



SFG1340

Environmental and Social Management Plan



First Segment (23.7 KMs) of the Bamyan-Baghlan Highway Rehabilitation, Afghanistan

SEPTEMBER 2015 VERSION

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ACRONYMS/GLOSSARY

ADB	Asian Development Bank
AIRP	Afghanistan Infrastructure Rehabilitation Program
ANEPA	Afghanistan National Environmental Protection Agency
ARTF	Afghanistan Reconstruction Trust Fund and (IDA)
B2B	Bamyan to Baghlan
COPA	Conditions of Particular Application
dB	Decibel
EA	Environmental Assessment
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
EMA	Environmental Management Act
ESMP	Environmental and Social Management Plan
ESMMP	Environmental & Social Mitigation Management Plan
GCOC	General Conditions of Contract
GoA	Government of Afghanistan
GPD	Gross Domestic Product
IDA	International Development Association
IEE	Initial Environmental Examination
Jerib	0.2 Hectares
KM	Kilometer
Kph	Kilometers per Hour
MOEW	Ministry of Energy and Water
MOI	Ministry of Interior
MOTCA	Ministry of Transport and Civil Aviation

MoPW	Ministry	of Public	Works
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- MRRD Ministry of Rural Rehabilitation and Development
- MoIC Ministry of Information and Culture
- NEPA National Environmental Protection Agency
- NGO Non-Governmental Organization
- NMT Non-Motorized Traffic
- OP Operational Policy
- PAF Project Affected Family
- PAP Project-Affected Person
- PPE Personal Protective Clothing
- PRT Provincial Reconstruction Team
- RAP Resettlement Action Plan
- ROW Right-of-Way
- SS-ESMP Site-Specific Environmental and Social Management Plan

SPM	Suspended Particulate Matter
Sta	Station
ToR	Terms of Reference
UN	United Nations
UNEP	United Nations Environmental Program
USAID	United States Agency for International Development
USD	United States Dollar

WB World Bank

EXECUTIVE SUMMARY

Introduction

Trans-Hindukush Road Connectivity Project, a part of which is the Bamyan to Baghlan (B2B) highway is an alternative route to the Salang highway which gets closed frequently due to weather related disruptions and maintenance works. The Bamyan to Baghlan Highway Road as a National Highway requires a high level of service because of its strategic importance in providing an alternate route from Kabul going northern part of the country. It will allow traffic to avoid the Salang Corridor, which subjects all north and south bound traffic to considerable time delays during the winter months, even under the best conditions. An asphalt paved road will increase security by reducing the time to respond to local, regional, or national incidents and will also facilitate access to social services and provide new regional trade opportunities including agriculture and mining. The upgraded road will decrease time and risks associated with travel in the region; facilitate better emergency response and access to social services; and provide new regional trade opportunities. The total length of this road is about 152 Kms. which has been divided in the 6 segments which includes construction of new asphalt pavement, replacement or rehabilitation of existing 11 bridges, replacement of cross drainage culverts, construction of new 839 drainage culverts and roadside drains, relocation and improvement of existing irrigation canals, other ancillary works such as stone masonry retaining walls, riprap slope protection, etc.

This Environmental and Social Management Plan (ESMP) is prepared for the first segment of Bamyan and Baghlan Highway road which is 23.7 Kms. This document is prepared based on the guidelines of the Environmental and Social Management Framework (ESMF) and covers the potential impacts identified in the Environmental and Social Impact Assessment which was carried out for the first segment of the road of Trans-Hindukush Road Connectivity Project. The ESMP complies with the Afghanistan Environmental law and EIA regulations along with World Bank Safeguards Polices. The road design and rehabilitation is to be funded by World Bank as part of the Afghanistan Reconstruction Trust Fund (ARTF) and International Development Association (IDA). This project has been classified as Category 'A' project.

The ESMP document summarizes the potential environmental and social impacts identified during ESIA study and assesses further environmental and social risks and impacts of the first segment (23.7 Kms.) of the road. In addition, the report determines the necessary mitigation measures and summarizes the necessary management and monitoring plans to ensure that impacts are dealt with and mitigation measures are followed during the project activities.

This ESMP ensures that appropriate levels of environmental and social impact assessment are carried out as part of project design, including public consultation process, especially for Category 'A' projects. The OP 4.01 is applicable to the rehabilitation, maintenance and spot improvement of B2B road project. In addition to the management procedures and plans described in this document, reference is also made to the other live documents like Resettlement Policy Framework (RPF), Resettlement Action Plan (RAP) for the first segment and Environment and Social Management

Framework (ESMF) developed for this project. These documents describe the detailed social safeguard plans and will be utilized as key guiding documents in all the proposed management, monitoring and mitigation measures outlined in this ESMP.

Project Sitting and Physical Characteristics (First Segment)

The first segment of the road is located in Dushi distract of Baghlan province which starts at the outskirts of Dushi at the intersection with the road to Kabul which is 23. 7 Km. the road immediately crosses a small bridge and starts to traverse a valley floor adjacent to the Surkhab River. The road continues along the south bank of the river wedged between the mountain slopes and the fertile agricultural lands until it crosses to the north bank of the river and passes through the villages of Baghe Mula Shah, Konjak, Gozar, Konda Sang, Pole Konda Sang, Char Bagh, Robat, Dahane Kayan, Lokhtoghai and the last village is Shalezar which located at the end of first segment.

The existing gravel road is narrow, earthen and snaky with no appurtenance structures like culverts, retaining walls etc. except bridges over the Surkhab River. As the existing alignment and proposed alignment runs along the foot of the hills or from the neighborhood of topographic break the alignment mostly crosses fan shaped unconsolidated depositions where stream flow appear to spread over a larger area having no specific channel course making difficult to choose the most suitable and sustainable channel course.

All the pipe structures having diameter of 1 meter is shifted to box culverts having dimensions of 1.0m x 1.0m. Approximately 80 percent of the dimensions are changed and culverts with large sizes are proposed. List of proposed culvert structures (new & up-gradation) and bridges are attached as Appendix E.

The existing road width is between 5 to 12 meters and the planned civil works in the proposed project include widening the road at some segments and pavement rehabilitation along the entire length of the road. The road is expected to be widened to 10 m (with two 3.5m lanes with1.5m road shoulder on either side). The 15 meter is the right of way (ROW) from the edge of the road.

Potential Environmental and Social Impacts

Environmental and social impact assessment started with the scoping analysis where the key potential impacts were identified and followed by more detailed impact analysis in the EISA report. The environmental and social impacts of the 23.7 Kms. of first segment of the road is unlikely to have major negative impacts on the environment during the road construction activities. Due to widening of road width, some affected families are losing their agriculture lands, houses and structures in the first segment and accordingly a separate Resettlement Action Plan (RAP) is prepared which covers all the land acquisition issues and resettlement procedures.

The environmental impacts of the first segment associated with the activities during construction period include air pollution, water pollution, soil erosion, noise, dust, removal of trees, destruction of existing water canals and structures, generation and handling of construction and other waste, and health and safety concerns associated with construction workers. The assessment was conducted within the areas within 5km of the project influence area and Sensitive Receivers of the

project area include general public, school, mosques, fruit gardens etc were identified. Based on the criteria set out, the representative ASRs, WSR for the first segment have been identified close to the project site and a brief description of the representative is presented in the Appendix F.

Furthermore, there have been a total of 34 families – farmers who are losing a part of their agricultural land within the area of segment 1. These include: (i) 26 families are losing agricultural land (none orchard land), (ii) 7 families are losing both orchard and none orchard land, and (iii) one family is losing only orchard land. The amount of affected land (orchard + none orchard) under segment one is 11.5 Jeribs or 2.2 hectares, an average 0.338 Jerib or 0.067 ha.

Environmental and Social Mitigation Measures

The specific mitigation measures for each of the minor environmental impacts and any adverse socio-economic impacts that arise have been considered. These measures should significantly reduce the identified potential environmental and social impacts. The key environmental mitigation measures include actions to minimize the adverse impacts on sensitive receivers, rehabilitation of destructed walls, and structures, restoration of riprap and stone pitching, restoration of adequate drainage systems, planting trees in sensitive zones, restoration of vegetative cover, usage of well-maintained equipment, water spraying for dust control, limiting noisy activities to normal daylight hours, keeping the drainage ditches and culverts unblocked, provision and use of personal protective equipment to workers, installing construction and warning signs, provision of alternative temporary access roads. Most of the proposed mitigation measures of the ESMP will be ensured under provisions of the construction supervision contract documents.

The cost of implementing mitigation works will be provided for in the project Bill of Quantities (BoQ) and this ESMP document shall be an integral part of the works contract. The resettlement costs and other social impact mitigation measures have be described in the RAP document and are made part of the RAP budget.

The Resettlement Action Plan for the first segment describes mitigation measures for all potential social impacts and the resettlement procedures including compensation for the loss of assets to the affected persons. All the social mitigation measures shall be implemented in accordance with the procedures described in the RAP document.

Institutional Arrangements

The PMU/MoPW is responsible for the implementation of the Environmental & Social Safeguard measures through their contractors who would be accountable to the MoPW. Therefore, under the PMU/MoPW the Environmental and Social Safeguard Management Unit (ESMU) will be established. The ESMU in collaboration with their technical counterparts will have overall responsibilities for implementing the environmental and social management plans.

Supervision and regular monitoring of all significant environmental and social parameters is important to ensure compliance of the ESMF. Monitoring of the Site-Specific ESMP will not only

help in detecting the scale and extent of impact caused by the project overtime, it will also inform whether mitigation actions have been properly and timely implemented and are working as envisaged in the safeguard documents.

Grievance Redress Mechanism

During the project implementation and resettlement action, affected families may still have some grievances with respect to the activities, their impacts, compensation and other mitigation measures. A comprehensive grievance redress mechanism is suggested in this document for ensuring a proper and timely redress of all grievances raised. A grievance redress committee for the first Segment has already been constituted. The GRM procedure is presented in appendix G.

Consultation and Disclosure

Comprehensive and regular consultations have been carried out with all the Project Affected Persons (PAPs) and stakeholders on the project site. These consultations were commenced prior to the launch of project and the PAPs were provided with the opportunity to engage in the planning process, to raise questions and receive inputs and responses to their concerns. PAPs likely to be adversely affected by project activities were informed in advance of their rights to mitigation and/or compensation. In addition, social committee for Grievance Redress was established in the first segment. Refer to Appendix A. The consultation will be continued during project implementation and operation phase with all PAPs, community, governmental officials and other stakeholders and their feedback will be and suggestions will be taken into account. The process will be facilitated by regional safeguard officer in coordination with established social committee.

1 Project Background

The Government of Islamic Republic of Afghanistan (GoIRA) has identified the Bamyan-Baghlan Corridor also called the Bamyan-Dushi Highaway, located within the Provinces of Bamyan and Baghlan. Ministry of Public Works (MoPW) has categorized the Bamyan-Dushi Corridor as a National Highway for its strategic importance providing an alternative route from Kabul going towards north bypassing Salang Highway and the high level of service linked to it. The road is now being upgraded with assistance from the World Bank. The upgraded road will provide a year around alternative route to the Salang Highway, as well as increased security by reducing the time to respond to local, regional, or national incidents, and facilitate access to social services and provide new regional trade opportunities including agriculture and mining.

This entire road starts at the intersection with Kabul to Dushi part of ring road in Baghlan province at about Km 160 from Kabul and ends at the intersection with road to Maidan Shar in Bamyan along the Charikar Bamyan road. The project road passes along the districts of Doshi, Tala Wa Barfak, Kuhmrad, Saighan and Shibar in Baghlan and Bamyan provinces. It also passes many villages directly along the project road. There are also other villages that are located on the opposite side of the river which will benefit from the project.



Figure 1: Bamyan to Baghlan

1.1 Scope of the ESMP

This Environmental and Social Management Plan (ESMP) is being prepared to manage the environmental and social impacts through and specific mitigation actions required to implement the project in accordance with the requirements of ESMF and applicable national and World Bank legislation and regulations. It provides an overview of the environmental and social baseline conditions on the routes of the proposed fist segment of the project, summarizes the potential impacts associated with the proposed construction and pavement works and sets out the management measures required to mitigate any potential impacts in a series of discipline specific Environmental & Social Management Plan (ESMP). This ESMP is to be implemented by the contractor to be commissioned by PMU/MoPW for the project.

1.2 Purpose of ESMP

The Site-Specific ESMP is a project-specific source document detailing the environmental and social protection requirements to mitigate and minimize the adverse impacts. The ESMP's primary purpose is to ensure that the environmental requirements and social commitments associated with the project are carried forward into implementation and operational phases of the project and are effectively managed. The specific objectives of this ESMP are as hereunder:

- Minimizing any adverse environmental, social and health impacts resulting from the project activities
- Prevent or compensate for any loss of the affected persons
- Conducting all project activities in accordance with the relevant Afghanistan Laws and World Bank Safeguard operational policies and guidelines
- Prevent environmental degradation as a result of either individual subprojects or their cumulative effects
- Enhance positive environmental and social outcomes
- Ensure that the ESMP is feasible and cost-efficient
- To act as an Action Plan in order to ensure that the project impact mitigation measures are properly implemented and monitored
- Ensure that all stakeholders concerns are addressed

1.3 Policies, Legal and Administrative Framework

This ESMP is developed by following the guidelines as set forth in ESMF prepared for B2B the Trans-Hindukush Road Connectivity Project which is approved by the Bank. The ESMP of this project is carried out to meet the following requirements of the Afghanistan Environmental Policies and regulations:

- 1. The Environmental Law of Afghanistan (2007)
- 2. Afghanistan EIA Regulation (2008)
- 3. National Environmental Impact Assessment Policy (2007)

- 4. The Land Expropriation Law (2000) and its Amendments (2005)
- 5. Law on the Preservation of Afghanistan's Cultural and Historical Artifacts
- 6. Air Quality Standards

In addition the following WB Operational Safeguards Policies have been triggered for this project:

- Environmental Assessment (OP 4.01);
- Involuntary Resettlement (OP 4.12);
- Physical Cultural Resources (OP 4.11)

This ESMP ensures that appropriate levels of environmental and social impact assessment are carried out as part of project design, including public consultation process, especially for Category 'A' projects. The OP 4.01 is applicable to the rehabilitation, maintenance and spot improvement of Trans-Hindukush Road Connectivity Project. This project has been classified as Category 'A' project.

1.4 Environmental and Social Impacts Assessment

The Environmental and Social Impacts Assessment conducted for this project identifies all the environmental and social impacts of this project. The 23.7 Kms. of first segment of the road is unlikely to have major negative impacts on the environment during the road construction activities. Due to widening of road width, some affected families are losing their agriculture lands, houses and structures in the first segment and accordingly a separate Resettlement Action Plan (RAP) is prepared which covers all the land acquisition issues and resettlement procedures.

The environmental impacts of the first segment associated with the activities during construction period include air pollution, water pollution, soil erosion, noise, dust, removal of trees, destruction of existing water canals and structures, generation and handling of construction and other waste, and health and safety concerns associated with construction workers. Mitigation measures will be taken to minimize the environmental costs by reducing the identified potential environmental impacts.

1.5 Environmental and Social Mitigation Measures

The required mitigation measures for each of the minor environmental impacts and any adverse socio-economic impacts that arise have been considered. Furthermore, a complete monitoring and auditing system has been suggested in order to sustain the social and environmental situation in the area of the projects. These measures should significantly reduce the identified potential environmental and social impacts.

The Resettlement Action Plan for the first segment describes mitigation measures for all potential social impacts and the resettlement procedures including compensation for the loss of assets to the affected persons. All the social mitigation measures shall be implemented in accordance with the procedures described in the RAP document.

