

REPORT N° FINAL

ENVIRONMENTAL AND SOCIAL GAP ANALYSIS REPORT

KAZAKHSTAN – KURTY BURYBAYTAL 62 KM
ROAD PROJECT

CONFIDENTIAL

MAY 2016

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62 KM ROAD PROJECT

EBRD

**Final
Confidential**

Project no: 70020772

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WSP | Parsons Brinckerhoff

The Victoria
150-182 The Quays
Salford Quays
Greater Manchester
M50 3SP

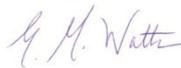
Tel: +44 (0)161 886 2400

Fax: +44 (0)161 886 2401

www.wspgroup.com

www.pbworld.com

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PRODUCTION TEAM

CLIENT

Principal Banker (EBRD) Sholpan Dikhanbayeva

Principal Environmental Advisor (EBRD) Stanislav Suprunenko

WSP PARSONS BRINCKERHOFF

Project Director and Technical Reviewer Neal Barker

Project Manager and Lead Auditor Scott Beaton

EIA and Roads Specialist Rachael Bailey

SUBCONSULTANTS

Lead Local EHS Consultant (Eco-Socio Analysts) Vladimir Merkuryev

Social and Gender Specialist (Gender and International Development Consulting) Ildiko Almasi

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1

EXECUTIVE SUMMARY

BACKGROUND

WSP Parsons Brinckerhoff (WSP | PB) has been commissioned by the European Bank for Reconstruction and Development (EBRD) to support with an Environmental and Social (E&S) assessment for the Category A Kurty Burybaytal Road Project in Kazakhstan.

The Kurty Burybaytal road sections are:

- Section 1: km 2152-2214 (62km).
- Section 2: km 2214-2295 (81km).
- Section 3: km 2295-2335 (40km)
- Section 4: km 2335-2380 (45km)

The proposed above investments include the reconstruction and widening of the existing roads, the reconstruction of bridges and the upgrading of intersections as well as the financing of supervising engineers, implementation assistance to the Project Implementation Unit (PIU) and institutional components.

As well as the EBRD, the other road sections will potentially be or have been financed by other International Financial Institutions (IFIs) that include World Bank (WB), Asian Development Bank (ADB) and Islamic Development Bank (IsDB).

It is planned that the time scale of the start of construction for all sections is likely to be in 2017. The estimated construction period of each section is 39 months.

Section 2 of the Kurty Burybaytal Road Project is a previous section of the road that has received EBRD financing. The EBRD is now considering the provision of finance to the JSC Kazautozhol (the Client) for the reconstruction of Section 1 of the 228 km "Kurty Burybaytal", or the "Centre - South" corridor linking the cities of Astana to Almaty. Section 1, the 62 km Burybaytal-Aksuek section (the "Project") that EBRD is potentially financing, starts at a point of 281 km from Almaty and at approximately 2 km west of Aksuek Town. This E&S assessment relates only to Section 1 of the road.

PROPOSED ROAD INVESTMENT

Currently, the Section 1 road is a Kazakh Category 2 road with two lanes. The road will be reconstructed to comply with the Kazakh Category 1b highway requirements. The road's asphalt pavement is now past its effective working life and its condition is deteriorating at a fast rate, due to a combination of traffic loading and the age of the road surface. Reconstruction of the road is now urgently required to improve the ride quality of the road, minimise road user costs and provide a road surface that can be maintained in a cost effective manner. In addition, widening of the road will reduce the number of traffic accidents due to the narrow width of the road which forces drivers to cross into the oncoming traffic lane to overtake vehicles. Other upgrades or new features will also include a junction, off ramps, rest areas, bus stops, a junction overpass, a railway overpass, culverts, a bridge, junction lighting and a police station.

GAP ANALYSIS AND AUDIT REVIEW

A gap analysis has been carried out of key project documentation provided, focusing primarily on the national Environmental Impact Assessment (EIA) which has been developed in accordance with the rules, regulations and standards of the Republic of Kazakhstan (RoK) for design and construction of roads. The State Environmental Expertise Positive Conclusion on the EIA was obtained 20th March 2015. In addition, the audit has involved the review of additional documents which have been made available, an inspection of the road section for which EBRD funding is being sought and interviews with key stakeholders.

Although the project is classified as a Category A project under EBRD's Environmental and Social Policy, it is considered that the impacts that have been identified and assessed, can be addressed through mitigation measures as provided within the EIA. However, it is considered that for the EIA to meet international standards, a number of additional recommendations are proposed based on the EIA gap analysis and general audit findings. These recommendations are included in an Environmental and Social Action Plan (ESAP) that has been developed to ensure that the Project is fully aligned and compliant with relevant EU standards, EBRD Performance Requirements and best practice.

Key actions areas are provided in **Error! Not a valid bookmark self-reference.** below.

Table 1-1 Key Actions

REVIEW AREAS	ACTION AREAS
Institutional EHS Capacity and Management	<ul style="list-style-type: none"> → Establish organisational capacity – project roles and responsibilities to be clearly defined including the Project Implementation Unit (PIU) → Appoint contractors following a tender process. Also appoint the Project Management Consultant (PWC) / Project Supervision Consultant (PSC). Ensure sufficient staffing levels → Develop capacity building programmes for successful project implementation → Report on ESAP implementation and stakeholder engagement activities and resolution of grievances
Planning and Permits	<ul style="list-style-type: none"> → Obtain air emissions permit within 1 year after commencement of construction works → If there are any design changes, obtain the necessary permits again prior to commencements of activities for which the permits are required
Environmental Performance	<ul style="list-style-type: none"> → PIU to develop an environmental management system (EMS) → Protect, preserve and enable access to sites of cultural significance. Relocate affected sites with informed consent. Set up chance find procedures → Undertake pre-construction surveys using a trained ecologist to check for the presence of protected species → Provide revised EIA or supplementary information to include: <ul style="list-style-type: none"> ■ Water and wastewater impacts ■ Baseline noise and air quality data ■ Materials use and containment measures ■ If Geohazard impacts are anticipated ■ Identification of licensed facilities for waste disposal
Health and Safety Performance	<ul style="list-style-type: none"> → Conduct inspection of contractor's occupational health and safety performance → Outline principles and strategy for labour accommodation and develop code of conduct. Undertake public consultation and obtain socio-economic and health baseline data for nearby settlement. Camp to meet IFC standards → Carry out independent inspections of contractors → Tender documents for the procurement of construction companies should include Environmental Health, Safety and Social (EHSS) performance standards that should be met. → Develop and implement incident reporting procedures → Develop Occupational Health and Safety Plans → Develop Emergency Preparedness and Response Plan → Develop Construction Environmental Management Plans (inclusive of Traffic Management Plans)
Social and	<ul style="list-style-type: none"> → Develop labour and social policies and PIU to review policies and incorporate

REVIEW AREAS	ACTION AREAS
Employment	<ul style="list-style-type: none"> into contracts for contractors → Consider the employment of the local population and encouragement of women involved in contracting and subcontracting organisations → Ensure access to roads from isolated properties and Lake Balkhash during construction and also when the road is complete and in full use. Provide underpass for agricultural and other vehicles near to Aksuek Town → Provide adequate worker camp security with consideration for gender issues typical of linear projects. Security to have appropriate experience, training and code of conduct → Although no physical resettlement is foreseen, land acquisition should include informal land users and inclusion in the compensation scheme. Temporary acquisition of structures should be re-cultivated and returned to owners. Independent audits of the acquisition process should be undertaken → Develop and implement a Stakeholder Engagement Plan (SEP) including a Grievance Mechanism with a suitable appointment to manage the implementation of the SEP → Develop a Non-Technical Summary (NTS) of the project for disclosure in the public domain (with other key documents as specified within the SEP)
Road Safety Measures	<ul style="list-style-type: none"> → Implement road safety measures e.g. location of bus stops, pedestrian crossings (refer to report by road safety audits)

These action areas have been provided as implementable ESAP actions that include the resources / estimated costs required, a timetable for implementation and completion of the actions and the criteria for successful implementation. In some cases, the costs of these actions are based on the initial review actions and not the follow on implementation costs. The ESAP should be adopted with the mitigation measures that have already been identified in the national EIA. The ESAP is provided in Appendix B, B-1.

2 INTRODUCTION AND PROJECT BACKGROUND

2.1 PROJECT BACKGROUND

The European Bank for Reconstruction and Development (EBRD) is considering providing finance for the reconstruction of a section of the 228 km “Kurty Burybaytal”, or the “Centre - South” corridor linking the cities of Astana to Almaty. The Section for which the EBRD finance is sought by the JSC Kazautozhol is 62 km (the “Project”), the Burybaytal-Aksuek section.

The 62 km section (Section 1) starts at a point of 281 km from Almaty and at approximately 2 km west of Aksuek Town. The Kurty Burybaytal road sections are:

- Section 1: km 2152-2214 (62km). Current section that is proposed for EBRD financing.
- Section 2: km 2214-2295 (81km). Previous section that has received EBRD financing.
- Section 3: km 2295-2335 (40km).
- Section 4: km 2335-2380 (45km).

As well as the EBRD, the other road sections will potentially be or have been financed by other International Financial Institutions (IFIs) that include World Bank (WB), Asian Development Bank (ADB) and Islamic Development Bank (IsDB).

The proposed investments include the reconstruction and widening of the existing roads, the reconstruction of bridges and upgrading of intersections as well as financing of supervising engineers, implementation assistance to the Project Implementation Unit (PIU) and institutional components.

It is planned that the time scale of the start of construction for all sections is likely to be in 2017. The estimated construction period of each section is 39 months.

WSP Parsons Brinckerhoff (WSP | PB) has been commissioned by the EBRD to undertake an Environmental and Social (E&S) assessment for the 62 km Burybaytal-Aksuek road section in advance of the potential investment by the EBRD.

2.2 SCOPE OF WORK

The scope of work is as follows:

- Conduct a gap analysis of the existing Environmental Impact Assessment (EIA) and other key project documentation against the requirements of the EBRD’s Performance Requirements (PRs) (2014) for an Environmental and Social Impact Assessment (ESIA) and current European Union (EU) EIA legislation (updated in 2014). The most significant differences are likely to be related to the Social provisions as set forth in the EBRD PRs, specifically the social provisions of PR1, PR2, PR4, PR5, PR7, PR8 and PR10;
- Review of land acquisition and potential involuntary resettlement and economic displacement impacts that may occur, or have occurred, as a result of the Project. Verify Project documentation relating to land acquisition for compliance with EBRD PR5;
- Review of stakeholder identification, analysis and engagement policy and practices relative to EBRD PR10 for Information Disclosure and Stakeholder Engagement;

- Review of the national EIA for robust social and environmental baseline data to inform Project design decisions, a review of alternatives, to ensure that alternatives were considered for Project design as well as application of the mitigation hierarchy, and the development of mitigation measures (local EIAs often do not provide enough detail in the development of mitigation measures); and
- Based on the above:
 - Clearly identify any gaps in the existing documentation and processes relative to the EBRD requirements;
 - Substantiate how the identified gap(s) could pose a risk to the Project;
 - Identify a scope of work that would be required to fill the gaps;
 - Develop an Environmental and Social Action Plan (ESAP); and
 - Preparation of a Disclosure Pack comprising a Stakeholder Engagement Plan (SEP) and a Non-Technical Summary (NTS) in Russian, Kazakh and English.

This report covers the scope of work above excluding the NTS and SEP. A separate SEP report has been prepared entitled: *“Stakeholder Engagement Plan, Burybaytal-Aksuek 2152-2214km, Part of the Reconstruction of the ‘Centre-South’ Corridor Linking Astana to Almaty, April 2016”* and a separate NTS has been prepared entitled: *“Non-Technical Summary, Burybaytal-Aksuek 2152-2214 km, Part of the Reconstruction of the ‘Centre-South’ Corridor Linking Astana to Almaty, April 2016”*.

The ESAP is provided in Appendix B, B-1 and also as a standalone document.

2.3 OBJECTIVES

The specific objectives of this review were to undertake a compliance review of the national EIA against EU and National legislation (See Chapter 6). Where there were gaps or deficiencies in the EIA, then supplementary information has been provided where it was accessible and readily available, otherwise recommendations have been made and included with other audit findings and incorporated into a corporate level ESAP to ensure compliance with relevant best practice, corporate, national, EU standards and EBRD Performance Requirements. Key to the review is an assessment of the project against EBRD Performance Requirements, which are presented as follows:

- PR 1: Environmental and social appraisal and management;
- PR 2: Labour and working conditions;
- PR 3: Pollution prevention and abatement;
- PR 4: Community health, safety and security;
- PR 5: Land acquisition, involuntary resettlement and economic displacement;
- PR 6: Biodiversity conservation and sustainable management of living natural resources;
- PR 7: Indigenous people;
- PR 8: Cultural heritage;
- PR 9: Financial intermediaries; and
- PR 10: Information disclosure and stakeholder engagement.

With regard to PR 10, a review of stakeholder engagement requirements and grievance procedures has been undertaken and presented in the separate SEP report which also provides a summary of comments, queries and concerns raised by stakeholders during public consultation meetings and how these have been addressed. The SEP provides a framework for consultation

activities and project disclosure, including the identification of potential stakeholders, methods used for consultation activities and the records to be kept. The SEP has been developed in accordance with the requirements for a Category A Project (See Chapter 2 for the assessment to determine the categorisation). The SEP will enable the PIU to inform relevant stakeholders of potential project impacts and address concerns that may be raised using a grievance mechanism. The social engagement activities carried out to date are summarised in the SEP and in this report.

The separate NTS report provides a summary of the Project in non-technical language covering the background and project description, the EIA process, the environmental and social benefits/impacts, mitigation and management measures and the contact details for communications with a link to the SEP and the grievance mechanism.

2.4 AUDIT TEAM AND AUDITEE INVOLVEMENT

The WSP I PB team, including associates, involved in the audit are presented on page ii at the front of this report. The WSP I PB team comprising, Scott Beaton and Vladimir Merkurjev conducted the in-country audit from the 12 - 14th April 2016.

A separate road safety specialist team from IMC Worldwide Ltd (IMC) comprising John White and Tim Jakeman were also present in-country.

2.5 STAKEHOLDER MEETINGS AND SITES VISITED

The details of the sites visited and meetings held as part of the audit are presented in Table 2-1 below.

Table 2-1 Meetings and Sites Visited

SITE / MEETINGS	SPECIFIC AREAS VISITED / MEETINGS HELD	DATE VISITED
Meeting	Offices of Kazavtozhol Almaty Region (road authority responsible for the 81 km section of road that the team previously interviewed)	12/4/16
Meeting	Offices of Kazdorproekt Almay (road design company)	12/4/16
Road	Road visit – full length of the 62 km road	13/4/16
Road / Meeting	Aksuek town, large town near to the start of the road section / Aksuek Rural Area Council	13/4/16
Road / Meeting	Kazavtozhol Zhambyl Region (road authority responsible for the 62 km section of road)	13/4/16
Road	Burybaytal Station, small settlement at the end of the road section	13/4/16
Meeting	Offices of Kazdorproekt Almay (road design company)	14/4/16

See Appendix A, A-1 which provides maps that show the 62 km section of road visited.

During the audit, meetings were held with key representatives of various stakeholders involved with the project as listed in Table 2-2 below.

Table 2-2 Meetings with Key Representatives of Various Stakeholders

NAME	COMPANY AND ROLE	TITLE
Batyr Dadamurzaev	Kazavtozhol Almaty Region Project introduction	Director
Ayzhan Tuganova	Kazavtozhol Zhambyl Region Road management and project schedule	Deputy Director
Dauren Tul'taev	Kazavtozhol Zhambyl Region Traffic management	Head of the Traffic Management Service Department
Tanatar Sabitov	Kazavtozhol Zhambyl Region Road maintenance and information on Burybaytal Station settlement	Director of the Road Maintenance, Aksuek
Sultanbek Karimov	Kazdorproekt Project introduction	General Director
Svetlana Sharipova	Kazdorproekt Project issues	Project Chief Engineer
Zhaslan Sharipov	Kazdorproekt Road guidance and baseline conditions	Baseline conditions investigation manager
Anastasiya Asadchuk	Kazdorproekt Environmental management	Ecologist
Berik Usenov	Aksuyek Rural Area Aksuek social issues, employment, accommodation, land acquisition etc	Deputy Councillor

2.6 LIMITATIONS

The work undertaken provides a good overview of the associated impacts and mitigation of the project but is necessarily limited by the amount of time allocated to the site visit and the staff available during the time spent in-country. There was a good level of engagement with representatives and they were found to be open and responded well to questions.

WSP | PB has based its conclusions and recommendations on the information available, visual observations and the auditee responses. WSP | PB does not and cannot guarantee that the road audited has no environmental or health and safety or social issues or liabilities beyond those observed during the audit. It may be necessary to modify the findings or conclusions presented in this report, if additional information becomes available to WSP | PB at a later date. WSP | PB has reviewed reports and considered written records as part of this audit but has not verified the content or accuracy of this information and suggest that the JSC Kazautozhol does this separately if required.

This report was compiled for the benefit of the EBRD and the JSC Kazautozhol only. This report is not intended to be relied upon by third parties without prior written authorisation by WSP | PB.

2.7 REPORTS AND OTHER INFORMATION CONSULTED

The documentation that was provided for information on the project that was consulted and reviewed as part of this project are is provided in Appendix B, B-2.

3 PROPOSED INVESTMENT AND REGULATORY REQUIREMENTS

3.1 RATIONAL FOR ROAD INVESTMENT AND STUDY AREA

The proposed EBRD funded road section (Section 1) is located in Moiynkum district of Zhambyl Oblast, between Burybaytal Station and Aksuek Town. It is part of the larger transit “Centre-South” corridor of “Astana-Karaganda-Balkhash-Kapshagay-Almaty” which is aligned in a south-eastern direction. Section 1 is the last part of Astana-Almaty highway to be rebuilt which was reconstructed in 2003. The length of the road is 62 km and it is part of the overall 228 km length of the road section connecting Kurty village with Burybaytal village that is being financed by EBRD and other IFIs. Improvement of Kurty-Burybaytal road section will facilitate the transit of goods and passengers from Almaty to Balkhash, Karaganda and Astana and develop regional trade.

The road will serve local and national transport requirements, as well as the agricultural sector, which is a key sector in Kazakhstan and will be a major beneficiary. Labour movement will also be enhanced, as communities near to the road such as Burybaytal Station and Aksuek Town will benefit from easier transport links. The road will be part of a route between China and Western Europe via Western China, through Kazakhstan to Russia. This will be economically beneficial from a trade and tourism perspective. The upgraded road will improve the international transportation of goods, including goods produced in countries such as Tajikistan, the Kyrgyz Republic and Uzbekistan.

Currently, the road has two lanes and is Category 2 under Kazakh road standards. The road will be reconstructed to comply with the Kazakh Category 1b highway requirements, widened to four lanes and will include the reconstruction of bridges and upgrading of intersections. The road’s asphalt surfacing is now past its effective working life and its condition is deteriorating at a fast rate, due to a combination of traffic loading, the age of the road surface and wide variation in ambient temperatures. Reconstruction of the road is now urgently required to improve the ride quality of the road, minimise road user costs and provide a road surface that can be maintained in a cost effective manner. In addition widening of the road will reduce the number of traffic accidents due to the narrow width of the road which forces drivers to cross into the oncoming traffic lane to overtake vehicles. In 2013, traffic between Kurty and Burybaytal varied from 3,060 to 7,277 vehicles per day. The dedicated livestock underpasses planned as part of this scheme will also improve road safety, as local farmers will no longer need to take their livestock across the active highway.

