could be avoided.			Compliance with site rules and national traffic rules outside the work area	When required Once a month
		3.3 Ensure adherence of the speed limit of 20 km/hr, otherwise specified by the project management, at work area.	Contractor	Supervision Consultant PTEGP	Public & stakeholder consultation record, site inspection record	When required
		3.4 Ensure that vegetation clearing will be minimized and no tree will be uprooted without prior consent of the Supervision Consultant. It is recommended to plant 10 new trees for every one tree uprooted on site within the project vicinity. Do not introduce invasive or exotic species through new plantation.	Contractor	Supervision Consultant PTEGP	Site record; Site Inspection	Once a week or When required basis
		3.5 Contractor will ensure that the disposal of cleared vegetation is not in a manner that may affect the blockage of natural drainage or public paths	Contractor	Supervision Consultant PTEGP	Site Inspections; Implementation of Waste Disposal Plan	Daily Once a month
4	Air Pollution; Dust Emission; and Water Pollution.	4.1 Vehicle and plant maintenance work should not be conducted at work's site except light maintenance i.e. changing wheel etc. Vehicle washing should be avoided at site.	Contractor	Supervision Consultant PTEGP	Compliance System in place	Daily As and When required
		4.2 Material Safety Data Sheets (MSDS) or Control of Substances Hazardous to Health (COSHH) sheets should be available at site.	Contractor	Supervision Consultant PTEGP	Site Record	Weekly basis
		4.3 Ensure that all equipment, generators and vehicles used during the construction are properly tuned and maintained in good working condition in order to minimize the air pollution from	Contractor	Supervision Consultant PTEGP	Periodic Plant & Equipment Inspection Record maintained by the Contractor	Daily When required

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		the plant's emissions.				
		4.4 Require personal protective equipment (PPE) will be provided to the workers to protect them from environmental pollutions by the Contractor.	Contractor	Supervision Consultant PTEGP	PPE Issue record Site Inspections	Daily When required
			Contractor	Supervision Consultant PTEGP	Environmental monitoring record	When required
		4.7 All sections of the road/paths including access tracks that are prone to dust emission should be damped with water sprinkling during construction phase of the project.	Contractor	Supervision Consultant PTEGP	Public Consultation; visual inspection;	Once at the start of every work shift
5	Tree cutting and wildlife habitat disturbance. The natural habitat is vulnerable to noise and dust generated from the movement of site traffic and work activities		Contractor	Supervision Consultant PTEGP		
			Contractor	Supervision Consultant PTEGP		
		5.3 Ensure that no-hunting, trapping and/or harassing wildlife takes place at site. The wildlife protection laws should be strictly implemented. On identification of any nest, inform consultant and PMU immediately.	Contractor	Supervision Consultant PTEGP	Compliance with wildlife protection rules & regulation	BC/DC Daily When required
		5.4 Ensure that the general awareness of the crew is enhanced regarding the wildlife, through environmental training and notice boards.	Contractor	Supervision Consultant PTEGP	Compliance with Environmental and Wildlife Protection laws Implementation of Training Plan	DC Daily When required

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency	
			Executor	Monitor			
		5.5 Ensure wood and shrubs are not used as fuel during construction phase.	Contractor	Supervision Consultant PTEGP	Compliance with site rules Provision of gas cylinder etc.	DC Daily Once a month	
6	Public grievances related to environmental and social aspects e.g. unavailability of drinking water, loss of public property, loss of agricultural land or of livelihood. Obstruction of community paths; and aesthetic problem	6.1 Maintain a complaint register at site office and ensure timely resolution of complaints received.	Contractor	Supervision Consultant PTEGP	Inspect Register	Compliant	Weekly during construction Phase
		6.2 Inform and coordinate the local residents regarding construction time schedule. Conduct meaningful public consultation during all stages of the project execution.			Public Record	Consultation	Monthly Public consultation
		6.3 Identify and appropriately respond to impacts on directly affected persons to ensure legal compliance and meet moral/ethical obligation.					
		6.4 workers will be trained to address privacy issue and behave ethically especially towards woman and children.					
		6.5 Avail maximum local man powers/skilled or unskilled labour					
		6.6 ARAP will be prepared and implement before commence construction phase of the project for compensating the affected persons in accordance to WB OP4.12 and national laws.	PTEGP Supervision Consultant	PMU PTEGP	ARAP implementation record	BC	Three times (pre, during and post construction)
		6.7 No livelihood or private land likely to be adversely affected due to the project execution, if occurs than respond according to World Bank's Operational Policies					In case of any complaint, emergency visit will be organized. During and after completion of sub-project; social

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		<p>6.8 Job priority will be given to the local area inhabitants for unskilled and where possible skilled labour for the project execution.</p> <p>6.9 Local residents in the sub-project area will be informed about the project details, sub-project schedule and GRM.</p>				compliance report will be submitted by PMU PTEGP.
7	Archeological or religious remains (such as graves etc.) may find during the construction activities of the project, particularly during preparation of ground and earthwork activities	<p>7.1 All earthwork activities must be supervised by a competent person on site. Vibrating roller should be avoided near the buildings/structure, if require prior approval will be required from the consultant.</p> <p>7.2 In case of findings of archeological or religious site during execution of work on site, the work should be stop and immediately inform E&S team of PMU.</p>	Contractor	Supervision Consultant PTEGP	Site Inspection record	When required basis during construction phase
		<p>7.3 Implement Chance Find Procedure (provided as Annexure B) in case of uncovering of ancient site or artefacts during construction phase of the project.</p> <p>7.4 Explain Chance Find Procedure to the site workers by delivering toolbox talk on this topic during construction phase of the project on site.</p> <p>7.5 In case of unavoidable interference require in public places i.e. shrine, mosque, schools, graveyard etc. prior notification will be issued to the consultant and consultant needs to be done to reach consensus on procedure or other options.</p>	Contractor	Supervision Consultant PTEGP	Site diaries Site training record	Before and during construction phase

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
8	Blocking of road may hamper public mobility due to increase in number of vehicles and causing road safety; safety hazard for communities; damage to public infrastructure;	<p>8.1 The Contractor will prepare and implement Traffic Management Plan and get its approval from the supervision consultant for implementation at site</p> <p>8.2 Enforce the maximum speed limit for site traffic to 20 km/hour or otherwise specified different limits by the supervision consultant.</p> <p>8.3 Any damage to public roads/property due to the project traffic should be rectified ASAP by the contractor.</p> <p>8.4 Movement of vehicles carrying construction material should be restricted during off peak day time only to reduce traffic load and inconvenience to the local residence.</p> <p>8.5 Indicators, signboards regarding traffic diversion should be provided at proper distance.</p> <p>8.6 Maintain access to public properties and community services (school, health center etc.) during construction phase of the project. If require provide temporary access by constructing temporary structures. Working hours should be fixed and communicated with the local community in advance so there is minimum disturbance to the local community.</p> <p>8.7 All temporary diversion/access routes should be designed and</p>	Contractor	Supervision Consultant PTEGP	Implementation of Approved Traffic Management Plan.	Weekly during construction phase

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		constructed by the competent authority to minimum similar or better standard.				
9	<p>Campsites for construction workers are the important locations that have significant impacts such as health and safety hazards on local resources and infrastructure of nearby communities.</p> <p>There will be a potential for diseases to be transmitted including malaria, exacerbated by inadequate health and safety practices.</p> <p>Child labour and school drop out</p> <p>Occupational Health and Safety issues</p> <p>Hindrance in movement of local women and children and breach in privacy</p>	<p>9.1 Contractor will have rented out houses for the workers rather installation of camps nearby the sub-project site. A code of conduct to be followed to ensure no privacy issues arise with the local community.</p> <p>9.2 Provide adequate health care facilities (trained First Aider) within construction sites.</p> <p>9.3 Provide first aid facility round the clock at residential arrangements for project staff.</p> <p>9.4 Maintain stock of medicines in the facility and appoint fulltime designated first aider or nurse.</p> <p>9.5 Ensuring that children and minors are not employed directly or indirectly on the sub- project.</p> <p>9.6 Communication on hiring criteria, minimum age, and applicable laws.</p> <p>9.7 Provide personal protection</p>	Contractor	<p>Supervision Consultant</p> <p>PTEGP</p>	<p>Site inspection record</p> <p>PPE issuing record</p>	Weekly during construction

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
	matter Economic Losses (about 31 kanal Private Land Acquisition)	equipment (PPE) for workers, such as safety boots, helmets, masks, gloves, protective clothing, safety goggles etc. (as per the requirement of risk assessment) 9.8 The contractor will rent out a house for the accommodation of his site based migrated work force. The contractor is required to develop a Site Management Plan to address: <ul style="list-style-type: none"> ➤ Discipline ➤ Community liaison ➤ Ethnic tensions ➤ Code of Conduct on Ethical Behavior ➤ and Gender-based Violence ➤ Local culture and norms 9.9 ARAP should be prepared and implemented for compensating the affected persons before commence work on site.	Supervision Consultant PTEGP	PMU PTEGP	Approved ARAP from World Bank	BC