The key environmental mitigation measures include storage of construction waste in locations predecided in consultation with the local communities, waste disposal in designated locations, handling of liquid waste in sealed containers, rehabilitation of destructed walls, and structures, restoration of riprap and stone pitching, restoration of adequate drainage systems, planting trees in sensitive zones, restoration of vegetative cover, usage of well-maintained equipment, water spraying for dust control, limiting noisy activities to normal daylight hours, keeping the drainage ditches and culverts unblocked, provision and use of personal protective equipment to workers, installing construction and warning signs, provision of alternative temporary access roads. Most of the proposed mitigation measures will be ensured under provisions of the construction supervision contract documents and as necessary by agreement with the communities that is stated in the ESIA report. All costs associated with the mitigation measures for all environmental and social impacts would be incorporated into the overall project contract.

1.6 Environmental and Social Management Plan (ESMP)

Summary of the Environmental and Social Management Plan (ESMP) is presented in a tabular format at the end of this section and in chapter six of this report. The objective of this ESMP is to establish a mechanism to implement mitigation measures for the identified negative impacts and to monitor the efficiency of these mitigation measures. The content of the ESMP table of first segment of the project is based on the findings of this ESIA study and consultations with local stakeholders (Project Affected People).

The total cost of implementing this ESMP is estimated at **6,804,026.00** Afs, and the breakup of the cost will be provided in the project Bill of Quantities (BoQ).

1.7 Public Consultations

Consultations were conducted with all the Project Affected Persons (PAPs) on the project. These consultations were commenced prior to the launch of project and the PAPs were provided with the opportunity to engage in the planning process, to raise questions and receive inputs and responses to their concerns. PAPs likely to be adversely affected by project activities were informed in advance of their rights to mitigation and/or compensation. In addition, social committee for Grievance Redress was established in the first segment. Refer to Appendix A.

1.8 Environmental and Social Monitoring Mechanism

The monitoring, auditing and reporting procedure has been established in order to ensure proper implementation of mitigation measures, and maintain or improve the environmental and the socioeconomic characteristics of the area during the construction and operation phases of the project. The monitoring procedure will focus on noise impact, air quality and water quality, plus any emerging socio-economic adverse effects. The monitoring activity will monitor the application of environmental and social mitigation measures and the result of monitoring activities shall be reflected in the monthly reports. An institutional framework and strategy for the involved official institutions is suggested in order to strengthen the capacity buildings in the field of the environmental monitoring and reporting procedures and methodologies.

2 Description of Project Location (First Segment 23.7 Km)

The entire 152 Km of this road project has been divided into 6 segments as per the design prepared by LBG and PMU/MPW is verifying the design with the existing alignment and accordingly will prepare the project package for each segment.



Location Map of First Segment

The first segment starts at the outskirts of Dushi at the intersection with the road to Kabul which is 23.7 Km. the road immediately crosses a small bridge and starts to traverse a valley floor adjacent to the Surkhab River. The road continues along the south bank of the river wedged between the mountain slopes and the fertile agricultural lands until it crosses to the north bank of the river and passes through the villages of Baghe Mula Shah, Konjak, Gozar, Konda Sang, Pole Konda Sang, Char Bagh, Robat, Dahane Kayan, Lokhtoghai and the last village is Shalezar which located at the end of first segment.

The existing Baghlan to Bamyan road width is between 5 to 12 meters and the planned civil works in the proposed project include widening the road at some segments and pavement rehabilitation along the entire length of the road. The road is expected to be widened to 10 m (with two 3.5m lanes with1.5m road shoulder on either side). The 15 meter is the right of way (ROW) from the edge of the road.

In general, the project will involve civil works including excavation and embankment, rock blasting, gabions and revet mattresses, slope reinforcement and retaining walls, aggregate courses, bridges & culverts construction, reinforcing steel, stone masonry for retaining wall, guard wall, culvert-inlet/outlet structure, bed protection, lined ditch, permanent traffic control and signage, vegetation (bush) clearing, earth (soil) movement, topographic leveling, alignment and realignment of road segments, road pavement, coal tarring, etc with potential environmental impacts.



3 Baseline Condition of First Segment 23.7 Km

The baseline environmental and social data for the entire road were collected through research, field visits and public consultations and presented in the ESIA. The information was collected from the continuous environmental and social surveys and public consultation with PAPs, community leaders, stakeholder and local government were conducted for the first segment. In addition, the land clearance and socio-economic survey have been done for the first segment too. The following baseline conditions were presented physical environment, biological environment, socio-economic aspects including health and safety.

During 17-29 Feb 3015 and 28 March-15 April 2015 the technical engineering and ESM team visited the site in order to carry out the Environmental and Social Safeguard Survey, Road Geometry, Hydraulic and Structures, Geotechnical for the first segment which covered Km 0+000 to 23+700 of the road. Based on the site verification the following issues were considered:

3.1 Physical Environment

3.1.1 Topography

The topography of the first 23.7 km of the road is variable which is located in Dushi district. The road traverses agricultural land in the valley, occasionally the road rises out of the valley floor 30-40 meters as it rounds bends in the River.



The elevation of the road changes considerably over its extent, starting at around 820 meters above sea level in Dushi and finishing at around 2200 meters above msl. This equates to an average of a drop of 1 meter every 100 meters travelled from Bamyan to Dushi. Generally the area is mountains area along with agriculture lands in the valleys and also road is passing through residential area.



3.1.2 Road Geometric Design

Mostly the proposed road alignment is applicable at site with some changes especially where the proposed alignment crosses the floodways. The proposed alignment where crosses the floodways should be shifted toward the hill side in order to reduce the drainage structures' spans and prevent the settlement of the material which is being occurring at the downstream side of the hill where the flood water is spreading in the wider area.



In addition, from Km 11+100 to 14+200 the road alignment to be changed because it has been designed at brae of the mountain as a result of huge materials settlement construction of drainages structures are not possible instead the road alignment should be shifted toward the mountain/hill side behind the village where topographic survey is required.



Figure 7 Proposed revised alignment

In the current design most of the earthen irrigation canals are shifted and based on the field visit it is not possible to shift the canals unless to use reinforced concrete or stone masonry.

It is not possible to block the water during the construction of road or shifting the canals. So it was recommended to revise the current design and the road alignment should be changed to opposite side of the road in order to protect the irrigational canals.





It is recommended to change the designed alignment from 8+600Km to 9+800Km and from 11+200Km to 14+370Km, the new proposed alignment is passing the hilly area and is appropriate alignment, the existing ground material is granular and suitable material for sub grade.

From 17+000Km to 17+300Km a Kariz is located at the left side of road so it is required to shift the road alignment toward the left side of road.

From 17+300Km to 17+870Km the existing road is passing over the agricultural land so high embankment filling is required.



Figure 9 : Proposed road alignment passing through agriculture land

At some places the propose road alignment is crossing the agricultural land and appropriate embankment should be considered in the revised design for durability of the pavement.



Figure 10 : Earthen irrigation canal which will not be disturbed

3.1.3 Geological Characteristics

This field visit covers the survey of material sources for road embankment, subgrade, sub base, study of the existing road material as per WSP International Sweden AB report, LBG design, and observation of surface water, study of geomorphology, geology of the road area, GPS tracking and checking of cutting side slope in accordance with the design cross sections. Based on the feasibility study report which is prepared by WSP International Sweden AB, field verification and site survey data, the materials such as sand and gravel or mixture of material are available for construction of sub grade, sub base layers. For base course layer rocky mountainous source is available nearby the road. The soil is consisting of predominantly rubble and stone and less extent rubble and loam or rubble with thickness of 0.5 to 5m underlined by rock. The available soil is categorized from poor to well graded sand with gravel. The existence of silt deposit is minimum, excavation of test pits and collection of soil samples along the project road for soil classification purpose (Moisture density relationship and California Bearing Ratio etc) is performed and it is described and showed in feasibility study report.

Schedule of Existing CBR Values								
From	То	CBR (%)	USCS	Remark				
0+000	0+200	8	SM					
0+200	2+300	4	CL					
2+300	4+000	10	GP-GM					
4+000	4+500	4	CL	See note No.7				
4+500	15+500	6	SC,SM	on				
15+500	18+000	4	CL	DWG.No.BD-				
18+000	20+000	6	GC-GM	RD-004				
20+000	20+500	4	CL-ML					
20+500	23+000	6	SC-SM					
23+000	23+500	4	CL-ML					

Table 1: CBR values accordance Design volume 2 of 5(sub-volume 2.3 0f 4) Road Works

According to the design documents Volume 2 of 5 Roadwork (Sub-volume 2.3 of 4) CBR values of the existing road material for the first section 23.7Km are 4 to 10%. The road cut and road widening material of these intervals which they have 1:1 side slope cutting ratio and formed from stone fragments, gravel and sand can be used in embankment filling but the existing road CBR values accordance design documents are below 10% so in the alignment of this section especially from 15+930Km to 16+930Km the existing road sub grade should be improved.

From 0+130 to 0+330 there is proposed cutting of conglomerate at the left side of the road and the proposed rations of cutting is 0.3H: 1V is not suitable because the of the semi soft condition of the conglomerates at mentioned places; therefore, the cutting slope should be changed to 1H: 1V. In field verification of design it was noted that there are proposed rock cutting places and the proposed ratio of rock cutting in design cross sections are found satisfactory.

There is no major rock cutting areas which requires blasting in first segment of the road but from 0+130 to 0+330 there is proposed cutting of conglomerate at the left side of the road and the proposed ratio of cutting is 0.3H: 1V which is not suitable because the of the semi soft condition of the conglomerates at mentioned places; therefore, the cutting slope should be changed to 1H: 1V. From 14+170Km to 14+600Km there is a rocky mountain at the left side of road, there are rocks mass sliding and there are possibilities of further sliding and falling of rocks masses especially from top of the mountain.

Figure 11 : From 14+170Km to 14+600Km there is a rocky mountain at the left side of road, there are rocks





From 15+930Km to 16+930Km the road widening and road cutting material is plastic clay, it is unsuitable material for embankment filling, material of this area will be removed and replaced with other suitable material.



Figure 12 : 15+930Km to 16+930Km

It is worth to mention that from 16+240Km to 16+320Km under the existing road there are holes. The type of material in this interval is clay, in winter and rainy seasons the surface water infiltrating in to the holes and washing the material. In this interval the existing road had settlement due to soft condition of material and underground small holes therefore it is required to remove the soft material from road surface up to 2m depth and replace with suitable material. At the hill side construction of reinforced concrete lined side drains is essential.

The river valley soils are generally alluvial or meadow alluvial. Within the project area itself productive soils are limited to the valley floors. These areas are farmed intensively from Dushi to around Km 70 after which the fertile areas become smaller and the climate becomes less favorable to multiple cropping patterns. The predominant crops vary along the alignment, with rice being grown in the wide valleys closer to Dushi. Wheat was also grown and fruit orchards (apple, apricot and peach) were observed in the first 50 kilometers or so of the road. Silts and other materials washing down from the barren side slopes had begun to impact upon the fertile soils in the valleys. Farmers have attempted to construct walls and mud barriers to protect their land, but heavy rainfall and run-off from the slopes is still impacting negatively on the productive soils in the valleys.



3.1.4 Hydrology

At Dushi the Surkhrab meets with the Andarab River and it became the Pul-i Khumri River. Most of the villages in the project area extract the groundwater for drinking purposes. Seasonal flooding can be problematic in the region with flash floods forming from Surrounding Mountains. These flash floods in the spring and early summer can have detrimental effects on the project road by washing out low lying sections close to the rivers.

Since the river is flowing parallel to the road at some locations so the protection structures can prevent further erosion but for determining the foundation depth sub surface investigation and boring is required in order to determine the stratigraphic condition of the material which will located under the foundation of the structure. The scour depth calculation is also required to determine the scouring depth of protection structures from the hydrological point of view.

The river water is mostly using for irrigation of Agriculture land and the water wells for drinking purpose.

Hydrological/Hydraulics and Structures:

Numerous small streams and rivulets join to the Surkhab River. The Dushi Bamyan Road passes along this river. Surkhab is the main tributary of Kunduz River Which has catchment area of 12410 km2. Most of the streams and rivers are dry during the autumns and winter months except during rainy season and the summer months when the snow melts. Flow fluctuations are high with flash floods during spring and summer

The Surkhab River is perennial steep sloped mountain river with narrow waterway having gravel and boulder bed material. At most of the locations the road alignment runs parallel to the river bank within the active flood zone. The catchment basin's areas and method to determine the discharge values seem to be correct and matching to existing site conditions, but the capacity of hydraulic structures is not enough to accommodate or pass the flash floods safely. Therefore, it is recommended that the capacity of each structure should be increased based on the quantity and sizes of boulders that flood had brought in previous last 8 years.

Existing Hydraulics and Structures:

The existing gravel road is narrow, earthen and snaky with no appurtenance structures like culverts, retaining walls etc. except bridges over the Surkhab River. As the existing alignment and proposed alignment runs along the foot of the hills or from the neighborhood of topographic break the alignment mostly crosses fan shaped unconsolidated depositions where stream flow appear to spread over a larger area having no specific channel course making difficult to choose the most suitable and sustainable channel course.

As the outlet of the catchment basin is spread over large width so the velocity is reduced immediately and sediments are lifted having large size boulders and thickness of material up to 3.5 meters. In addition, the size of catchment basin varies also the shapes, having high steep slopes result high velocity flow which transport the unconsolidated surface of the catchment basin consists of boulders and clay particles.

All the pipe structures having diameter of 1 meter is shifted to box culverts having dimensions of 1.0m x 1.0m. Approximately 80 percent of the dimensions are changed and culverts with large sizes are proposed. List of proposed culvert structures (new & up-gradation) and bridges are attached as Appendix E.

Seismic: Accordance the feasibility report and Afghanistan seismic zone map this road is located in major damage possibility zone. The maximum estimated seismic activity is 6~7.5 on the modified Richter scale. Accordance to design documents sub-volume 2.3 of 4 and field visit the sub-grade soil CBR values is less than <10% therefore the soil have to be considered as frost susceptible.

3.1.5 Air Quality and Climate

The climate in the project area is variable from the lower altitude of Dushi to the elevated Bamyan. Climatic and soil conditions of the Project Area are such, that it is likely to be subject to dust storms in the summer months, leading to higher levels of Suspended Particulate Matter (SPM). In addition, due to the unpaved status of the project road, elevated levels of SPM are present along the entire route during the summer months created by vehicle movements, especially heavy goods vehicles. This creates significant health hazards, as was reported at Gandak Health Clinic and also causes significant nuisance in the roadside villages.

3.2 Biological Environment

3.2.1 Flora

The most common species on the more humid soils in the project area are oaks, ashes, willows, poplars and fruit trees in orchards. Based on recent surveys there is no documentation of potential habitat for threatened or endangered plant species within the immediate vicinity of the project location. It is possible that some special status flora may exist within the mountains, but they are unlikely to be impacted by Project Works. Some mature trees within the Right of Way will be removed.

3.2.2 Fauna

Afghanistan's National Environmental Protection Agency (NEPA) has officially released Afghanistan's first list of protected species. The species on this list are now protected against illegal hunting or harvest. 138 species are currently on the list, which includes 74 mammals, 54 birds, 7 plants, one amphibian, one reptile and an insect. The proposed project area has a very limited value as a habitat for T&E species because of the lack of vegetative cover or other suitable habitat. Within the Project Area little in the way of wildlife can be observed. Consultation with local residents revealed that the most prominent animal species in the Project Area were fox and rabbit. It is possible that higher up in the more remote parts of the mountains other species are present, however, the fauna of this region has not been documented within the last 25 years and as such the exact nature of the species in this region is unknown. No threatened or endangered species are known to exist in vicinity of this segment of the road, and there are no protected areas within the ZOI.