3.2 DETAILED OVERVIEW

3.2.1 ROAD REHABILITATION

OVERVIEW

The road design characteristics are presented below:

- Road category – 1b
- Length – 62 km
- Earthwork – 3,982,920 m³
- Tarmac – 1,210,563 m²

- Junction – 1
- Off ramps – 11
- Rest areas – 8
- Enclosed bus stops – 4
- U-turns – 14
- Bridges – 4 / total length 252.9 m
- junction overpass / total length 90.2 m
- rail road overpass / total length 40.5 m
- Reinforced-concrete Culverts
- Road:
 - circular d-1.5m – 50 / total length 1,849.3 m
 - rectangular 2.0x2.0m – 9 / total length 303.1 m
 - rectangular 4.0x2.5m – 2 / total length 76.3 m
- junction:
 - d-1.0m – 5 / total length 99.5 m
- Off ramps:
 - d-1.0m – 5 / total length 92.8 m
 - d-0.5m – 1 / total length 11.8 m
- Bridges and junction lighting – 5.92 km
- Police station – 1

The 62 km road reconstruction includes two realigned short sections of road near to Aksuek Town and Burybaytal Station.

The feasibility, design, planning and permitting phases of the project have been completed.

It is planned that the time scale of the start of construction for all sections is likely to be in 2017. The estimated construction period of each section is 39 months.

A summary of Project stages that have been undertaken is provided below.

FEASIBILITY STUDY

A feasibility study and detailed design has been completed, accepted and approved by the State Expertise, in accordance with the Kazakhstan regulatory regime. The final design is now completed.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

The national EIA was developed in accordance with the rules, regulations and standards of the Republic of Kazakhstan (RoK) for the design and construction of roads. State Environmental Expertise Positive Conclusion on the EIA was obtained 20th March 2015, with the following prior approvals:

- The Sanitary Epidemiological Service – 30th January 2015; and
- The Balkhash-Alakol Basin Water Inspectorate approval – 28th January 2015.

The EIA has been reviewed to identify gaps that have been addressed within an ESAP. The ESAP includes actions that are recommended for implementation in order to fully meet EBRD's Performance Requirements, EU standards and international best practice.

DESIGN AND IMPLEMENTATION

A feasibility study and the road design is now finalised and is in the process of being reviewed by the regulatory authorities. Key stages in the future will be the issue of invitations to tender to road construction companies and the appointment of project management and project supervision roles.

PERMITS AND LICENCES

All the permits and licences required by national legislation have been obtained, including land deeds, clearing permits, borrow pits / quarries permits for earthworks and soil gravel mix, pipe installation permits, lighting permits etc., with the exception of the permits required to cover air emissions which have not yet been obtained. However, as per RoK laws these can be obtained within a year after the commencement of construction works.

3.2.2 AREA OF INFLUENCE

The area of influence in respect to this Project is considered to be the other sections of the 228 km "Kurty Burybaytal" or the "Centre - South" corridor linking Astana to Almaty. The Section for which the EBRD finance is being sought is 62 km. The Kurty Burybaytal road sections are:

- Section 1: km 2152-2214 (62km). Current section that is proposed for EBRD financing.
- Section 2: km 2214-2295 (81km). Previous section that has received EBRD financing.
- Section 3: km 2295-2335 (40km).
- Section 4: km 2335-2380 (45km).

A project risk is that the full section of the road does not specifically meet the requirements of EBRD, as other road sections are potentially being financed by other IFIs and other standards have therefore been used. Although it is assumed that ESDD has or will be undertaken for these road sections and that there should be a good level of alignment with EBRD's requirements.

3.3 INVESTMENT PLANS

3.3.1 INVESTMENT PLANS

The European Bank for Reconstruction and Development (EBRD) is considering providing finance for the reconstruction of a section of the 228 km "Kurty Burybaytal" or the "Centre - South" corridor linking Astana to Almaty. The Section for which the EBRD finance is sought by JSC Kazautozhol is 62 km (the "Project"), the Burybaytal-Aksuek section, or Section 1.

3.3.2 EBRD CATEGORISATION

The EBRD are considering providing finance as detailed above. Under the EBRD Environmental and Social Policy¹, projects are categorised as A, B, C or FI to determine the nature and level of environmental and social investigations, information disclosure and stakeholder engagement

¹ Environmental and Social Policy, European Bank for Reconstruction and Development, May 2014

required. This will be commensurate with the nature, location, sensitivity and scale of the project, and the significance of its potential adverse future environmental and social impacts. Past and present environmental and social issues and risks associated with project-related existing facilities will be subject to environmental and social appraisal regardless of the categorisation.

Appendix 2 of the Environmental and Social Policy provides an indicative list of types of projects which would be categorised as Category A. This list applies to “greenfield” or major extension or transformation-conversion projects in the categories listed which are examples of projects that could result in potentially significant adverse future environmental and/or social impacts and therefore require an Environmental and Social Impact Assessment. The categorisation of each project will depend on the nature and significance of any actual or potential adverse future environmental or social impacts, as determined by the specifics of nature, location, sensitivity and scale of the project.

Contained within the example list of Category A projects that relate to this project are:

6. Construction of motorways, express roads and lines for long-distance railway traffic; airports with a basic runway length of 2,100 metres or more; new roads of four or more lanes, or realignment and/or widening of existing roads to provide four or more lanes, where such new roads, or realigned and/or widened sections of road would be 10 km or more in a continuous length.

The proposed investment for Section 1 is for the widening of an existing road to four lanes of a continuous length of 62 km. This meets the criteria above, as such this Project is classed as a Category A project which at an early stage in the project would be in line with the policy where potentially significant adverse future would not have readily be identified or assessed, and which, therefore, would require a formalised and participatory Environmental and Social Impact Assessment process. However, following a review of the environmental and social impacts, it is now considered that impacts are not adverse and have been identified, assessed and can be addressed through mitigation measures, the requirements for a Category B project. However as required under EBRD requirements, for a Category A projects, there is need for a comprehensive ESIA and a review of associated documents that must be carried out, followed by their public disclosure for a minimum period of 120 days. The scope of work is to undertake a gap analysis of the national EIA and to develop an ESAP to address gaps in the national EIA. Other documents being developed for disclosure include a NTS and SEP.

A review of the Project has been undertaken to determine the applicability of EBRD’s PRs to the Project. Chapter 8, Conclusions and Recommendations summarises the findings of this audit against EBRD’s PRs. All PRs are considered to be applicable with the exception of PR 7: Indigenous People and PR 9: Financial Intermediaries.

None of the activities that will be associated with the reconstruction of the road are those that are listed in the Exclusion List in the EBRD Environmental and Social Policy.

4 ROAD SETTING AND KEY FEATURES

4.1 SETTING

4.1.1 GENERAL INFORMATION

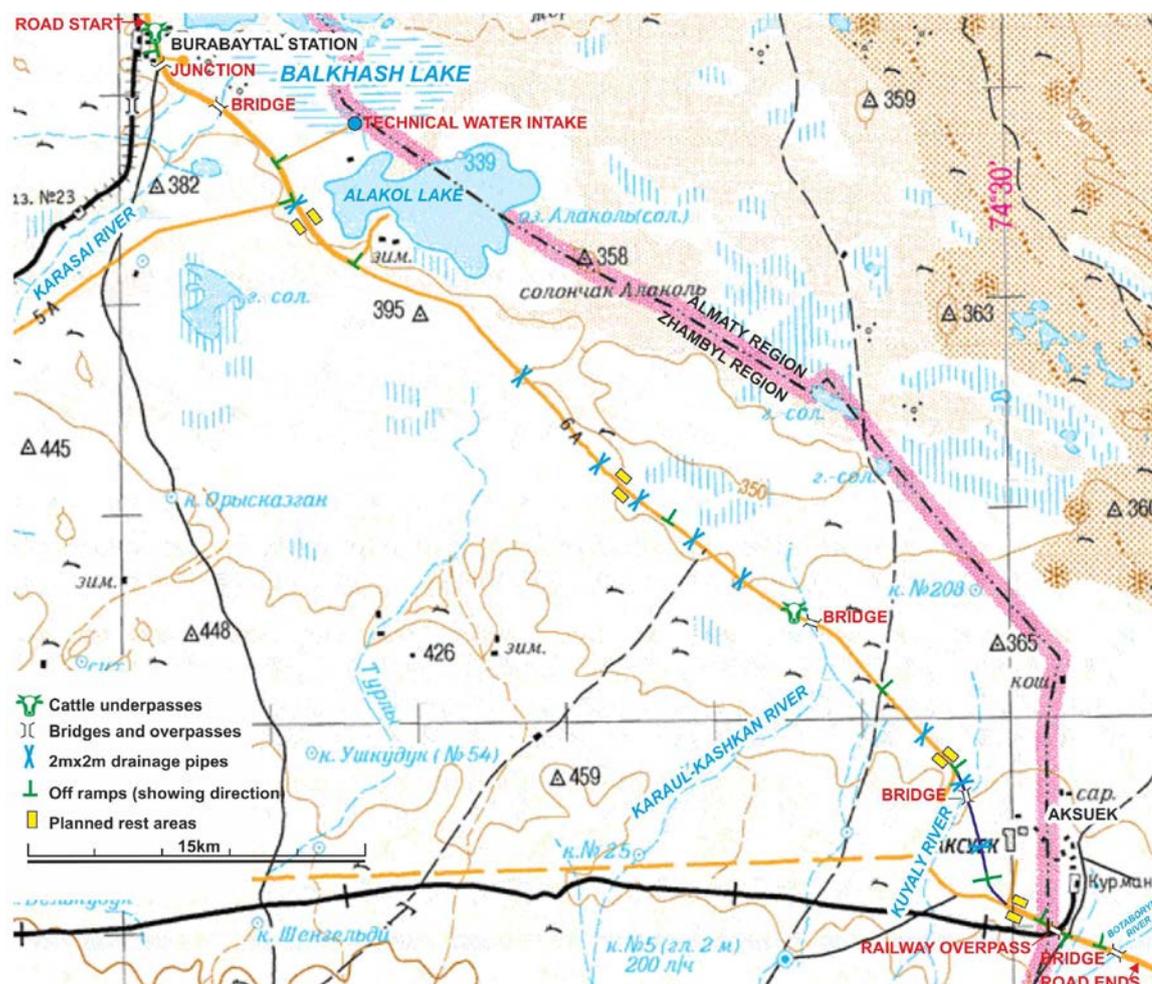
The proposed EBRD 62 km funded road section (Section 1) is located in Moynkum district of Zhambyl Oblast, between Burybaytal Station and the Aksuek Town. It is part of the larger transit “Centre-South” corridor of “Astana-Karaganda-Balkhash-Kapshagay-Almaty” which is aligned in a south-eastern direction. It is the last part of Astana-Almaty highway to be rebuilt. The 62 km road reconstruction includes two realigned short sections of road near to Aksuek Town and Burybaytal Station.

The designed road alignment crosses four river beds Kuyaly, Karaul-Kashkan, Karasay, Botaborym. In recent years the rivers have been mostly always dry. The Project will include the reconstruction of four bridges. Other upgrades or new features will also include a junction, off ramps, rest areas, bus stops, a junction overpass, a railway overpass, culverts, bridge and junction lighting and a police station.

The road corridor runs on gently hilly terrain in the middle desert zone along dry river beds and lakes, which is used for non-intensive herding. At present, on some days the small herds from the settlements and the farm may cross the road wherever convenient in the early morning and before dusk. The herders currently take their livestock across the road at all locations. However since the river beds are used for pasturing, herd crossing often occurs under the bridges. There is a water well near the road which is located at the farm. Its output limits the number of livestock the farm can keep. The road alignment passes through the territory of Lake Alakol, and Lake Bakhash is also nearby. There are a number of dirt road connections to the lake, used for fishing, tourism and leisure activities. The road runs through the Zhusandaly Nature Preserve which is inhabited by a number of mammals including goitered gazelle, wolves, jackals, foxes, corsac foxes, hares and various birds. Two other nature protection areas near the road alignment are the Ramsar designated Ili River Delta 23 km northeast and Andasay Nature Preserve 91 km southwest.

Figure 4-1 shows the Burybaytal-Aksuek section of the road including road features that include location of bridges and overpasses, cattle underpasses, drainage pipes, exit roads and rest areas.

Figure 4-1 Kurty-Burybaytal Road: Burybaytal-Aksuek Section



See Appendix A, A-2, for a selection of photographs taken during the road visit.

4.1.2 PHYSICAL CHARACTERISTICS OF THE LOCATION AND CLIMATE CONDITIONS

The project corridor runs on flat terrain. The area's geology is characterised by thick accumulations of sediments of glacial and river origins, sediments and relief are formed by wind. Soil around the alignment is poorly developed, protrudes to 20cm and is presented by slightly humid grey soils.

The surface water network drains to the north and eventually falls into Lake Balkhash. The Aksuek-Burybaytal road alignment passes in close proximity to Lake Alakol and Lake Balkhash. The hydrological network in the development areas is poor with only the River Shue and its inflows, Kuyaly, Karaul-Kashkan, Karasay and Botabory passing through the region. The Shue is the only river of economic importance with the other inflows and various streams only flowing during snowmelts and periods of heavy rain. Groundwater is not abundant in the project area as reserves are filled by infiltrating rain and melt-water. Any groundwater is typically found within the fractured rocks and reserves are not found at 5-7m below the surface.

The proposed road alignments are located in desert-steppe zones of poor pasture land, used primarily for agriculture and small scale cattle farming. The three main geomorphologies found within the development are widespread hummocky terrain and outwash plains with valleys and

depressions between mountains. The desert habitat is divided into two zones, a desert zone and piedmont zone. Vegetation of the steppe zone consists mainly of perennial wormwood, black (*Haloxylon ammodendron*) and white (*Haloxylon persicum*) saxaul, Kyrgyz feather grass, *Anabasis salsa*, *Salsola arbusculiformis*, *Camphorosma monspeliaca* and *Turan wormwood*. Semi-shrub and bushes are the main types of vegetation found in desert areas with species such as *Calligonum*, *astragalus* and sandy acacia dominating the habitat. The piedmont deserts are characterised by the presence of ephemeral species such as *Poa bulbosand* (bulbous bluegrass) and *Carex pachystylis*. The river Shue valley vegetation is primarily thickets of shrubs such as Chingil and Tamarisk species with bogs containing reed, typha, bulrush and cheegrass species.

The road alignment passes through the Zhusandaly Preserve which is inhabited by a range of mammal, bird and reptile species. The mammals include, eared hedgehog, gerbils, marmots, jerboa, long clawed ground squirrel, hare, jackal gazelle, saiga antelope, argali, less white toothed shrew, muskrat, common vole, spotted cat, wild boar and roe deer. Bird species in the area include, Dalmatian and white pelican, steppe eagle, vulture, lesser kestrel, Balaban falcon, partridge, black swift, shrike, pink starling, black vulture, white-tailed eagle, pheasant, marsh harrier, crane and demoiselle crane. During surveys only wolves, foxes, jackal, corsac, goitered gazelle, mufflon, roe deer and Tolai hare were discovered in the immediate proximity to the road development during seasonal migration times in the spring and autumn months.

It is considered that wildlife such as gazelle Jeyran have sufficient crossing points. There are two cattle underpasses that will be built; one immediately next to Burybaytal and the second next to the bridge through Karaul-Kashkan River that may flood the surrounding ground under the bridge once in 4-6 years. In addition, there are four bridges (total length over 250 m) that will be reconstructed over dry river beds most of the time. There are also many reinforced concrete culverts. Furthermore, it has been recommended that a further underpass is built near to Aksuek, so that agricultural and other types of vehicles can cross the reconstructed road. It was reported that vehicles from the town often cross the road. All these should allow for sufficient crossing points which were reported to have been taken into account in the design and there is no requirement for further assessment.

It has been recommended that pre-construction surveys using a trained ecologist are undertaken to check for the presence of protected species and for areas to be fenced off if required based on findings.

The climate in the Zhambyl region is highly variable as a result of climate, soils, flora, fauna and water resources. The climate is continental, with daily fluctuations in air temperatures and characteristic strong winds. Temperatures reach a maximum of 45°C in July and a minimum of 43°C in January. Precipitation occurs between March-April with an average of 100-190mm and 200-290mm between October-November. The annual average wind speed for the region is 4.8m/s.

4.1.3 SOCIAL AND ECONOMIC FEATURES

The 62 km section of the road is located in the 50,400 km² Moiynkum district which is further subdivided into 16 rural areas inhabited by some 30,000 people of more than 30 nationalities. Aksuek is located 2 km north of the southern end of the road. The population of Aksuek was reduced by 10,000 people after a uranium mine was shutdown in 1991 and the empty houses in the town have been dismantled for reuse as building materials. The population now consists of approximately 1,200 residents, mainly elderly residents who once worked at the mine. Burybaytal Station at the northern start of the road section consists of some 60 houses, over time its population has gradually fallen and there are now approximately 200 residents.

Apart from a family farm 3 km southeast of Burybaytal and 166 m north of the road, there are no houses or settlements located directly adjacent to the road section. The farm uses the 200 m dirt road to enter the main road to travel in both directions. There are no houses and farms around the road due to the absence of fresh groundwater and poor pastures with grass that burns out before

summer. Agriculture and small scale meat and dairy cattle farming is developed on Syrdarya River flood plain 100 km southwest of the road. Fresh water is brought to Burybaytal Station by the railway and to Aksuek by a 53 km pipeline. There is limited livestock held in these settlements. In order to cross the road, two new cattle underpasses are to be built: one immediately next to Burybaytal and the second next to the bridge through Karaul-Kashkan River that may flood the surrounding ground under the bridge once in 4-6 years and prevent the cattle from crossing for a few weeks. Aksuek herders can use two bridges and the railway overpass to cross their livestock over the road.

There are various businesses such as petrol stations and cafes adjacent to the road alignment. These businesses do not need to be demolished as there is sufficient land adjacent to the alignment, for the reconstruction of the road. There will be a requirement for land acquisition for the road reconstruction, as two sections of the 62 km road will be realigned. These two sections are at the northern and southern ends of the road. The land that will be required for the land acquisition is not currently in use, and was observed to not have any informal agricultural or other commercial activities.

There were no herds of cattle, horses or camels observed during the site visit, apart from a few isolated cattle observed near to one of the rest stop areas. Two new cattle underpasses are proposed.

4.1.4 ARCHAEOLOGY

A certified archaeological company has undertaken a study to identify all sites and objects that are of cultural significance in the vicinity of the road. This study identified 11 fatal road accident memorials, a modern closed Muslim/Christian cemetery and three ancient burial mounds of unknown age. Even though the sites are far enough from the planned road and they would not be affected by the project directly, it is necessary to make sure that the access to them will not be blocked. Although there are no burials under the memorial stones, some sites may be sensitive when it comes to relocation or limitation of access due to the spiritual culture of rural Kazakh people. There are no processes under the Kazakh law to address this issue. Mitigation measures have been recommended to preserve memorial sites along the road and, if necessary, to identify the appropriate relocation processes with the informed consent of the owner of the memorial sites. At realigned section at the beginning of the road near to Aksuek, there is a cemetery. It was reported that the new re-aligned section will not pass close the cemetery and that road access to the cemetery will be maintained.

'Chance finds' could occur along the road during the construction stage of the project. This includes any findings of cultural and archaeological significance that surfaces during construction works. In case anything is found in the ground that might be of cultural or archaeological significance, the Institute of Archaeology and other relevant institutions will need to be contacted to undertake an assessment of the findings. It has been recommended that a chance find procedure is set up and in the event that an artefact is discovered it is reported to the relevant authorities.

4.2 LAND OWNERSHIP

The reconstruction of the 62 km section of the highways requires the acquisition of approximately 142 ha of land. Of this, approximately 119 ha will be occupied permanently by the road with the remaining 23 ha being returned. The temporary occupation or permanent removal of land is likely to cause a loss of profits to landowners. The state forestry agency owns the land and an approval for conversion of 'land use' is required before any work begins. Compensation for the loss of their land will be calculated and submitted by the state forestry agency. On the re-alignment section near to Aksuek, the land is owned by Aksuek Village Council, a similar process of compensation for the loss of land should be undertaken. Similarly, on the re-alignment section near to Burybaytal Station, the land is owned by Shagynak Village Council, and again a similar process of

compensation for the loss of land should be undertaken. It is unlikely that there will be any land acquisition that will result in physical or economic displacement of businesses at rest areas near to the road. For those that are on the old road for the re-alignment section near to Burybaytal Station, road access to these businesses will be maintained. At the other rest area there are several structures that include cafes, petrol stations and other unknown structures. It was reported that for the reconstruction, approximately 1 metre either side of the road will be required which will affect the structures.