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
10	Uncontrolled releases of hazardous materials may result from small cumulative events, or from more significant equipment failure associated with events such as manual or mechanical transfer between storage systems or process equipment.	<p>10.1 Measures for fire prevention and firefighting.</p> <p>10.2 Indicators on site (for example, heavy rainfall) that will prompt the shutdown of specified areas of work.</p> <p>10.3 Procedure for shutdown of site, including transfer of plant, materials and personnel to safe areas (for example in the event of a flood).</p> <p>10.4 Emergency evacuation procedure for staff and members of the public likely to be impacted by an emergency event on site (for example: fire or blast).</p> <p>10.5 Where practicable, avoiding or minimizing the use of hazardous materials.</p> <p>10.6</p> <p>10.7 The contractor will prepare emergency shutdown procedures and evacuations to cover all staffs and affected members of the public in the event of any emergency incident (such as traffic accident and fire).</p>	Contractor	Supervision Consultant PTEGP	Training Record Compliance with ESMP Emergency Plan is in place	Monthly during construction phase

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		<p>10.8 The contractor will ensure emergency access routes are well-known and have appropriate signage. Identification of locations of hazardous materials and associated activities on an emergency plan.</p> <p>10.9 Training should incorporate information from Material Safety Data Sheets (MSDS) for hazardous materials being handled.</p> <p>10.10 MSDSs should be readily accessible to employees in their local language.</p>				
11	Noise Pollution Issue	<p>11.1 Carry out noise monitoring at 5m distance from machine or work activities which likely to produce noise pollution.</p> <p>11.2 Use appropriate machinery in good working condition in order to keeping noise levels within NEQS.</p> <p>11.3 Require personal protective equipment (PPE) will be provided to the workers to protect them from noise pollutions by the Contractor.</p>	Contractor	Supervision Consultant PTEGP	Environmental monitoring record	Once a day for every noise producing activity
12	Occupational Health and Safety Issues	<p>12.1 Road safety issues should be mitigated through implementation of site specific traffic management plan.</p> <p>12.2 Suitable rest area (covered area protection from rain and wind) and toilet with running water facility should be</p>	Contractor	Supervision Consultant PTEGP	Execution of H&S Plan, Traffic Management Plan, Environmental Monitoring Plan and GRM practices.	Once BC and Monthly in DC phase of the project.

Sr. No.	Impacts	Mitigation Measures	Responsibility		Parameters for Monitoring	Frequency
			Executor	Monitor		
		<p>provided on site by the contractor.</p> <p>12.3 Emergency lighting of adequate intensity should be installed and automatically activated upon failure of the principal artificial light source to ensure safe shut-down, evacuation etc.</p> <p>12.4 Provide personal protection equipment (PPE) for workers, such as safety boots, helmets, masks, gloves, protective clothing, safety goggles etc. (as per the requirement of risk assessment)</p> <p>12.5 All site workers should be tested for communicable diseases e.g. Covid-19, HIV/AIDS, Cholera, Typhoid etc. at start and at yearly basis.</p> <p>12.6 Provide first aid facility round the clock at occupied areas for the project by the contractor.</p> <p>12.7 The workers will be informed that in case of any grievance they can report to the site supervisor. The site supervisor will be provided a complaint register to record grievances. In case the matter is not resolved locally the site supervisor will be required to forward the matter to PMU.</p>				

BC – Before Construction; DC – During Construction

8. Waste Management Plan

8.1 Solid Waste Management

This component describes the illustrated waste disposal plan that will be employed during the construction phase of this sub-project. The site specific Waste Management plan will be prepared by the contractor in light of the recommendation made in this section before commence work on site.

Envisaged main types of waste to be generated from the project activities include:

- Domestic waste;
- Construction waste;
- Fuel, oils, and chemicals based waste;
- Packing waste;
- Excess construction material;
- Excavated spoil; and
- Vegetation waste (from clearing area covered with natural vegetation).

Domestic waste and construction waste will be the main type of waste generated from work area and construction activities. Domestic waste contains high percentage of readily degradable hydrocarbon which gives bad smell on decomposition, especially in hot and humid environment. Construction waste classified as inert waste which could be problematic to dispose of. It is recommended to collect the domestic waste and construction waste separately. The Contractor will adopt 3 Rs (reduce, reuse and recycle) approach for managing the solid waste of the sub-project.

Domestic Waste

- All the waste generated at contractor's site office(s) and accommodation of site based staff of the project should be collected and bagged. Domestic waste collection should be arranged with the local authority for disposal.
- Burning of waste at site should be strictly prohibited.
- Biodegradable bags should be provided at site for waste collection and disposal. Weekly collection of waste should be arranged with local authority i.e. Tahsil Municipal Authority Kallar Kahar by the contractor.
- Separate bins should be provided at site for collection recyclable waste (paper, glass, cans, plastic bottles etc.) and green waste (compostable, kitchen or garden waste).

Other Non-Hazardous Waste

- Excavated spoil can be used as fill material provided it meets required engineering criteria. But if it needs to be disposed of then ensure it does not affect natural drainage of the area and cause water ponding, flooding etc.
- Extra material (aggregate, brick, cement etc.) should be sent back to the supplier at the completion of the work.
- No waste should be buried at site.
- Recycle packing waste, if it comprises only cardboard or other recyclable material. Non-recyclable packing waste should be disposed of with other inert construction waste.

- Vegetation waste from clearing the area should be disposed of such that it does not affect/block natural drainage and public paths. It is recommended to consider compost the green waste. Supervision consultant will evaluate the composting option of green waste with the collaboration of the contractor.

Special Waste

- Cement bags, fresh concrete, empty chemical/fuel container, used batteries, medical waste or excavated contaminated soil can be classified as special waste.
- Special waste should be handled as hazardous waste and collected in suitable container/bags, keep special waste in the purpose-built temporary storage area only and send it to of site to authorized disposal site.
- All site workers involved in handling special waste should use appropriate PPE according to the risk assessment or health & safety plan of the project.
- Special waste should be carried in suitable carrier vehicles to the authorised disposal site.

8.2 Liquid Waste Management

Wastewater generated from the contractor's camp and work area during construction phase of the project can be disposed of by connecting the local existing wastewater disposal system with the approval of concern authority. If require, wastewater testing should be conducted as per the requirement of the local authorities.

If there is no existing sewerage pipeline available near the camp office or site offices than disposal system should be installed including construction of septic tank, soaking pit and underground sewage collection system.

Liquid material, fuel etc. should be kept in the designated bunded (impermeable with raised boundaries) area only. The bunded area should be designed, constructed and maintained by the competent person.

Spill Kit (sand bags, absorbing pads, shovels and plastic bags/container for carrying contaminated soil or liquid) should be provided at the storage area, in case of accidental spills or leakage. Loading and unloading of the material at site should be managed by a trained banksman.

9. Training Plan

The environmental and social training will help to ensure to meet the requirement that the ESMP are clearly understood and followed by all project personnel. The primary responsibility of providing these training to the project personnel (as specified in the below training plan) will be that of the contractor and Supervision Consultants. The training will be given to the site workers, working at different level (manager, supervisor, labourer etc.) and stages of the project i.e. construction and operation stage. Tentative training plan is provided below. The plan should be finalized before the commencement of the project by the supervision consultant is given below:

Table 10. Proposed Training Plan

Trainee	Trainer	Contents	Schedule
All Site Workers	Contractor's Site/Project Manager	Site Inductions – All site workers should be inducted for the site. The importance of the area from environmental (wildlife, archaeology, water sources etc.) point of view should be explained to the trainee and inform them and ensure all site workers adhere the environmental laws and regulations. It should be clearly spell out that no site worker should get involve in hunting or poaching of wildlife. Site rules e.g. speed limit, break timing, rest area, waste handling practice etc. should be explained to the site workers. sexual abuse, privacy issue and exploitation.	Before the trainees start work on site (4 sessions – each session include 25 workers)
<ul style="list-style-type: none"> • Contractor's: Managerial or supervising staff • Consultants: Managerial staff and Engineers 	Environment Specialist PTEGP Environmental Specialist/Health & Safety Manager of Supervision Consultant	Environmental and social aspects of the area, key finding of the EA; Mitigation measures; key elements of ESMP and its implementation on site. Using Fire Extinguisher correctly (type of fire extinguisher for different types of fire, how to inspect and use it).	Before construction Phase
Drivers	Environmental Manger of Contractor, Environment	HSE Plan, Road Safety, Road Restrictions, Vehicle Restrictions, Defensive Driving, Vehicle Reversing	Before the trainees commence work on site

Trainee	Trainer	Contents	Schedule
	Specialist of Supervision Consultant	Rules, Social and Cultural Values of the area.	