3.3 Social Component

A detailed socio-economic survey was conducted by ESM team of the PMU at MPW during December 2014 and January 2015 to collect the baseline information on the socio-economic conditions of the project affected families identified by ARAZI team in the first segment of the road project.

There are 10 villages falling on the road alignment at Segment 1, 97 families living in these 10 villages are affected directly in terms of land loss, loss of buildings/ structures, houses and shops and walls etc. Some of these families are also losing a part of their homestead land beyond the built up homes, these include yard for cattle, kitchen garden and land used for other purposes.

S. No.	CDC/ Village	No. of PAFs					
1.	Bagh Mulla Sha	25					
2.	Char Bagh	2					
3.	Dahane Kayan	13					
4.	Gozar	2					
5.	Kondasang	15					
6.	Konjak	13					
7.	Lokhtoghai	12					
8.	Pule Kondasang	6					
9.	Rubat	7					
10.	Shalezar	2					
	Total 97						

Table 2: List of villages and No. of PAFs therein

Figure 14: Road view and graveyard



Figure above shows the grave is located close to the existing road alignment which will be removed

4 Potential Environmental and Social Impact

This section describes the environmental and social impacts that are likely to result from the rehabilitation of the road, and mitigation measures addressing them through this ESMP. Based on conducted field surveys and environmental and social assessment, the 23.7 km. of first segment of the road have major negative impacts on the environment and social parts during the road construction activities. Due to road widening, the people are losing their agriculture lands, house and structures which increase the number of PAPs in the first segment and accordingly a separate Resettlement Action Plan (RAP) is prepared which will cover land acquisition issues and the compensation procedures. The contractor will be responsible for compliance with the ESMP provisions during the construction phase of the project. The contractor will be also in charge of undertaking work in a manner which complies with all relevant environmental procedures, adheres to all legislative requirements, and ensures that all environmental objectives associated with the contract are achieved.

Environmental Components		Pł	nysica	ıl		Biol a	ogic I		Soci	al and	l Soci	Decoi	iomio	e Asp	ects	
Physical Activities	Land use	Soil Erosion	Surface /Ground Water	Air Quality and Dust	Waste generation	Flora	Fauna	Land acquisition	Agriculture / Farming	Health and Safety	Pressure on Public Utilities	Public Infrastructures	Noise and Vibrations	Cultural Properties	Archaeological Heritage	Gender Issues
Pre- Construction Phase	0	N	N	N	Ν	-2	N	-2	-2	N	-1	-1	Ν	N	N	+2
Construction Phase	-1	-1	-1	-2	-2	-1	N	Ν	-1	-2	-1	-1	-2	N	N	+1
Operation and Maintenance Phase	N	N	N	N	N	+2	N	N	N	0	N	N	N	N	N	+2

Table 3: ENVIRONMENTAL AND SOCIAL IMPACTS SCREENING MATRIX

Key: -2=High Negative Impact -1=Low Negative Impact 0=insignificant/Negligible impact +2=High Positive Impact +1=Low Positive Impact N=No Impact The following sections therefore are organized on broad aspects in the following order:

- Physical environment
- Biological environment
- Social environment

4.1 Potential Physical Environmental Impacts

4.1.1 Air Quality

Construction activities - particularly earthworks, increased traffic, and the use of cement, asphalt, and other building materials will produce excessive airborne dust and toxic asphalt fumes. This will affect local air quality.

Bitumen boilers: During the Construction stage, bitumen boilers often contribute to air quality degradation especially when the bitumen itself is used as a fuel (a practice during locally funded maintenance activities). Training in their use is the best mitigating factor and their operation should be limited to experienced road workers. New bitumen work should also be 'dusted down' to prevent nuisance to the public.

Table 4: The Air Sensitive Receptors ASRs for the first segment have been identified close to the Project Site and a brief description of the representative ASRs is presented as under

No	Name	Village	Location (at Km point)	From center Line (Aprox)
1	Zaher School	Bagh Mulla Sha	02+300	50 m
2	Dwelling Units	Bagh Mulla Sha	03+740	<20 m
3	Dwelling Units	Dahan Moroo	03+800	<20 m
4	Dwelling Units	Gazar	05+560	<20 m
5	Dwelling Units	Konjak	06+880	<20 m
6	Dwelling Units	Kundasang	07+000	<20 m
7	Market	Pule Kundasang	10+500	<20 m
8	Dwelling Units	Pule Kundasang	10+500	<20 m
9	Darul uloom (Mosque)	Pule Kundasang	10+800	16 m
10	High School	Pule Kundasang	11+000	40 m
11	Dwelling Units	Charbagh	12+500	<20 m
12	Jamatkhana (Place of worship)	Charbagh	12+800	80 m
13	Dwelling Units	Dahan Karoo	14+550	<20 m
14	Dwelling Units	Sorkhak Bini	15+000	<20 m
15	Dwelling Units	Rabat	17+200	<20 m

16	Mosque	Rabat	17+200	16 m
17	Clinic	Rabat	17+900	16 m
18	Police Station	Dahan Kayan	18+300	20 m
19	Dwelling Units	Dahan Kayan	18+300	<20 m
20	Dwelling Units	Lokhtoghai	22+000	<20 m
21	Dwelling Units	Shalezar	23+700	<20 m

The Contractor will undertake frequent watering of the road surface to reduce the potential dust nuisance. Mitigation measures during the construction stage are given in the Environmental & Social Mitigation Management Plan / ESMMP (Table 3).

4.1.2 Water Quality

The primary impact of the project on the first segment is related to contamination of river water due to construction activities and this also including impacts resulting from construction camps) and extraction of limited groundwater resources for construction activities. In addition, in some area the irrigation canals will be interrupted which will affect the irrigation system of the area. Wastewater and hazardous materials (fuel, oil, acids, caustics, etc.) may drain into streams and drainage areas, causing pollution to the river or groundwater. This is particularly true for bridge construction activities, construction campsites, and staging areas where workers, construction equipment, and building materials are most concentrated.

The vehicles and machines used by the contractor will operate in the immediate vicinity of the river. Oil or fuel leakages can impact surface water quality. This impact can be substantially reduced by regular maintenance of vehicles.

The site observations indicate that the road is prone to wash-outs in certain sections caused either directly by the Surkhab River or from flash floods within the rivers tributaries. In addition, the one water well will be removed due to road widening.

The assessment area for the water quality assessment is normally taken as all the areas within 5km of the project influence area. The water sensitive receivers were identified. The proposed method of construction and operational activities of the project were reviewed and potential sources of water quality impact that may arise during the construction and operational phase were described. Identified Water Sensitive Receivers (WSRs) in and around the project area is presented in Table 4

Table 5	: Identified	Water Receivers	(WSRs)	within	the first	segment
			· · · ·			

S.No	(WSRs) location name:	Stations
1	Near to Puli Dushi	0+200 - 0+500
2	Baghi Mullah Sha	2+900 - 3+520
	Irrigation canal	
3	Kondah Sang Irrigation	Located at 7 km

	Canal	
4	Dahan-I- Kayan	18+300
5	Lokhtoghai	22+00

4.1.3 Soil Erosion

The earthworks to reduce/eliminate the soil bund in the river made during the former construction works may lead to significant erosion and siltation of the river. This impact can be mitigated by preventing such earthworks during the winter rainy season.

The road and bridge construction will intensify the effects of natural soil erosion that may be due to vegetation removal, soil disturbance, and exposure of bare soil surface. There will be no significant soil disturbances as the site will not need any preparation activities such as blasting. The key problems will be borrowed pits and spoil sites (only one borrow pit and one spoil site are planned for the first segment), as well as bridge and culvert construction sites, particularly during rainy days. The eroded material may affect aquatic habitats and alter aquatic species' life cycle events by increasing turbidity, changing the water temperature, changing the depth of water bodies, runoff of nutrients into the river.

These impacts can be mitigated by civil engineering control measures including: slope stabilization, vegetated buffer strips, silt fence. The soil erosion may cause damage to agriculture lands.

4.1.4 Solid Waste

Due to the construction activities, various types of solid waste will be generated. Construction materials wastes, cements, bricks, sand, and gravels, as well as food remains, plastic tins, glass, paint cans, and jars may be expected. To manage wastes from construction in such a way that any potential impacts on the environment are minimized or avoided, the proposed mitigation measure of the Contractual Specific Environmental and Social should be applied.

4.1.5 Ancillary or Associated Activities and Construction Materials

- Cut and Fill Requirements: Extensive cut and fill activities will be required along the projects alignment. Unmanaged disposal of cut material can have significant impacts to surface hydrology. There is huge size of materials will be excavated and blasted during construction works. Improper dumping of such material could have significant impacts to surface water courses or to private and agricultural lands.
- The major construction materials required for the project are soil, sand, aggregates, bitumen, steel and cement. Selected soil required for the project will be procured from

proposed borrows areas, which are located mainly outside or RoW. Based on the total requirement and availability of each soil type, estimates of soil quantity to be obtained from each of the borrow areas, three borrow -pit areas are proposed along the road corridor in accordance with the environmental management guidelines. The first borrow area is located within 4+000 km of the road, second borrow area is in the 16+000 km in the first segment of the road and the third one is within 29+000 km of the road. The proposed borrow pits are located outside of the ROW in distance of more than 500 meters from local residents. There are not any forest lands or tress, water bodies and agricultures lands within the 500 meters. The sites are located on government owned land that will not result any disputes. Pollution Prevention technologies and practices will be applied in construction phase according to the nation and International good practices and standards. The specific mitigation measures and guidelines are proposed in the ESMMP which will be implemented by contractor with regular monitoring by PMU.

• **Quarry Operations:** Crushed rock will be needed for construction purposes. Operation of quarries can have significant environmental problems if not managed correctly, more specifically uncontrolled excavation of rock material can leave unsightly scars on mountain sides and can also potentially make slopes unstable.

• Sitting of the Contractor Camp

Location and operation of construction camps and temporary yards may not only damage the immediate environment but also contaminate the surroundings area with waste generation, the proposed guidelines and the specific mitigations should be applied as suggested in the ESMMP.

Five locations for construction camps are proposed along the road. The first construction camp can be located on the left side of road sta 42+500, the second camp can be located on the right side of road sta 56+500, the third camp can be located on the right side of road sta 71+000, the fourth construction camp can be located on the right side of road sta 131+000 and the fifth proposed construction camp can be located on the left side of road sta 141+000.

4.1.6 Noise Quality Issues

Noise impacts are expected to increase during construction due to the use of construction machinery and earth-moving equipment. It is estimated (considering major construction equipment to be used) that the daytime noise levels must be within the applicable standards of 85 dB when the noise receptor is at a distance of 50m or more from the noise source - except for high noise equipment like pneumatic hammers. Due to the fact that some villages and school are located near to project side then the proposed guidance of the ESMAP must be considered.

4.2 Potential Biological Environmental Impacts

4.2.1 Flora

Vegetation clearance; Drainage clearance, bush and vegetation clearance on a routine basis is needed to maximize the use of the non-bituminous portion of the road corridor thereby optimizing the potential use of the entire available corridor. The maximization of the use of the nonbituminous portion of the available corridor is directly linked to the increased road safety and a reduction in road accidents.

Furthermore, minor impacts upon habitats and flora of the project area are expected as a result of the road rehabilitation and formation of new alignments. Rehabilitation work will directly cause minor degradation of local ecology through the clearance of small areas of vegetation – mostly ground cover - at work sites and ancillary sites. Due to widening of the road, some trees along with the lands are losing which are reflected in the RAP and specific measurement has been taken in to considerations. Only few numbers of trees may have to felled along the roads which fall very close to the edge of the existing pavement. In addition, hundreds of new trees will be planted along the road in the first segment.

4.2.2 Fauna

Based on the observation and according to ESIA studies No significant faunal activities were observed in the project site vicinity. No endangered species listed by NEPA is reported in the project location. Based on local reports, the Foxes, Rabbits and Wolves are living in upper mountainous area which will not be affected by road activities. In addition, few waterfowls including ducks and local species are feeding and resting around the river which is away from the road project.

4.3 Socio-economic Impacts

The road rehabilitation has potential negative impacts on social parts in the first segment. Due to road widening, the people may have to lose their agriculture lands, house, walls, and structures.

4.3.1 Project Affected Families (PAFs)

Due to widening of road width in the first segment 97 families are affected directly in terms of land loss, loss of buildings/ structures, houses and shops and walls etc.

Type of Loss	No. of PAFs
Loss of Agriculture land	34 PAFs are losing their agriculture land, out of them 7 PAFs are losing both Orchard and Non Orchard land. 26 PAFs are losing only Non

Table 6 Summary of type of loss and number of PAFs affected by them

Type of Loss	No. of PAFs		
	Orchard land and 1 PAF is losing only Orchard land.		
Loss of Residential Structure	27 PAFs are losing their house structures/ Buildings		
Loss of homestead land	38 PAFs are losing their homestead land where their houses are built, and other land on the homestead plot having cattle yards, kitchen garden and for other uses		
Loss of other structures	39 PAFs are losing their shops and 12 PAFs are also losing other building/ structures		
Loss of boundary walls	28 PAFs are losing their boundary walls		
Expenses on relocation, shifting of residence	27 PAFs are losing their house structures/ Buildings will require relocation		
Loss of income and livelihood due to severe agricultural land impacts	14 PAPs are losing more than 10% of their total agricultural land holding and are vulnerable to loss of income and livelihood		
Loss of income and wages	In addition to the PAPs losing their agriculture land, 39 PAPs are also losing their shops		

In order to compensate the lands lost and demolishing of the existing structures, a comprehensive Resettlement Action Plan is prepared which includes the efforts made on consultations and disclosures regarding the resettlement process under the proposed road location. The RAP consists the baseline information on the socio-economic condition of the people living in the project area and potential impacts of the road. The RAP provides for the action plan including budget for compensation payable to the affected persons. It also enlists other economic and livelihood restoration measures for mitigating effects of other impacts.

4.3.2 Cultural and Archaeological Area

In the first segment of road corridor, there are not any cultural properties and archaeological sites.

4.3.3 Common Property Resources Issues

The common properties resources along the roadsides include Water Wells, Public Water taps, two small Micro-Hydro Power Plants (electricity networks) are identified in the project corridor in the Kondah Sang village within the station of 8+045 and the second MHP is located within the station of 8+150 and within the RoW, which will be affected by the intervention. Shops and other community structures are available which may have to be effected and accordingly the specific measures were considered in the mitigation plan along with provision sum which will be included into project

BoQ. In addition, two graves are close to the road alignment and may have to be reallocated to the public graveyards in close consultation with local community. According the the proposed mitigation measures of ESMMP and the Contractual Specific Environmental and Social Conditions must be applied.

No	Name of Structures and Properties	Villages	Chinnage	For from center Line (Aprox)
1	Graveyard	Robat	16+150	40 m
2	Graveyard	Bagh Mulasha	3+020	7 m
3	Graveyard	Dahan Karoo	14+550	11 m

Table 7: Graveyards along the road corridor

4.3.4 Access Problems and Traffic Disruption

This is more important due to the fact that along road corridors numerous schools, clinics, markets, shops, etc are located. It is expected that there will be some traffic disruption during construction. Therefore, a formal traffic management plan adhering to International Standards will be prepared by the Contractor and will be approved by the PMU/MoPW before commencing the work on any link. There should be proper safety arrangements during construction works. The cost will be met from the original contract.