There may be other land owners that were not detailed during the audit visit and have not been identified as yet. However it was reported that local government has acquired official data from the Land Registry and has started consultations with affected landowners to inform them about the Project and potential impacts. The land acquisition process will include the valuation of land, compensation payments and consultation with landowners. Land acquired for temporary use for construction pads and other facilities will be re-cultivated, cleaned and returned to the original owner.

The land will need to be converted for 'land use' before any works begin. Compensation for the loss of state forestry agency land will be calculated and submitted to the agency. The section close to Aksuek Village Council is owned by the council. A similar process is foreseen to determine compensation for loss. There are no small businesses in this section of the land so it is unlikely that there will be physical or economic displacement, though further studies are required to confirm this. It was confirmed that throughout the realignment section of the road, access to roadside businesses will be maintained.

All the owners will be identified through the Land Relations Department according to the land registry. Land owners will be notified about the project and consultation activities have started. The land acquisition process is currently not documented, although the process is foreseen to include: valuation of land, compensation payments and consultation with landowners. Land acquired for temporary use only will be re-cultivated, cleaned and returned to the original owner. These temporary land areas will be used for construction pads and other facilities.

The total number of affected land owners or land users is unknown at this stage.

5 ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL MANAGEMENT ARRANGEMENTS

5.1 RESPONSIBLE BODIES

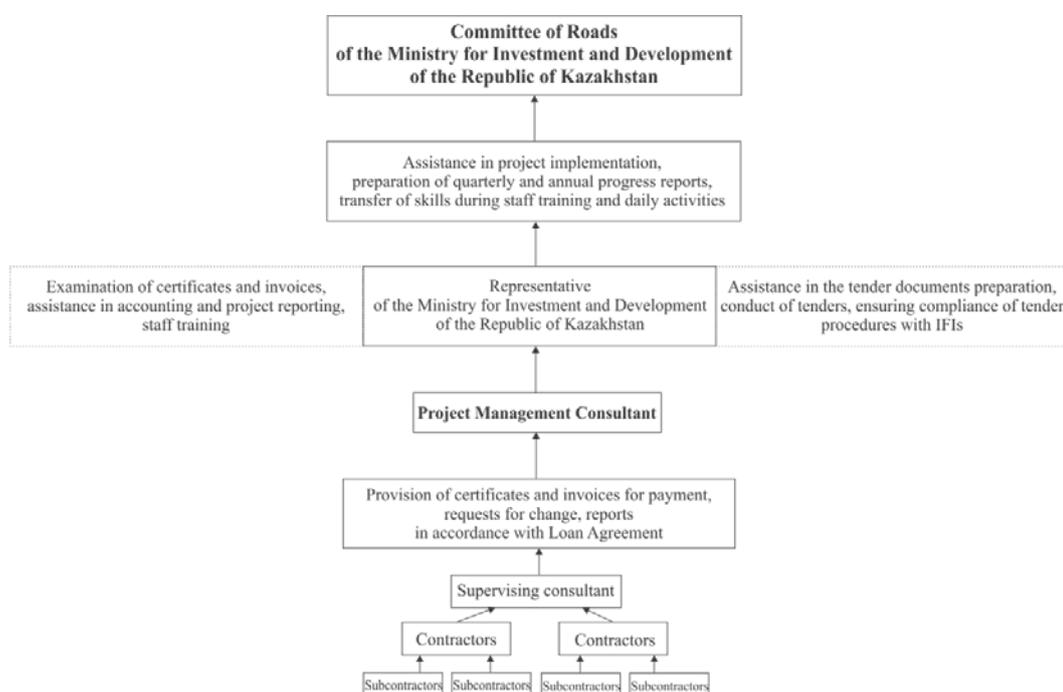
The Client manages road construction projects. It is within the Ministry of Investment and Development of Kazakhstan, which is the implementing agency. The Ministry has responsibilities for transport sector policy and for planning, developing and regulating transport in the road, railway, and aviation sectors. The Committee of Road Police is responsible for road safety and has approved the road safety measures that have been proposed. After project completion, the Ministry of Investment and Development will be in charge of the operation and maintenance of the project roads.

5.2 PROJECT MANAGEMENT AND IMPLEMENTATION

From meetings held with Kazavtozhol (Zhambyl Region) during the site visit along the road alignment, it was not known what the plans were for the establishment of the PIU. It is anticipated that there will be a need to establish institutional organisational capacity for this project. Roles and responsibilities are not defined as yet. Kazavtozhol based in Taraz, Zhambyl Region is the road authority responsible for the 62 km section of road and is likely to form the Project Implementation Unit (PIU). This is a regional department of the Client. The arrangements for the PIU have not been decided yet.

The planned management and reporting structure for the previous Section 2 road that is also assumed to apply to the Section 1 road as below.

Figure 5-1 Project Management Structure



Similar to the previous EBRD funded section of road (Section 2: km 2214-2295 at 81km), it is assumed that for day to day project management and meeting EHSS performance standards during construction will be undertaken by an appointed Project Management Consultant (PMC) and an appointed Project Supervision Consultant (PSC). Specialist staff will be assigned to the PMC to undertake all environmental assessment related tasks and the PSC's team will have an environmental monitoring specialist and social impact monitoring specialist. Their role will be to assist in all aspects of environmental planning and implementation, internal monitoring and evaluation, and training of the PMC and relevant government staff on environmental assessment and EBRD's Environment and Social Policy. There is no assignment of these roles yet.

5.3 EHSS MANAGEMENT

5.3.1 EHS RESPONSIBILITIES

The PIU of the Client is responsible for preparing the tender documents and selecting the contractors that would carry out the reconstruction of the road.

PSC will also be a contractor of the Client. In addition an Independent Monitoring Agency (IMA) could be hired as well.

After completion of the road, the PMC in cooperation with the district/regional administrations will undertake routine and random monitoring.

5.3.2 EHS POLICIES AND MANAGEMENT SYSTEMS

The Client has no integrated EHS management system with proper policies, plans and procedures. It is recommended to incorporate at least some elements of ISO 14001 into the activities of the PIU, such as setting policies, plans and procedures, a regular review and update of all the above as required and these should be incorporated into contracts with contractors.

5.3.3 STAKEHOLDER DIALOGUE

Stakeholder engagement and public hearings are a requirement under the Kazakh national legislation. The public meetings were held on 25th February 2015 in Burybaytal. The invitation for the event and additional information on what would be shared was publicised in local newspapers Znamya Truda in Russian and Akzhol in Kazakh both issued on the 21st February 2015. This short notice is non-compliant with the public consultation requirements that require a period of 20 days between the public note and the meetings. There are no public notes about that hearing that was placed on the Zhambyl regional council or the Moiynkum region web-sites which is again not in line with national legislation.

The public meetings were attended by Burybaytal village residents – entrepreneurs and elderly-, as well as by the Burybaytal School Head mistress, Fish Inspection representation, a representative from KazAvtoZhol and an environmental specialist from KazDorNII; Head of Road Maintenance Facility that represents Kazakhavtodor; Deputy General Director, ecologist and senior specialist of Kazdorproyekt..

The public meeting was aimed at explaining the elements of the road construction, including the alignment, cattle underpasses, road surfacing. All participants were given an opportunity to express their opinions and ask questions relating to the Project. The key concerns were around implementation plans, air emissions and the probability of building demolition.

There is currently no Stakeholder Engagement Plan (SEP) set up for the Project to inform future engagement activities or the disclosure of relevant information to the affected stakeholders. The system within the regional, district and local authorities seems to be working well with clearly identified and designated roles and responsibilities in all relevant institutions. The process follows

a bottom-up approach where local authorities have the responsibility to organise meetings and public hearings and to reach out to affected stakeholders in the area. In case they need information related to the land registry their officials approach the district or regional level authorities to request the necessary data.

A SEP has been prepared by the WSP | PB team to incorporate the principles and practices already in place with the EBRD requirements and provide for a systemic consultation process following the different stages of the Project. The full details of future engagement are provided in the SEP.

5.3.4 CONTRACTOR MANAGEMENT

It is understood that there will be similar contractor management arrangements as for the previous EBRD funded road section (Section 2).

The tendering process is coordinated by the Client. The construction companies are considered to be the primary supply chain under the Environmental and Social Policy of the EBRD and thus measures to assess their compliance with the requirements in terms of labour and working conditions have been included in the ESAP.

As part of the evaluation process, the criteria for past performance should be taken into account. It is recommended that as part of the selection process EHSS performance should be evaluated. This is included in the ESAP.

All mitigation measures in the EIA that have been identified should be incorporated into tender documents and become part of the works contracts for the contractors. It is recommended that further mitigation that is provided in this report should also be integrated into tender documents. The Client has templates for previous ADB, WB, EBRD funded contracts that can be used.

Implementation of mitigation measures during the construction stage will be the responsibility of the contractor in accordance with the contract specifications and loan requirements. The PSC will supervise the monitoring of implementation of mitigation measures during the construction stage. There will be co-ordination for resolving complicated issues that arise in the field and to provide continuously updated information to submit reports to the PMC and the EBRD.

The key issues identified with the supply chain centre on labour and working conditions. In general the construction industry in Kazakhstan is non-compliant with many international conventions and international standards. This non-compliance is due to the lack of PPE for workers, lack of facilities in the vicinity of the working area (including toilets, medical and dining facilities), inadequate break and resting periods and extended work-hours. It has been reported that standards are better for projects financed by Donors and IFIs. Under national legislation, there are no independent labour inspection requirements. It is important to undertake independent labour inspections and health and safety audits to ensure compliance not only with national legislation but also with international best practice. Reportedly the Ministry of Labour and Social Protection of Population and the Committee for Consumer Rights Protection control these issues effectively.

A workers camp is planned possibly to serve as accommodation for up to 1,050 workers. The workers' camp will be required to be compliant with International Finance Corporation (IFC) standards. It is stated that the labour force will come from the closest towns and villages to the extent possible. A skills assessment may be recommended to identify available labour force in the area to plan and manage the workforce for the project. It is recommended that a due diligence investigation for all security personnel is conducted to make sure they have appropriate licensing, experience and training for security contractors. It has also been recommended that for the location of accommodation, consideration for utilising existing capacity in accommodation and other local amenities is given e.g. Aksuek Town. Aksuek Town has many derelict buildings due to the outflow of residents after the closure of the local mining industry facilities. The option to house

part of the workforce in the town would provide opportunities for local businesses; however, it comes with its own risks, namely the difficulties that might arise from managing privately rented accommodation for workers and restricting their movement in the village. It is currently thought that the camp will be located near to Burybaytal Station in an area of 11 ha that will also include a tarmac plant. There is no land acquisition involved and the land has been given a temporary use permit. The land was observed to be unused. It has been recommended that an outline principle and strategy for labour accommodation should be provided and a code of conduct developed. In addition, public consultation should be carried out to reach agreement on use of local services and socio-economic and health baseline data should be obtained **<<to include this ESAP as well>>**

Others issues for consideration are that the workers' camps and workers residing on site might lead to conflicts with the settlements and local communities around the road. The nearest settlements are Buribaytal Station and Aksuek Town and the ends of the road section. Typical issues around workers' camps can often include harassment of females, anti-social behaviour escalated by substance abuse, spread of prostitution and STIs in the area and in some cases increased crime rates. The Code of Conduct will contain measures to mitigate or avoid such impacts. It is unlikely that the project will result in any negative consequences, as the contractors would probably plan the local recruitment as the use of illegal labour force from neighboring countries in road projects is not practiced. From discussions with the deputy councilor of Aksuek Rural Area, there is the potential capacity to provide some skilled and semi-skilled workforce of people that have worked in defunct industries such as the uranium mine and other industries such as borates mine and processing facility and quarrying. It was reported that there are up to 50 unemployed people in the town. There are some 1,200 residents in the town. At Burybaytal Station where it is understood that the camp could be located, there are some 200 residents. It is understood the majority of the working population are involved in fishing at the nearby lake.

During discussions with the deputy councilor of the Aksuek Rural Area, it was stated that the road reconstruction could be economically beneficial to the town from not only the supply of local workforce but also the possible use of local amenities. For example there are two hotels that could be renovated to provide accommodation. The general view was positive regarding the road project.

6 ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL ANALYSIS

6.1 ENVIRONMENTAL, HEALTH, SAFETY AND SOCIAL IMPACTS

6.1.1 APPROACH

The information provided in this chapter is based on observations during the visit to the existing road and interviews with key stakeholders. In addition further findings are presented in Chapter 6 of the gap analysis of the EIA.

6.1.2 ENVIRONMENTAL ISSUES

WASTE GENERATION AND DISPOSAL

It is not clear yet how materials will be safely stored (both hazardous and non-hazardous) and it is recommended that containment measures are introduced for the storage of materials.

Construction pads will have storage areas for waste, although it was reported that there are no nearby licensed facilities for the disposal of waste. It was suggested that Aksuek quarry could be used as a landfill but it is not clear if this is a licensed site. It has been recommended that licensed facilities for disposal of construction waste and other waste streams including hazardous waste should be identified.

WATER USE AND WASTE WATER

Even though the water sources have yet to be identified, it was stated that technical water is likely to be brought in from Lake Balkhash by road tanker on an existing road that will be rehabilitated. A permit is in place for water abstraction from the lake. Potable water will be bought by road tanker from Aksuek Town and Burybaytal Station. In Aksuek, a water pipeline has been repaired and at Burybaytal Station a well will be rehabilitated. From the workers camp, it was reported that foul water will be sent by road tanker to a sewage treatment plant as yet unidentified but likely to be Aksuek (currently not working). It is probable that waste water will need to be transported to Almaty. Recommendations have been made to undertake an assessment of water impacts to include the sources and groundwater recharge rates. A two stage sewage treatment works should be used.

The road design is to have interceptors comprising gravel filtration to minimise pollution to the rivers. There will be five such interceptors next to bridges, although it should be noted that riverbeds are mostly dry throughout the year. There will be 18 construction pads with a total area of 9 ha. It is recommended that measures should be specified such as interceptors for surface water capture and treatment.

OTHER ISSUES

Other impacts relating to air quality and noise are not considered to be significant issues due to the lack of settlements along the route and the low traffic volumes. However a number of recommendations are provided on the basis that there is no baseline data and there are rest areas along the road, an isolated farmhouse at 166 m from the road and Burybaytal Station.

6.1.3 HEALTH AND SAFETY ASSESSMENT

The team was unable to examine any health and safety (H&S) issues related to the construction, as the works have not started yet. From the teams previous visit for the EBRD Section 2 road to another associated road construction site, there will be a need to strengthen health and safety standards. Areas will include the use of adequate PPE, provision of adequate welfare facilities (i.e. bathrooms, kitchens), duration for breaks/resting periods and working hours in compliance with national legislation and international best practice.

Health and safety measures will be the sole responsibility of the construction companies. A number of recommendations have been provided in the ESAP that include inspection programmes of H&S performance, incident reporting procedures, occupational H&S Plans and an Emergency Preparedness and Response Plan.

Community health and safety will need to be addressed through recommendations that include the development of Construction Environmental Management Plans (inclusive of Traffic Management Plans).

The safe crossing of herds during the construction period should be addressed with the use of temporary crossing points designated and publicised as such for the construction phase.

The ESAP will inform the tender documents that need to be prepared for the construction companies and will constitute a legal requirement in the contract.

6.1.4 SOCIAL ISSUES

The Project is unlikely to result in significant long-term adverse social or gender impacts. The site visit confirmed that the impacts on social issues can be identified and mitigated through the ESAP. The majority of the impacts will be related to the construction (i.e. noise, dust, increased construction traffic, influx of workers) and will not continue during the operation phase of the road. The construction related impacts may have a slightly more significant impact on vulnerable groups who by virtue of age, gender, physical and mental wellbeing may experience the impacts differently.

The section financed by EBRD is not passing through any settlements; there is only Aksuek Town which is 2 km from the road and Burybaytal Station at the end of the road where the worker camp will be situated. Burybaytal Station has a population of some 200 people. The influx of approximately 1000 workers is a significant impact on the population across the Burybaytal Station. The management of the labour camp and its vicinity is of crucial importance to avoid any unnecessary stress on the population. The ESAP will recommend a Labour Accommodation Management Plan and a Code of Conduct for the workers to be developed and implemented prior to any construction activities start. In addition, public consultation should be carried out to reach agreement on use of local services and socio-economic and health baseline data should be obtained **<<to include this ESAP as well>>** It is likely, though, that certain business opportunities will be created by the workers' camp and the Project will attract residents from nearby settlements to provide food and other services to the workers. See section below on Gender Impacts.

The road itself will facilitate safer and quicker transport of goods and services both on a national and international level and will support the local farmers in getting their produce to the markets in bigger cities more efficiently. The new road will not result in an increased number of public transport vehicles or more frequent services in the area; however, it will greatly improve transport safety.

STAKEHOLDER ENGAGEMENT

Although there is no formalised SEP for the Project, national legislation required consultations to finalise the EIA; these were undertaken in February 2015. These public meetings failed to meet the national legislation requirements by not providing a sufficient notice period for residents to attend and not providing public notes in the offices of local councils. The public meeting was organised in the village of Burybaytal and were attended by residents, benefactors of the loan and local authorities. There are no other public engagement activities that are foreseen or planned by the Client or local authorities.

A SEP has been prepared by the WSP | PB for the Client to use for future stakeholder engagement activities, internal and external communication.

GENDER

As the project is unlikely to cause significant social impacts, the gender impacts of the project are also minimal. The key issues identified are related to the workers' accommodation and its impacts on local communities and neighbouring settlements. It is recommended that a code of conduct is prepared and implemented for workers settlement in order to prevent the possible impact, including potential harassment, anti-social behaviour or other criminal activities.

In Kazakhstan, the land is usually registered in the name of the husband, which is confirmed by the fact that women were not identified as affected landowners. It is therefore unlikely that they will benefit from the compensation packages provided for the landowners. There is no physical relocation foreseen and the 30 m right of way acquired for the new lanes does not have a significant impact on livelihoods and the availability of pasture land in the area.

There are limited business and employment opportunities in the area especially for women. It is recommended that women's employment opportunity on the Project and the related infrastructure is supported. This includes non-traditional positions such as engineers, machine operators and any other positions where qualified women could apply. In case of significant number of resident female workers and employees, the workers' camp should allow for separate facilities for men and women to avoid any unwanted contact or attention. Qualified women are likely to be available to fill positions such as medical professional or service and maintenance service providers in the area of the camp. The engagement of local women and men in employment is encouraged.

There are certain limitations to women's employment according the Government Regulation No. 1220 dated 28th October 2011. Jobs restricted to women under this Government Regulation include mining, metalwork, factories and jobs deemed hazardous, however, women are permitted to work the same night hours as men. The legislation of the RoK guarantees the equal opportunities both for men and women in the employment process and wage rates.

There is a significant gender pay gap in the country that is further enforced by the Constitution Article 24 and the Labour Code Article 22.15 stating that there is no equal remuneration for men and women for the same job. The Law 223-IV dated 8th December 2009 on State Guarantees of Equal Rights and Opportunities for Men and Women Chapter 3, Clause 8 guarantees equal opportunities during the hiring process.

DISRUPTION DURING CONSTRUCTION

During construction the traffic will be organised such that the existing road can be utilised even where widening and realigning is not taking place. A similar approach will be used for the construction of culvert pipes. For bridge construction, temporary road bypasses will used.