10. Illustrated Traffic Management Plan

Execution of rehabilitation/improvement/widening of existing road will require partial or full closure of the road for short period during construction. Therefore, traffic management plan will be required to manage the road traffic during construction phase of the project. It is the Contractor's contractual obligation to prepare and submit a Traffic Management Plan with consultation of stakeholder and public consultation, and get its approval from the supervision consultant, PTEGP and traffic police and implement on site. The contractor should hold consultation with local community and furnish the site specific traffic management plan, considering provision of alternative route (if available) and other options e.g. closing part of the road, introducing new traffic signals, closing road for short time etc. The plan should be disclosed to the public by providing it at local library and at the project site office(s). The suggestions made in this section should be incorporated by the Contractor in preparation of the Traffic Management Plan.

The purpose of traffic management plan is to cope with traffic distribution that call for coordinated actions from several services responsible for road/traffic management on a given road or network.

If part of the road needs to be used to undertake the work activities then following measures should be taken during execution of the construction activities:

- The working area should be clearly marked with separating fence. No unauthorized person should be allowed to enter the working area;
- If possible, temporary alternative route should be provided for the affected traffic, if alternative route is not available than ensure the provided free road (available part of the road for the traffic) for the traffic is adequate for the load and type of traffic;
- The temporary route should be adequate for the existing traffic plus the project traffic and designed and built by a specialized Contractor.
- Provide temporary traffic signal or control traffic manually by provision of trained traffic controller, if require;
- Construct Speed breaker(s), if require;
- Sign posts about the new traffic light, speed breaker and/or proposed new road layout should be placed at least one km from affected length of the road/street. Sign boards about the expected delay in traffic and possible queue build up sign should be placed before the work area or affected part of the road etc.;
- It is the Contractor's contractual obligation to use roads and paths of the area with care and in case of any damage, repair the damaged roads or paths immediately;
- Arrange all delivery or heavy vehicle access in the built up area during off-peak time i.e. 10 to 12 morning and 2 to 4 afternoon (depends timing of local school/colleges timings) in order to minimise traffic congestion; and
- Supervision consultant should review the submitted traffic management plan by the contractor and tailored the plan according to the environment of the area and nature of work need to be conducted.
- The sub-project will seek to avoid placement of camps where their presence might contribute to any conflicts, or intrude on privacy. The contractor is required to develop a Site Management Plan to address:
 - Discipline
 - Community liaison

- Ethnic tensions
 - Code of Conduct on Ethical Behavior
 - and Gender-based Violence
 - Local culture and norms
- Relevant staff of the contractor and supervisor consultant will be trained on:
 - Privacy concerns of women
 - Road obstruction: ensuring access to community assets (Schools, mosques, health centers etc.)
 - The contractor will also be provided printed guidelines on good behavior practices for labour force. Environmental Guidelines are included as an Annexure H.

11. Environmental & Social Monitoring Plan

Environmental monitoring will be carried out to ensure that all construction activities comply and adhere to environmental provisions and standard specifications, so that all mitigation measures are implemented.

Table 11: Environmental & Social Monitoring Plan

No.	Description	Monitoring Location	Monitoring Parameters	Frequency of Measurement
1	Ambient air quality	At construction site near sensitive receptor e.g. Hospital, School etc.	NOx, SOx, CO and Particulate matter.	Laboratory based (approved laboratory from EPA Punjab) bi-annual during 2 years of construction phase considering monitoring at two points 2 (8No. of 24hrs monitoring)
2	Groundwater and surface water quality monitoring area	From the groundwater source(s) used by the contractor and surface water bodies located near the construction area	Water table depth, discharge, physical-chemical parameters, biological contamination, heavy metals and toxic organic compounds.	Laboratory based (approved laboratory from EPA Punjab) testing at bi-annual basis during the construction phase of the project (assuming two groundwater sources utilize by the contractor. Neela Wahan and open drain collect wastewater of the area are major surface water bodies – 16No. tests).
3	Dust pollution, emission of smoke and potential air pollutants from the construction machinery.	Construction sites, borrow areas, access roads	Dust, smoke, gases	Visual monitoring throughout construction phase
4	Visual check for exhaust emissions from the vehicles.	Construction sites, access roads, borrow areas.	Visible emissions.	During routine site monitoring
5	Visual check for vegetation loss	Construction site, site offices, access roads, borrow area	Type and number of tree species uprooted	At the beginning of construction activities and during construction phase.
6	Noise	Construction site, access roads, communities centers (schools, hospitals etc.) within 100m of construction site	Noise measurement	Once a week throughout the construction phase. Or as per requested by the supervision consultant.
7	Solid Waste management	At Construction site and contractor's site office/residence	Any sign of soil or water contamination; Any un-authorized waste dumping	Daily during whole construction phase.
10	Oil based wastes /spills	Oil storage area, vehicle washing lines; any other spill area.	Facilities to control the accidental oil spill according to control measures; any sign of soil or water contamination	Daily during construction phase
11	Socioeconomic issues	At project locations; settlements	Local people recruited for all	During construction phase

			manual labour and other jobs for which local skill are available; grievances of and conflicts with communities;	
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12. ESMP Implementation Cost

Total allocated cost for implementation of ESMP on site is 2% of the project cost i.e. PKR 32,303,367 (without 5% Punjab Sales Tax). ARAP cost is not included in the cost of ESMP. It is contractor's contractual obligation to implement ESMP on site during construction phase of the project. Cost of ESMP activities will be included in the Contractor Budget and Bill of Quantities (BoQs) through in accordance to the procurement procedures. The estimated cost details for the implementation of ESMP details are provided in the table 12 below. Estimated unit rates are taken from the previous study with additional 50% inflation.

Table 12: Estimated ESMP Implementation Cost

Name of item	Quantity	Unit	Unit Rate (PKR)	Total Amount (PKR)
Estimated PPE Cost (taken from previous study +50% inflation or market rate)				
Dust masks	44,000 (considering average 100 persons working over 20 months)	Each	20	880,000
Safety Shoes	400	Each	3000	1,200,000
Gloves (suitable for their task, mainly material handling gloves (handling steel bars, concrete bags, bricks etc.))	2000 (considering average 100 persons working require new pair every month)	Each	500	1,000,000
First Aid Box	10	Each	10,000	100,000
Ear Plugs	2000 (considering same assumption as for gloves)	Each	250	500,000
Safety Helmets	200	Each	2000	400,000
Safety Jackets/Hi-Viz	2000	Each	1000	2,000,000
Sanitizer	500	Each	500	250,000
Thermogun	4	Each	10,000	40,000
Safety Goggles	2000	Each	1000	2,000,000
SUB TOTAL (1)				8,370,000
Environmental Analysis During Construction				
Ambient Air Quality Analysis (SO _x , NO _x , CO, PM _{2.5} , O ₃ ,)	8	Each	120,000 (market rate)	960,000
Noise Level Monitoring	4 Noise monitoring devices	Each	200,000 (market rate)	800,000

Name of item	Quantity	Unit	Unit Rate (PKR)	Total Amount (PKR)
Estimated PPE Cost (taken from previous study +50% inflation or market rate)				
Water Analysis (groundwater and surface water)	16	Each	50,000 (market rate)	800,000
SUB TOTAL (2)				2,560,000
Others				
Provision of Rubbish Bins	100	Each	2500	250,000
Reflective Tape	500	Each	1000	500,000
Safety cones	500	Each	5,000	2,500,000
Safety boards	50	Each	12,000	600,000
Water sprinkling	Once a day during summer and when require basis during winter	L/S	1,000,000	1,000,000
Implementation of Training Plan	10 session	Each session	75,000	750,000
Implementation of Traffic Management Plan (provision of temporary traffic signal, speed breaker etc. constructing of new diversion route (road)for traffic management is not included in this cost)	1	L/S	2,000,000	2,000,000
Allocated Replenishment of Trees Cost	18	Km	416000	7,488,000
SUB TOTAL (3)				15,088,000
TOTAL ESMP COST				26,018,000
CONTEGENCY IN ESMP COST				6,285367

13. Grievance Redress Mechanism

A site-based Grievance Redress Mechanism (GRM) for the sub-project will be operational during the entire sub-project cycle. Grievance Redress will be convened as per the World Bank OP 4.12 which requires an appropriate and accessible grievance redress mechanism for affected persons, including displaced persons and host communities.

A multi-tier GRM has been proposed in the ESMF. At the PMU level, the Social Safeguard and Gender Specialist will be the focal person for PTEGP. Project director will chair the Grievance Redress Committee (GRC). For the proposed sub-projects, Dy. Director Development, Chakwal Mr. Fazal Shar (contact No. 0344 4025576 will act as Grievance Redress Officer (GRO). The GRM process will be explained to the GRO.

GRM will provide an easy to access forum for stakeholders to officially launch any complaint (through complaint boxes, by post, via mail, in person etc.) against any project related activities or issues whereby, their complaints will be heard, registered and addressed by the project. The proposed GRM has time bound activities with clearly defined roles and responsibilities. All complaints received in writing or received verbally will be properly recorded and documented. An online GRM already exists and can be accessed at <https://ptegp.punjab.gov.pk/grm>. Figure 3 explained the procedure of registering the complain in local language i.e. in Urdu, the board will be displayed at project site office(s).