4.3.5 Community Health and Safety

The construction activities and vehicular movement at construction sites and access service roads may result in road side accidents particularly inflicting local communities who are not familiar with presence of heavy equipment. This is a temporary and minor negative impact. Quality of groundwater and surface water resources available in the nearby local communities may be affected due to the construction activities, oil spillage and leakage, roadside accidents etc. The labour works with different transmittable diseases may cause spread out of those diseases in the local residents. The borrow pit areas located near the residential, settlements, may cause accident for the people moving near to those areas.

The World Bank IFCs General Health and Safety Guidelines for Occupational Health and Safety (OHS) and Community Health and Safety will be followed. These documents provide guidelines for issues such as water quality and availability, disease prevention, physical hazards, chemical hazards and the use of personal protective equipment (PPE). The guideline is linked within the ESIA report.

In addition, the proposed mitigation measures of ESMMP and the Contractual Specific Environmental and Social conditions must be applied.

4.3.6 Health and Sanitation

Health risks are commonly associated with poor labor camp condition. Unsafe water sources and unhygienic conditions (lack of toilet and washing facilities) bear the risk of additional and often endemic diseases, such as dysentery, diarrhea and cholera.

4.3.7 Mines Clearance Issue

Based on the Afghanistan Mine Action Standards as provided by the Mine Action Coordination Center of Afghanistan (MACCA) which is part of the project ESIA report, the road corridor along with the zone of influence is assessed by MACCA and accordingly there is no high risk of is mine issues in the road corridor. The assessment report along with the location map is appended at Appendix B.

5 **Public Consultation**

A comprehensive consultation with PAPs, District Government Officials, Community leaders and other stakeholders were carried out by ESMU/PMU. The individual consultation has been also conducted with each PAPs. The PAPs were fully aware about the Project salient features, land acquisition mechanism and compensation procedures. In addition, the Public awareness and meetings have been taken through public announcing in the villages. The first Social Grievance Redress Committee was also established at the district level which the members were elected by the community. The committee members are from PAPs, District government, community leader, ARAZI and other local stockholders.

The proper stakeholder and community consultations will be continued during construction phase and all concerns and issues will be noted out and must be considered by the contractor. Furthermore, during the physical works the compliances and issues will be recorded by the GRC team and after sharing with the ESMU/PMU the corrective action will be taken and the contractor will be instructed accordingly. The summary of the consultation is appended in the appendix A.
6 Environmental and Social Mitigation Management Plan

In order to address these environmental and social issues appropriate mitigation measures have been proposed to offset and reduce the potential impacts on environment and social parts. For this purpose a detail environmental and social mitigation plan including the required mitigation options has been prepared in the below table which shall be used by construction contractors during execution of project activities.

Consequences of project activities	Potential Impacts	Mitigation Measure	Schedule of Implementation	Monitoring Indicators	Authority Responsible	Costs (AFs)
		Pre-Construct	ion Phase			
Loss of Land, Livelihoods & Assets	Impact on local people's lives	The PAPs have been identified and the acquisition process for land and properties (Govt. /private) is carrying out, the mitigation & compensation procedures are outlined in the RPF and detailed in the Resettlement Action Plan (RAP) Designs shall ensure that as far as	To be implemented at the design phase	Consultation/ community engagement meetings held; and completed acquisition process Review of	PMU/MoPW PMU/MoPW	The total cost reflected in the RAP 0.Afs
Activities	slope and earth removal from borrow areas caused for soil erosion and landslides	possible all cut and fill activities are balanced	Design i nase	technical document to make sure the issues are considered in the document		
Borrow Pits	Increased embankment heights and wider roadways may present demands for fill,	Based on the total requirement and availability of each soil type, estimates of soil quantity to be obtained from each of the borrow areas, three borrow -pit areas are proposed along the road corridor in accordance with the	Design phase prior to construction activities	Review of technical document to make sure the issues are considered in	The borrow pit plan should be prepped by the contractor	0.Afs

	portions of which are likely	environmental management guidelines The first borrow area is		the document	and will be approved by	
	to be supplied	located within 4+000 km of the road.			PMU/MoPW	
	by area soils	second borrow area is in the 16+000				
	2	km in the first segment of the road and				
		the third one is within 29+000 km of				
		the road. The proposed borrow pits are				
		located outside of the ROW in				
		distance of more than 500 meters from				
		local residents. There are not any				
		forest lands or tress, water bodies and				
		agricultures lands within the 500				
		meters. The sites are located on				
		government owned land that will not				
		result any disputes. Pollution				
		Prevention technologies and practices				
		will be applied in construction phase				
		according to the nation and				
		International good practices and				
		standards. The specific mitigation				
		measures and guidelines are proposed				
		which will be implemented by				
		contractor with regular monitoring by				
		PMU.				
		This process should be undertaken in				
		consultation with local representatives				
		and should form part of a borrow pit				
		action pan.				
Erosion	Could result	To reduce the impacts of erosion,	Design Phase	Review of	PMU/MoPW	0.Afs
	increased runoff	engineering designs shall ensure:		technical		
	and/or increased	• The side slopes of cuttings and		document to		
	velocities which	embankments will be designed to		make sure the		

	could lead to additional soil loss	 reflect soil strength and other considerations as included in the project specifications in order to reduce slips or erosion; To prevent soil erosion in areas of steep mountainous slopes, rock-fall fences, rip-rap, retaining structures and gabion baskets for river bank protection will be included in the engineering design; For embandments greater then (model) 		issues are considered in the document		
		 Tor embandments greater than only stepped embankments will be used; and Ditches shall be designed for the toe of slopes in cut sections with gutters or drainage chutes designed to carry water down-slope to prevent erosion. Interceptor ditches shall be constructed near the top of slopes, or on benches, in cut slopes. For steep slopes drainage will be designed and constructed to intercept longitudinal flow and carry water away from fill slopes. 				
Emergency Response Plan	Producing of hazardous materials, oil spills and work side accidents	An emergency response plan which will cover containment of hazardous materials, oil spills, and work-site accidents shall be prepared. The plan will detail the process for handling, and subsequently reporting, emergencies, and specify the organizational structure (including	Prior to the start of construction activities	Review of the document	The contractor and will be approved by PMU/MoPW	0.Afs

		responsibilities of nominated				
		personnel).				
Hydrology	Impacts to structures	All roadway embankments, bridges and drainage structures shall be designed to prevent potential impacts from high water levels and flood events. Hydrological studies have been conducted and specific recommendations were considered in the project design for these structures.	Implemented at design stage	Review of design package to make sure that hydrological recommendation considered into deign package	PMU/MoPW	0.Afs
Air Quality	Dust and Emissions that may increase respiratory disease among the local people	• Preparation of a dust suppression plan by the contractor. The plan will detail the action to be taken to minimize dust generation (e.g. spraying un-surfaced roads with water, covering stock-piles, and blasting with use of small charges etc) and will identify the type, age and standard of equipment to be used.	Prior to the start of construction activities	Review of dust suppression plan and make sure it is part of project package	Prepared by the Contractor and approved by the PMU/MoPW	0.Afs
Socio- Economic	Traffic disruptions	The Contractor will prepare a traffic control plan, to be approved by the PMU/MoPW. The plan will include haulage and work site routes, traffic control devices, temporary fencing, barriers and barricades, detours, traffic signs and speed limits, and safe passage of pedestrians.	Prior to the start of construction activities	Review of traffic control plan and make sure it is prepared properly and part of project package	Contractor have to prepare the plan and should be approved by PMU/MoFW	0.Afs
Other Infrastructure	Protection of Utilities that may effected	• All CPRs (common property resources) such as stand posts, bore wells, graves, water supply lines, sewage lines, drainage systems and	Prior to construction	Make sure that the recommendation and cost is	Contractor with oversight from	0 Afs

		 electric power supply lines shall have to be removed and relocated outside the corridor before commencement of the road improvement activity. Before commencing construction work a survey to establish the detailed location of all irrigation systems and electricity supply networks affected by the Works shall be undertaken. During the environmental survey two very small MHP were identified in the first segment which will be effected by the project activities so it is recommended to consider the reallocation and construction of the structures in the specific locations in the design document 		considered in the project package	PMU/MoPW	
		Constructio	n Phase			
Topography Cut and Fill	Cutting of hill slope and earth removal from borrow areas or via blasting caused for soil erosion and landslides	 During construction cut and fill will be balanced as far as is possible. However, should excess fill be created in certain areas the following should apply; Where excess fill material cannot be re-used contract provisions shall ensure that none of the excess material is dumped into the Surkhab Rivers (or any of their tributaries). Any locations identified by the Contractor where excess cut 	Throughout construction phase.	Status of ground cover in constructed areas; Regular Site observation and photos	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	0.Afs

material will be produced shall be reported to the PMU/MoPW and a suitable location identified by both parties for the disposal of this inert waste.

- All materials should be confined to government owned land and in no circumstances should be dumped on agricultural or productive lands. Neither should this material impact upon any watercourse including irrigation channels.
- In the event of any spoil or debris from construction works being deposited in any of the afore mentioned areas or any silt washed down to any area, then all such spoil, debris or material and silt shall be immediately removed and the affected land and areas restored to their natural state by the Sub-Contractor to the satisfaction of the PMU/MoPW.
- Blasting will only be carried out during the day and according to a pre- established schedule, the adjacent communities will be notified of the blasting times well in advance;
- Use of blasting mats to reduce noise during blasting operations;
- Use of low volume charges will

reduce the potential for vibration induced damage to structures;

- In the event of damage proven to be due to the contractor's activities, owners of structures will be fully compensated.
- People of the vicinity area will be informed about the blasting time and its possible hazard.
- Each public organization and individuals having structure in proximity to the site of the work will be notified in advance (with sufficient time) for using the explosives so that the organization and individuals could take necessary step.
- Danger zone will be created and ensured that all personnel, vehicles and livestock are cleared from the zone before and during the blast. In the settlement area, necessary steps (it might be evacuation in the area) will be taken to avoid damage to the property from the flying rock.
- Danger red flag will be displayed prominently in all direction during the blasting. The flag will be kept 200m far from the blasting site in radial direction.
- Not more than 10 charges will be prepared and fired at a time. The site

		 in charge will blow a siren for cautioning the local people. Provide adequate compensation to land and property damaged by the blasting Permission shall be obtained from the Chief of police/District Governor in order to use of explosive material, storage, application and transportation of explosives. The blasting site shall be restored after the completion of blasting, and left in stable condition without steep slopes 				
Quarry Ops and rock crushing	Quarry operation and its potential effect on instability, landslide, water pollution, damage to farmland, disturbance in natural drainage	 Prior to opening of any quarry or rock crushing facility, the Contractor will require approval from the relevant local authorities and the PMU/MPW to ensure that land owners are adequately compensated for land use and that the sites are not located in an area likely to cause significant detriment to the local environment. To ensure that this is the case contractors should ensure that quarries and crusher plants are: Located at least 500 meters from urban areas to prevent noise and dust impacts. Located outside of agricultural land. Where possible located on 	Construction phase.	Site observation and reporting and make sure the quarry Ops is properly going on	Implemented by contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	0.Afs

		 government owned lands Quarry shall not be done near surface water sources. Take soil/rock from approved borrow areas, barren areas, or vendors; store soil and debris to avoid erosion; dispose to existing dumps or reuse excavated soil and construction debris. Proper selection and management of quarry sites, rehabilitation of quarry sites after completion of work. The contractor will also submit the following to the relevant authorities for approval and thereafter present to the PMU: Exact location (makers to be placed in the field) – avoid slopes. Plan of the area indicating type and size of trees Excavation plan (management of vegetation and top soil volume and depth of excavation) Rehabilitation plan for the pit and access road. 				
Spills/leaks	Producing of hazardous materials, oil spills and work side accidents	Contract documents will contain provisions requiring contingency plans for actions in the event of contamination due to spills or hazardous materials. They include the following: • All fuel and chemical storage (if	Throughout construction phase.	Spot checks by ESMU/PMU	Implemented by Contractor (via contact Provisions outlined in Appendix C)	0.Afs

		 any) shall be sited on an impervious base within a bund and secured by fencing. The storage area shall be located away from any watercourse or wetlands. The base and bund walls shall be impermeable and of sufficient capacity to contain 110 percent of the volume of tanks. Filling and refueling shall be strictly controlled and subject to formal procedures. All valves and trigger guns shall be resistant to unauthorized interference and vandalism and be turned off and securely locked when not in use. The contents of any tank or drum shall be taken to ensure that no contaminated discharges enter any soils 			with oversight from the PMU/MoPW	
Construction activities (waste generation)	Improperdisposalofconstructionwastes may leadtosoilcontaminationinsurroundingenvironment.	Construction wastes will be stored and covered to avoid run off due to rain fall and contamination of soil and water bodies. The solid wastes will be collected and disposed off in designated sites.	Construction phase.	Solid waste disposal to landfill is verified	Contractor	0.Afs
Erosion	Could result increased runoff and/or increased	The Contractor will be responsible for ensuing:Material that is less susceptible to	Construction phase.	Status of ground cover in constructed	Implemented by Contractor	0.Afs

		1 111 1 1 1				
	velocities which could lead to additional soil loss	 erosion will be selected for placement around bridges and culverts; and Re-vegetation of exposed areas including; (i) selection of fast growing and grazing resistant species of preferably local grasses and shrubs; (ii) immediate revegetation of all slopes and embankments if not covered with gabion baskets; (iii) placement of fiber mats to encourage vegetation growth, although due to the arid conditions in most of the road, this may only feasible where there is regular rainfall or other natural water supply. 		areas	(via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	
Borrow Pits	Increased embankment heights and wider roadways may present demands for fill, portions of which are likely to be supplied by area soils	 The contractor will consider the following: Exact location (makers to be placed in the field) – avoid slopes. Plan of the area indicating type and size of trees Excavation plan (management of vegetation and top soil volume and depth of excavation) Rehabilitation plan for the pit and access road. The Contractor should observe the following at the site. In constructing access roads to the site, agriculture reserves will be by 	Construction phase.	Regular site observations and reporting	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	0.Afs

		1				
Hydrology	Impact	 The surface of the borrow pit site should first be cleared of all unwanted materials including grass and vegetation. The topsoil should be carefully removed and stockpiled. The surface of the stockpiled topsoil will be protected against erosion and wind by planting local grass. After removal of materials the contractor will spread the topsoil on the pit surface. The contractor will reshape the site at gradients not exceeding 1:5 unless otherwise specified. The relevant PMU when satisfied with the restoration of the site will issue the contractor with Certificate. The sum approved in the bill of qualities will then be released. On the other hand where the Contractor is not able to restore the site, the Contract Sum for the borrow pit restoration will be withheld. A new contract or Contractor will have to be signed with another firm to restore the site and the original contract sum used to pay the new contractor. Additional borrow pits will not be opened without the restoration of those areas no longer in use. 	Construction	Water quality	Implemented	θΑfε
Hydrology	Impact on surface water	The Contractor shall ensure that no tools or machinery are washed in	Construction phase.	Water quality. Nature of	Implemented by	0.Afs

any water source or areas that shall drain into an existing watercourse, stream, or canal.