During the construction, alternative routes for dirt roads while intersections are constructed should be in place. Communities should not be cut off during construction and also when the road has been built. It was stated that most dirt roads will be connected to the road if used regularly and

that consultation with farmers on this issue will take place. It was noted that there were several dirt road connections to the nearby lake, used for fishing, tourism and leisure activities.

Disruptions of traffic and limited crossing points during the construction phase will cause issues for the general traffic, public transport vehicles, local residents and herders. From a community health and safety perspective it is important that individual construction contractors have their own plans and procedures to raise awareness of scheduled works resulting in disruption of traffic and allocate adequate road signs to ensure safe traffic. In case of lane or road closures, stakeholders such as public transport companies, road users and local residents should be notified so they can plan timetables, trips and schedules accordingly.

A community health and safety plan will be developed by the construction companies to minimise accidents and incidents resulting from road works. The increase in construction vehicles and other heavy goods vehicles carrying construction materials will result in increased noise and dust in the area and likely disruptions in traffic or road closures. Mitigation measures are identified in the ESAP to minimise the impacts.

LIVESTOCK AND LIVELIHOOD

The construction of the new road is unlikely to result in negative impacts on the livestock and livelihoods of farmers and landowners in the area. There is no agricultural production taking place due to the climatic conditions. No agricultural activity that was observed during the visit along the road. There were no herds of cattle, horses or camels observed during the site visit, apart from a few isolated cattle observed near to one of the rest stop areas. Two new cattle underpasses are to be built: one immediately next to Burybaytal and the second next to the bridge through Karaul-Kashkan River that may flood the surrounding ground under the bridge once in 4-6 years and prevent the cattle from crossing for a few weeks. Aksuek herders can use two bridges and the railway overpass to cross their livestock over the road. Temporary crossings will be designated during the construction period to ensure that economic activities of local residents are not disturbed as a result of the construction.

LAND ACQUISITION

The reconstruction of the 62 km section of the highways requires the acquisition of approximately 142 ha of land. Of this, approximately 119 ha will be occupied permanently by the road with the remaining 23 ha being returned. The temporary occupation or permanent removal of land is likely to cause a loss of profits to landowners. The state forestry agency owns the land and an approval for conversion of 'land use' is required before any work begins. Compensation for the loss of their land will be calculated and submitted by state forestry agency. On the re-alignment section near to Aksuek, the land is owned by Asuek Village Council, a similar process of compensation for the loss of land should be undertaken. Similarly, on the re-alignment section near to Burybaytal Station, the land is owned by Shagynak Village Council, and again a similar process of compensation for the loss of land should be undertaken. It is unlikely that there will be any land acquisition that will result in physical or economic displacement of businesses at rest areas near to the road. For those that are on the old road for the re-alignment section near to Burybaytal Station, road access to these businesses will be maintained.

The local government has acquired official data from the Land Registry and has started consultations with affected landowners to inform them about the Project and potential impacts. The land acquisition process will include the valuation of land, compensation payments and consultation with landowners. Land acquired for temporary use for construction pads and other facilities will be re-cultivated, cleaned and returned to the original owner.

It has been recommended in the ESAP that a Livelihood Restoration Framework (LRF) identifying all affected people and compensation framework is developed.

VULNERABLE GROUPS

A vulnerable group assessment has been undertaken to identify whether certain groups of communities affected by the Project prove to be especially sensitive to the impacts. The only settlement close to the road Aksuek Town and Buribaytal Station and the residents of the latter will be directly impacted by the Project. The majority may not be vulnerable but due to their close vicinity to the construction activities they may be disproportionately affected by noise, dust, traffic and vibration. A Construction Environmental Management (inclusive of Traffic Management Plans) will need to be developed.

The only people that might be vulnerable are the herders who reside and work – both formally and informally – on nearby farms, although none were observed. There is only one farm at a distance of 166m metres from the road and no livestock were observed during the drive along the road apart from a few isolated cattle near to one of the rest stop areas.

Herders could potentially be identified as vulnerable in case they use the land informally. The majority of herders are formally/informally employed by land owners and farmers in the area, thus they will be covered by compensation according to Kazakh legislation. However, herders may cross the road or temporarily live there during the seasonal migration or when they transport the animals to the bigger farms to sell them. These informal herders are not recognised under Kazakh national legislation and thus mitigation measures have been identified to assess additional compensation measures or consultation activities to comply with EBRD's PR 5. Compensation might not only be monetary, but ensuring that they have safe road crossings and are informed of any road closures and construction work that might impact on their migration and herding. Recognition and compensation of informal herders and land users is a requirement under the EBRD policy. It may be that there are no informal land users identified, however an assessment should be undertaken to confirm that there are no formal or informal land users.

Depending on the number of workers' migrating to the area, females might be vulnerable to abuse and harassment. As detailed in the contractor management section, a strict code of conduct will apply to the camp area. The influx of migrant workers might escalate the vulnerability of women, though, based on local experts, it is unusual for migrant workers to target the construction industry for employment. They are more likely to work in farms or factories. As the workers camp is based near to Burybaytal Station this situation can arise and therefore it has been proposed that a Code of Conduct is established.

People living with disabilities or other health issues and the elderly might be more vulnerable to the increased noise and dust resulting from construction activities. Some of the residents might be vulnerable at Burybaytal Station.

CONTRACTOR MANAGEMENT

The design is completed. Contractor tenders have not yet been prepared. A contractor will be appointed for the road construction and there will also be the appointment of project management and project supervision roles in the future. In addition, suitably qualified personnel should be appointed to monitor the different contractors undertaking construction activities. It is recommended that independent audits are carried out to ensure that environmental, health and safety standards are complied with and that social issues such as terms and conditions of employment and standards of the camp planned for workers are compliant with EBRD requirements.

The workers camp is proposed to be located near to Burybaytal Station and will provide accommodation for up to 1,050. It was stated that workers' camp will be compliant with IFC

standards² and this has been recommended. There are also a number of planned construction pads.

The construction industry is generally dominated by men, though certain positions could be filled by women – i.e. drivers, engineers etc. Villages nearby should be encouraged to contribute to the supply chain of the camp – e.g. providing food and other services. Although there is only settlement at Burybaytal Station at the end of the road and one nearby isolated farmhouse, therefore there may not be enough people nearby to support the camp. Similarly, it is not clear where the labour force will come from. There may be some that can come from Aksuek but others will need to come from further afield.

It is known that construction health and safety standards do not meet international standards. Tender documents for the procurement of construction companies should include EHSS performance standards that should be met. As a minimum national standards should be met such as the occupational health and safety regulations is provided in **Error! Not a valid bookmark self-reference.** below.

Table 6-1 National Occupational Health and Safety Regulations

ROK REGULATION	RELEVANT REQUIREMENTS
SNiP 1.03-05-2001 “Occupational Health and Safety during the construction” Act on “Occupational Health and Safety” №528-2 from 28.02.2004	<p>Working place conditions shall comply with all sanitary epidemiological requirements</p> <ul style="list-style-type: none"> → Regularly inspect the process to eliminate or reduce risks → Provide information, instruct and examine knowledge of OHAS → Provide safe working conditions, special clothes, PPE, first aid and disinfection. Employees have the right to stop work if the above is not provided with no cost to himself → When work has an aspect of hazard, compensate with additional pay → Provide 0.5 litres of milk daily to the workers involved in hazardous operations → Perform certification of working conditions on operational facilities if the operation mode changes or at least once every 5 years if it remains the same → Investigate accidents and analyse accidents, incapacitation records → Obtain insurance for damage to workers health → Conduct medical examinations once a year → Prevent escalation of accidental situation

It is recommended that these national requirements should be fully met and also go beyond these requirements to meet EBRD requirements that require compliance with EU Occupational Health and Safety (OHS) standards³ that are relevant to the project.

In addition, regular communications on relevant information or changes anticipated that might affect the workforce and the opportunity to provide comments as part of continuous improvement, including how to raise grievances should be undertaken. Furthermore, the following should be undertaken;

- Provision of security to safeguard workers and property;
- Training of workers, and provision of appropriate incentives for them to use and comply with health and safety procedures and protective equipment; and
- Implementation of emergency prevention, preparedness and response arrangements in place.

² EBRD/IFC Guidance Note “Workers’ accommodation: processes and standards”, 2009

³ EU OHS standards mean substantive requirements in EU legislative requirements in the field of safety and health at work setting out minimum health and safety requirements for the protection of workers.

At this stage of the Project, the construction companies i.e. the primary supply chain are unknown. The Client should (as confirmed with the previous EBRD funded section) contain ESAP within the tender documents, so all actions committed to by the Client are included in the contract for the construction companies.

ROAD SAFETY AND DESIGN CONSIDERATIONS

The accident statistics for the 62 km section of road in 2015 are presented in Table 6-2 below.

Table 6-2 Road Accident Statistics (2015)

KM	DATE TIME	VEHICLE	TYPE	FATALITIES	WOUNDED
2173	04.03.17-20	Light vehicle	Head on collision	0	1
2195	19.08/00-05	Light vehicle	Collision	0	1

Although there were only two reported accidents and no fatalities in 2015 on the 62 km section of the road, there have been significant number of accidents over the last few years on the full road alignment.

Under PR4, there is a requirement to take into consideration relevant EU road and traffic safety management standards⁴ and, where appropriate, to undertake a road safety audit for each phase of the project and routinely monitor incident and accident reports to identify and resolve problems or negative safety trends. Where there are vehicles or fleets of vehicles (owned or leased), there should be appropriate training provided to workers on driver and vehicle safety. There should be regular maintenance of all project vehicles.

Reference should be made to the road safety audit team report findings for the identified road safety risks and the mitigation proposed. However during the in-country visit, in discussions with the road safety audit team, key areas for consideration were the locations and safety measures for new bus stops on the road where pedestrians will need to cross the road. This would particularly be an issue for the bus stop that drops off passengers going to Aksuek Town. In addition, it has been requested by the community in the public consultation meeting that an underpass should be provided for agricultural and other vehicles that regularly cross the road.

It has been recommended in the ESAP that a summary of how isolated properties (e.g. the farmhouse) and other sites will have access (e.g. to Lake Balkhash) as there are currently dirt roads joining the road. It is important that they will continue to be able to join the reconstructed road (during construction and when the road is complete and in full use). These roads will only be able to join the road in one direction when the road reconstruction is complete and it is important that they will not have to travel long distances to do a u-turn to travel along the opposite route. For the isolated farm, to access the road to travel south, they will need to travel approximately 2.5 km north on a parallel road to join the reconstructed road. At Burybaytal Station, the inhabitants will have to travel approximately 4.2 km round trip to travel north. At the realigned section near to Burybaytal Station, businesses that were on the existing road will have access to the reconstructed road. A road will be rehabilitated to connect to the reconstructed road up to the where the businesses end. There are two cafes, a petrol station and police station.

⁴ Consistent with the objectives of Directive 2008/96/EC of 19 November 2008 on Road Infrastructure Safety Management.

7 GAP ANALYSIS AND SUPPLEMENTARY INFORMATION

7.1 APPROACH

A gap analysis has been conducted against the EU EIA requirements and best practice. The key findings are presented in this chapter of the report.

7.1.1 AIR QUALITY

There is no baseline air quality monitoring data provided in the EIA. This information is required to calculate the percentage increase in pollutant concentrations due to the proposed scheme and to verify the emissions data for the vehicles, which is used to predict the operational emissions. It is therefore recommended that baseline air quality monitoring for NO₂ should be undertaken at locations along the road alignment for a minimum of three months (although 6 months preferable) prior to the start of construction. A continuous analyser and diffusion tubes would be required. Air quality monitoring locations should be at potentially affected settlements e.g. Burybaytal Station and the four resting areas (two existing and two new areas, where businesses will continue to operate and new businesses will operate in the future respectively).

The EIA identified a number of sensitive settlements from the road alignments. There is no map to shown where these settlements are in relation to the alignment and descriptions of their locations may be more suited to coordinates or grid references.

Ecological habitats, such as Khusandaly Preserved Area, have not been identified as sensitive air quality receptors. A map of the boundary of Khusandaly Preserved Area in relation to the road alignment should be included in the EIA. Potential air quality impacts on this sensitive receptor and any sensitive flora should be considered in the air quality assessment and cross referenced to the flora and fauna section. This information should be provided to demonstrate that all relevant receptors have been considered within the assessment. As shown in Table 7-1 below, the Air Quality Standards in Kazakhstan are either equal to or more stringent than EU standards.

Table 7-1 Air Quality Standards

POLLUTANT	KAZAKHSTAN STANDARDS MCP A/ MG/M3		EU STANDARD			
	20 min	24hours	1 hour average	24 hour average	Annual Average	Maximum daily 8 hour mean
Nitrogen dioxide (NO ₂)	0.085	0.04	0.2 mg/m ³ (may be exceeded 18 times per year)		0.04 mg/m ³	
Particulate matter (PM ₁₀)	0.15	0.05	0.05 mg/m ³ (may be exceeded 35 times per year)		0.04 mg/m ³	
Carbon monoxide (CO)	5.0	3.0				10 mg/m ³
Lead (Pb)	0.001	0.0003			0.0005 mg/m ³	

The EIA provides calculated air emissions for the construction stage (Section 4.2.2, Table 4.6 of the EIA) and states that the predicted emissions will be within the Kazakhstan limit values. The

predicted emissions during construction are provided in tons (with no duration specified) and the standards are provided in mg/m³; it would be better to use the same units before disclosing the document to the public.

The EIA states that the operation air quality assessment is based on traffic data forecasts to 2028 provided in the Feasibility Study, however the data was not provided in the EIA. The assessment only considers the “do-something” scenario, and does not assess the air quality emissions for the “do-nothing” scenario (future baseline).

The EIA provides calculated air quality emissions for operation, but it needs to state what the calculated air quality emissions are measured in – hourly mean, annual mean, daily mean etc. The assessment considers emissions at 20m from the road alignment. At this distance the MPC limit values are not exceeded, so the sensitive land uses beyond this distance are unlikely to be affected. The EIA also needs to state the distance to the nearest residential property along the road alignment, and whether the limit values would be exceeded at the property.

7.1.2 NOISE AND VIBRATION

The EIA identified a number of sensitive settlements from the road alignments, however some isolated properties have not been considered. The report does not identify any ecological habitats that may be sensitive to noise such as Khusandaly, River Shue, Lake Alakoi and Balkhash. The noise effects on the habitat and any protected species it contains should also be considered and cross referenced to the flora and fauna section. This information is required to identify all the potential sensitive noise receptors.

The EIA does not include any baseline noise surveys. It is recommended that a day-time and evening and noise survey is undertaken along the alignments to establish the noise baseline. This information should then be used to identify any locations with existing elevated noise levels, and to consider the implications of any increases on these locations.

There is no prediction of construction noise level. The EIA states that using ‘engineering judgment’ the noise levels are expected to be below the levels in the Kazakhstan regulations. This needs to be supported by appropriate construction noise assessment methodologies. This would be calculated based on the anticipated construction activities and machinery. The assessment needs to consider the impact on sensitive receptors located both near the alignment, construction compounds and haul routes. Construction noise mitigation is included but further details are required. There is no assessment of construction vibration, if there will be any construction activities that are known to generate higher levels of vibration, such a piling or compactors, they should be identified together with appropriate mitigation.

The operational noise assessment states that noise levels will be below the 70dBA limit at 20m from the road without noise barriers and 10m with noise barriers. However, it is not possible to review these findings as the EIA does not contain any information on the method used to predict the noise levels, or the traffic flow figures, and it does not present the actual noise levels that were predicted.

The noise standard in Kazakhstan Regulations is 70-80 dBA. The EU Environmental Noise Directive does not set binding noise limits, it leaves this to the discretion of the member states, however the IFC Environmental Noise Standards are widely applied to projects and provide an alternative international standard. The IFC Standards are set out in **Error! Not a valid bookmark self-reference.** below.

Table 7-2 IFC Environmental Noise Standards

RECEPTOR	IFC ENVIRONMENTAL NOISE STANDARD	
Land Use Type (Receptor)	Daytime (07.00-22.00)	Night Time (22.00-07.00)
Residential Areas	55	45

The IFC noise limits for commercial areas are comparable to the Kazakhstan noise limits, but the IFC noise limits for residential areas is lower. The actual predicted noise levels at 20m from the road were not included in the EIA, so it was not possible to consider whether this lower standard would be exceeded.

It is recommended that the EIA identifies the residential properties closest to the road alignment and calculates the predicted operational noise levels at these locations.

7.1.3 HYDROLOGICAL IMPACTS

SURFACE WATER

It is unclear whether the new bridges are being built adjacent to the existing bridges, and then the older bridges will be demolished, or whether the existing bridges will be demolished and then the new bridges constructed.

The Aksuyek-Burybaytal alignment passes within 500 metres of Lake Alakoi and less than 300m to Lake Balkhash. It is unclear in the EIA whether any permits have been obtained for the rivers and lakes affected by the project. During the visit, it was reported that all permits have been obtained with the exception of the permits required to cover air emissions which have not yet been obtained. However, as per the RoK laws these can be obtained within a year after the commencement of construction works.

During the operation of the road potentially contaminated surface water runoff, will be treated in settlement ponds where necessary. It is likely that this is a reference to interceptors which are gravel filters. Further clarity on the mitigation of surface water runoff is required, including the location of settlement ponds and interceptors, to demonstrate that the surface water will be treated before entering rivers.

The road maintenance regime will involve the use of less toxic de-icing materials.

GROUNDWATER

The impact to groundwater during construction is expected to be low, due to the planned implementation of best practice measures during construction. The road will be on an embankment, with adjacent ditches that will be up to 3m below ground level. The greatest potential for impacts on groundwater is during the bridge construction, the EIA states that impacts are likely to be minimal, but this statement needs further justification.

WATER SUPPLY

The water requirements during construction have been calculated. Section 6.2 of the EIA states that the water supply during construction will be obtained from the existing water supply network within the area. Further clarification is required into the locations of these abstraction areas. A map should be provided to clearly show abstraction locations. While water requirements for workers have been calculated, there is no consideration of baseline water usage by local settlements. Further clarification is required to determine whether that local residents are not adversely impacted by the increase in water consumption.

Even though the water sources have yet to be identified, it was stated during the site visit that technical water is likely to be brought in from lake Balkhash by road tanker on an existing road that will be rehabilitated. A permit is in place for water abstraction from the lake. Potable water will be bought it by road tanker from Aksuek Town and Burybaytal Station. In Aksuek, a water pipeline has been repaired and at Burybaytal station a well will be rehabilitated. From the workers camp, it was reported that foul water will be sent by road tanker to a sewage treatment plant as yet

unidentified but likely to be Aksuek, currently not working. It is probable that waste water will need to be transported to Almaty. Recommendations have made to undertake an assessment of water impacts to include the sources, groundwater recharge rates. A two stage sewage treatment works should be used.

Further measures are required to demonstrate how access to these supplies will be managed during construction. The contractor will be responsible for getting permits to use surface water and groundwater resources. Groundwater recharge rates have been considered, however no data is presented in the EIA. This should be assessed to ensure the project will not deplete supplies in this arid region.

The water requirements during the operation and maintenance of the road have not been calculated.

WASTEWATER

The EIA does not state whether there will be any discharge of wastewater. Permits are required to discharge construction wastewaters to rivers, and the pollutant concentrations must be below set limits. The wastewater discharge locations should be stated and mapped. It is unclear whether any of the proposed discharges to surface water would be affected by the seasonality of the rainfall and temporary nature of some rivers.

The method of treating waste sludge from toilet septic tanks has not been considered or provided.

The EIA states that during construction, the domestic wastewater will be disposed to a concrete septic pit 1.5m x 3m, and then transported to the nearest Waste Water Treatment Plant which has not been specified.

It is not clear how the wastewater from the rest areas will be disposed of during the operation of the road, this should be specified.

7.1.4 OTHER IMPACTS

GEOLOGY AND LAND

There is a large risk of soil erosion during construction, and detailed measures are proposed to reduce the risk. This will require close monitoring during construction to ensure soils are protected.