Figure 3: Procedure for Registering Complaints



عوامی شکایات اور ان کا حل

عوام الناس سے گزارش ہے کہ

تعمیراتی کام کے دوران کسی قسم کے مسئلے / شکایت کی صورت میں درج ذیل ہدایات پر عمل کریں۔

1. تعمیراتی کام کی جگہ پر متعلقہ ڈسٹرکٹ کوآرڈینیشن آفیسر کے مہیا کردہ نمبر پر اپنی شکایت درج کروائیں۔
2. شکایت کا تسلی بخش حل نہ ہونے کی صورت میں **پنجاب ٹورازم فار اکنامک گروتھ پروجیکٹ** کی جانب سے نیچے دیے گئے نمبر یا پتے پر اپنی شکایت پہنچائیں۔

فون نمبر: 042-99332607 ایڈریس: پنجاب ٹورازم فار اکنامک گروتھ پروجیکٹ-A-175، اہمال اسکیم، کالج کارنر، لاہور

3. شکایات کے آن لائن اندراج کیلئے **PUNJAB TOURISM FOR ECONOMIC GROWTH PROJECT** کی ویب سائٹ پر آن لائن فارم پُر کریں ویب سائٹ: ptegp.punjab.gov.pk
4. برائے مہربانی شکایت درج کروانے وقت اپنی مکمل تفصیل نام، پتہ، شناختی کارڈ نمبر اور رابطہ نمبر ضرور مہیا کریں۔



14. Conclusion

The project will not have any significant adverse impact on the existing environment of the area other than land acquisition and temporary increase in noise and dust levels and movement of the additional machinery and traffic during construction phase of the project.

On the other hand, the project will accommodate thousands of the road users (including tourists of the area) and improve travelling comfort and the road safety. The proposed work scheme will help in minimizing traffic blocking and congestion this will improve overall environment of the area by reducing vehicle emission, dust and noise pollution in the area. It is envisaged that the project will facilitate and attract more visitor/tourist in the area and subsequently improve the local economy and help poverty alleviation.

ANNEXURE

Annexure A: Checklist Completed for Environmental & Social Screening

S/N.	Screening Criteria	Yes	No	Explanation
ENVIRONMENT				
1.	<ul style="list-style-type: none"> Is the subproject in an eco-sensitive area or adjoining an eco-sensitive area or monument? (Yes/No) If Yes, which is the area? Elaborate impact accordingly. 		No	Kallar Kahar – Manara Road is located within Salt Range of Chakwal District. However, the proposed work scheme comprises on rehabilitation/improvement of exist road and most of the proposed work activities are restrained within the ROW of the road. About 31 kanals of adjacent private land will be acquired for widening and slight variation in the road layout located within built-up area. No significant adverse E&S impact is anticipated.
2.	Will the subproject create significant/moderate/no environmental impacts during the construction stage?	Yes		The proposed work scheme includes rehabilitation/improvement/widening in the existing road, therefore the anticipated adverse environmental and social impacts of the project can be classified as Moderate Impacts. Anticipated adverse impacts are related to construction phase of the project and are temporary, localized and mitigable.
3.	Clearance of vegetation/tree-cover/other	Yes		There will be clearance of vegetation and tree cutting require for execution of the project. it is envisaged that out of 28 Km of road which need to be rehabilitated/Improved/widening about 18 Km length will require vegetation clearance remaining 10 Km located within built up area. Exact number of trees need to be uprooted for the project will be determined on site once the extended boundaries of the road including proposed hard shoulders are marked on site. Clearance (NOC) will be acquired for each Km from Punjab Forest Department as the work progress on site.
4.	Direct discharge of construction run-off, improper storage, and disposal of excavation spoils wastes and other construction materials adversely affecting water quality and flow regimes.	Yes		Road rehabilitation/improvement work unlikely to generate noticeable volume of surface run-off. However, surface water run-off likely to be generated from washing plant & equipment and site office should be collected and dispose of appropriately. Control surface water bodies of the area (nullah, ponds etc.) need to be protected from all sort of pollution. Material storage and disposal sites for surplus excavated spoil should be carefully designed and approved from the supervision consultant. It is contractor's contractual obligation to ensure that there is no hindrance in natural existing drainage arrangements for surface

S/N.	Screening Criteria	Yes	No	Explanation
				run-off due to the material storage and spoil or other construction waste disposal activities. Further evaluation of mitigation measures will be presented in the ESMP. The ESMP will be implemented on site by the contractor and supervised by the client (PMU).
5.	Flooding of adjacent areas.	Yes		<p>Execution of proposed project activities are unlikely to cause any flooding.</p> <p>Flash flooding may occur in the area during heavy rain. The contractor should identify potentially high risk area along the road e.g. low line area, area next to steep slopes etc. and accordingly design/build his facilities and work plan (site offices, contractor's camp etc.)</p>
6.	Improper storage and handling of substances leading to contamination of soil and water.	Yes		<p>Poor housekeeping, improper handling/mobilization of material on site, storage etc. will increase the risk of accidental spill and subsequently damage the environment of the area.</p> <p>All material loading/unloading activities should be managed and supervised by the competent person.</p> <p>Avoid storing hazardous material on site. But if require store material at purposed build storage area i.e. on impermeable surface, contain surface run-off by bunding the area with sand bags, provision of double container of recommended volume capacity etc.</p> <p>More details will be provided in the ESMP.</p>
7.	Elevated noise and dust emission.	Yes		<p>Earth works and cutting hard surfaces (rock, existing structure etc.) are major components of the project. This likely to cause noise and dust pollution in the area. These impacts are mitigable and will be addressed in detail in the ESMP.</p>
8.	Disruption to traffic and visitor's movements.	Yes		<p>Hindrance to local traffic is anticipated during construction phase of the project. A site specific traffic management plan should be prepared by the contractor and get its approval from supervision consultant before commence work on site. Once the road rehabilitation/improvement work is completed the road capacity will be improved and traffic movement will be more smoothened in the area.</p>

S/N.	Screening Criteria	Yes	No	Explanation
9.	Damage to existing infrastructure, public utilities, and amenities.	Yes		Few Electricity poles and existing drain located along the roads may require to be relocated for widening and/or amending the road layout. All affected services will be relocated with the consultation of relevant authorities i.e. TMA, and Islamabad Electric Supply Company (IESCO)
10.	Failure to restore temporary construction sites.		No	All areas temporarily occupied by the contractor for their facilities e.g. contractor camp, material or plant storage yard etc. will be restored to minimum to its original condition at completion of the construction phase of the project. Supervisory consultant will monitor regularly. PMU's E&S team will also conduct monitoring visits on regular basis.
11.	Possible conflicts with and/or disruption to local community and/or visitors.	Yes		<p>Temporary disturbance to local community and visitors in the area are anticipated. This could be minimized by good planning of work activities, meaning full consultation during different stages of the project (design, construction and operational phase), prepare and implement comprehensive ARAP (depending on total number of affecties) and developing/implementing Grievances Redress Mechanisms (GRM) during construction phase of the project. The existing GRM system currently being implemented on ongoing road rehabilitation/improvement projects successfully. The procedure explained and disclosed to the public on online system and also display on notice board on site.</p> <p>A committee will be established to implement/monitor of delivering GRM. PMU has a dedicated GRM system consisting of both online and physical components. Online complain registration system is operational in addition Complain Register will also be provided at site office(s). Information regarding how to register complaint will be displayed on site in local language.</p>
12.	Health risks due to unhygienic conditions at workers 'camps.	Yes		It is contractor's contractual obligation to provide safe & healthy contractor's camp for all site workers of the project. Contractor's facilities will be inspected on regular basis by other parties of the project (Supervision Consultant, PTEGP and C&W Department).
13.	Will the subproject create significant/limited/no environmental impacts during the operational stage? (Significant / limited / no impacts) <ul style="list-style-type: none"> • Flooding of adjacent areas 			The proposed project comprised on rehabilitation/improvement of existing road. Identified adverse impacts are construction related impacts which are temporary, localized and mitigable. Therefore it can be stated that

S/N.	Screening Criteria	Yes	No	Explanation
	<ul style="list-style-type: none"> Impacts to water quality due to effluent discharge Gas emissions Safety hazards Other, specify.			there is no significant adverse environmental impact of the project execution. Anticipated positive and negative environmental and social impacts of the sub-project will be evaluated and presented in the ESMP.
14.	Does the sub-project involve any prior clearance from the State Forest Department for either the conversion of forest land or for tree-cutting? (Yes/No). If yes, which?	Yes		Tree plantation located within the ROW of the road belongs to the Punjab Forest Department. A clearance will be required from Forest Department before clearing the area for construction work. Any tree uprooted on site for project execution will be replaced with additional plantation carry out within the project vicinity, details will be provided in the ESMP.