- The Contractor shall ensure that rain runoff from the construction sites is not deposited directly into any watercourse, stream, or canal.
- The Contractor shall check on a weekly basis that all equipment for prevention of oil and or lubrication leaks and ensure that all equipment oil and lubrication replacements are performed only in maintenance and repair areas.
- The Contractor shall arrange with the village representatives those works which might interfere with the flow of irrigation waters to be carried out at such times as will cause the least disturbance to irrigation operations. Should any operation being performed by the Contractor interrupt existing irrigation facilities, the Contractor shall restore the irrigation appurtenances to their original working conditions within 24 hours of being notified of the interruption.
- The Contractor shall construct, maintain, remove and reinstate as necessary temporary drainage works and take all other precautions

surface runoff from the site

(via contact Provisions outlined in Appendix C) with oversight from the

Contractor

PMU/MoPW

		 necessary for the avoidance of damage by flooding and silt washed down from the Works. The Contractor shall also provide adequate precautions to ensure that no spoiler debris of any kind are allowed to be pushed, washed down, fallen or be deposited on land adjacent to the Site. 				
Hydrology	Impact on surface water	COPA portion of the Conditions of Contract shall specifically state that "The Contractor shall prevent interference with the supply to, of abstraction from, of the pollution of, water resources including underground percolating water There is an irrigation structures located in the area of segment-1, which runs parallel to road for about 600 m. The second canal is about 300 m which is located in Kondah sang village. The project is not expected to disturb/block irrigation system during construction period. In some sensitive points, the protection walls are considered in the project design accordingly	Construction phase.	Water quality. Nature of surface runoff from the site	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	0.Afs
Air Quality	Construction Impacts	Potential air quality impacts in the construction stage of the Project will be mitigated by implementation of the following controls:	Construction phase.	-Visible particulate matter in the air;	Implemented by Contractor (via contact	0.Afs

- Construction equipment being maintained to a good standard and fitted with pollution control devices. The equipment (including the pollution control devices) will be checked at regular intervals to ensure they are maintained in working order and the checks will be recorded by the contractor as part of environmental monitoring;
- Discouraging of the idling of engines;
- Prohibition of the use of equipment and machinery that causes excessive pollution (i.e. visible smoke) at project work sites;
- Ensuring that all vehicles transporting potentially dustproducing material are not overloaded, are provided with adequate tailboards and side- boards, and are adequately covered with a tarpaulin (covering the entire load and secured at the sides and tail of the vehicle) during transportation;
- Not permitting the operation of hotmix, asphalt, aggregate or concrete plant in close proximity of populated settlements nor within 500m of sensitive uses (such as schools, and hospitals);
- During periods of high wind any

-Increase Provisions inupper outlined in respiratory tract Appendix C) ailments; with - Vehicle oversight service. from the PMU/MoPW

		 dust generating activities will not be permitted within 200m of populated settlements (ASR) located in the direction of prevailing wind; Material stockpiles being located in sheltered areas and be covered with tarpaulins or other such suitable covering to prevent material becoming airborne; Regular watering/spraying of unsurfaced project roads and all unsurfaced roads being used for haulage of materials during the dry season; and Preparation of a dust suppression program, submitted to the PMU/MoPW prior to commencement of the works. The plan will detail the action to be taken to minimize dust generation (e.g. spraying un-surfaced roads with water, covering stock-piles, and blasting with use of small charges etc) and will identify the type, age and standard of equipment to be used. 				
Construction	This activity has	Construction of this car parking &	Construction	Availability of	Contractor	5,894,026.00
of one car	mostly positive	maneuvering including drinking water	phase.	car parking and		Afs The
parking &	impacts and was	and sanitation facilities will proved a		maneuvering		detail cost
maneuvering	recommended in	good resting area for the drivers and				estimation is
including	the ESIA report	passengers and equipped with recycle				attached
drinking water		bin				with the

and sanitation facilities						Appendix D.
Lack of toilets for site workers	Contamination of surrounding environment	Use mobile toilets as the contractor is on site. Use available toilets/ latrines within the area	Construction phase.	Availability of toilets	Contractor	60,000.00 Afs
Flora	Destruction of flora	 Contract documents should ensure the following: Vegetation clearance during construction activities, especially of trees and along the road-side, will be minimized; Trees felled shall be replaced on a three to one basis in consultation with landowners; 2000 site adopted tress will be planted along the road corridor Contractors will be responsible for supplying appropriate and adequate fuel in workers' camps to prevent fuel-wood collection. 	Construction phase and operation phase	Tree plantation is verified.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	100,000.00 Afs
Land Use (Construction camps and other construction facilities)	Inappropriate location such as proximity to local community drinking water source, Environmentally unsound use of community resources by	 Contractors shall ensure that: All sewage and waste water discharges shall be collected and treated in an approved system installed on site. The Contractor will provide medical examinations and emergency medical care for the construction staff and will provide suitable and clean sanitary facilities and necessary safety equipment, 	Construction and operation phase.	Sound environmental practices in camps	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the	0.Afs

workers	 including special masks covering nose and mouth, for employees when applicable. The Contractor will also provide clean potable water, food and housing when necessary. The burning of materials where unavoidable in open air shall be done under strict supervision The Contractor shall not burn tires, asphaltic materials, oil or any materials that will produce dense smoke, either for the purpose of incineration or to augment the burning power of other matter. Extreme caution shall be taken to dispose of materials so as to avoid damage or destruction to private property or to cause excessive air pollution. Location of construction camps at least 500m away from community areas, and away from drinking water sources Regarding temporary sites, written agreements with local landowners for temporary use of the property will be required and sites must be restored to a level acceptable to the owner within a predetermined time pariod 	PMU/MoPW
	owner within a predetermined time period.Upon completion of the Contract, all	

		elements of the camp shall be removed and the site, as far as possible, be returned to its original condition unless designated for alternative uses with approval of the PMU/MoPW				
Energy Considerations	Impacts to coalmines	Contract provisions should ensure that commercial activities have adequate access along the project road. This should include provisions that the road is not closed for more than two hours at a time.	Construction phase.	Site observation and complains	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	0.Afs
Health & Safety	Health and Safety Impacts	 Providing basic medical training to specified work staff and basic medical service and supplies to workers; Layout plan for camp site, indicating safety measures taken by the contractor, e.g. firefighting equipment, safe storage of hazardous material, first aid, security, fencing, and contingency measures in case of accidents; Work safety measures and good workmanship practices are to be followed by the contractor to ensure no health risks for laborers; Protection devices (ear muffs) will be provided to the workers 	Throughout construction phase.	Protected workers at sites. Consultation with public. Workers using gloves, gumboots, helmets and raincoats	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	0.Afs

operating in the vicinity of high noise generating machines;

- Provision of adequate sanitation, washing, cooking and dormitory facilities including lighting up to satisfaction;
- Proper maintenance of facilities for workers will be monitored;
- Provision of protective clothing for laborers handling hazardous materials, e.g. helmet, adequate footwear for bituminous pavement works, protective goggles, gloves etc;
- Ensure strict use of wearing these protective clothing during work activities;
- Availability of safe drinking water for the workers;
- Elaboration of a contingency planning in case of major accidents;
- Adequate signage, lightning devices, barriers and persons with flags during construction to manage traffic at construction sites, haulage and access roads;
- Timely public notification on planned construction works;
- Close consultation with local communities to identify optimal solutions for diversions to maintain community integrity & social links;
- Seeking cooperation with local educational facilities (school teachers) for road safety campaigns;
- Provision of proper safety signage at

		 sensitive/accident-prone spots; and Setting up speed limits in close consultation with the local stakeholders. 		
Community health and safety	The construction activities and vehicular movement at construction sites and access service roads may result in road side accidents particularly inflicting local communities who are not familiar with presence of heavy equipment. This is a temporary and minor negative impact. Quality of groundwater and surface water resources available in the nearby local communities may be affected due to the construction activities, oil spillage and	 There should be proper control on construction activities and Oil spillage leakage of vehicles. The Borrow areas should be fenced properly and banned for the movement of the residents. The labour works with different transmittable diseases should be restricted within the construction site. Efforts will be made to create awareness about road safety among the drivers operating construction vehicles; Timely public notification on planned construction works; Close consultation with local communities to identify optimal solutions for diversions to maintain community integrity & social links; Seeking cooperation with local educational facilities (school teachers) for road safety campaigns; Provision of proper safety and diversion signage, particularly at urban areas and at sensitive/accident-prone spots. Setting up speed limits in close consultation with the local stakeholders; and If identified, consider additional guard rails at accident-prone 		

leakage, roadside	stretches and sensitive locations		
accidents etc.	(schools and markets).		
The labour works	• The communicable disease of most		
with different	concern during construction phase,		
transmittable	like sexually-transmitted disease		
diseases may	(STDs) such as HIV/AIDS, should		
cause spread out	be prevented by successful initiative		
of those diseases	typically involving health		
in the local	awareness; education initiatives;		
residents. The	training heath workers in disease		
borrow pit areas	treatment; immunization program		
located near the	and providing health service.		
residential,	• Reducing the impacts of vector		
settlements, may	borne diseases on long-term health		
cause accident	effect of workers should be		
for the people	accomplished through		
moving near to	implementation of diverse		
those areas.	interventions aimed at eliminating		
	the factors that lead to disease,		
	which includes		
	• Prevention of larval and adult		
	propagation of vectors through		
	sanitary improvements and		
	elimination of breeding nabitat close		
	Eliminate any unuselle impounding		
	• Eminate any unusable impounding		
	• During construction work		
	• During construction work,		
	should be provided for crossing near		
	settlement		
	• Bridges and other structures have to		
	be structurally stable enough to bear		
	maximum ground acceleration		
	recorded for the area in past.		
	• Fencing should be strong enough so		
	that it cannot be broken easily by		

		 local people for making passages. Discharge of any wastewater at upstream of the point of public supply should be restricted. Batching plants should be installed away from settlements Use of water should not disturb public water availability. Source of water should be selected carefully. 				
Socio- economic	Employment	Contract documents will require that at least 50% of the workforces are locally hired.	Construction phase.	Public consultation meetings	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	0.Afs
	Traffic disruptions and Road Safety Enhanced vehicular movement and speed in the long run may result in road safety issues like traffic accidents. This impact is permanent but	 Regarding temporary impacts to local roads and traffic, contracts should include the following: A clause specifying that care must be taken during the construction period to ensure that disruptions to traffic and road transport are minimized. The Contractor shall ensure that the roads remain open to traffic during construction activities; The Contractor will prepare a traffic control plan to be approved by the 	Construction phase.	Complains	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	0.Afs

moderately PMU/MoPW. The plan will include adverse in nature, haulage and work site routes, traffic since the control devices, temporary fencing, frequency of barriers and barricades, detours, accidents may be traffic signs and speed limits, and lowered, but their safe passage of pedestrians; intensity may be quite severe due • Prior to construction activities, the to enhanced contractor will install all signs, speeds at which barriers and control devices needed vehicles will to ensure the safe use of the road by move. traffic and pedestrians, as required by the traffic control plan; • Signs, crossing guards and other appropriate safety features will be incorporated at grade level rail and road crossings; • Local authorities and residents in a working area will be consulted before any detours for construction or diverted public traffic are established; • Disposal sites and haul routes will be identified and coordinated with local officials: and • Construction vehicles will use temporary roads constructed for that purpose to minimize damage to agricultural land and local access roads. Where local roads are used.

they will be maintained and reinstated to their original condition

after the completion of work.

		 Provision of signboards directing the drivers about the diversion and the road crossing, overpass/underpass, signage, road shoulders, relocation of schools entrance and other required action will be included in the traffic control plan by the contractor. Providing and maintaining traffic management comprising diversion warning, guiding and regulatory signage, channelizers and delineators, lightening etc; Contractor staff could be trained and put on the duty to manage the traffic during the construction activities taking place along the road; Temporary bypass, if possible, should be avoided if it involves clearing of land; and Max allowable speed for heavy machinery on the site should not exceed than 20 km/ hr. 				
Noise	Construction noise	 Contract provisions shall ensure: Source Controls, i.e., requirements that all exhaust systems will be maintained in good working order; properly designed engine enclosures and intake silencers will be employed; and regular equipment maintenance will be undertaken; Site Controls, i.e., requirements that 	Throughout construction phase.	Not to exceed 40 working Hours/per week. Sound proofing material. Public Complains.	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight	0.Afs

stationary equipment will be placed as far from sensitive land uses as practical; selected to minimize objectionable noise impacts; and provided with shielding mechanisms where possible;

- Work near Sensitive Receptors shall be limited to short term activities. No asphalt plants, rock crushing plants or any long term generators of significant noise shall be allowed within 500 meters of sensitive receptors;
- Time and Activity Constraints, i.e., operations will be scheduled to coincide with periods when people would least likely be affected; work hours and work days will be limited to less noise-sensitive times. Hoursof-work will be approved by the site engineer having due regard for possible noise disturbance to the local residents or other activities. Construction activities will be strictly prohibited between 10 PM and 6 AM in the residential areas. When operating close to sensitive areas such as residential, nursery, or medical facilities, the Contractor's hours of working shall be limited to 8 AM to 6 PM;
- Community Awareness, i.e., public

from the PMU/MoPW

		notification of construction operations will incorporate noise considerations; methods to handle complaints will be specified. Sensitive receptors will be avoided as possible (i.e., aggregate crushers, operators, etc.). Disposal sites and haul routes will be coordinated with local officials;				
Other Infrastructure	Protection of Utilities that may effected (Two Micro Hydropower (MHP) electricity networks are identified in the project corridor in the Kondah Sang village within the station of 8+045 and the second MHP is located within the station of 8+150 and within the RoW, which will be affected by the intervention. In	 Contractors are required to coordinate with all relevant officials to avoid significant adverse impact to irrigation and electricity networks. Before commencing construction work a survey to establish the detailed location of all irrigation/electricity networks affected by the Works shall be undertaken. Any temporary changes to irrigation/electricity networks should be re-instated to their original state on completion of works using the baseline survey. Local farmers should be consulted throughout the process to ensure adequate flows through any altered channels The relocation sites for CPRs shall be done in consultation with the local administrative authorities and people. Two MHP should be established and 	Throughout construction phase.	Drinking water storage, relocation of graves and MHPs are verified	Implemented by Contractor (via contact Provisions outlined in Appendix C) with oversight from the PMU/MoPW	750,000.00 Afs

Т	Cotal estimated cost as a Provision Su	ım	6,804,02	6.00 Afs
	existing ones.			
	established before damaging the			
	all these structures should be			
	environmental contractual condition			
	• It is mentionable that as per the			
	BoQ.			
	will be considered in the project			
	(250,000.00 Afs) as a provision sum			
	training, so the total amount is			
	rehabilitated and along with ESM			
	to be removed which have to be			
	some walls and public structure need			
	• In addition, in few road chinnage			
	amount of (50,000.00 AFs).			
	the nearest grave yard with the			
	with community should relocate in			
	the contractor in close consultation			
	be removed from the road edge, so			
	• There are two graves which need to			
corridor).	amount of (300,000.00 AFs).			
the road	wells for the local people with the			
and 14+600 in	should construct two potable water			
020, 14+555,	activities; therefore, the contractor			
station of 3-3+	to be removed by the project			
within the	• There is one potable well may have			
also be affected	the amount of (250,000.00 AFs).			
graveyards will	in the new proposed locations with			
addition, three	the structures have to be constructed			

6.1 Mitigation cost

The estimated costs of mitigation measures identified above (6,804,026.00 Afs) will be included under the ESM provision sum in the project Bill of Quantities (BoQ) as per the correct engineering estimation. The contractor is responsible to implement the proposed mitigation measures as per the instruction of the ESMU/PMU.

6.2 Monitoring

The overall objective of environmental and social monitoring is to ensure that mitigation measures are implemented and that they are effective. Environmental and social monitoring will also enable response to new and developing issues of concern. The activities and indicators that have been recommended for monitoring are presented in the ESMP.

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. The contractor shall employ an ESM officer responsible for implementation of social/environmental requirements. This person will maintain regular contact with ESMU. The contractor and PMU/ESMU have responsibility to ensure that the proposed mitigation measures are properly implemented during the construction phase.