The EIA does not refer to any identification or testing of potentially contaminated soils along the road alignment. This should be undertaken to avoid the risk of contaminants being mobilised and contaminating further areas, groundwater or surface water during construction.

FLORA AND FAUNA

There are protected species within the preserved area, including antelope. The road could potentially sever the habitat of this species, particularly as the road is on a raised embankment. There are two cattle passes proposed along the road alignment, but it is not clear whether antelope could use these underpasses. The authorities have indicated that the cattle underpasses will not be suitable for crossing of antelope. The EIA does not mention that the four bridges over mostly dry river beds throughout the year will be suitable crossing for wildlife.

The EIA proposes a tree replacement ratio of 1:1 or compensation for deforestation, which should be carried out according to the requirements of Forest Code of the RoK.

CULTURAL RESOURCES

A certified archaeological company has undertaken a study to identify all sites and objects that are of cultural value in the vicinity of the road. The study identified fifteen memorials of particular archaeological historical and cultural interest, including one cemetery, three ancient burial mounds and eleven road accident memorials. The identified cultural sites are located away from the proposed road alignment and do not need to be relocated. If any road accident memorials are discovered in the immediate vicinity of the road, it has been recommended that the appropriate relocation processes are implemented with the informed consent of the owner of the memorial site. Sites should be fenced, if necessary, to ensure that construction activities will not prevent access to sites, or damage, the sites. In addition, 'Chance finds' should be reported to the Institute of Archaeology and other relevant institutions to undertake excavation and full archaeological assessment of the finds.

A summary of the gap analysis findings is presented in Table 7-3 below.

Table 7-3 Environmental and Social Impacts and Mitigation Identified in the EIA

ENVIRONMENTAL RESOURCE	IMPACTS IDENTIFIED IN THE EIA	MITIGATION MEASURES IDENTIFIED IN THE EIA	RECOMMENDATIONS
Construction Period			
Climate and Air Quality	<p>There is potential for air quality impacts on nearby sensitive receptors, particularly farms. The settlements are an isolated farm, Burybaytal Station and rest areas along the road alignment.</p> <p>Predicted air emissions are provided along with the methodology for calculating the prediction.</p>	<p>The contractor will be responsible for minimising dust emissions at all times. Stockpiles of materials will be stored in sheltered areas, away from sensitive areas and will be covered with a tarpaulin and sprayed in dry and windy weather. Any material to be moved will be sprayed prior to movement. Vehicles with open-load carrying areas must have properly fitted side and tail boards. The open-load area will be covered with a tarpaulin in good condition that is properly secured and extends 300mm over the edges of the vehicle's side and tail boards. In periods of high wind, dust generating operations are not permitted within 200m of residential areas downwind. Construction vehicles will be properly maintained and engines must be switched off when not in use. The contractor is responsible for taking measures to limit exhaust emissions from construction vehicles and must submit proposed measures in a mitigation and monitoring plan. Residential or sensitive areas such as nurseries and hospitals must be given advance warning of construction works so they can take appropriate measures to reduce the impact.</p>	<p>Baseline air quality information at residential dwellings near the road alignment should be obtained.</p> <p>Baseline air quality monitoring for NO₂ should be undertaken at locations along the alignment for a minimum of three months (but preferably six months) prior to the start of construction.</p> <p>The air quality monitoring technique and equipment for the construction monitoring should be specified.</p> <p>Visual dust monitoring should be undertaken daily during construction, and dust dampening measures taken if required.</p> <p>A complaints hotline should be established for the duration of the works and the number should be displayed at appropriate locations near the scheme.</p> <p>Work sites should not be located within 200m of residential properties.</p>
Noise and Vibration	<p>There is minor potential for construction noise and vibration impacts to nearby sensitive receptors, such as residential properties and Khusandaly Preserved Area, however the nearest settlement is 70m away and the isolated farm is 166m away. Noise levels at this distance were identified below the MPL.</p> <p>There is also potential for noise and vibration exposure impacts on construction workers.</p>	<p>Zones with noise levels above 80 dBA must be marked with safety signs, and workers within these zones must be provided and wear suitable PPE at all times.</p> <p>Overnight working is not included in the construction plan in order to minimise disturbance.</p> <p>Engines and machinery used in construction shall be insulated to reduce noise emissions and vibration. Speed limits must be in place to maintain traffic noise at a reduced level. Machinery such as compressors must be placed within a soundproof enclosure. The contractor is responsible for ensuring the operation of all equipment and vehicles does not cause unnecessary or excessive noise. The contractor is also responsible for maintaining vehicles and machinery in good condition to reduce noise and vibration emissions. In residential or sensitive areas, contractors will have restricted working times.</p>	<p>Baseline noise and vibration data should be collected for the road currently. Vibration monitoring should take place throughout the life cycle of the project.</p> <p>The noise and vibration associated with construction activities should be calculated.</p> <p>Hearing protection should be provided to construction workers exposed to 85 dBA and above. No workers should be exposed to noise levels over 87dBA.</p> <p>Noise barriers should be placed around the perimeter of the construction works in sensitive areas.</p>

ENVIRONMENTAL RESOURCE	IMPACTS IDENTIFIED IN THE EIA	MITIGATION MEASURES IDENTIFIED IN THE EIA	RECOMMENDATIONS
Water Supply	The EIA includes a calculation of the water required for the project	Suitable water supply sources are identified	Measures need to be included that ensure local residents are not adversely affected by water consumption from the construction work. The water is to be extracted from the existing infrastructure used by local residents Groundwater recharge rates should be assessed
Surface Water	Accidental spillage of materials Run off from bridges containing pollutants entering local surface water courses Rain and melt-water washing dust containing pollutants into surface water receptors De-icing salts collect in small waterways in high concentrations and enter groundwater	Construction Best Practice for the storage of materials and clear-up of any accidental spillages Surface run off from bridges will go through a system of gravel filtration interceptors Rain and melt-water will be removed from the road via a cross slope of 15-40° which drains into surface water gutters with gravel oil interceptors	Mitigation required to reduce or stop the accumulation of salt concentrations in local surface water courses as a result the use of de-icing salts
Groundwater	Soil excavations near the bridges impact on groundwater Infiltration of pollutants into groundwater Infiltration of contaminants from sewage discharge into groundwater	None specified Filter trays (assumed to be gravel filtration interceptors) Precast concrete rings with a diameter of 1.5 m and a depth of 3m will be used to eliminate sewage effluent infiltrating groundwater (assumed to be a septic tank)	The potential for the soil works to impact on groundwater near the bridges needs to be assessed further Further information is required on where sewage will be sent to for treatment and disposal
Wastewater Management	Wastewater infiltration into groundwater	Filter trays (assumed to be gravel filtration interceptors) Precast concrete rings with a diameter of 1.5 m and a depth of 3m will be used to eliminate sewage effluent infiltrating groundwater (assumed to be a septic tank) No other mitigation suggested	A method should be specified to treat domestic wastewater The need for permits should be specified Water quality should be monitored on a regular basis.
Geology and Land	Dust formation can occur due to soil properties, vehicular/ earth movement and climatic conditions A significant volume of topsoil will need to be removed for the road alignment and diversion routes. Care will be required to preserve top soil reinstatement activities Licenced borrow pits need to be	Mitigation measures are specified	Monitoring will be required during construction to ensure the mitigation measures are implemented Baseline soil and geology data needs collection

ENVIRONMENTAL RESOURCE	IMPACTS IDENTIFIED IN THE EIA	MITIGATION MEASURES IDENTIFIED IN THE EIA	RECOMMENDATIONS
	used. Borrow pit assessment is recommended once they are selected. An assessment of the impacts of the construction traffic from the borrow pit will also be required		
Ecosystems and Flora & Fauna	Pollutants from exhaust emissions can impact plant growth and wildlife Metal accumulation in roadside vegetation entering the food chain and potentially impacting on animals Habitat removal and fragmentation in and near to the Khusandaly Preserved Area Hydrological changes associated with cutting and filling (unclear if this is related to vegetation removal) Household and industrial waste occupying roadside habitat.	Fish protection devices (unspecified) Migration paths/tunnels permitting animals to cross under the road Cattle crossings for livestock.	A map of the boundary of this preserved area and the road alignment should be included in the EIA. The EIA identified protected fauna within the preserved area, but needs to give further consideration to several habitats, particularly those used by antelope and other mammals An ecologist should undertake pre-construction surveys to check for the presence of protected species. Any particularly sensitive habitats should be identified and fenced off prior to the commencement of construction Vegetation clearance should not be undertaken during the bird breeding season Detailed information is required on the specification of the fish protection devices proposed, including type and their purpose Further information is also required on the design of the proposed underpasses that will be used by animals
Geohazards / Seismic hazards	Not considered in EIA	None specified	The potential for the road construction and operation to be affected by geohazards should be considered in the EIA. If none are anticipated this should be confirmed The EIA states that the seismic activity is 9 points but the scale is not specified. The potential for seismic activity to affect the road, particularly the bridges, and any design considerations should be assessed
Waste Management	Inert materials will be re-used within the project Hazardous material will be disposed of via existing municipal waste management facilities Timber from felled trees will be stored outside the construction zone and sold to the public as	Wastes will be stored on a 20 cm thick layer of fertile soil at designated waste storage buildings Waste will be removed by "special vehicles" in the designated areas	More information is required on how "special vehicles" remove and transport waste safely Further information is required on the locations of landfill sites

ENVIRONMENTAL RESOURCE	IMPACTS IDENTIFIED IN THE EIA	MITIGATION MEASURES IDENTIFIED IN THE EIA	RECOMMENDATIONS
	firewood		
Cultural Resources	Impacts on the setting of known cultural heritage resources, including burial mounds. Potential destruction of previously undiscovered assets during ground works	An archaeological investigation of a tomb is being undertaken A perimeter fence will be erected 50m from the edge of the burial mounds during construction. A process for ceasing construction works in the event of an archaeological find has been established	A map to show the location of the tomb and burial mounds in relation to the road alignment should be included in the EIA The assessment should consider whether there are areas with a higher potential for undiscovered archaeology to be present, where an archaeological watching brief should be used Measures should be provided to ensure the memorials to traffic accident victims adjacent to the road are sensitively relocated in consultation with those who erected them
Visual Landscape	Not considered in EIA	None specified	The road will introduce a raised structure in a relatively flat landscape; therefore the visual impact of this should be considered Mitigation measures should be provided
Operational Period			
Climate and Air Quality	NO ₂ emissions are above maximum permissible limits at a distance of 30 m	No mitigation proposed	Baseline air quality monitoring for NO ₂ should be undertaken at locations along the road alignment for a minimum of three months (but preferably six months) prior to the start of construction The air emissions for the do-nothing scenario should also be assessed, and the percentage increase in emission calculated Recommend that the data for all pollutants is presented including concentrations at regular distances away from the road and include a map to show potentially affected properties Assess the concentrations of pollutants with the future increased traffic flow
Noise and Vibration	There is potential for noise and vibration impacts on nearby sensitive receptors, particularly residential properties	None specified	The location and type of noise mitigation should be identified and included in the design. This should be based on robust prediction of noise levels
Water Supply	The water requirements during the operation and maintenance of the road have not been calculated	None specified	Indicative water requirements and potential water sources should be provided in the EIA The volume of water required for road maintenance should be considered. Mitigation measures should be outlined to avoid adverse impacts to local resident's

ENVIRONMENTAL RESOURCE	IMPACTS IDENTIFIED IN THE EIA	MITIGATION MEASURES IDENTIFIED IN THE EIA	RECOMMENDATIONS
			water supply.
Surface Water	Intensive surface water runoff during heavy rainfall, and mobilisation of deposited contaminants	Potentially contaminated surface water runoff, will be treated in settlement ponds and filtrated (gravel interceptors)	The location of these ponds and interceptors should be specified in the EIA Maps should be provided to show the locations of interceptors and surface water management measures
Groundwater	Polluted run-off from the road	Use of drainage channels, culverts, and treatment in settlement ponds, before release to surface waters	Locations of drainage channels, culverts, and settlement ponds should be specified in the EIA along with a map Locations of discharge points should also be provided
Wastewater Management	None	None specified	The EIA should state how the wastewater from the rest areas will be managed and where it will be discharged.
Geology and Land	Following the reinstatement and re-cultivation of all bare areas of ground during construction no impacts are anticipated	Land will be re-cultivated using a seed mix suitable for an arid and hot climate	Consideration should be given towards local residents and whether these plant species are suitable for future farming
Ecosystems and Flora & Fauna	Pollutants from exhaust emissions to impact plant growth and wildlife Metal accumulation in roadside vegetation entering the food chain and causing possible impact on animals. Habitat removal and fragmentation in and near to the Khusandaly Preserved Area Hydrological changes associated with cutting and filling (assumed to be vegetation cuttings) Household and industrial waste occupying roadside habitat	Cattle underpasses are included in the design, but it is unclear whether these would be suitable for antelope and other fauna	The EIA and road design needs to include measures to prevent the severance of habitats used by antelope and other mammals. The EIA needs to show the design of the fish protection devices and whether they are a permanent feature Evidence to demonstrate the suitability of underpasses for migrating flora and fauna should be collected
Geohazards/ Seismic	Not considered in EIA	None specified	The potential for the road construction and operation to be affected by geohazards should be considered in the EIA. If none are anticipated this should be confirmed. The EIA states that the seismic activity is 9 points but the scale is not specified. The potential for seismic activity to affect the road, particularly the bridges, and any design considerations should be assessed
Waste Management	Generation of gravel and salt	None specified	The EIA should recognise that sludge from settling ponds

ENVIRONMENTAL RESOURCE	IMPACTS IDENTIFIED IN THE EIA	MITIGATION MEASURES IDENTIFIED IN THE EIA	RECOMMENDATIONS
	from winter road maintenance, sludge from the settling ponds for stormwater, asphalt, gravel and concrete		can have elevated concentrations of heavy metals from polluted road runoff, and this should be assessed within the context of this Project
Cultural Resources	Impacts on the setting of burial mounds	Institute of Archaeology is being consulted to determine whether they would prefer to secure the closure of the five burial grounds or open them to the public	-
Visual landscape	Not considered in EIA	None specified	The road will introduce a raised structure in a relatively flat landscape, therefore the visual impact of this should be considered. The tree felling and replacement, and the stockpiling and reinstatement of bare ground should be included in the assessment. Mitigation measures should be put in place in order to reduce the impact of a raised structure in a flat landscape to visual receptors and the landscape

7.2 ASSESSMENT AGAINST SPECIFIC EIA REQUIREMENTS

7.2.1 KEY EIA REQUIREMENTS

A summary of the compliance status against the EU EIA Directive Annex III is presented in Table 7-4 below.

Table 7-4 Compliance with the EU EIA Directive

NO	REQUIREMENT OF EU EIA DIRECTIVE ANNEX III	COMPLIANCE ASSESSMENT
1	Description of the project	A description of the project is provided in the existing EIA. The mapping provided is not sufficiently detailed
	Description of the physical characteristics of the whole project and the land-use requirements during the construction and operational phases	The project description covers the: <ul style="list-style-type: none"> → Basic concept → Technical concept → Construction approach but not technology. → Limited information on the operating regime
	Description of the main characteristics of the production processes, for instance, nature and quantity of the materials used	The EIA does not include a description of the materials used, estimated quantities and destination
	An estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed project	It provides some estimates, by type and quantity, of expected residues and emissions (water, air, noise, vibration etc.) resulting from the operation of the proposed project. However, others such as the actual predicted noise levels are missing
2	Where appropriate, an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects	Alternatives have not been considered as widening the existing road was considered to have fewer impacts than alternative road alignments
3	A description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.	<p>Population: The EIA identifies some local settlements and refers to properties near the road alignment, but further details are required</p> <p>There is limited information on facilities and infrastructure and the economy</p> <p>Fauna and Flora: The EIA provides insufficient information on terrestrial and aquatic ecosystems and protected species</p> <p>Soil: The EIA describes the existing geology, but lacks information on seismology and geohazards</p> <p>Water: The EIA provides some limited information on the existing hydrology. Pollution sources and water protection are described</p> <p>Air and Climatic factors: The EIA describes the existing meteorology and climate, but does not provide any air quality monitoring data.</p> <p>Material assets including architectural and archaeological heritage and landscape: The EIA describes protected natural and historical landmarks</p> <p>Inter-relationship between above factors: is considered in places.</p>
4	A description (1) of the likely significant effects of the proposed project on the environment resulting from: the existence of the project, the use of natural resources, the emission of pollutants,	<p>The EIA sets out an assessment of the likely significant effects during construction and operation of the proposed road</p> <p>Population: Impacts of traffic, especially during construction and operational stages are not fully identified</p> <p>Fauna: Impacts relating to terrestrial fauna are not fully identified</p> <p>Flora: Impacts on terrestrial flora and the location of protected areas are not fully identified</p>

**NO REQUIREMENT OF EU EIA COMPLIANCE ASSESSMENT
DIRECTIVE ANNEX III**

	the creation of nuisances and the elimination of waste; (1) This description should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project.	Soil: The EIA states that it will only obtain material from existing borrow pits with EIA's and permits. Water: Impacts regarding surface and groundwater quantity (including supply of drinking water) and quality during construction and operation are discussed in the existing EIA Air: Potential sources of emissions and dust problems during construction are identified Climatic factors: Greenhouse gas emission and issues of impacts on the microclimate are not identified Cultural heritage assets: archaeological heritage assets are identified Landscape: Landscape impacts are not considered Positive effects are also listed, such as improved road safety, journey times and economic benefits The existing EIA does not identify whether an impact is direct or indirect; short, medium or long term; or permanent or temporary. Cumulative effects over the environment components, including human settlements are not addressed and quantified within EIA
5	A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.	The EIA sets out the proposed mitigation and offsetting measures during construction and operation. Population: There is a no description of the proposed location of access roads and site compounds. There is no proposed traffic management plan. Further mitigation is required for impacts on the local population Fauna and Flora: Further mitigation measures to protected species are required Soil: seismic activity and geohazards have not been considered Water: Further measures to protect quality of groundwater and surface water are required Air: Further measures may not be required, once the assessment demonstrates the predicted impacts more robustly Climatic factors: Greenhouse gas emission and issues of impacts on the microclimate are not considered Cultural heritage: Measures to protect cultural heritage assets adequately addressed Landscape: Not assessed, but measures to reinstate bare ground and replant trees are included
6	A non-technical summary of the information provided under the above headings	There is no Non-Technical Summary
7	An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information	Not provided

7.2.2 SOCIAL REQUIREMENTS

From the Directive 2011/92/EU of the EP and the Council of 13th December 2011 on the assessment of the effect of certain public and private projects on the environment with regard to social issues:

The directive emphasises the need for effective public participation in decision-making, as well as the participation of associations, organisations especially non-governmental organisations. The directive highlights the public participation ensures accountability and transparency of the decision-making process and raises public awareness of environmental issues. Disclosure of impact assessment documents for public comments is also a requirement under the directive emphasising that the direct and indirect effects on the population, human beings and human health should also be included in the documents.

The information to the public could be communicated by public notices or by other appropriate means such as electronic media, posters, brochures or phone calls early in the assessment process. Reasonable time-frames should be provided for the public to prepare and participate in the consultation activities ensuring that information is made available in an appropriate manner. The results of consultations should be recorded and taken into account during the project.

The public has the right to seek other formal channels to request a review procedure such as cases before a court of law or another independent and impartial body established by law to challenge the legality of decisions, acts and plans.

The Directive was amended in 2014⁵ to include more emphasis on the protection and promotion of cultural heritage and strengthen public access to information. The amendments allows for information to be gathered and incorporated in the design even when it is not coming through a formal stakeholder engagement channel.

The national EIA requirements also provide for early engagement of relevant and interested stakeholders to participate in the decision making and share their opinions and feedback on the Project.

The EIA does not provide for an assessment of impacts on human health, however, covers impacts on population and cultural heritage.