CULTURAL HERITAGE

S/N.	Screening Criteria	Yes	No	Explanation
1.	Will the subproject create significant/limited/no cultural properties impacts?		No	There is no cultural property site identified within ROW or in the close vicinity of the project.
2.	Involve significant excavations, demolition, and movement of earth, flooding, or other major environmental damages.		No.	The proposed sub-project involve rehabilitation/improvement of existing road and no significant earthwork, demolition or flooding anticipated due to the execution of the work.
3.	Is located within or in the vicinity of a recognized cultural property conservation area or heritage site		No	
4.	Is designed to support the management or conservation of a cultural property.	Yes		The sub-project is designed to improve access to tourist destinations in Chakwal and Khushab Districts.
5.	Does the subproject involve any prior clearance from the Archeology Department for either the conservation or management of heritage sites or vicinities? (Yes/ No). If yes, which?		No	

SOCIAL

S/N.	Screening Criteria	Yes	No	Explanation
1.	Will the subproject create significant/limited/no adverse social impacts?	Yes		Limited impacts – mainly due to the private land acquisition
2.	Land acquisition resulting in loss of income from agricultural land, plantation, or other existing land.	Yes		As per road design about 31 kanal of private land will be acquired for rehabilitation/improvement of the road.
3.	Impact on livelihood and economic activity.	Yes		The C&W will utilize the available ROW in the

S/N.	Screening Criteria	Yes	No	Explanation
				built up area. Some street vendors, squatters may require relocation. The affected vendors will be compensated as per Project's RPF.
4.	Land acquisition resulting in relocation of households.		No	No residential structure or household need to be relocated for the work execution.
5.	Any reduction of access to traditional dependent communities (to areas where they earn for their primary or substantial livelihood).		No	Site specific traffic management plan will be implemented by the contractor and ensure there is no hindrance in the movement of local community/traffic.
6.	Any displacement or adverse impact on tribal settlement(s).		No	No existence of tribal settlements identified along sub-project.
7.	Adverse impacts to women, including economic and safety concerns.		No	<p>Girl's school and colleges recorded along the road and girls/women movement need to be facilitated by the contractor using alternative routes or diversions etc.</p> <p>The PMU team will ensure that issues of sexual abuse and exploitation are made part of trainings conducted for contractor, labour and site supervisor.</p> <p>In addition, the GRO will be sensitized to give high priority to such incidents if reported.</p> <p>Sub-project specific E&S guidelines prepared for the project will be shared with the contractor.</p> <p>No specific adverse economic impact on women of the area is anticipated.</p>
8.	Impact on infrastructure (roads, water supply, any other type of infrastructure) <ul style="list-style-type: none"> Other, specify. 	Yes		Electricity poles and affected length of storm water drain will be relocated after consultation with concerned departments such as TMA, and Islamabad Electric Supply Company (IESCO)
OVERALL ASSESSMENT				
Subproject is declined				
Subproject is accepted				
Subproject is classified as environmental Category A and requires an in- depth Environmental and Social Impact Assessment and an Environmental Management Plan.				
Subproject is classified as environmental Category B and requires an Environmental and Social Management Plan.		B		
Subproject is classified as environmental Category C and does not require an Environmental Management Plan.				

Annexure B: Chance Find Procedure

Chance Find Procedures

Project may involve deep excavations. Therefore, the possibility of chance find is not ignorable. In case of any chance find, the contractor will immediately report through Supervision Consultant to DG Directorate General of Archaeology, Punjab, to take further suitable action to preserve those antique or sensitive remains. Representative of the Director will visit the site and observe the significance of the antique, artefact and Cultural (religious) properties and significance of the project. The report will be prepared by representative and will be given to the Director. The documentation will be completed and if required suitable action will be taken to preserve those antiques and sensitive remains.

In case any artefact, antiques and sensitive remains are discovered, chance find procedures should be adopted by contractor workers as follows:

- Stop the construction activities in the areas of chance find.
 - After stopping work, the contractor must immediately report the discovery to the Supervision Consultant.
 - The Director decides to take over the antiquity for purposes of custody, preservation and protection, the person discovering or finding it shall hand it over to the Director or a person authorized by him in writing.
 - Delineate the discovered site or area.
 - Consult with the local community and provincial Archaeological Department.
 - The Director shall, constitute a team of archaeologists for undertaking preliminary investigation and will decide about further course of action in light of findings of the team.
 - The suggestion of the local communities and the concerned authorities will be suitably incorporated during taking the preventive measures to conserve the antique, artefact and cultural (religious) properties; and
 - Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remain, a night guard shall be arranged until the responsible local authorities take over.
 - Avoid the use of heavy construction machinery during the excavation process; and
- The Contractor staff must have relevant qualification and experience of similar projects.

Annexure D: Environment and Social Monitoring Checklist

Name of the project/ scheme: Rehabilitation/Improvement/Widening of Road from Kalar Kahar to Manara Town, District Chakwal

Executing Agency: _____

Date of visit: _____

Sr. #	Identified Environmental & Social issues	Mitigation Measure	Means of Monitoring	Status of Mitigation Measure be Adopted		Remarks
				Yes	No	
1.	Noise	Noise level testing should be executed by Contractor.	EPD certified laboratory results			
		Provision for Personal Protective Equipment (PPE's), ear muffs/ear plugs to workers.	Visual Inspection			
		Use of machineries and equipments having less noise.	Visual Inspection			
2.	Dust	Provision for personal protective equipment (PPE's)	Visual Inspection			
		Sprinkling of water	Visual Inspection to ensure water sprinkling is being implemented			
3.	Air Quality	Air quality will be analysed before and during execution of scheme	Results from EPD certified laboratory			
4.	Waste management	Immediate removal of the accumulated construction waste	Visual inspection Local Community			

Sr. #	Identified Environmental & Social issues	Mitigation Measure	Means of Monitoring	Status of Mitigation Measure be Adopted		Remarks
				Yes	No	
5.	Provision of first aid	First aid kit Emergency numbers will be displayed at appropriate places	Visual inspection			
6.	Health, Safety and Environmental needs	Adequate safety precautions such as helmets, safety shoes, gloves, etc. should be provided to the labour	Inspection of usage of Personal Protective Equipment during execution			
7.	Public Consultation	Local residents will be consulted during execution phase regarding their views either they are satisfied with the Contractor's activities or not and grievance (if any)	Consultation with local residents			
8.	Vehicles Movement	Provision of alternative routes	Visual inspection			
		signboards for alternate routes Safety barriers				

Sr. #	Identified Environmental & Social issues	Mitigation Measure	Means of Monitoring	Status of Mitigation Measure be Adopted		Remarks
				Yes	No	
9.	Infrastructure Losses i-e, loss of land, damage to structures, damage to plants etc.	RAP/ARAP	Record of grievance and mode of compensation provided			
10.	Obstruction in public access	Provision of alternate routes	Visual inspection			
		Construction should start from middle of the street and later on from either right or left side	Record of public grievance			
11.	Privacy Issues	Workers should be trained to address privacy issues and ethically behaved.	Visual inspection and record of grievance			
12.	Economic Losses	In case of obstruction of passage, shopkeepers/local businesses may affect Public Consultation, alternate routes will be provided. In case of any loss, compensation will be	Record of Public Grievance Visual Inspection			

Sr. #	Identified Environmental & Social issues	Mitigation Measure	Means of Monitoring	Status of Mitigation Measure be Adopted		Remarks
				Yes	No	
		provided by the Contractor				
13.	Any other					

Monitoring Team:

Name and Designation

Signature

Annexure E: Wildlife Protected Areas Details of District Chakwal



GOVERNMENT OF THE PUNJAB
 FORESTRY, WILDLIFE & FISHERIES
 DEPARTMENT

Dated: 11.10 .2022

NOTIFICATION

No. SOP(WL)12-1/2019 (D):- In exercise of the powers conferred by the Section-09 of the Punjab Protected areas Act, 2020, the Secretary, Govt. of the Punjab, Forest, Wildlife & Fisheries Department, is pleased to order the area specified in the schedule given below to be a **Wildlife Sanctuary** for all wildlife species inhabiting the area till further orders:

SCHEDULE

Name	Area	Tehsil	District
Kallar Kahar Lake Wildlife Sanctuary	282.67 acres	Kallar Kahar	Chakwal

BOUNDARIES

East: Kallar Kahar Interchange.
 West: Kallar Kahar City.
 North: Kacha rakha Village/ Kallar Kahar City
 South: Kallar Kahar Motorway /service Area.

(SHAHID ZAMAN)
 SECRETARY, F, W & F DEPARTMENT

No. & date even.

A copy is forwarded to the:

1. Director General, Wildlife & Parks, Punjab, Lahore.
2. Deputy Commissioner, Chakwal.
3. District Police Officer, Chakwal.
4. Conservator of Wildlife, Ministry of Climate Change, Government of Pakistan, Islamabad.
5. Superintendent, Govt. Printing Press, Punjab Lahore for publication in the next issue of the Punjab Govt. Gazette and supply twenty printed copies of Notification.

4-4
 19-10-2022
 C.C

593

(MUHAMMAD FAREED GHANI)
 SECTION OFFICER (WILDLIFE)

PS to the Secretary, FW&F Department.