The environmental monitoring program will operate through the preconstruction, construction, and operation phases. It will consist of a number of activities, each with a specific purpose with key indicators and criteria for significance assessment.

Monitoring should be undertaken at a number of levels. Firstly, it should be undertaken by the Contractor at work sites during construction, under the direction and guidance of the Supervision Consultant who is responsible for reporting the monitoring to the implementing agencies. It is not the Contractor's responsibility to monitor the land acquisition and compensation issues. It is recommended that the Contractor employ local full time qualified environmental inspectors for the duration of the Contract.

Environmental monitoring is also an essential component of project implementation. It facilitates and ensures the follow-up of the implementation of the proposed mitigation measure, as they are required. It helps to anticipate possible environmental hazards and/or detect unpredicted impacts over time. Monitoring includes:

- Selection of environmental parameters at specific locations;
- Sampling and regular testing of these parameters.

Periodic ongoing monitoring will be required during the life of the Project and the level can be determined once the Project is operational.

6.2.1 Internal Monitoring

It is the responsibility of the ESMU/PMU to conduct regular internal monitoring of the project to verify the results of the Contractor and to audit direct implementation of environmental mitigation measures contained in the ESMP and construction contract clauses for the Project. ESMU/PMU also have the direct responsibility to oversee the implementation and monitoring of land acquisition and compensation issues as outlined in the RAP. Therefore, the ESMU will carry out

supervision and monitoring of implementation of proposed mitigation measures and for any issues the contractor will be instructed for corrective actions.

6.2.2 External Monitoring

It is recommended that a consultant should be hired to carry out Annual Environmental Audits in line with NEPA requirements.

World Bank and NEPA have the overall responsibility for issuing approval for the Project and ensuring that their environmental guidelines are followed during Project implementation.

ESMU/PMU through the consultant will therefore provide NEPA and World Bank with reports on environmental and social safeguards compliance during implementation as part of their annual progress reports and annual environmental auditing reports.

Parameters To Be Monitored	Proposed Mitigation Measure	Location	Measurements	Frequency of Measurement	Responsibilities
Air Quality	 Apply (spray) water to the construction surface and other piled materials such as sand as much as needed. Perform periodical check and maintenance for the construction machinery Monitor/measure concentrations of particulate matter 	Along the Road, especially near intersections with population centres	 Site inspection Measuring concentrations of air pollutants using monitoring equipment and appropriate monitoring methods 	Weekly	ESMU
Noise Level	 Reduce working night shifts as much as possible in populated areas. Apply the Regulations for ambient noise levels during this phase as a major tool in designing the construction activities schedule. 	Along the Road, especially near intersections with population centres	 Site inspection Measuring of noise levels using monitoring equipment and appropriate monitoring methods 	Daily	ESMU

Table 8: Monitoring Plan during Construction

Waterways	Maintenance of well- kept construction site and no discharge of effluents into waterways	Waterways/water bodies close to work sites and base camps	Visual inspection	During construction	ESMU
Biodiversity	Good site management practices to be observed to ensure minimal disturbance of habitats and sites	Along the Road especially near intersections with population centres, base camps and borrow sites	Site inspection	During construction	ESMU
Plantation of trees	 Trees felled shall be replaced on a three to one basis in consultation with landowners; 2000 site adopted tress will be planted along the road corridor 	Both side of road corridor	Visual inspection Site inspection	During plantation season and after	ESMU
Drainage System	 Periodic cleaning and maintenance of ditches and culverts Periodic inspection for solid waste disposal in culverts 	Culverts across the road	Site inspection	During construction	ESMU
Public and Occupational Health and Safety	• Ensure proper safety measure, personal protective equipments and implementation of health and safety plan and procedures	Along the road corridor	 Site inspection Visual observation 	During construction	ESMU
Social Issues	Avoid any disturbance to local communities and provision of fair compensation and disbursement on time	Along the road corridor especially where are the land acquisition issues are located	• Records and resettlement plan	Continuous	ESMU, PMU
Common properties and infrastructures	• Two MHP, the graveyard, water wells, should be established and the structures have to be constructed before damaging the existing structures	Along the road corridor and the sites which have been identified in different road chainnage	 Site inspection Visual observation 	Before and During construction	ESMU

6.3 Institutional Arrangements

In the execution of the project, the PMU/MoPW will be responsible for the implementation of the Environmental & Social Safeguard measures through their contractors who would be accountable to the MoPW. Therefore, under the PMU/MoPW the Environmental and Social Safeguard Management Unit (ESMU) is established. The ESMU will be working under the close supervision of the PMU/MoPW and reporting to the Executive Director of the PMU.

The ESMU in collaboration with their technical counterparts will have overall responsibilities for implementing the environmental and social safeguards requirements and compliance with the ESIA document.

The site supervision and monitoring of the ESMP implementation will be carried out by regional ESM officers, who will be supported by other technical specialists as necessary.

In addition, the contractor shall have an Environmental and Social Safeguard Officer on the site who will be responsible for all environmental and social safeguard issues and ESMP implementation.

The Environmental and Social Management Unit will make sure that all project staff and counterpart who are involve in project implementation receive both initial and ongoing environmental and social safeguard awareness and training sufficient to ensure they are familiar with their environmental and social safeguard responsibilities under the ESMP.

6.4 Implementation schedules and reporting

The implementation will be rolled out as required for each project component in line with the construction timetable and frameworks established for surveying and consultation, management and monitoring. ESMU/PMU will have responsibility for social and environmental aspects of the projects. Supervision undertaken will also cover these aspects.

Appendix A: Summary of the Community Consultation Meeting

Name of the project location	First segment of B2B Highway
Name of the villages Covered during	Bagh Mula Shah, Konjak, Gozar, Konda Sang, Pole Konda
Consultation Meetings	Sang, Char Bagh, Robat, Dahane Kayan, Lokhtoghai and
	Shalezar villages
Name of the districts	Dushi
Name of the provinces	Baghlan
Number of participants:	110
Consultation meetings	03 Nov 2014 - 10 Nov 2014 (10 village level meetings)
(Local people and PAPs)	
Separate meetings with PAPs	03 Nov 2014 - 10 Nov 2014 (individual meetings with PAPs)

Issues Discussed	People Views and Suggestion
General perception about the project and the	They have favorable opinion about the project. People
awareness about the proposed (Rehabilitation of	were partially aware about the project but they
23.7 Km of road in Dushi district)	became more aware during the consultations and
	meetings. Local people expressed their readiness for
	(loss of structure/asset, removal of trees and land
	acquisition) and cooperation about project
	rehabilitation and would like the project to start as
	soon as possible.
Support of local people for the proposed project	All the participants urged that they will extend full
	support to the project. They assured their support and
	security and also promised locally available skilled
	and unskilled labor and local raw materials like stone
	and sand for construction at reasonable cost.
Identification of Environmental & Social	During the transect walk with the community, No
sensitive location	environmental/socially sensitive location along the
	roadside was identified.
Choices during the project design, construction	The community suggested that their viewed should be
and operation stages	considered during the follow up of the existing road
	alignment in the new design. No major change was
	suggested by them. They also opined that there should
	be continuous consultations with the local people. The
	skilled and un-skilled labor and local available
	machinery should to be hired on preference from the
	surrounding villages if needed.
Land acquisition	Community and PAPs were informed that a
	comprehensive RAP is being prepared and the land
	acquisition and compensation process were explained
	properly to all of them. Also individual consultations

Issues Discussed	People Views and Suggestion
	were conducted with each individual PAPs.
Grievance Redress Committee (GRC)	A Grievance Redress Committee was established
	having representation of PMU, District authorities and
	representatives of community and PAFs.
Tree removal	Many trees will have to be removed and the
	community demanded plantation of new trees. As
	mentioned in the ESMP, 2000 new tress will be
	planted along the road corridor in the first segment.
General socio-economic impact	The main economic activity is agriculture. Farmers
	are engaged in cultivation of potatoes, rice and wheat
	are major crops in the area. Due to small land
	holdings and acute poverty some people are engaged
	in small business and employment opportunities in
	Dushi district. The proposed road is expected to
	benefit all the economic activities directly or
	indirectly.
Other benefits of Project	The community expressed that the road rehabilitation
	project will provide easy access for local inhabitants
	to markets, schools, clinics and other facilities.
Availability of land mine	According to MACCA, there is no mine along or
	close to this road.
Views of women	All women were happy and welcomed the road
	project. Improve road access to schools and clinics
	were the highlights. Some women requested job
	provisions for them in the road project and also
	demanded support for economic activities like
	tailoring, livestock etc.

Appendix B: Location Map of Mine Area

As per the MACCA assessment there is no land mines in the first segment of the road corridor, the following is the location map within 200 meter of buffer zone.


Appendix C: Specific Environmental and Social Conditions

The following has been extracted from the Conditions of Particular Application (COPA) prepared for use in the Dushi – Bamyan and Salang Highway Rehabilitation Project.

General Provisions and Precautions

The Contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation

The Contractor shall be solely responsible for the remedy or mitigation measure(s) required by the environment related effects of any of his construction or construction-related activities. In case of an environmental problem, the Contractor shall immediately notify the PMU/MoPW who will instruct him as to the next course of action to take. Among the situations which may require such steps, are complaints or legal actions by third parties on matters such as environmental damage to property and natural resources, ground subsidence, interruption of groundwater flow, and surface and groundwater contamination.

During the entire process of constructing the Works - including preparation of the site and clean up upon completion - the Contractor shall exercise the utmost care in order to prevent damage to the environment. The Contractor shall conduct is operations being aware of and employ necessary means and measures for eliminating and/or if impracticable, minimizing environmental impacts pertaining to, but not limited to:

- Water quality;
- Air Quality;
- Flora;
- Protection of soils;
- Social Issues;
- Solid / liquid waste Management;
- Natural Resources;
- Noise;
- Irrigation Systems;
- Protection of utilities; and
- Health and Safety.

The Contractor shall provide full co-operation and assistance in all environmental management surveillance carried out by the PMU/MoPW.

Water Quality

The following conditions shall apply to avoid adverse impacts to water quality:

- The Contractor shall ensure that no tools or machinery are washed in any water source or areas that shall drain into an existing watercourse, stream, or canal.
- The Contractor shall ensure that rain run-off from the construction sites is not deposited directly into any watercourse, stream, or canal.
- The Contractor shall ensure that all temporary construction facilities are locate at least 50 meters away from a water course, stream, or canal.
- The Contractor shall weekly check all equipment for prevention of oil and or lubrication leaks and ensure that all equipment oil and lubrication replacements are performed only in maintenance and repair areas."
- The Contractor shall not interrupt or interfere with the flow, or level, of irrigation waters without making prior arrangements with and obtaining the agreement of the authorities having jurisdiction.
- The Contractor shall arrange with the authorities having jurisdiction those works which might interfere with the flow of irrigation waters to be carried out at such times as will cause the least disturbance to irrigation operations. Should any operation being performed by the Contractor interrupt existing irrigation facilities, the Contractor shall restore the irrigation appurtenances to their original working conditions within 24 hours of being notified of the interruption.
- The Contractor shall at all times ensure that all existing stream courses and drains within, and adjacent to the Site are kept safe and free from any debris and any excavated materials arising from the Works.
- The Contractor shall ensure that chemicals and concrete agitator washings are not deposited into watercourses.

Air Quality

The following conditions shall apply to avoid adverse impacts to air quality:

- The Contractor shall not install any furnaces, boilers or other similar plant or equipment using any fuel that may produce air pollutants without prior written consent of the of the local authorities having jurisdiction.
- The Contractor shall not burn debris or other materials on the Site.
- Stockpiles of sand and aggregate greater than 20 m3 for use in concrete manufacture shall be enclosed walls extending above the pile and beyond the front of the pile.
- Effective water sprays shall be used during the delivery and handling of all raw sand and aggregate and other similar materials, when dust is likely to be created and to dampen them during dry and windy weather.

- Areas within the Site where there is a regular movement of vehicles shall have an acceptable all- weather surface.
- Conveyor belts shall be fitted with wind-boards, and conveyor transfer points and hopper discharge areas shall be enclosed to minimize dust emission. All conveyors carrying materials that have the potential to create dust shall be totally enclosed and fitted with belt cleaners.
- Cement and other such fine-grained materials delivered in bulk shall be stored in closed silos.
- All air vents on cement silos shall be fitted with suitable fabric filters provided with either shaking or pulse-air cleaning mechanisms. The fabric filter area shall be determined using an air-cloth ratio (filtering velocity) of 0.01 0.03 m/s.
- Weigh hoppers shall be vented to a suitable filter.
- The filter bags in the cement silo dust collector must be thoroughly shaken after cement is blown into the silo to ensure adequate dust collection for subsequent loading.
- The provision of adequate dust suppression plant including water bowsers with spray bars.
- Areas of reclamation shall be completed, including final compaction, as quickly as possible consistent with good practice to limit the creation of windblown dust.
- In dry periods, the Contractor shall spray roads within the construction areas of the Site a minimum of two or more times per day, as necessary to control dust to the satisfaction of the PMU/MoPW.
- The Contractor shall require that all vehicles, while parked on the site have their engines turned off.
- The Contractor shall ensure that all trucks used for transporting materials to and from the site are covered with canvas tarpaulins, or other acceptable type cover, properly secured to prevent debris and/or materials from falling from or being blown off the vehicle(s).
- The Contractor shall provide construction walls in all locations where strong winds could cause the blowing of dust and debris.
- The Contractor shall undertake at all times the necessary actions to prevent dust nuisance.
- Where dusty materials are being discharged to vehicles from a conveying system at a fixed transfer point, a three-sided roofed enclosure shall be provided with a flexible curtain across the entry. Exhaust fans shall be provided for this enclosure and vented to a suitable fabric filter system.
- The Contractor shall frequently clean and water the concrete batching plant and crushing plant sites and ancillary areas to minimize dust.
- Dry mix batching shall be carried out in a totally enclosed area with exhaust to suitable fabric filters.

• Preparation of a dust suppression program, submitted to the PMU/MoPW prior to commencement of the works. The plan will detail the action to be taken to minimize dust generation (e.g. spraying un-surfaced roads with water, covering stock-piles, and blasting with use of small charges etc) and will identify the type, age and standard of equipment to be used.

Protection of Soils

Cut and Fill Activities: In undertaking cut and fill activities associated with the Works the Contractor shall ensure:

- Where excess fill material cannot be re-used contract provisions shall ensure that none of the excess material is dumped into the Bamyan or Surkhab Rivers (or any of their tributaries);
- Any locations identified by the Contractor where excess cut material will be produced shall be reported to the PMU/MoPW and a suitable location identified by both parties for the disposal of this inert waste;
- All materials should be confined to government owned land and in no circumstances should be dumped on agricultural or productive lands. Neither should this material impact upon any watercourse including irrigation channels;
- In the event of any spoil or debris from construction works being deposited in any of the afore mentioned areas or any silt washed down to any area, then all such spoil, debris or material and silt shall be immediately removed and the affected land and areas restored to their natural state by the Contractor to the satisfaction of the PMU/MoPW.

Borrow Pits: The following conditions shall apply to borrow pits:

- Borrow pit excavation should be coordinated and approved prior to opening by the PMU/MoPW to ensure that as few borrow pits are opened as possible.
- Borrow pits will be located out of agricultural areas to reduce the potential impact to economically valuable land.
- Topsoil from borrow pit areas will be saved and reused in re-vegetating the pits if required.
- Consultation with the local population should be held to determine if they would like the borrow pit to remain open. The borrow pit can then act as a water resources for cattle. Pit restoration will follow the completion of works if the local population decides it is not needed.
- The excavation and restoration of the borrow areas and their surroundings, in an environmentally sound manner to the satisfaction of the PMU/MoPW will be required

before final acceptance and payment under the terms of contracts. This will include revegetation and stabilization of slopes.