⁵ Directive 2014/52/EU of the EP and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment

8

CONCLUSIONS AND RECOMMENDATIONS

8.1 PROJECT BENEFITS AND KEY IMPACTS

The road project is considered to provide benefits that include a vastly improved road network, with the EBRD potentially funded section part of the overall road connection between Almaty, the largest city and economic and cultural centre, with Astana, the capital. There will be road safety measures that are part of the design (and others that have been identified from the road safety audit) that should greatly improve road safety. The road will serve local and national transport needs as well as the agricultural sector, which is a key sector in Kazakhstan, which will be a major beneficiary. Labour movement will also be enhanced with communities near to the road such as Aksuek benefitting from easier transport links. The road will also be part of a route between China and Western Europe via Western China, through Kazakhstan to Russia. This will be economically beneficial from a trade and tourism perspective. There will be the international transportation of goods produced in countries that include Tajikistan, the Kyrgyz Republic and Uzbekistan. It is thought that the project will also assist the government to strengthen the capacity of agencies responsible for managing the national road network, and to prepare and implement a road safety and road service improvement action plan that will provide system-wide benefits.

From the gap analysis review of the EIA, the review of additional documentation, the site visit to inspect the current road and the discussions held with various stakeholders it is concluded that this Category A project as defined in EBRD's Environmental and Social Policy largely meets the PRs and EU standards, although the EIA needs further work to fully meet the standards. An ESAP has been developed from the gaps that have been identified to provide additional mitigation measures and studies that are recommended to be implemented with the EIA to ensure that the project is fully aligned with the standards. The assessment has been done at a relatively early stage in the lifecycle of this road construction project such that the EIA can be revised and finalised or supplementary information provided and the ESAP implemented.

An area that needs further information and appropriate mitigation, as detailed in this report include those relating to social issues. However, it is concluded that the Project is unlikely to cause any significant, long-term or adverse social impacts. Key social impacts or the projects include:

- Influx of workers residing in labour accommodation on site
- Management of the supply chain
- Livestock crossing during construction
- Land acquisition and compensation for informal land use
- Preservation of cultural heritage and memorial sites along the road
- Community health and safety during construction

Legislation governing resettlement and land acquisition in Kazakhstan does not allow for compensation of informal land users and residents or people who will be indirectly impacted by the Project. It is important to identify people without legal title and provide adequate compensation for any lost livelihoods or housing. It is reported that land required for the road reconstruction is owned by state forestry agency, Aksuek Village Council and Shagynak Village Council. There may be other land owners that were not detailed during the audit visit and have not been identified as yet.

The construction industry in Kazakhstan often fails to comply with labour, health and safety regulations in terms of PPE, work-hours and rest periods. The labour accommodation will be built to provide a residence for workers coming to work on the road. A code of conduct will be developed to minimise conflict with local communities, harassment and anti-social behaviour. The accommodation is proposed to be located near to the Burybaytal Station. In addition, public consultation should be carried out to reach agreement on use of local services and socio-economic and health baseline data should be obtained.

The national legislation does not provide for independent labour inspections, health and safety audits and independent monitoring of land acquisitions. In order to follow international best practice these independent audits should be undertaken on a regular basis, at least annually to monitor Project performance. It is understood that the Committee for Protection of Consumer Rights and Ministry of Labour and Social Protection of Population conduct regular inspections and control through request of reports.

For full details of all the areas of improvement and actions proposed to ensure compliance that have been identified in the audit, refer to the Environment and Social Action Plan (ESAP) in Appendix B, B-1. These should now be considered as part of the road investment plans.

8.2 SUMMARY AGAINST EBRD PERFORMANCE REQUIREMENTS

8.2.1 INTRODUCTION

In respect of specific EBRD Performance Requirements (PRs), the environmental and social appraisal has been conducted against these requirements as presented in the previous chapters. A high level summary of the project against the performance requirements is provided in Table 8-3 overleaf in a compliance summary table in accordance with EBRD guidance.

The compliance summary provides a systematic review of project compliance with the EBRD Environmental and Social Policy, as defined through the applicable Performance Requirements (PRs). The scope of compliance is for all PRs applicable to non-FI projects, such as this project. Following, a review of the PRs all are applicable with the exception of PR 7: Indigenous people and PR 9 Financial Intermediaries.

The details in the compliance table will provide a baseline against which to judge future performance of the project through the annual environmental and social reporting process that is undertaken by EBRD. The compliance table as provided in the ToRs provides between 2 and 10 indicators for each of the applicable PRs: 1 - 10.

8.2.2 EBRD COMPLIANCE SUMMARY GUIDANCE

For all PRs (Indicators with whole number references) a summary of overall compliance with the PR has been provided. Where there are derogations from a PR, a justification has been provided and supporting documents referenced as required.

For each indicator within a PR, three steps have been completed as below in accordance EBRD guidance:

1. Decide whether the indicator is applicable. For Category A and B projects the starting point is that all indicators are applicable unless the project has no significant aspects relevant to the indicator (i.e. no risks), in which case the indicator should be scored "NA" and a brief summary of the reason given. For Category C projects the starting point is all indicators are NA unless the project has a significant aspect relevant to the indicator (i.e. there is a material risk).
2. Decide whether an opinion is possible. If not (for example if the indicator will apply, but it is too early in the project) score as "NOP" and provide a brief summary of why. Where lack of

opinion represents a material omission to the review refer to where this is addressed in the report and summarise any recommendations.

3. Score the indicator as follows and provide brief justification.

Table 8-1 below provides how the indicator scoring is defined.

Table 8-1 Indicator Scoring

INDICATOR	DEFINITION
EC	Exceeding Compliance The project has gone beyond the expectations of EBRD's PR requirements. EBRD should be able to use projects rated EC as a role model for positive Environmental and Social effects.
FC	Fully Compliant: The project is fully in compliance with EBRD's requirements, and EU and local environmental, health and safety policies and guidelines.
PC	Partial Compliance: The project is not in full compliance with EBRD's requirements, but has systems, processes or mitigation measures in place which are working towards addressing the deficiencies.
MN	Material Non-compliance: The project is not in material compliance with EBRD's requirements, and the systems, processes and mitigation measures in place are not working towards addressing the deficiencies.
NA	Not Applicable The project has no significant aspects relevant to the indicator (i.e. no risks), in which case the indicator should be scored "NA".
NOP	No Opinion Possible No opinion is possible (for example if the indicator will apply, but it is too early in the project) score as "NOP".

1. *Comments/Issues:* Provide a brief commentary on the relevance of this requirement for the project and an explanation of the chosen score.
2. *Actions Required:* Where applicable, briefly describe any actions required by the client to achieve full compliance with each requirement. Where a relevant action is included in the ESAP for this project, please provide a reference to the ESAP.
3. *PR Summary:* Provide an overall summary against the PR, using the above compliance definitions with supporting commentary. In some cases it may be sufficient to address a PR at summary level only, depending on Stage 1 above.

Note: The Material Non-compliance score (at both Indicator and PR level) has significant implications for Project approval and requires particular care. In judging whether the measures sufficiently address deficiencies the consultant should consider in a structured way both the level of residual (post-approval) risk and the level of confidence that the Project can successfully bring the issue into compliance with the Policy through the ESAP. Table 10 below illustrates the approach to be taken.

Table 8-2 below illustrates the approach to be taken.

Table 8-2 Risk / Confidence

	High	PC	MN	MN
Risk	Medium	PC	PC	MN
	Low	FC	PC	PC
		High	Medium	Low
		Confidence		

Table 8-3 below provides the EBRD compliance summary table.

Table 8-3 Summary of EBRD Performance Requirements for the Investment Programme

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
1	Assessment and Management of Environmental and Social Impacts and Issues				
	Summary: Impacts have been identified and assessed and are addressed through mitigation measures provided within the EIA. However the EIA needs some further work to meet European Union (EU) standards and therefore a number of additional recommendations are proposed based on the EIA gap analysis and general audit findings to ensure that the project is fully aligned and compliant with best practice, EBRD Performance Requirements and relevant EU standards. Further actions are proposed to ensure there is organisational capacity and commitment.				
1.1	Environmental and Social Assessment	PC	The EIA generally refers to the assessments methods used, but does not consistently set out the approach, or data used. The results of some assessments, such as operational noise, are not provided All permits are in place with the exception of the air emissions permit that can be obtained within one year after the commencement of construction works	Revise the EIA or provide EIA supplements with the provision of additional information and additional studies in areas that include noise and air quality. See Table 7-3 and 7-4 EIA for full gap summary Obtain air emissions permit prior to commencement of construction works	3.1 -3.8 1.6
1.2	Environmental and Social Management Systems	NOP	The Client does not have an environmental management system. The PIU is not formed and therefore it is not known if the PIU will have an environmental management system.	Develop an environmental management system aligned to ISO 14001 for the PIU	1.4
1.3	Environmental and Social Policy ⁶	NOP	It is not known if the Client has an environmental and social policy.	Develop or review and update existing environmental and social policies for the PIU and incorporate into contractual arrangements with contractors.	1.5
1.4	Environmental and Social Management Plan	PC	There is some construction best practice included, but less operational mitigation. The scope of the required mitigation will be difficult to define for some topics due to a lack for robust baseline/impact assessment.	All actions as presented in the ESAP to supplement the EIA	All
1.5	Organisational Capacity and Commitment	PC	The PIU and the Client should have adequate capacity to implement the Project. Although the PIU has not yet been formed. The contractors will also have responsibilities in terms of health and safety, traffic and road safety and environmental performance management. The contractors have not been appointed, so there is not enough information to assess their organisational capacity. In addition, the will be appointments of a PMC/PSC to	Assess organisational capacity after appointment of contractors and the PMC and PSC and implement capacity training as may be required. Ensure adequate staffing levels.	1.2, 1.3 1.9

⁶ Where the project represents a substantial extension to the client activities, confirm that Policy and supporting management systems and plans are appropriate for the new activities.

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
			oversee management of the project.		
1.6	Supply Chain Management	PC	The primary supply chain of the Project includes the construction companies that will be appointed to undertake the construction of the road. According to the Labour Code there will be no child labour or forced labour in the supply chain. Regular inspections of labour conditions and health and safety will be undertaken by the Road Police and other relevant government bodies. The national legislation does not require independent audits of the supply chain.	Independent audit of the supply chain is recommended. Quarterly inspection of contractors' occupational health and safety (OHS) performance. Set up and maintain an EHS incident reporting procedure to maintain records of annual monitoring, accidents and incidents.	2.5 1.7 1.8
1.7	Project Monitoring and Reporting ⁷	PC	There are weak monitoring procedures in Kazakhstan, and the reporting in the EIA lacks baseline data and assessment information.	Annual report on ESAP implementation	1.1
2	Labour and Working Conditions				
	Summary: Construction companies are not appointed yet. Assessment included national legislation in terms and conditions of employment and health and safety regulations. Measures are proposed to ensure full compliance with PR2				
2.1	Human Resource Policies and Working Relationships	NOP	The contractors are not appointed yet, thus it is not possible to review and comment on their HR policies and the working relationships. As an EBRD requirement, they will be required to comply with national legislation.	Upon appointment of contractors, HR policies and practices should be provided for review. As part of the evaluation and selection process, criteria for past performance should be considered and whether there are policies in place.	1.5, 2.1, 2.7
2.2	Child and Forced Labour	FC	Child labour and forced labour are prohibited under the Labour Code of Kazakhstan and thus it is assumed that appointed contractors will be compliant both with EBRD requirements and with national legislation.	No actions required.	-
2.3	Non-Discrimination and Equal Opportunity	PC	The Labour Code of Kazakhstan and additional legislation prohibit non-discrimination and provide equal opportunities, though the construction industry is male dominated.	Upon appointment of contractors, HR policies and practices should be reviewed to confirm the company's stance on non-discrimination and equal opportunities. Employment opportunities for local population with promotion of gender equality As part of the tender / bidding process	1.5, 2.1, 2.2 2.7

⁷ At appraisal stage there will be limited information. Compliance assessment should address specific plans for monitoring and reporting (against for example ESAP requirements) and also consider whether there is evidence of weak monitoring/reporting by client on other relevant projects - which may reduce confidence in future performance.

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
				environmental and social policies should be incorporated into contractual arrangements.	
2.4	Workers Organisations	NOP	It is unlikely that collective bargaining agreements will be enforced by a trade union, as employees will most likely have individual contracts with the main contractor. Depending on the number of employees recruited there might be attempts to set up a workers organisation, though it is too early to provide an opinion on this.	Upon appointment of contractors, HR policies and practices should be reviewed to confirm the company's approach to workers organisation. As part of the tender / bidding process environmental and social policies should be incorporated into contractual arrangements.	1.5, 2.1, 2.7
2.5	Wages, benefits, and conditions of work and accommodation	NOP	The construction companies are not appointed yet, though the EIA contains some measures to ensure that the workers' accommodation is compliant with IFC standards and will contain the necessary facilities to ensure hygienic conditions but full details are not provided. No information on wages and conditions of work is included in the EIA.	Worker camps to fully meet IFC standards. Upon appointment of contractors, review wage and benefit structures and complete a workers accommodation inspection to ensure full compliance with IFC standards. As part of the tender / bidding process environmental and social policies should be incorporated into contractual arrangements.	1.5, 2.1, 2.3, 2.7
2.6	Retrenchment ⁸	NA	Not applicable	No actions required.	-
2.7	Grievance Mechanism	PC/MN	No formal grievance mechanism for the workers or for the Project. The SEP prepared as part of this assignment contains the necessary strategies for internal and external communications including interaction with the contractors and the workers.	Approval and implementation of the SEP.	5.1, 10.1, 10.3
2.8	Non-Employee Workers	NOP	No information available.	Upon appointment of contractors review the companies' stance on non-employee workers. As part of the tender / bidding process environmental and social policies should be incorporated into contractual arrangements.	1.5, 2.1, 2.7
2.9	Supply Chain	NOP	The primary supply chain is the construction companies who will be appointed to undertake the work. The supply chain management issues are not discussed in the EIA.	Compliance on labour and working conditions is required for all construction companies.	2.1
2.10	Security Personnel Requirements	NOP	Security personnel are not discussed in the EIA.	Upon appointment of contractors review their approach to site security.	4.5
3	Resource Efficiency and Pollution Prevention and Control				

⁸ Will not be applicable to many projects at appraisal stage. However evidence, within the last 3 years of client approach to retrenchment which is not compatible with the Policy should be taken into consideration.

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
	NB. Appraisal should carefully consider (and state) what regulations or standards have been applied to compliance assessment (eg EU, National, Sector Best Practice). Assessments should address consideration of the performance of alternative techniques.				
	Summary: A number of action areas have been identified where gaps have been identified in the ESIA as follows.				
3.1	Resource Efficiency	FC	The EIA provides measure to minimise the generation of waste	No actions required.	-
3.2	Pollution Prevention and Control - Air and Noise emissions	PC	Air Quality emissions have been calculated and it is anticipated that they will comply with Kazakhstan and EU limits, once the assessment has been revised to demonstrate the impacts on sensitive receptors more clearly. The EIA states that noise emissions meet Kazakhstan standards, but the supporting assessment information and results were not proved in the EIA. The lower IFC noise standard for residential areas should also be considered	Baseline air quality data is required. Specify air quality monitoring technique and equipment for construction monitoring. Undertake a baseline noise survey. Assess predicted noise and vibration at specified locations.	3.2
3.3	Pollution Prevention and Control - Waste waters	PC	Measures are included but further measures are required and they need to be detailed in the design	Further information required on wastewater treatment and disposal.	3.5
3.4	Greenhouse Gases ⁹	PC	Air emissions are assessed, but greenhouse gasses are not specifically identified, and their impacts are not assessed.	Assess greenhouse gas emissions and microclimate impacts.	3.1
3.5	Water	PC	Water requirements and some sources of water for use during construction have been identified, but groundwater recharge rates have not been considered. Further mitigation measures are required to reduce the risk of surface and groundwater contamination. Avoidance of depletion of water resources in the area is required.	Assess water impacts to include the sources, groundwater recharge rates. Assess water use during the operation and maintenance and how wastewater from rest areas will be managed.	3.4
3.6	Wastes	PC	Anticipated wastes have been calculated and some of the disposal routes have been identified but not all Containment measures for all materials should be identified	Provide information on materials used, estimated quantities and destination. Provide secondary containment measures for materials stored.	3.7, 3.8
3.7	Hazardous Substances and Materials	PC	There has not been an investigation of potentially contaminated materials or any soil testing As above, disposal methods and routes for hazardous materials not identified	Identify or test potentially contaminated soils along the alignment and if the potential for the soil works to impact on groundwater near the bridges needs to be assessed further. Implement monitoring during the construction phase	3.5, 3.6, 3.7, 3.8

⁹ Particular attention should be given to client demonstration of consideration of alternatives. Projects expected annually to produce more than 25,000 tonnes of Co2 equivalent should provide an emission inventory and plans for annual reporting.

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
4	Health and Safety				
	Summary: A number of action areas have been identified where gaps have been identified in the ESIA as follows.				
4.1	Occupational Health and Safety	PC	The EIA details the relevant national legislation governing Construction Safety, Roads Construction, Bridges and Pipes as well as guidance on PPE. The EIA also contains reference to health and safety of the construction camp, hazardous materials and drinking water	Individual contractor's health and safety policies and practices will need to be reviewed upon appointment. Develop integrated Occupational Health and Safety Plan.	2.6 4.2
4.2	Community Health and Safety	NOP	There are no properties along the road section, apart from an isolated farmhouse and the settlement Burybaytal Station. There are some rest areas along the route. There will be road users and possibly herders present during the construction period. Some of the OHS requirements under the national legislation cover fencing of equipment and prohibition of a public presence on the construction site. The signage of roads and facilitation of traffic and livestock crossing will be the sole responsibility of the individual construction companies. Community health and safety has not been assessed in the EIA, it only refers to environmental and health impacts and possible emergency situations	Upon appointment of contractors, review community health and safety plans and actions. Provide a summary of how isolated properties with dirt roads joining the road will continue to be able to join the reconstructed road (during construction and when the road is complete and in full use). Prepare site-specific Emergency Preparedness and Response Plan Independent audits of traffic and road safety measures introduced specifically for the site Develop Construction Environmental Management Plans, which should include traffic management plans Review locations and safety measures for new bus stops on road where pedestrians will need to cross road	2.6, 4.1, 4.3, 4.4, 4.6, 4.7
4.3	Infrastructure, Building, and Equipment Design and Safety	NA	Not applicable (Only traffic and road safety have been considered within the scope, as undertaken by road safety audit team with key recommendation areas summarised in this report). For the full list of recommendations, refer to the road safety audit report.	No actions required.	-
4.4	Hazardous Materials Safety	PC	The potential for contaminated or hazardous material to be present along the alignment has not been assessed in the EIA. Containment measures for all materials should be identified	Identify or test potentially contaminated soils along the alignment and if the potential for the soil works to impact on groundwater near the bridges needs to be assessed further. Implement monitoring during the construction phase. Provide information on materials used, estimated quantities and destination. Provide secondary containment measures for materials stored.	3.6, 3.7
4.5	Product and Services Safety	NA	Not applicable (Only traffic and road safety have been considered within the scope, as undertaken by the road safety	No actions required.	