584
 12-10-2022

ADU (M)
 Secy
 14/10
 14/10



**GOVERNMENT OF THE PUNJAB
 FORESTRY, WILDLIFE & FISHERIES
 DEPARTMENT**

Dated: 12.04.2022

NOTIFICATION

No. SOP(WL)12-1/2019 (D):- In exercise of the powers conferred by the Section 09 of the Punjab Protected areas Act, 2020, the Secretary, Govt. of the Punjab, Forest, Wildlife & Fisheries Department, is pleased to order the area specified in the schedule given below to be a Wildlife Sanctuary for all wildlife species inhabiting the area till further orders:

SCHEDULE.

Name	Area	Tehsil	District
Simbli (North) Reserve Forest Wildlife Sanctuary	13700 Acres	Kalar Kahar	Chakwal

BOUNDARY.

East Malot Reserve Forest
West Village Khandoa and Chak Misri
North Village Karoli
South Lilla Bharwana

Government of Punjab
 GOVERNMENT
 Diary No. 1732
 14 APR 2022

(Signature)
 (SHAHID ZAMAN)
 SECRETARY F, W & F DEPARTMENT

NO. & DATE EVEN.

Copy is forwarded to:

- 1- The Director General Wildlife & Parks, Punjab, Lahore.
- 2- The Deputy Commissioner, Chakwal.
- 3- The District Police Officer, Chakwal.
- 4- The Conservator of Wildlife, Ministry of Climate Change, Government of Pakistan, Islamabad.
- 5- The Superintendent, Government Printing Press, Punjab Lahore for publication in the next issue of the Punjab Government Gazette and supply of twenty printed copies of Notification.

(Signature)
 18/4/22

(Signature)
 (MUHAMMAD FAREED GHAURI)
 SECTION OFFICER (WILDLIFE)

C.C

PS to the Secretary, FW&F Department.

2087
 13-4-22



**GOVERNMENT OF THE PUNJAB
FORESTRY, WILDLIFE & FISHERIES
DEPARTMENT**

Dated: 05.01.2022

NOTIFICATION

No. SOP(WL)12-1/2019 (D):- In exercise of the powers conferred by the Section 09 of the Punjab Protected areas Act, 2020, the Secretary, Govt. of the Punjab, Forest, Wildlife & Fisheries Department, is pleased to order the area specified in the schedule given below to be a Wildlife Sanctuary for all wildlife species inhabiting the area till further orders:

SCHEDULE

Name	Area in Acres	Tehsil	District
Chumbi Surla Wildlife Sanctuary	12180	Chakwal/Pind Dadan Khan	Chakwal and Jhelum

BOUNDARY.

East: Ban Amir Khatoon.
West: Chumbi.
North: Private land of Khai, Shamsabad, Khokher Zer & Wariamal.
South: Chak Khushi, Khokher Bala, Dalelpur, Dariala kahoon.

(SHAHID ZAMAN)

SECRETARY, F, W & F DEPARTMENT

NO. & DATE EVEN

A copy is forwarded for information and necessary action to:-

Director General, Wildlife & Parks, Punjab	1.
	2.
	3.
	4.
	5.

c.c.

1. The Director General, Wildlife & Parks Punjab, Lahore.
2. The Deputy Commissioners, Jhelum and Chakwal.
3. The District Police Officers, Jhelum and Chakwal.
4. The Conservator of Wildlife, Ministry of Climate Change, Government of Pakistan, Islamabad.
5. The Superintendent, Govt. printing press, Punjab, Lahore for publication in the next issue of the Punjab Govt. Gazette and supply twenty printed copies of the notification.

PS to the Secretary, F.W.&F Department.

(MUHAMMAD FAREED GHOURI)
SECTION OFFICER (WILDLIFE)

EFCAS F.W. & F DEPARTMENT	
DY. NO.	101
DATE	2-1-22

Dist. No. 14
Date Recd. 20.22

CCM
received
11/1



**GOVERNMENT OF THE PUNJAB
 FORESTRY, WILDLIFE & FISHERIES
 DEPARTMENT**

Dated: 12.04.2022

NOTIFICATION

No. SOP(WL)12-1/2019 (D):- In exercise of the powers conferred by the Section 09 of the Punjab Protected areas Act, 2020, the Secretary, Govt. of the Punjab, Forest, Wildlife & Fisheries Department, is pleased to order the area specified in the schedule given below to be a Wildlife Sanctuary for all wildlife species inhabiting the area till further orders:

SCHEDULE.

Name	Area	Tehsil	District
Chinji Reserve Forest Wildlife Sanctuary	15,003 Acres	Talagang	Chakwal

BOUNDARY.

East Boundary of Tehsil Kallar Kahar
West Boundary of District Khushab
North Ghabir Nala
South Boundary of District Khushab



(Signature) 12/4/22
(SHAHID ZAMAN)
 SECRETARY F, W & F DEPARTMENT

NO. & DATE EVEN.

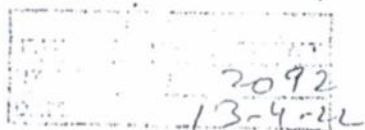
Copy is forwarded to:

- 1- The Director General Wildlife & Parks, Punjab, Lahore.
- 2- The Deputy Commissioner, Chakwal.
- 3- The District Police Officer, Chakwal.
- 4- The Conservator of Wildlife, Ministry of Climate Change, Government of Pakistan, Islamabad.
- 5- The Superintendent, Government Printing Press, Punjab Lahore for publication in the next issue of the Punjab Government Gazette and supply of twenty printed copies of Notification.

(Signature)
(MUHAMMAD FARIED GHOUR)
 SECTION OFFICER (WILDLIFE)

C.C

PS to the Secretary, FW&F Department.





GOVERNMENT OF THE PUNJAB
FORESTRY, WILDLIFE & FISHERIES
DEPARTMENT

Dated: 12.04.2022

NOTIFICATION

No. SOP(WL)12-1/2019 (D):- In exercise of the powers conferred by the Section 09 of the Punjab Protected areas Act, 2020, the Secretary, Govt. of the Punjab, Forest, Wildlife & Fisheries Department, is pleased to order the area specified in the schedule given below to be a Wildlife Sanctuary for all wildlife species inhabiting the area till further orders:

SCHEDULE.

Name	Area	Tehsil	District
Noorpur Reserve Forest Wildlife Sanctuary	15190 Acres	Kallar Kahar	Chakwal

BOUNDARY.

East Village Sarkalan and Laphi
West Village Noorpur Sethi
North Village Buchal Kalan
South Kundwal (District Jhelum)

12/4/22

(SHAHID ZAMAN)

SECRETARY F, W & F DEPARTMENT

NO. & DATE EVEN.

- ✓ Copy is forwarded to:
- 1- The Director General Wildlife & Parks, Punjab, Lahore.
 - 2- The Chief Conservators of Forests, Northern Zone, Rawalpindi & Central Zone, Lahore.
 - 3- The Deputy Commissioner, Chakwal.
 - 4- The District Police Officer, Chakwal.
 - 5- The Conservator of Wildlife, Ministry of Climate Change, Government of Pakistan, Islamabad.
 - 6- The Superintendent, Government Printing Press, Punjab Lahore for publication in the next issue of the Punjab Government Gazette and supply of twenty printed copies of Notification.

C.C

PS to the Secretary, FW&F Department.

2193
18-4-22

(MUHAMMAD FAREED GHOURI)
SECTION OFFICER (WILDLIFE)

1746

SECRETARY, FORESTRY, WILDLIFE & FISHERIES DEPARTMENT
G-5, F-7, CHAKWAL
Date 12/4/22



12-2/19

GOVERNMENT OF THE PUNJAB
 FORESTRY, WILDLIFE & FISHERIES
 DEPARTMENT

Lahore the 29th June, 2020

NOTIFICATION:

NO.SOFT(EXT)XII-1/2020. Simbli (North) Reserved Forest is located on the Motorway (M-2) between Lilla Interchange & Kallar Kahar Interchange and easy access to the general public. It is the part of Sardhl Block of Kallar Kahar Forest Sub-Division, which comprises over 13700 acres with more than 50% vegetation cover. It comprises of Dry deciduous scrub type, Phulal (acacia modesta) Kau (Olea cuspidate) and Sanatali (dodoneaviscse). In addition, it is also the natural habitat of Punjab Urial & abundant population is also present in the area.

2. In exercise of the Powers under Section 17(1) of the Punjab Wildlife (Protection, Preservation, Conservation and Management) (Amendment) Act 2007, the Governor of the Punjab is pleased to declare the area of Simbli (North) Reserved Forest of Chakwal Forest Division, specified in the following schedule as "Salt Range National Park" with immediate effect.

Locality	Tehsil and District	Area
Simbli (North) Reserved Forest of Chakwal Forest Division	Tehsil Kalar Kahar District Chakwal	13700

The GPS coordinates alongwith satellite image / map covering an area of 13700 acre is enclosed at **Annex-I**.

3. The boundary of the area of Salt Range National Park is as under:-

Simbli (North) Reserve Forest	North	Village Karoli
	South	Lilla Bharwana
	East	Malot Reserve Forest
	West	Village Khandoa and Chak Misri.