• Additional borrow pits will not be opened without the restoration of those areas no longer in use.

Quarries: Prior to opening of any quarry or rock crushing facility, the Contractor will require approval from the relevant local authorities and the PMU/MoPW to ensure that land owners are adequately compensated for land use and that the sites are not located in an area likely to cause significant detriment to the local environment. To ensure that this is the case Contractors should ensure that quarries and crusher plants are:

- Located at least 500 meters from urban areas to prevent noise and dust impacts.
- Located outside of agricultural land.
- Where possible located on government owned lands

Spills and Leak: The Contractor shall ensure that:

- All fuel and chemical storage (if any) shall be sited on an impervious base within a bund and secured by fencing. The storage area shall be located away from any watercourse or wetlands. The base and bund walls shall be impermeable and of sufficient capacity to contain 110 percent of the volume of tanks;
- Filling and refueling shall be strictly controlled and subject to formal procedures;
- All valves and trigger guns shall be resistant to unauthorized interference and vandalism and be turned off and securely locked when not in use; and
- The contents of any tank or drum shall be clearly marked. Measures shall be taken to ensure that no contaminated discharges enter any soils.

Erosion: The following conditions shall apply to prevent erosion:

- Material that is less susceptible to erosion will be selected for placement around bridges and culverts; and
- Re-vegetation of exposed areas including; (i) selection of fast growing and grazing resistant species of preferably local grasses and shrubs; (ii) immediate re-vegetation of all slopes and embankments if not covered with gabion baskets; (iii) placement of fiber mats to encourage vegetation growth, although due to the arid conditions in most of the road, this may only feasible where there is regular rainfall or other natural water supply.

Protection of Flora

To avoid impacts to flora the following shall apply:

• Vegetation clearance during construction activities, especially of trees and along the road-side, will be minimized;

- Trees felled shall be replaced on a three to one basis in consultation with landowners; and
- Contractors will be responsible for supplying appropriate and adequate fuel in workers' camps to prevent fuel-wood collection.

Avoidance of Social Impacts

To avoid adverse social impacts, the following clauses shall be included:

- Not less than 50% of the Contractor's total labor force shall be Afghanistan citizens. The Sub- Contractor shall transmit on a monthly basis to the Employer a report on the numbers of Afghan and Non- Afghan staff and workforce. The listing shall be by discipline and skill levels and must show the percentages of Afghan versus Non-Afghan Nationals, and by nationality;
- Commercial activities, including coalmines, shall have adequate access along the project road. This should include provisions that the road is not closed for more than two hours at a time.

To avoid impacts associated with construction camps and temporary construction facilities the following conditions shall apply:

- All sewage and waste water discharges shall be collected and treated in an approved system installed on site;
- Upon completion of the Contract, all elements of the camp shall be removed and the site, as far as possible, be returned to its original condition unless designated for alternative uses with approval of the PMU/MoPW;
- The Contractor will provide medical examinations and emergency medical care for the construction staff and will provide suitable and clean sanitary facilities and necessary safety equipment, including special masks covering nose and mouth, for employees when applicable. The Contractor will also provide clean potable water, food and housing when necessary;
- The burning of materials where unavoidable in open air shall be done under strict supervision;
- The Contractor shall not burn tires, asphaltic materials, oil or any materials that will produce dense smoke, either for the purpose of incineration or to augment the burning power of other matter;
- Extreme caution shall be taken to dispose of materials so as to avoid damage or destruction to private property or to cause excessive air pollution; and
- Regarding temporary sites, written agreements with local landowners for temporary use of the property will be required and sites must be restored to a level acceptable to the owner within a predetermined time period.

Noise

To avoid adverse impacts due to noise, the Contractor shall consider noise and vibration as an environmental constraint in its design, planning and execution of the Works. The Contractor shall take all appropriate measures to ensure that work carried out by the Contractor, whether on or off the Site, will not cause any unnecessary or excessive noise which may disturb local inhabitants.

Without prejudice to the generality of the foregoing, noise level reduction measures shall include the following:

- Source Controls, i.e., requirements that all exhaust systems will be maintained in good working order; properly designed engine enclosures and intake silencers will be employed; and regular equipment maintenance will be undertaken;
- Site Controls, i.e., requirements that stationary equipment will be placed as far from sensitive land uses as practical; selected to minimize objectionable noise impacts; and provided with shielding mechanisms where possible;
- Work near Sensitive Receptors shall be limited to short term activities. No asphalt plants, rock crushing plants or any long term generators of significant noise shall be allowed within 500 meters of sensitive receptors;
- Time and Activity Constraints, i.e., operations will be scheduled to coincide with periods when people would least likely be affected; work hours and work days will be limited to less noise-sensitive times. Hours-of-work will be approved by the site engineer having due regard for possible noise disturbance to the local residents or other activities. Construction activities will be strictly prohibited between 10 PM and 6 AM in the residential areas. When operating close to sensitive areas such as residential, nursery, or medical facilities, the Sub- Contractor's hours of working shall be limited to 8 AM to 6 PM;
- Community Awareness, i.e., public notification of construction operations will incorporate noise considerations; methods to handle complaints will be specified. Sensitive receptors will be avoided as possible (i.e., aggregate crushers, operators, etc.). Disposal sites and haul routes will be coordinated with local officials;
- Blasting will only be carried out during the day and according to a pre- established schedule, the adjacent communities will be notified of the blasting times well in advance;
- Use of blasting mats to reduce noise during blasting operations;
- Use of low volume charges will reduce the potential for vibration induced damage to structures;
- In the event of damage proven to be due to the contractor's activities, owners of structures will be fully compensated.

Protection of Irrigation Systems

To avoid potential adverse impacts to irrigation, the Contractor shall:

- Any temporary changes to irrigation should be re-instated to their original state on completion of works using the baseline survey.
- Local farmers and village elders should be consulted throughout the construction period by the Contractor to ensure adequate flows through any altered channels.
- There are two irrigation structures located in the area of segment-1. The first canal runs parallel to road for about 600 m. The second canal is about 300 m which is located in Kondah sang village. Protection walls have been included along the entire length of those canals. The construction work for protection walls is not expected to disturb/block irrigation system for a long period. However, proper measures have been considered for avoiding adverse impact on agricultural crop and orchards. These mitigation measures, for which the contractor will be mainly responsible, are included, as following:
 - The Contractor shall arrange meeting with relevant irrigation association (IA) to identify suitable time for construction of protection walls along those irrigation canals. The construction activities should not be during crop season.
 - The Contractor will be responsible to restore the irrigation facilities to their original working condition within 24 hours. These measures will be applied if the contractor works cause to interrupt irrigation facilities due to ancillary or associated activities.

Protection of Utilities

To avoid potential adverse impacts to utilities, the Contractor shall:

- Any temporary changes to electricity networks should be re-instated to their original state on completion of works using the baseline survey.
- Locals and village elders should be consulted throughout the construction period by the Contractor to ensure adequate electricity supply throughout project works.

Health and Safety

To avoid health and safety impacts the Contractor shall conform to the following:

• Due precautions shall be taken by the Contractor to ensure the safety and security of his staff and labor to ensure that medical staff, first aid equipment and stores, sick bay and suitable ambulance service are available at the camps, housing, and on the Site at all

times throughout the period of the Contract and that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements

- The Contractor shall report to the PMU/MoPW details of any accident or incident pertaining to the security of its personnel, equipment, the site, its camp or the completed Works as soon as possible after its occurrence. The report shall be based on a detailed investigation by the Contractor of the event and provide particulars of what occurred (with explanatory sketch as necessary), who was involved (including names, and affiliations of such persons), what caused the incident, when the incident occurred (time and date), where the incident occurred and why the incident occurred. In the case of any fatality or serious injury, the Contractor shall, in addition, notify the PMU/MoPW immediately by the quickest available means.
- The Contractor shall at all times take the necessary precautions to protect all staff and labor employed on the Site from insect nuisance, rats, and other pests and reduce the dangers to health and the general nuisance caused by the same. The Contractor shall provide his staff and labor with suitable prophylactics for the prevention of malaria and shall take steps to prevent the formation of stagnant pools of water.
- The Contractor shall, so far as is reasonably practicable, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of his staff and labor
- Communicable diseases of most concern during the construction phase due to labor mobility are sexually transmitted diseases (STIs) such as HIV/AIDS. Inspite of the observed dent in the HIV/AIDS epidemic, the infection rates are still low in the whole country. Therefore, there is no evidence of HIV in the project area and the chances of spread of HIV/AIDS are much less. But in addition to this, it is recommended that the contractor incorporates STI/HIV/AIDS awareness and prevention program into the training programs for all construction workers. Also extend the awareness and prevention program to the nearby local communities. An awareness program will ensure that workers are apprised of the modes of transmission and risk of infection.
- Save insofar as the Contract otherwise provides, the Contractor shall provide and maintain such accommodation and amenities as he may consider necessary for all his staff and labor, employed for the purposes of or, in connection with the Contract, including all fencing, water supply (both for drinking and other purposes), electricity supply, sanitation, cookhouses, fire prevention and fire-fighting equipment, air conditioning, cookers, refrigerators, furniture and other requirements in connection with such accommodation or amenities. On completion of the Contract, unless otherwise agreed with the Employer, the temporary camps/housing provided by the Contractor shall be removed and the site reinstated to its original condition, all to the approval of the PMU/MoPW.

Regarding traffic safety:

- The Contractor shall ensure that disruptions to traffic and road transport are minimized. The contractor shall ensure that the roads remain open to traffic during construction activities;
- Prior to construction activities, the Contractor will install all signs, barriers and control devices needed to ensure the safe use of the road by traffic and pedestrians, as required by the traffic control plan;
- Signs, crossing guards and other appropriate safety features will be incorporated at grade level rail and road crossings;
- Local authorities and residents in a working area will be consulted before any detours for construction or diverted public traffic are established;
- Disposal sites and haul routes will be identified and coordinated with local officials; and
- Construction vehicles will use temporary roads constructed for that purpose to minimize damage to agricultural land and local access roads. Where local roads are used, they will be maintained and reinstated to their original condition after the completion of work.

Environmental and Social Management Plan

The - Environmental and Social Management Plan (ESMP) shall be prepared and need to be approved by ESMU. The ESMP which shall contain measures to incorporate and implement the mitigation actions outlined above.

Incorporated within the ESMP will be separate sections relating to:

- A traffic control plan. The plan will include haulage and work site routes, traffic control devices, temporary fencing, barriers and barricades, detours, traffic signs and speed limits, and safe passage of pedestrians;
- A survey to establish the detailed location of all irrigations systems affected by the Works;
- A survey to establish the detailed location of all electricity networks affected by the project;
- An emergency response plan which will cover containment of hazardous materials, oil spills, and work-site accidents shall be prepared. The plan will detail the process for handling, and subsequently reporting, emergencies, and specify the organizational structure (including responsibilities of nominated personnel); and
- Preparation of a dust suppression Plan. The plan will detail the action to be taken to minimize dust generation (e.g. spraying un-surfaced roads with water, covering stockpiles, and blasting with use of small charges etc) and will identify the type, age and standard of equipment to be used.

The Contractor shall submit regular environmental reports to the PMU/MoPW as a requirement of its environmental and social management plan. A summary report shall be submitted as part of the monthly progress report. Reports shall comprehensively address all relevant aspects of environmental and social requirements and, in particular, report on all environmental audits undertaken during the period covered by the report.

Failure to Comply

If the Contractor fails to comply with any Environmental requirements set forth in the Contract the PMU/MoPW may (after advising the Contractor in writing of the dissatisfactory and the Contractor's failure to take corrective action to the satisfaction of the PMU/MoPW, within two weeks after such notification) withhold up to twenty percent (20%) of the approved amount due to the Contractor for interim payments for the Work. Such withholdings may be made from successive interim payments after the initial withholding until the Contractor remedies, to the satisfaction of the PMU/MoPW, the non- compliance for which the initial withholding was made.

Appendix E: Structure's List of Bamyan to Baghlan Road Project Seg-1 Lot 1 0+000 to 24+060

	Catchment	Culvert Number	Station	Discharge	Designed Structure				
S.No					Dimension of Structure				
	Number				Ν	-	Width	х	Height
1	C-02	C-001	0+236	0.08	1	-	2.00	х	1.00
2	C-03	C-002	0+348	0.05	1	-	1.00	х	1.00
3	C-04	C-003	0+472	0.34	1	-	2.00	х	2.00
4	C-05	C-004	0+566	0.13	1	-	2.00	х	2.00
5		C-004 A	0+850		1	-	1.00	х	1.00
6		C-005	1+040	0.10	1	-	1.00	х	1.00
7	C-08	C-006	1+193	0.17	1	-	1.00	х	1.00
8	C-09	C-007	1+296	0.11	1	-	2.00	х	1.00
9	C-10	C-008	1+676	0.06	1	-	1.00	х	1.00
10	C-11	C-009	1+799	0.09	1	-	1.00	х	1.00
11	C-12	C-010	2+168	0.09	1	-	2.00	х	1.00
12	C-13	C-011	2+248	7.32	1	-	4.00	х	2.00
13	C-14	C-012	2+392	0.22	1	-	2.00	х	2.00
14	C-16	C-013	2+482	0.28	1	-	2.00	х	2.00
15	C-17	C-014	2+648	2.46	1	-	2.00	х	2.00
16		C-014 A	2+817		1	-	1.00	х	1.00
17	C-20	C-015	2+925	0.13	1	-	2.00	х	2.00
18	C-22	C-016	3+164	0.14	1	-	1.00	х	1.00
19	C-23	C-017	3+350	1.51	1	-	2.00	х	2.00
20	C-25	C-019	3+560	0.07	1	-	1.00	х	1.00
21	C-26	C-020	3+748	0.09	1	-	1.00	х	1.00
22	C-27	C-021	4+010	0.17	1	-	2.00	х	2.00
23	C-29	C-022	4+207	28.24		-		10 M BRID	GE
24	C-30	C-023	4+223	3.05	1	-	4.00	х	2.00
25		C-024	4+344	0.30	1	-	1.00	х	1.00
26	C-32	C-025	4+479	0.46	1	-	2.00	х	1.00
27	C-33	C-026	4+599	0.10	1	-	1.00	х	1.00
28	C-34	C-027	5+038	0.11	1	-	2.00	х	1.00
29		C-027 A	5+068		1	-	2.00	х	2.00
30	C-36	C-028	5+172	39.65		-	12 M BRIDGE		
31		C-028 A	5+204		1	-	3.00	х	2.00
32	C-38	C-029	5+665	0.10	1	-	1.00	х	1.00
33	C-41	C-030	5+820	0.07	1	-	1.00	х	1.00
34	C-44	C-031	5+918	0.06	1	-	1.00	x	1.00
35		C-031 A	6+017		1	-	1.00	х	1.00