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
			audit team with key recommendation areas summarised in this report). For the full list of recommendations, refer to the road safety audit report.		
4.6	Traffic and Road Safety	PC	A number of road safety concerns have been raised by the road safety audit team. From a social perspective, some of the key issues relate to location and safety measures for bus stops and the provision of an additional underpass for agricultural and other vehicles as has been requested in public consultation meetings	Pedestrian road safety crossing and location of bus stops to be reviewed Introduction of an additional crossing for agricultural and other vehicles Refer to recommendations provided in the road safety audit report.	4.7, 4.8
4.7	Natural Hazards	MN	A quantified level of seismic activity provided but scale not provided and other geohazards have not been considered in the EIA.	Consideration should be given to geohazards and if none are anticipated this should be confirmed.	3.7
4.8	Exposure to Disease	PC	There is no assessment of communicable diseases resulting from the influx of workers.	Consider local employment For labour accommodation, provide separate facilities for men and women to avoid any unwanted contact or attention. Camp to meet IFC standards that set out security and hygiene requirements. Code of conduct to be developed	2.2, 2.3
4.9	Emergency Preparedness and Response	PC	Reference to emergency preparedness is included but not specific actions	Prepare a site-specific Emergency Preparedness and Response Plan in consultation with contractors, sub-contractors, local emergency service providers and authorities.	4.3
5	Land Acquisition, Involuntary Resettlement and Economic Displacement				
	Summary: No physical or economic displacement is foreseen. Although there will be land acquisition for the road reconstruction, as two sections of the 62 km road will be realigned. These two sections are at the northern and southern ends of the road. The land that will be required for the land acquisition is not currently in use, and was observed to not have any informal agricultural or other commercial activities. Approximately 142 ha of land is required for acquisition. Of this, approximately 119 ha will be occupied permanently by the road with the remaining 23 ha being returned. The land is owned by state forestry agency and Aksuek Village Council. There may be others that have not been identified.				
5.1	Avoid or minimise displacement	FC	The preparation of the EIA included an analysis of alternatives. The road to be reconstructed does not go through settlements resulting in physical relocation. The land acquisition required for the project will have no significant impact on livelihoods and will result in no physical or economic displacement. The rest areas are considered to be far enough from the road and no agricultural activities were seen near to the road. The land acquisition –both temporary and permanent – will result in restricted crossing options for formal and informal herders farmers in the area.	No actions required.	-

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
5.2	Consultation	PC	The majority of the land owned by the state forestry agency who has been contacted and informed about the project. The re-aligned section near to Aksuek is owned by Aksuek Village Council and near to Burybaytal Station the land is owned by Shagynak Village Council. There is no process by which requires the identification of informal land owners and users for consultation and information disclosure. The land is most likely used by the residents of Aksuek village who participated in the February 2015 public meetings and know about the project. To date there has been no specific land acquisition consultations undertaken.	Approval and implementation of SEP by the Client Develop Land Acquisition and Compensation Framework For temporary structures re-cultivate and return to owners Audit land acquisition and compensation activities	5.1, 5.2, 5.3, 5.4, 10.1, 10.3
5.3	Compensation for displaced persons	PC	Compensation will follow Kazakh national legislation that recognises only the legal owners of the land and excludes informal land users and residents of the land. Compensation measures for legal owners and land users are in line with EBRD's requirements, however, Kazakh legislation does not allow for identification and compensation for informal land users or residents. Compensation in this case covers monetary and non-monetary services such as provision of crossing points, information dissemination on road works and other impacts that might hinder livestock activities thus forcing farmers to seek alternative crossing points or grazing land.	Identify informal land users and residents and compensate for any loss resulting from the land acquisition.	5.2
5.4	Grievance mechanism	PC	Affected people can seek alternative routes to submit complaints, though there is no formalised grievance mechanism set up for the Project. As part of the SEP prepared a grievance mechanism has been set up with designated roles and responsibilities.	Approval and implementation of the grievance mechanism detailed in the SEP.	10.1, 10.3
5.5	RAP/LRP documentation	NA	There is no physical or economic displacement foreseen as part of the project, so there is no need for a Resettlement Action Plan or a Livelihood Restoration Plan. The impacts on land acquisition are not significant as there is thought to only be the state forestry agency, Aksuek Village Council and Shagynak Village Council that own land that will be required temporarily or permanently for the road construction. As such, the ESAP actions are considered adequate to address land acquisition.	No actions required.	-
5.6	RAP/LRP implementation	NA	As above	No actions required.	-
5.7	Monitoring	PC	Monitoring of land acquisition related activities will form part of the annual monitoring of the Project performance, as all land	Independent audit of land acquisition activities.	5.4

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
			acquisition related actions will form part of the ESAP. There will be requirements to monitor environmental and social impacts of the Project including those of resettlement and land acquisition activities.		
6	Biodiversity and Living Natural Resources				
	Summary:				
	A number of action areas have been identified where gaps have been identified in the ESIA as follows.				
6.1	Assessment of Biodiversity and Living Natural Resources	PC	Protected habitats and species have been identified, but the potential severance of the habitat of antelope and other fauna, needs to be mitigated adequately. Although the new underpasses and the 4 bridges across dry river beds may provide sufficient crossing points Fish protection devices have been included in EIA although insufficient detail is provided on their purpose and locations	Under pre-construction surveys using a trained ecologist to check for the presence of protected species and do not undertake vegetation clearing during bird breeding season	6.1
6.2	Conservation of Biodiversity	PC	As above	As above	6.1
6.3	Sustainable Management of Living Natural Resources	PC	As above	As above	6.1
7	Indigenous People				
	Summary:				
	Not applicable as there are no indigenous people in the Republic of Kazakhstan.				
7.1	Indigenous People Assessment	NA	There are no indigenous peoples.	No actions required.	-
7.2	Adverse Effects Avoidance and Indigenous Peoples Development Plan	NA	There are no indigenous peoples.	No actions required.	-
7.3	Information Disclosure, Meaningful Consultation and Informed Participation	NA	There are no indigenous peoples.	No actions required.	-
7.4	Grievance Mechanism and Prevention of Ethnically Based Discrimination	FC	The grievance mechanism set up under the new SEP will provide equal opportunities and multiple channels for all interested and relevant stakeholders to submit complaints or grievances. Under the national legislation, advertisements publicising the public hearings are required to be both in Kazakh and Russian to ensure inclusivity.	No actions required.	-
7.5	Compensation and Benefit-Sharing	NA	There are no indigenous peoples	No actions required.	-
7.6	Impacts/Relocation on Traditional or Customary Lands and Cultural Heritage	FC	Herding is a traditional employment and lifestyle in the steppe of Kazakhstan. The Project will have no significant long-term impact on this lifestyle and activity for local residents. Cattle crossings have been included in the design to ensure that	No actions required.	-

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
			herding can continue after the road development and temporary crossing points will be set up during the construction period to ensure undisturbed livestock crossing.		
8	Cultural Heritage				
	Summary:				
	Archaeological assessment has been undertaken and all sites of cultural significant have been identified. Measures are proposed to ensure memorials are preserved				
8.1	Assessment and Management of Impacts on Cultural Heritage	PC	A certified archaeological company has undertaken a study to identify all sites and objects that are of cultural significance in the vicinity of the road. This study identified 11 fatal road accident memorials, a modern closed Muslim/Christian cemetery and three ancient burial mounds of unknown age.	Mitigation measures to preserve sites of cultural significance and archaeological sites and memorial sites Set up a chance find procedure	8.1, 8.2, 8.3
8.2	Consultation with affected communities and other stakeholders	PC	Public consultation has taken place once.	Approval and implementation of the grievance mechanism detailed in the SEP	10.1, 10.3
8.3	Project use of Cultural Heritage	FC	Cultural heritage in the form of roadside monuments for accidents will be protected	No actions required.	-
10	Information Disclosure and Stakeholder Engagement				
	Summary:				
	Public consultation has taken place and a further public consultation meeting took place at the end of March 2015 following disclosure of a revised ESIA. Measures are proposed to strengthen stakeholder engagement activities				
10.1	Stakeholder Engagement Plan	PC	Stakeholder engagement is a requirement under national legislation and a public hearing consultation has taken place once. A more formalised systematic stakeholder engagement programme has been developed for the project identifying all relevant and interested stakeholders and the appropriate communication methods with them. The SEP contains the roles and responsibilities, frequency of consultation activities and monitoring requirements. The SEP provides the details of information to be disclosed and the timeframes.	Approval and implementation of the SEP. Disclosure of documents in the public domain that include a NTS of the project. An appointment to manage the implementation of the SEP is required.	10.1, 10.2, 10.3, 10.4, 10.5
10.2	Operational Grievance Mechanism	PC	Due to the bottom-up approach of stakeholder engagement, affected people and other stakeholders can easily find a way to officially file complaints or grievances through local authorities. A more formalised grievance procedure has been developed as part of the SEP to ensure compliance with EBRD requirements.	Approval and implementation of a grievance mechanism included in the SEP.	10.1, 10.3
	Overall Compliance				
	National Environmental, Social, Health and Safety Requirements	FC/PC	The project is generally compliant with regard to national EIA requirements.	Obtain all necessary operational and environmental permits prior to commencement of	1.6

KPI REF.	PERFORMANCE REQUIREMENT	SCORE	COMMENTS / ISSUES	ACTIONS REQUIRED	ESAP REF.
				construction works such as the air emissions permit.	
	EU Environmental, Social, Health and Safety Requirements	PC	As per comments provided in this table.	Actions proposed in this table.	all