4. The following acts shall be prohibited in the National Park:-

- i. Hunting, shooting, trapping, killing or capturing of any wild animal in National Park or within three miles radius of its boundary.
- ii. Firing or any other act which may disturb any animal or bird or doing any act which interferes with the breeding places.
- iii. Felling, lopping, burning or in any way dragging or destroying, taking, collecting or removing any plant or tree there from.

- IV. Clearing or breaking up any land for cultivation, mining or for any other purpose.
- V. Polluting water flowing in and through the National Park.

BY ORDER OF THE GOVERNOR OF THE PUNJAB

(MUHAMMAD ASIF)
SECRETARY, FW&F DEPARTMENT

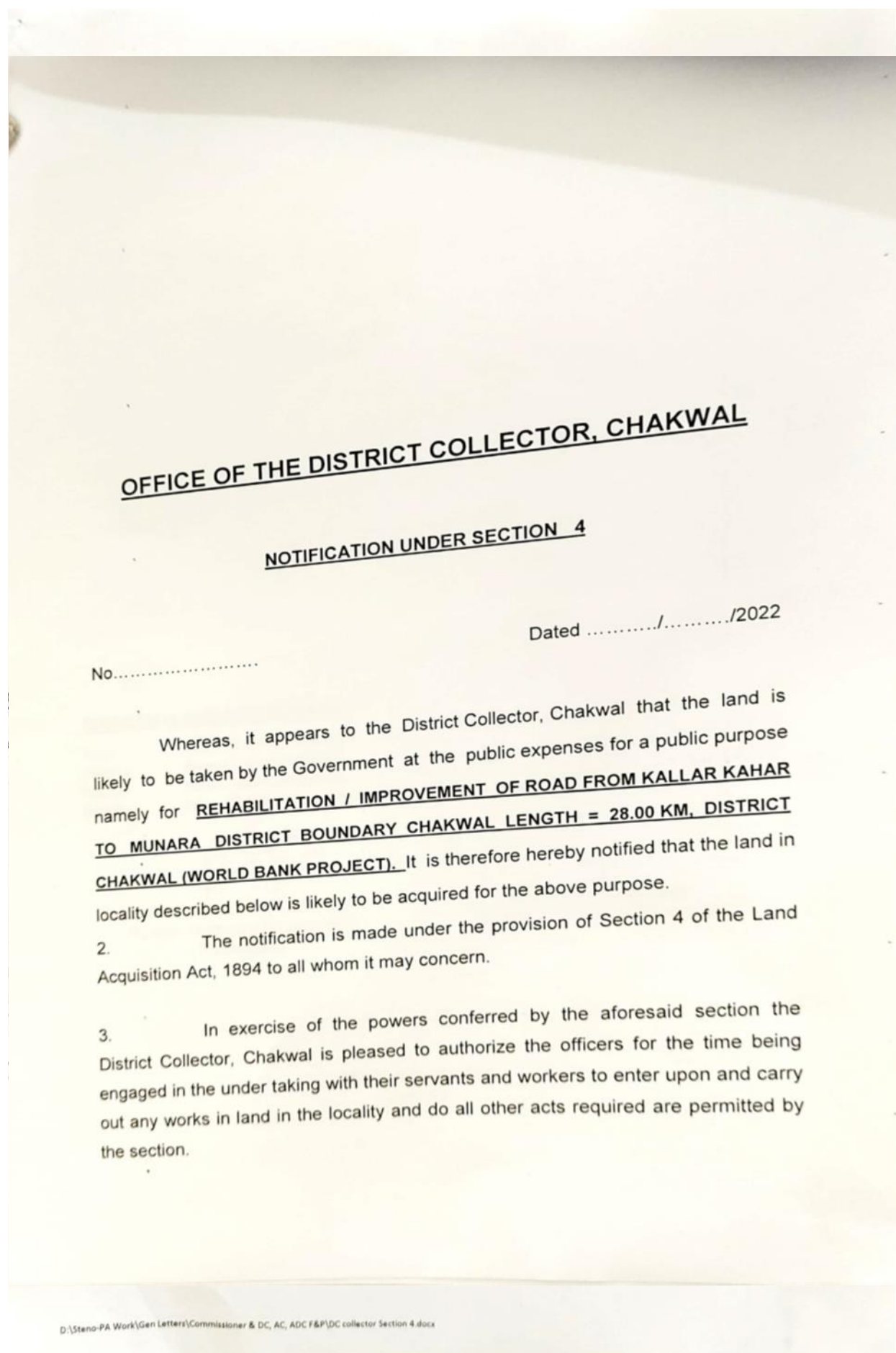
NO.SOFT(EXT)XII-1/2020 Dated Lahore the 29.06.2020.

A copy is forwarded for information and necessary action to:-

1. The Secretary to Governor of the Punjab, Lahore.
2. The Secretary to Chief Minister Punjab, Lahore.
3. All the Administrative Secretaries in Punjab.
4. The Secretary, Government of the Punjab, Law & Parliamentary Affairs Department.
5. P.S to Chief Secretary, Punjab S&GAD, Lahore.
6. All Commissioners in Punjab.
7. All Deputy Commissioner in Punjab.
8. All Chief Conservator of Forests in Punjab.
9. All Conservator of Forests in Punjab.
10. All Divisional Forest Officers in Punjab.
11. Superintendent, Government Printing Press, Punjab, Lahore, for publication in the next issue of provincial gazette and furnish 20 copies to this Department.
12. P.S to Secretary, Govt. of the Punjab, FW&F Department.
13. P.A. to Additional Secretary (Admn), Additional Secretary (Tech), Deputy Secretary (Admn), Deputy Secretary (Planning) and Director B&A (Forest) FW&F Department.
14. All Section Officers in FW&F Department.


SECTION OFFICER (FORESTS)

Annexure F: Request of Imposing Section 4



SPECIFICATION

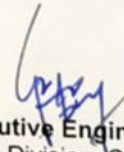
Village	Tehsil	District	Year of Jamabandi	Khasra Nos.	Area in Kanal - Marla
Kallar Kahar	Kallar Kahar	Chakwal	2007-08	4364/2674/1/2	00 - 16
				2684/1	00 - 12
				2685/1	00 - 02
				8686/1	00 - 04
				4366/2687/1	00 - 19
				4482/3819/1	01 - 01
				4482/3819/2	02 - 17
				4492/3834/1	02 - 09
				3837/1	00 - 04
				5569/4503/3840/1	03 - 18
				4499/3841/1	04 - 03
				4499/3841/2	01 - 14
				4509/3819/1	00 - 02
				4519/3851/1	04 - 09
				4524/3854/1	08 - 07
G.Total:-					31 - 17

DIRECTION AND BOUNDARIES

East;- Non-Cultivated area.
 West;- Non-Cultivated area..
 North;- Non-Cultivated area.
 South;- Non-Cultivated area.



Land Acquisition Collector
 Punjab Highway Department
 Rawalpindi



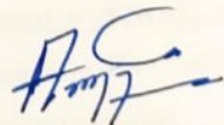
Executive Engineer
 Highway Division, Chakwal

District Collector
 Chakwal

CERTIFICATE

It is certified that:

1. The land proposed to be acquired REHABILITATION / IMPROVEMENT OF ROAD FROM KALLAR KAHAR TO MUNARA DISTRICT BOUNDARY CHAKWAL LENGTH = 28.00 KM, DISTRICT CHAKWAL (WORLD BANK PROJECT), is not waqaf property neither there exists any Mosque, Temple, Graveyard or any other place of worship.
2. It has been considered in-expedient to acquire the land by private negotiation.
3. The land included in the draft notification attached belongs to the Muslims only and no evacuee or state land is sought to be acquired.
4. The classification of land under acquisition as entered in the latest Revenue record is Banjar Jadeed, Banjar Qadem, and Ghair Mumkin Khundar.
5. Details of Khasra Nos. and other particulars of land are given in the draft notification attached herewith.



Land Acquisition Collector
Punjab Highway Department
Rawalpindi

Annexure G: Communication Record Regarding Require NOC from Punjab Forest Department



GOVERNMENT OF THE PUNJAB
PLANNING & DEVELOPMENT BOARD
PUNJAB TOURISM FOR ECONOMIC GROWTH PROJECT
Ph: 042-99332607-08

No. PMU/PTEGP/ESMF/ 139

Dated: 07-09-2022

To

Project Director (Civil Works-PTEGP)/AS (Tech-I),
Communication and Works Department,
Lahore.

Subject: NOC from Forest Department for Sub-Project "Rehabilitation/Improvement of Road from Kallar Kahar to Manara District Boundary Chakwal (28 km) under Punjab Tourism for Economic Growth Project (PTEGP)

Please refer to the subject cited above.

2. You are requested to direct the concerned quarter to obtain NOC from the office of Secretary Forest, Punjab for cutting of trees during rehabilitation/improvement of the subject road.