	Catchment Number	Culvert Number	Station	Discharge	Designed Structure				
S.No					Dimension of Structure				
					Ν	-	Width	x	Height
36	C-46	C-032	6+044	0.04	1	-	1.00	х	1.00
37	C-48	C-033	6+260	1.23	1	-	3.00	х	2.00
38	C-49	C-034	6+383	0.16	1	-	1.00	х	1.00
39	C-50	C-035	6+506	1.09	1	-	4.00	х	2.00
40	C-51	C-036	6+618	0.05	1	-	1.00	х	1.00
41	C-55	C-037	6+824	4.10	1	-	4.00	х	2.00
42	C-56	C-038	7+135	0.07	1	-	1.00	х	1.00
43	C-60	C-039	7+363	0.08	1	-	1.00	х	1.00
44	C-63	C-040	7+560	0.15	1	-	2.00	х	1.00
45	C-68	C-041	7+890	0.10	1	-	2.00	х	1.00
46	C-69	C-042	8+156	0.22	1	-	1.00	х	1.00
47	C-70	C-043	8+325	0.44	1	-	2.00	х	1.00
48	C-72	C-044	8+650	0.31	1	-	2.00	х	1.00
49	C-73	C-045		18.34		-			
50		C-045 A	8+885			-	15 M BRIDGE		
51		C-045 B	9+000			-			
52	C-76	C-046	9+086	0.13	1	-	1.00	х	1.00
53		C-046 A	9+164		1	-	2.00	х	1.00
54	C-78	C-047	9+298	0.15	1	-	2.00	х	1.00
55		C-047 A	9+500		1	-	2.00	х	1.00
56	C-81	C-048	9+599	0.22	1	-	1.00	х	1.00
57		C-048 A	9+879		1	-	2.00	х	1.00
58	C-88	C-049	10+122	1.81	1	-	2.00	х	1.00
59	C-90	C-050	10+422	0.12	1	-	1.50	х	1.00
60	C-91	C-051	10+482	0.12	1	-	1.50	х	1.00
61	C-92	C-052	10+063	0.28	1	-	2.00	x	2.00
62			10+640					40 M BRID	GE
63	C-93	C-053	10+747	0.21	1	-	1.50	x	1.00
64	C-94	C-054	11+198	0.66	1	-	2.00	х	1.00
65		C-054 A	11+249		1	-	4.00	х	2.00
66		C-054 B	11+310		1	-	2.00	x	2.00
67	C-96	C-055	11+478	1.61	1	-	3.00	x	2.00
68	C-99	C-056	11+592	0.58	1	-	2.00	x	1.00
69		C-056 A	11+736	0.30	1	-	2.00	x	1.00
70		C-056 B	11+815		1	-	2.00	x	1.00
71	C-107	C-057	11+936	10.10	1	-	4.00	x	3.00
72		C-058	12+175	0.30	1	-	2.00	x	1.00
73		C-059	12+346	0.18	1	-	2.00	х	2.00

	Catchment Number	Culvert Number	Station	Discharge	Designed Structure				
S.No					Dimension of Structure				
					N	-	Width	x	Height
74	C-110	C-060	12+502	0.45	1	-	2.00	х	1.00
75	C-111	C-061	12+564	1.00	1	-	2.00	х	1.00
76		C-061 A	12+729		1	-	2.00	х	1.50
77	C-113	C-062		1.67	1	-	3.00	х	2.00
78	C-115	C-063	13+296	5.32	1	-	4.00	х	3.00
79	C-119	C-064	13+486	15.88	1	-	8.00	х	3.00
80		C-064 A	13+616	small	1	-	1.00	х	1.00
81		c-064 B	13+718	small	1	-	1.00	х	1.00
82	C-121	C-065	13+830	0.32	1	-	2.00	х	1.50
83	C-123	C-066	13+979	0.32	1	-	2.00	х	1.50
84	C-125	C-067		65.78		-			
85	C-126	C-068	14+380	6.00		-		25 M BRID	GE
86	C-127	C-069		3.00					
87		C-069A			1	-	2.00	х	2.00
88	C-131	C-070	14+767	0.08	1	-	1.00	х	1.00
89	C-134	C-071	14+956	0.12	1	-	1.00	х	1.00
90		C-071 A	15+106		1	-	1.00	х	1.00
91	C-141	C-072	15+346	0.47	1	-	3.00	х	2.00
92	C-148	C-073	15+578	0.02	1	-	1.00	х	1.00
93	C-149	C-074	15+725	0.31	1	-	3.00	x	2.00
94		C-074 A	15+852		1	-	2.00	x	1.00
95	C-156	C-075	15+964	0.08	1	-	2.00	x	1.00
96		C-076	16+401	3.00	1	-	4.00	x	2.00
97	C-158	C-077	16+518	0.88	1	-	3.00	х	2.00
98	C-159	C-078	16+680	0.44	1	-	1.50	х	1.50
99		C-078 A	16+783		1	-	1.50	x	1.00
100	C-161	C-079	16+977	0.38	1	-	1.50	х	1.50
101	C-162	C-080	17+074	1.33	1	-	2.00	х	1.50
102	C-163	C-081	17+172	3.00	1	-	4.00	х	2.00
103	C-164	C-082	17+390	0.12	1	-	1.50	х	1.00
104	C-165	C-083	17+568	1.37	1	-	1.00	х	1.00
105	C-166	C-084	17+862	0.14	1	-	1.00	х	1.00
106	C-167	C-085	18+320	127.00		-	25 M BRIDGE		
107	C-168	C-086	18+395	0.19	1	-	1.00	x	1.00
108	C-169	C-087	18+515	0.60	1	-	2.00	x	1.00
109		C-087 A	18+572		1	-	2.00	х	1.00
110		C-087 B	18+722		1	-	1.00	x	1.00
111		C-087 C	18+881		1	-	1.00	x	1.00

	Catchment Number	Culvert	Station	Discharge	Designed Structure					
S.No					Dimension of Structure					
		Number			Ν	-	Width	х	Height	
112		C-087 D	18+936		1	-	1.00	х	1.00	
113	C-174	C-088	19+023	0.14	1	-	1.00	х	1.00	
114	C-175	C-089	19+210	1.04	1	-	1.50	х	1.00	
115	C-176	C-090	19+628	0.10	1	-	1.00	х	1.00	
116	C-177	C-091	19+628	0.17	1	-	1.00	х	1.00	
117	C-178	C-092	19+985	0.17	1	-	2.00	х	1.00	
118	C-179	C-093	20+062	0.36	1	-	1.00	х	1.00	
119		C-094	20+135	0.14	1	-	2.00	х	1.00	
120	C-180	C-095	20+475	0.37	1	-	1.00	х	1.00	
121	C-182	C-096	20+660	0.87	1	-	2.00	х	1.50	
122	C-183	C-097	20+815	0.41	1	-	2.00	х	1.50	
123	C-185	C-098	20+921	1.30	1	-	2.00	х	1.50	
124	C-186	C-099	20+974	0.38	1	-	2.00	х	1.50	
125	C-187	C-100	21+055	1.11	1	-	2.00	х	1.00	
126	C-188	C-101	21+172	1.12	1	-	2.00	х	1.00	
127	C-189	C-102	21+265	3.38	1	-	4.00	х	2.00	
128	C-190	C-103	21+342	0.83	1	-	4.00	х	2.00	
129	C-191	C-104	21+550	0.13	1	-	1.00	х	1.00	
130	C-192	C-105	21+776	5.59	1	-	5.00	х	2.00	
131		C-105 A	21+881		1	-	1.00	х	1.00	
132	C-193	C-106	22+017	5.35	1	-	5.00	х	2.00	
133	C-194	C-107	22+112	0.49	1	-	1.00	х	1.00	
134		C-108	22+333	0.30	1	-	1.00	х	1.00	
135		C-109	22+885	0.30	1	-	1.00	х	1.00	
136	C-196	C-110	23+079	0.37	1	-	1.00	х	1.00	
137		C-110 A	23+186		1	-	1.00	х	1.00	
138	C-197	C-111	23+300	0.28	1	-	1.00	х	1.00	
139	C-198	C+112	23+476	1.05	1	-	1.50	х	1.00	
140	C-199	C-113	23+657	0.27	1	-	2.00	х	1.00	
141	C-201	C-114	23+894	4.58	1	-	2.00	х	1.00	
142	C-202	C-115	23+947		1	-	2.00	х	1.00	

Appendix F: List of Sensitive Receptors

No	Name	Village	Location (at Km point)	From center	
1	Zaher School	Bagh Mulla Sha	02+300	50 m	
2	Dwelling Units	Bagh Mulla Sha	03+740	<20 m	
3	Dwelling Units	Dahan Moroo	03+800	<20 m	
4	Irrigation canal	Baghi Mullah Sha	2+900 - 3+520	20 m	
5	Dwelling Units	Gazar	05+560	<20 m	
6	Dwelling Units	Konjak	06+880	<20 m	
7	Dwelling Units	Kundasang	07+000	<20 m	
8	Irrigation canal	Kondah Sang	Located at 7 km	20m	
9	Market	Pule Kundasang	10+500	<20 m	
10	Dwelling Units	Pule Kundasang	10+500	<20 m	
11	Darul uloom (Mosque)	Pule Kundasang	10 + 800	16 m	
12	High School	Pule Kundasang	11 + 000	40 m	
13	Dwelling Units	Charbagh	12+500	<20 m	
14	Jamatkhana (Place of worship)	Charbagh	12 + 800	80 m	
15	Dwelling Units	Dahan Karoo	14+550	<20 m	
16	Dwelling Units	Sorkhak Bini	15+000	<20 m	
17	Dwelling Units	Rabat	17+200	<20 m	
18	Mosque	Rabat	17+200	16 m	
19	Clinic	Rabat	17+900	16 m	
2-	Police Station	Dahan Kayan	18+300	20 m	
21	Dwelling Units	Dahan Kayan	18+300	<20 m	
22	Dwelling Units	Lokhtoghai	22+000	<20 m	
23	Dwelling Units	Shalezar	23+700	<20 m	

Appendix G: Grievance Redress Mechanism

The best efforts made in designing the resettlement plan were aimed at ensuring that all potential impacts of the project are identified and all Project Affected Persons (PAPs) are enlisted to provide mitigation measures to address the potential impacts, and to chart out a mechanism to implement these mitigation measures. However during the project implementation, the stakeholders (mostly PAPs) may still have some grievances with respect to the project activities, their impacts, compensation and other mitigation measures.

A comprehensive grievance redress mechanism has been developed to address the concerns of affected persons and general public related to the project activities. This system will be in place immediately after the project is approved. In the meantime an intermediate system of GRM on similar lines has been put in place. Grievance redress committees have been constituted in the first segment' project area, along the GRCs at Project level and HQ level.

A format for constitution of social committee for grievance redressal is provided at Appendix D. Formation of the committee at the first Segment project area and the list of members is provided at Appendix E

Grievance Redress Mechanism; objectives and functions

The primary objective of this Grievance Redress Mechanism is to ensure that the views and concerns of those affected by project activities are heard and acted upon in a timely, effective and transparent manner. Further it will be to provide a forum to mediate conflict and cut down on lengthy litigation, which often delays the projects. It will also facilitate people who might have objections or concerns regarding the project activities to raise their objections and through conflict resolution so that these can be addressed adequately. The Grievance Redress Mechanism will be transparent, accessible to all, inclusive, participative and unbiased. PAPs will be made fully aware of their rights and the procedures for making a grievance. All grievances need to be recorded in a database along with outcome of grievance redress – and closely monitored and analysed in terms of category of grievances of speed of resolution

The main functions of the Grievance Redress Mechanism will be as follows:

- Provide a mechanism to PAPs to address the concerns arising as a result of project activities, eligibility entitlements provided in RAP and compensation paid,
- Record the grievance of PAPs, to enable tracking and review categorize and prioritize the grievances,
- Determine and implement the mitigation actions to address the grievances,
- > Inform PMU, MoPW of serious cases within one week; and
- Report to the aggrieved parties about the developments regarding their grievances and the decision of the project authorities
- > Monitoring and analysis of grievances, tracking response time

> Inform communities within the project area of influence to utilize GRM services

Grievance Redress Committee (GRC)

A multi-stage Grievance Redress Mechanism will be adopted. These Committees will be formed at various levels.

Road Segment Level (GRC): Relevant CDC members, Representative of PAFs, Contractor & Project Staff (PMU).

Project Level (GRC): PMU/MoPW, Arazi, MoJ, District/Provincial Governors, Provincial Director of MoPW, Safeguards officer from ESMU/PMU, AKDN (NSP Facilitating Partner) and Community Representatives.

Head Quarter Level (GRC): Deputy Minister (MoPW), PMU Director and PMU's Social team

Functions of GRC

- 1. Ensure that handling of grievances is in accordance with Afghan law and World Bank procedures.
- 2. Ensure that follow-up actions in response to grievances are taken within an agreed timeframe. Maintain record of all registered grievances in a database, along with details on the nature of the issues raised the case history, and actions taken.
- 3. Report on resolved/unresolved grievances a weekly basis to the PMU.
- 4. Coordinate with Government departments, at district, provincial and national level and civil society organizations for resolving the grievances of the local communities.
- 5. Coordinate with community representatives on the efficacy and usefulness of grievance redress procedures and recommend changes if any required to MoPW.
- 6. Assign member(s) to undertake site visits to assess issues raised as and when needed.

Procedure of Dealing with Grievances

Awareness generation-The PMU through ESMU team will ensure awareness generation campaigns about the project related activities to the extent so as to make the citizens aware to claim their rights and entitlements as described under the resettlement plan.

Submitting grievances and recording procedures-Grievances can be submitted to the district governor's office, PMU representative/counterpart at provincial level or to the implementing NGO. Grievances can also be submitted through email, SMS and phone calling. In case the issue is not resolve at the first and second/project levels, it will be brought to the GRC at HQ level in the next meeting. The issues can also be resolved at community level and recorded for all future references.

GRC meetings, proceedings and recommendations- In case an issue raised is not resolved at the local level, a copy of the registered complaint will be forwarded to next level for consideration. The GRC's meetings are to be held every second week to assess grievances, identify action to be taken and assign responsibility for follow-up. Cases put before the GRC will be assessed according to their urgency, and the social environmental, technical or operational issues that they may raise. Along with the details of each case, recommendations for referral or action will be entered into a database, to which PMU staff will have access. After the GRC meetings, its' minutes and recommendations will be sent to the PMU within a week of the GRC meeting. The same information will also be sent to the relevant applicants. All efforts will be made by PMU to implement the recommendations of GRC as soon as possible. ED, PMU will report to inter-ministerial committee about the disposal of complaints and pending status regularly.

Appeals and legal recourse- Issues not resolved at GRC level will be escalated at the MoPW level, Ministry, if considers necessary will attempt a hearing on the matter in order to resolve it. In case of no resolution, such issues will be referred to the court of law with the approval of H.E. Minister of Public Works. The diagram below presents various level of GRM committees for trans-Hindukush road connectivity project.



Generated by CamScanner from intsig.com **Ministry of Public Works** Bamyan-Baghlan Project Social Committee for Grievance Redress کمینه اجتماعی Bamyan Baghlan Highway Project Name: Village/District: From Doshi to Shulezar 19 vilages Baghlan Province 2114 8 93, 10 11 میلادی که در محل هجری ش لطابق) به اشتراک تعداد از نمایندگان، متنفذین و بزرگان محل تدویر گردیده بود روی تشکیل و ایجاد 1) (1) رمرمی مع شکایات (GRC) بحث و گفتگو صورت پذیرفت که در نتیجه اللہ مع شکایات (GRC) تعین گردید. به تایید اکثر آرا مجله أدرس: ١. 0777553703 0767307756, 0778488949 20-0707410628 AN. (. 10,000 CIPT. 0(0708537210 Nual 0771034860 أدرس: أدرس: #771030633 مسولیت داریم تا در اثنای وق وعکار پروژد، اجتما مول حل مناز عات ز مین مورد نیاز که جهت عریض س ازی پروڑ ہ سرک ضر ورت ا اقدامات مولین پروژه جهت تطبیق بهتر کار پروژه همکاری همه جانبه عندالموقع نمو با ما اقبت أن توجه لازم نمايم. (طرز العمل جمع أورى شكايات تشريح م پروژ در ق 775164206 سلام 50 يوبل 5 × ېر و تابيدې ث C 5.11 we sis 12