(Tajwar Saeed)
**Social Safeguard & Gender
Specialist (PTEGP)**

CC:-

1. Project Director, PTEGP
2. Environment Specialist, PTEGP
3. Civil Engineer, PTEGP
4. Managing Director, ES Consultants
5. Office Copy (SS&GS)



No. PMU/PTEGP/ESMF/283

Date Lahore December 14, 2022

To,

Project Director (Civil Works-PTEGP)/AS (Tech-I),
Communication and Works Department,
Lahore.

Subject: NO OBJECTION CERTIFICATE – REHABILITATION/IMPROVEMENT OF ROAD FROM KALLAR KAHAR TO MANARA, DISTRICT CHAKWAL UNDER PUNJAB TOURISM FOR ECONOMIC GROWTH PROJECT (PTEGP)

Reference is invited to our letter No. PMU/PTEGP/ESMF/139 dated 07-09-2022 on the caption subject.

2. It is conveyed that for the proposed widening and re-alignment of the road mentioned in the above subject will require removal of trees situated:

- Within 5 feet from the edge of the exiting road along both sides; and
- Trees identified within proposed additional loop for smoothening of the steep gradient of the existing road.

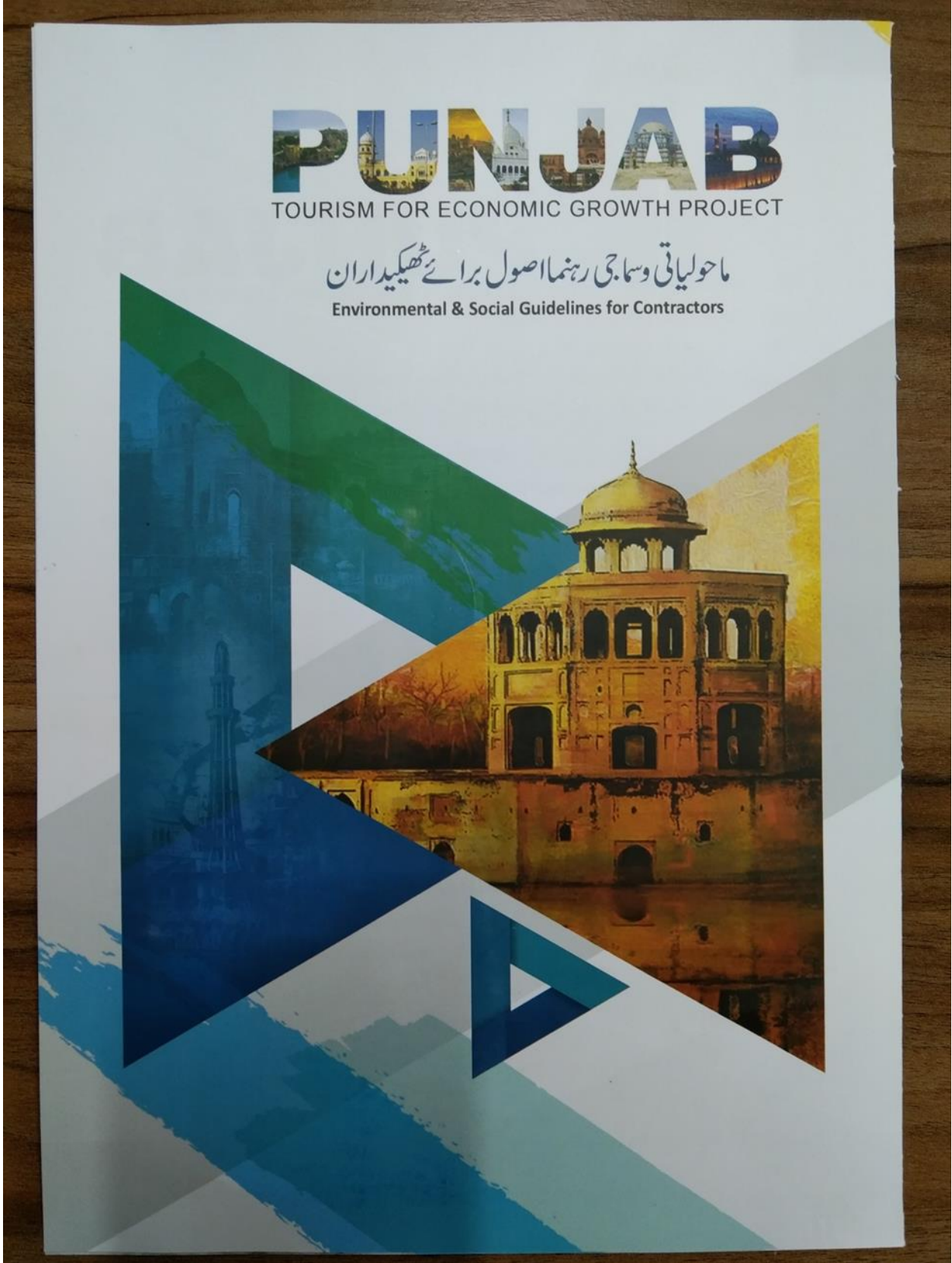
3. In this regard you are requested to direct the concern quarter to pursue the matter for obtaining the requisite NOC and estimated replenishment cost for the subject road with the office of Secretary Forest Department, Punjab please.


(Ahsan Bela)
Environment Specialist (PTEGP)

CC: -

1. P.S to Project Director (PTEGP)
2. Social Safeguard & Gender Specialist (PTEGP)
3. Civil Engineer, (PTEGP)
4. E&S Record.

Annexure H: Environmental Guidelines for the Contractor





PUNJAB

TOURISM FOR ECONOMIC GROWTH PROJECT

تعارف

پلائننگ اینڈ ڈیولپمنٹ بورڈ گورنمنٹ آف پنجاب نے ورلڈ بینک کے تعاون سے پنجاب سیاحتی اقتصادی منصوبہ شروع کیا ہے۔ جس کی کل لاگت 55 ملین ڈالر ہے۔ اس منصوبے کا مقصد اداروں کی قابلیت کو بڑھانا ہے تاکہ زیادہ سے زیادہ معاشی ترقی، روزگار کے مواقع اور علاقائی تعاون کو فروغ دینے کے ساتھ ساتھ ملک کی تصویر کو بہتر طور پر اجاگر کیا جائے۔

ماحولیاتی اور سماجی مسائل (Environmental & Social Issues)

Punjab Tourism for Economic Growth Project - ٹھیکیدار کی بھی طرح کے ترقیاتی کاموں میں اہم کردار ادا کرتے ہیں۔ **PTEGPP** کے تحت بننے والی تمام سڑکیں اور منسلک ترقیاتی کاموں کے پیش نظر ٹھیکیداران کے لیے **Guidelines** بتائی گئی ہیں۔ تاکہ ترقیاتی کاموں کے دوران پیدا ہونے والے ماحولیاتی اور سماجی مسائل کو مناسب طریقوں سے حل کیا جائے۔ ان کا مقصد ٹھیکیداران کو نہ صرف آگاہی دینا ہے بلکہ احتیاطی تدابیر اپنانا کر ماحول پر پڑنے والے اثرات کو کم بھی کرنا ہے۔

ترقیاتی کاموں میں تھوڑی سی سیاحتی ماحول کے نقص کو بگاڑنے میں اہم کردار ادا کر سکتی ہے۔ اس سے نہ صرف ماحول متاثر ہوگا بلکہ جانور اور پودے بھی متاثر ہو سکتے ہیں۔ ٹھیکیداران معلومات کی کمی کی وجہ سے ماحول میں بگاڑ پیدا کرنے کے ذمہ دار ہو سکتے ہیں۔ یہی وجہ ہے کہ ان **Guidelines** کو ترتیب دیا گیا ہے۔ تاکہ ماحول کے اس بگاڑ کو کم سے کم کیا جائے۔

ماحولیاتی اور سماجی مسائل کی مختلف اقسام ہیں

- 1- ہوا کی آلودگی، گرد و غبار (Air/Dust Pollution)
- 2- کوڑے کا تاج ہونا (Garbage Heaps)
- 3- شور و گٹل (Noise Pollution)
- 4- مٹی کا اڑنا (Dust Pollution)
- 5- یکسپ سائٹ یا خیمہ کی غیر مناسب جگہ پر موجودگی (Wrong Selection of Camp Site)
- 6- درختوں اور پودوں کا کاٹنا (Cutting of Trees & Plants)
- 7- رہائشیوں کو آنے جانے میں دقت (Public Constraints)
- 8- ٹریفک میں رکاوٹ
- 9- لڑائی جھگڑے (Public Conflicts)
- 10- رہائشی خواتین کے پردے اور پرائیویسی کے مسائل (Women Privacy Issues)
- 11- ملے اور فالتو سامان کھیتوں میں پھینکنا (Illegal Throw of Waste)
- 12- ارد گرد موجودہ دکانداروں کا راستہ بند ہونے سے معاشی نقصان (Economic Loss)
- 13- ارد گرد سکولوں، کالجز اور ہسپتالوں وغیرہ کا راستہ بند ہو جانے کی وجہ سے آنے جانے میں پریشانی (Passage Blockage)