Appendix A

SITE PLANS, MAPS AND PHOTOGRAPHS

APPENDIX A-1

ALIGNMENT DIAGRAMS

Diagram 1: Start of Road Alignment

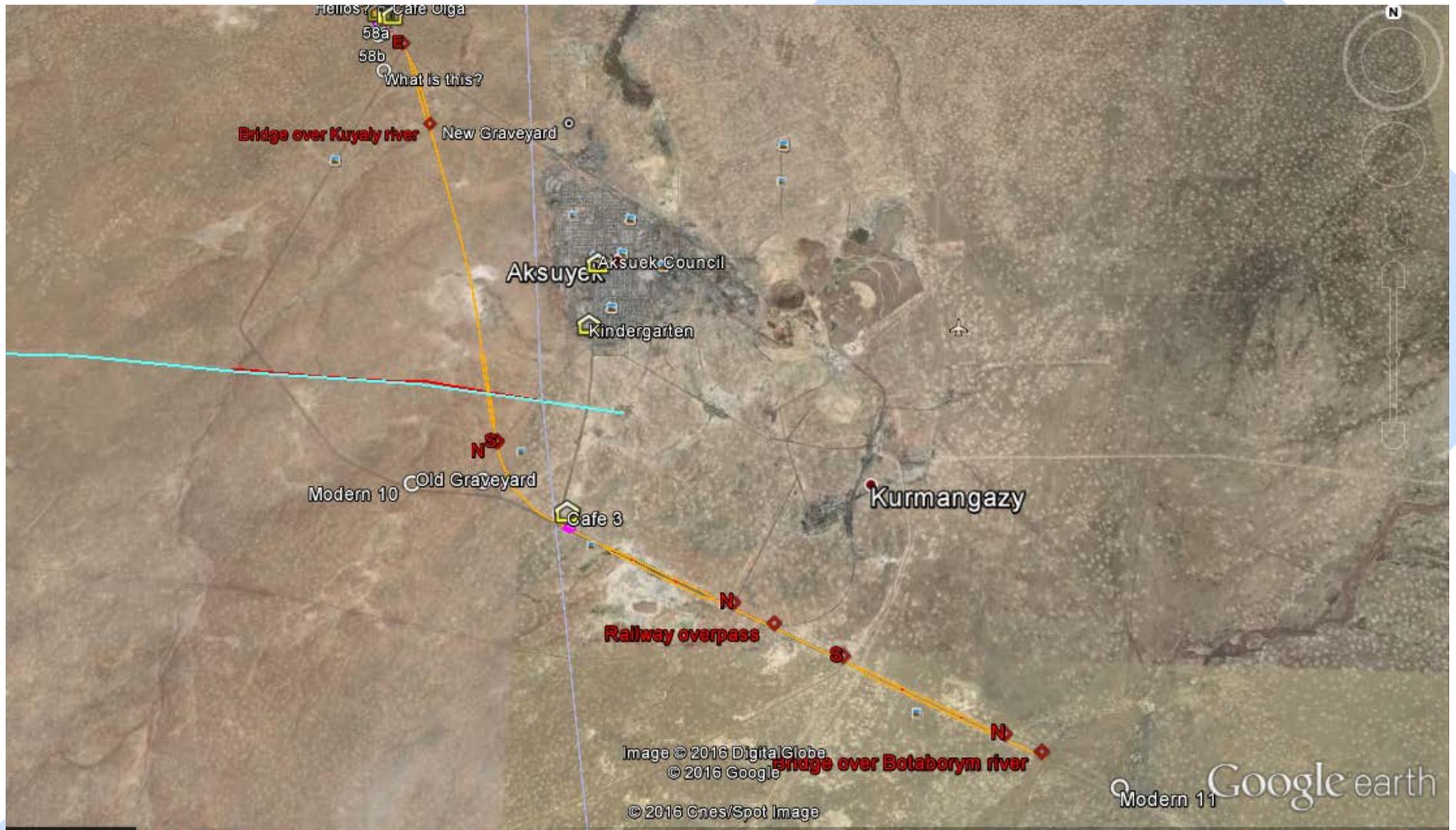


Diagram 2: Continuation of Road Alignment

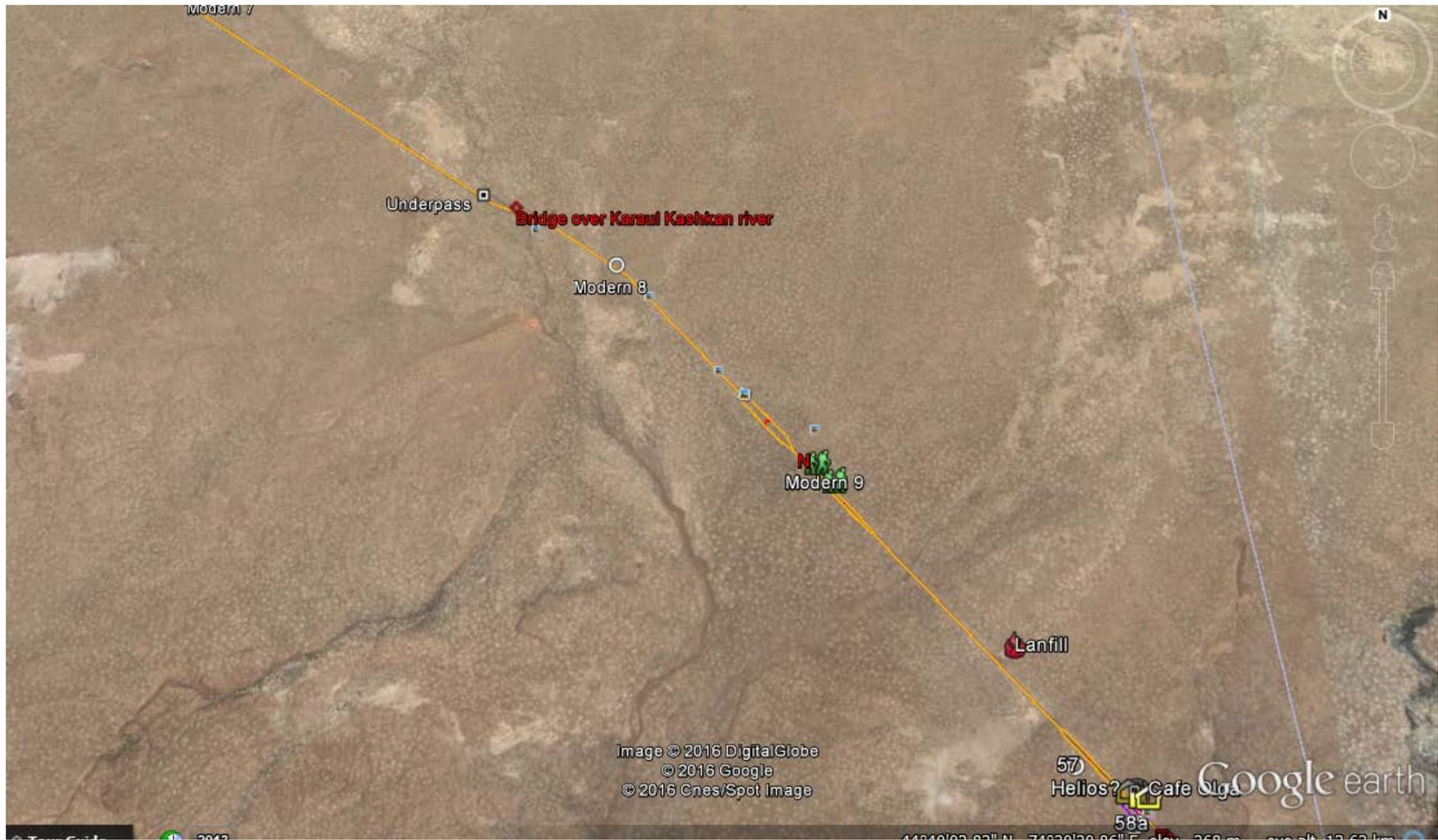


Diagram 3: Continuation of Road Alignment

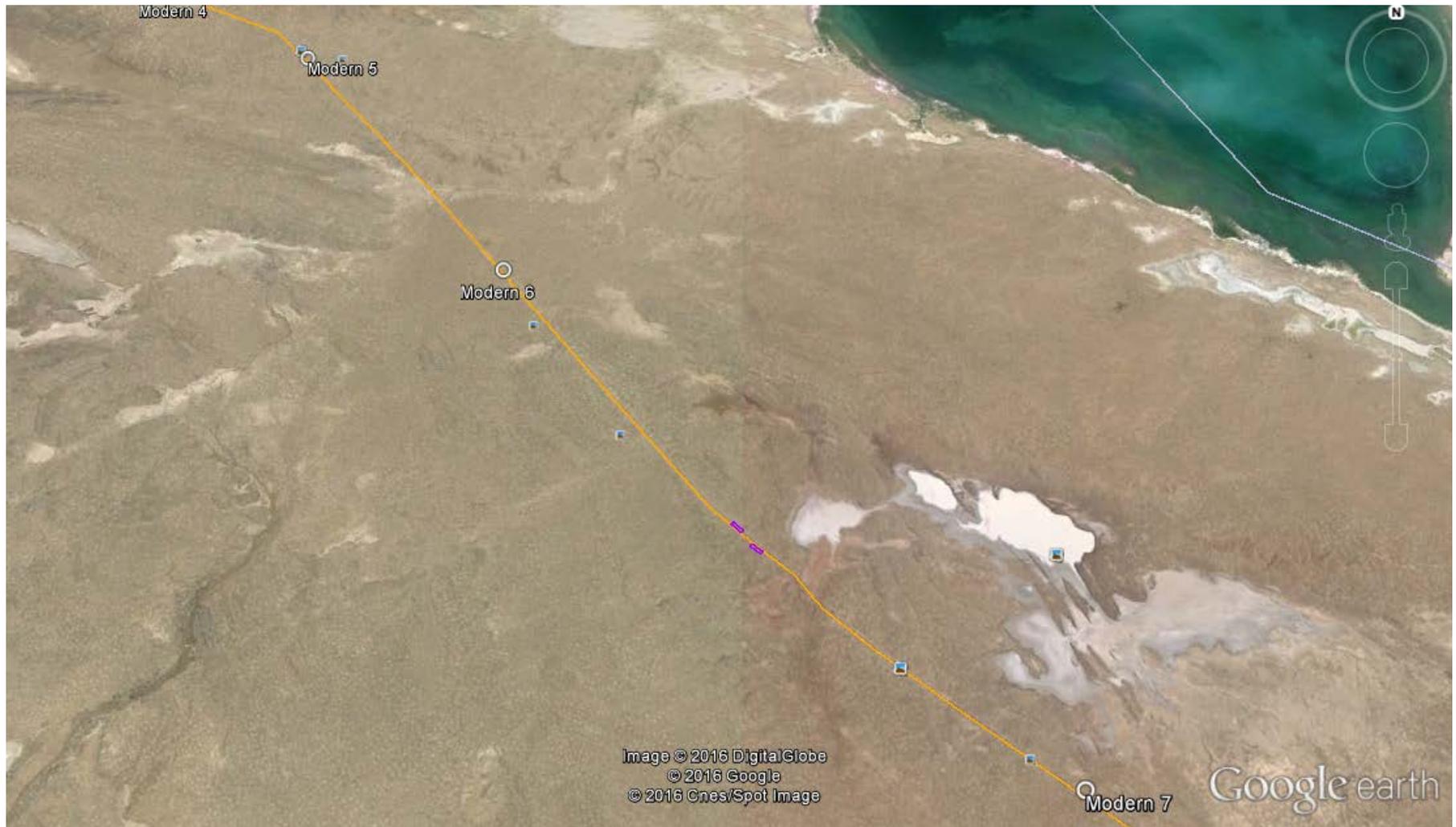
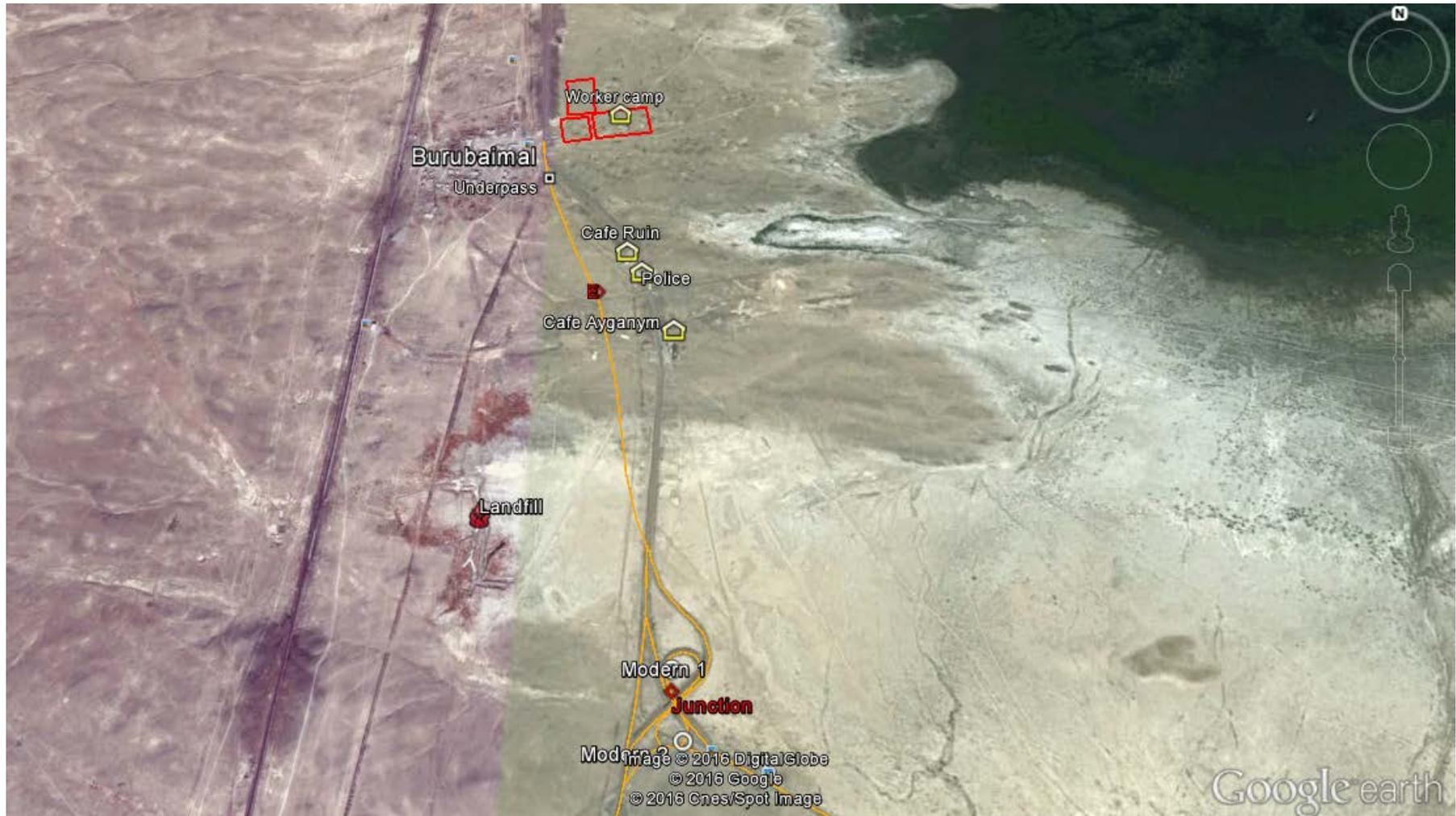


Diagram 4: Continuation of Road Alignment



Diagram 5: Final Section of Road Alignment



APPENDIX A-2

PHOTOGRAPHS

Photo 1: Start of Road Section



Photo 2: Bridge on Road Section



Photo 3: Cemetery near Road and Realigned Section



Photo 4: Rest Area on Road Section



Photo 5: Burybaytal Station



Photo 6: Area Proposed for Camp



Photo 7: School in Burybaytal Station



Photo 8: Lake near to Road



Photo 9: Dirt Road from Lake to Road



Photo 10: Memorial near to Road



Appendix B

ESAP AND DOCUMENTS CONSULTED

APPENDIX B-1

ESAP

Table 8-4 Environmental and Social Action Plan

NO	ACTION	ENVIRONMENTAL & SOCIAL RISKS (LIABILITY / BENEFITS)	REQUIREMENT (LEGISLATIVE, EBRD PR, BEST PRACTICE)	RESOURCES, INVESTMENT NEEDS, RESPONSIBILITY	TIMETABLE	TARGET AND EVALUATION CRITERIA FOR SUCCESSFUL IMPLEMENTATION	STATUS
PR1 Assessment and Management of Environmental and Social Impacts and Issues							
1.1	Incorporate this ESAP so that the Project is structured to comply with the Bank's Performance Requirements. Prepare annual monitoring reports on the status of ESAP implementation. Include in the report stakeholder engagement activities and resolution of grievances	Compliance with EBRD performance standards	EBRD PR1 to PR10 excluding PR7 & PR9	Own resources and Project Implementation Unit (PIU)	Annual submission	Report on ESAP implementation status and stakeholder engagement activities and resolution of grievances against a regularly updated grievance log	
1.2	Clearly identify team structures, organisations roles and responsibilities (JSC Kazautozhol) Confirm PIU and specialists responsible for the management of environmental and social issues Inform on appointments of contractors, project management consultants (PMC), construction supervision consultants (CSC) and any other key appointments	Compliance with EBRD performance standards	EBRD PR1	Own resources and PIU	PIU on appointment, others as part of annual submissions	Provision of management structure, roles and responsibilities (including contracting companies) Names of companies appointed	
1.3	Assess the capacity of implementing units, contractors, organisations, PMCs, CSCs and other key appointments Develop workforce capacity building programmes for successful project implementation	Compliance with EBRD Performance standards	EBRD PR1	Own resources, PIU and external consultants	On appointment and continue as part of the annual review	Report on assessment of capacity Training requirements identified and implemented	
1.4	Develop and implement Environmental Management Plan for PIU taking into account the best international practice aligned to ISO 14001	Optimisation of environmental management through a formalised system	EBRD PR1 Voluntary and best practice	PIU EMS and own resources and /or external consultants (cost dependent on extent of support)	End of 2017	Develop and implement an EMS Annual EHS Report to the Bank	
1.5	Review labour and social policies and incorporate into contractual arrangements with contractors – to include terms of employment, skills, dismissal, discrimination, harassment, violations, human rights, forced and child labour, wages and social leave/benefits and bribery and corruption	Contractor management	EBRD PR1, PR4	Provided by contractors and verified by the PIU	Prior to construction activities	Contractor employment and social policies Consolidated report including pp.2.1 and 4.2	
1.6	Permits are in place, with the exception of permits required to cover air emissions. However, as per Kazakhstan laws these can be obtained within a year after the commencement of construction works. If there are any design changes, obtain the necessary permits again prior to commencements of activities for which the permits are required. These include permits of	Compliance with the Republic of Kazakhstan regulatory requirements	EBRD PR1, PR4	Internal resource with support of PIU and /or resourced externally (for technical support in application processes)	Prior to construction activities commencing	Correspondence with regulatory bodies, copies of permits and certificate	

	temporary and permanent land use – construction pads, spoil dumps, contractor camps, batching plant and also environmental permits to cover air emissions, water use etc. that have not yet been obtained					
1.7	Conduct monthly inspection of contractors' occupational health and safety (OHS) performance. Contractor's report on performance to EBRD every six months during construction	Ensure contractor adoption of EBRD requirements for OHS	EBRD PR1	Own resources and /or external consultants	During construction	Report submitted to the Bank as part of annual report
1.8	Set up and maintain an Environmental, Health and Safety (EHS) incident reporting procedure to maintain records of annual monitoring, accidents and incidents. The procedure must be overarching, unique and integrated for the Project and for the contractors located on site	Set up an EHS incident reporting procedure	EBRD PR1	Own resources and contractors	Prior to construction	Monthly EHS reports on the project made by the contractor. Reports to the Bank within annual report
1.9	Client, contractors, PMCs, CSCs to provide sufficient staffing to manage the environmental, health and safety and social performance of the Project	Ensure appropriate Organisation Capacity and Competency	EBRD PR1	Own resources, PMCs, CSCs and contractors	Prior to start of construction and during the mobilization	Appointment letter of EHS management. Outline of all key staff roles and adequate staffing levels
PR2 Labour and Working Conditions						
2.1	Develop and adopt a Human Resource (HR) Policy and management system covering all employees, contractors and sub-contractors, to include (but not be limited to): → Approach to managing its workforce → Management of worker relationships → Access to worker's organisations → Working conditions and terms of employment → Child labour and forced labour policies → Equal opportunities and non-discrimination → Oversight provided of contractor policies/procedures → Access by all workers to policy/procedures in their language(s)	To ensure management of workforce in line with EBRD requirements.	EBRD PR2 Labour Code of the Republic of Kazakhstan	Own resources and PIU	HR policy developed and adopted: prior to further construction activities Contractor policies/ procedures reviewed/ approved: prior to work on-site HR Policies implemented throughout construction and operation	Consolidated report with pp.1.5 and 4.2 Technical specifications to the contract documentation Written HR policies compliant with EBRD PR2 and the national Labour Code
2.2	Consider the possibility to employ the local population taking into account gender policy (local skilled labour is potentially available in Aksuek Town and Burybaytal station)	Provision of equal opportunities and improving economic prospects of local residents	EBRD PR2	Own resources	Prior to and during construction	Report on employing local residents taking into account gender policy within the annual monitoring report
2.3	Document the constructors' labour accommodation strategy and principles. Develop a code of conduct adopted to govern life in the workers camp specific to	To standardise accommodation provided to the	EBRD PR2	Own resources, PIU and construction companies	Prior to construction of labour	Technical statement to the contract documentation Code of conduct for camp

	<p>the Project and the site</p> <p>Identify a suitable location of accommodation with consideration for utilising existing capacity in accommodation and other local amenities e.g. Aksuek Town</p> <p>The existing accommodation or new camp is to be arranged / designed to ensure it meets EBRD / IFC standards. Develop a camp specific code of conduct.</p>	<p>workers employed by the contractors</p> <p>To minimise the impact of any in-migration of construction workers on local communities</p>			<p>accommodation, or camp being accommodated by workers. To be incorporated into tender documents</p>	<p>residents</p>
2.4	<p>Consideration of the applications from the local residents in their language (s) in accordance with the legislation of the Republic of Kazakhstan</p> <p>Set up and maintain a formal grievance mechanism for employees and contractors and disseminate information about its uses to the workforce in the language(s) of the workers</p>	<p>To provide a channel for raising workers' concerns and a transparent, consistent mechanism for resolution</p>	EBRD PR2	Own resources	<p>Prior to construction and at regular intervals throughout construction, Report to EBRD on grievances and resolutions proposed</p>	<p>Adoption of formal grievance mechanism detailed in the Stakeholder Engagement Plan(SEP) and human resources policies</p>
2.5	<p>Arrangement of inspections involving independent consultants and other state and non-government organizations in order to audit the compliance of contractors with the Labour Code of the Republic of Kazakhstan and international standards</p>	<p>To prevent non-compliance with the requirements of the employment policy of EBRD and Labour Code of Republic of Kazakhstan</p>	EBRD PR2	Own resources and PIU	<p>Audit arrangement within 3 months after the project mobilization</p>	<p>Within the annual monitoring report</p>
2.6	<p>Develop human resources policies and management plans covering non-employee and third party workers to manage supply chain</p>	<p>To minimise supply chain risks</p>	EBRD PR 2	Own resources and PIU	<p>Prior to engaging any third party workers</p>	<p>Human resources and management policy for supply chain and third party workers</p>
2.7	<p>Undertake the tender process for the construction works to identify contractors with inclusion of environmental, health and safety performance, accidents statics, management systems and policies</p>	<p>Contractor management</p>	EBRD PR1, PR2, PR 4	Own resources with support of PIU	<p>During contractor selection process</p>	<p>Tender documentation</p>
PR3 Resource Efficiency and Pollution Prevention and Control						
3.1	<p>Implementation of recommendations provided by consultants in EIA and in the report:</p> <p>→ To amend EIA and provide the requested supplementary information.</p>	<p>Environmental impacts</p>	EU EIA	Own resources, PIU, CSC and contractors	<p>Prior to and during the construction</p>	<p>Progress report within the annual monitoring report</p>
3.2	<p>Undertake baseline air quality monitoring for NO₂ at locations along the alignment for a minimum of 3 months (and preferable 6 months) prior to the start of construction.</p> <p>Undertake visual dust monitoring daily during construction, and dust dampening measures taken if</p>	<p>Environmental impacts</p>	EU EIA	Own resources, PIU, CSC and contractors	<p>After defining the contractor in accordance with the work schedule</p>	<p>Progress report within the annual monitoring report</p>

	<p>required</p> <p>Establish a complaints hotline for the duration of the works and the number should be displayed at appropriate locations near the road</p> <p>Locations should be at potentially affected settlements – e.g. Burybaytal Station and 4 resting areas (2 existing and 2 new areas, where businesses will continue to operate and new businesses will operate in the future respectively)</p>					
3.3	<p>Undertake day-time, evening and night-time noise surveys along the alignment to establish the noise baseline. This information should then be used to identify any locations with existing elevated noise levels, and to consider the implications of any increases on these locations</p> <p>Predict construction noise and vibration at specified locations</p> <p>Locations should be at potentially affected settlements – e.g. Burybaytal Railway Station and 4 resting areas (2 existing and 2 new areas, where businesses will continue to operate and new businesses will operate in the future respectively)</p> <p>Perform regular monitoring of noise and vibration during construction at work sites and at specified locations. Identify activities that generate large noise volumes, such as crushers and pilling, and located them away from noise receptors. Measure their noise effects to ensure noise limits are not exceeded</p>	Environmental impacts	EU EIA	Own resources, PIU, CSC and contractors	After defining the contractor in accordance with the work schedule	Progress report within the annual monitoring report
3.4	<p>Technical water will be transported by road tanker from Lake Balkhash on an existing road that will be rehabilitated. A permit is in place for water abstraction from the lake. Drinking water will be sourced from an existing well and pipeline to provide water for the workers camp.</p> <p>Undertake an assessment of water impacts to include the sources, groundwater recharge rates</p> <p>Identify how wastewater will be managed (not currently specified). This needs to be managed to avoid polluting Lake Balkhash, groundwater, the four rivers which the road crosses and the Nature Reserve within which the scheme is located. Ensure that the contractor sends wastewater to a two stage sewage treatment works</p> <p>Specify measures that will be used such as interceptors for surface water capture and treatment (at 18 construction pads, with a total area of 9 hectares. 5 will be next to bridges, although riverbed is mostly dry</p>	Environmental impacts	EU EIA	Own resources, PIU, CSC and contractors	After defining the contractor in accordance with M&A During and after construction	Progress report within the annual monitoring report

3.5	Supervise potentially contaminated soils along the alignment The potential for the soil works to impact on groundwater near the bridges needs to be assessed further Implement monitoring during the construction phase	Environmental impacts	EU EIA	Own resources, PIU, CSC and contractors	During construction	Progress report within the annual monitoring report
3.6	Consideration should be given to geohazards and if none are anticipated this should be confirmed	Environmental impacts	EU EIA	Own resources, PIU, CSC and contractors	During geological works	Progress report within the annual monitoring report
3.7	Provide secondary containment measures for hazardous materials and stored in construction compounds. Use fluid catchment trays in vehicle refuelling areas	Environmental impacts	EU EIA	Own resources, PIU, CSC and contractors	After defining the contractor in accordance with M&A During construction	Progress report within the annual monitoring report
3.8	Identify licensed facilities for disposal of construction waste and other waste streams including hazardous waste. (not currently identified)	Environmental impacts	EU EIA	Own resources, PIU, CSC and contractors	During construction	Progress report within the annual monitoring report
PR4 Health and Safety						
4.1	Provide a summary of how isolated properties (e.g. the farmhouse) and other sites will have access (e.g. to Lake Balkhash) as there are currently dirt roads joining the road. Ensure they will continue to be able to join the reconstructed road (during construction and when the road is complete and in full use)	Avoidance of local population severance	PR4	Own resource (with design company), PIU, CSC and/or contractors	After defining the contractor in accordance with M&A	Report on findings, with changes to road design as needed
4.2	Develop an integrated Occupational Health and Safety Plan that is compliant with national legislation, monitoring and management systems to cover any operation of the Project. The system should cover: → Job- and task-specific hazard analysis and controls → PPE requirements and enforcement mechanisms → Designation and enforcement of smoking/non-smoking areas → Safety training for all personnel in their own language(s) → Review of contractors OHS plans, to meet the same standards as Project Company plans → Oversight of contractor OHS development / implementation, including mandatory reporting to CSC → Record-keeping, including total work-hours, lost work-hours due to accidents/incidents, description of lost-time incidents, hospitalisations, fatalities → Toolbox talks to share information on risks, accident prevention, etc. The same integrated document must be applied to all	To minimise accidents and incidents and ensure safety of workers and equipment	EBRD PR 4 SNiP 3.06.04-91 SanPiN No3 01.016.97	Own resources, PIU, CSC and contractors	Prior to construction	Consolidated report with pp. 1.5 and 2.1 OHS Plan adopted by contractors Report to EBRD on status of plan development and on OHS performance, including work-hours, lost-time incidents, major accidents, fatalities (including actions taken in response to accidents) – include contractor data separately and combined

	parties involved in the construction and operation of the Project					
4.3	Prepare a site-specific Emergency Preparedness and Response Plan in consultation with contractors, sub-contractors, local emergency service providers and control authorities (if required in case of specific types of work)	Prepare for emergencies to minimise negative impacts	EBRD PR4 National legislation	Own resources, PIU, CSCs, Contractors and/or external experts from government agencies (if required)	Prior to construction	Documentation of the Emergency Preparedness and Response Plan
4.4	Independently audit traffic and road safety measures introduced specifically for the site	Ensure an independent review of traffic and road safety measures	EBRD PR4	Own resources, PIU, CSCs, Contractors and/or external experts from government agencies (if required)	Annually during construction	Report on independent traffic and road safety audit
4.5	Conduct due diligence investigation for all security personnel of the contractor to make sure they have appropriate licensing, experience and training	Prevent conflict between security personnel and local communities Prevent potential human rights violations by security personnel	EBRD PR4 Best practice	Own resources, PIU, CSCs and Contractors	Prior to construction work	Due diligence carried out and documented Report to EBRD any incidents involving security guards
4.6	Implementation of safe practices during construction to minimise potential impacts to local communities, and construction workers, during construction are to include: → Construction vehicles to keep to agreed access routes and adhere to speed limits → Information boards about public safety hazards and emergency contact information → Hazardous materials and wastes stored on site to prevent community exposure to these substances → Publishing of temporary livestock crossing sites and road works that disrupt traffic → Establish temporary diversions for the local access routes. These measures should be part of Construction Environmental Management Plans – which should include traffic management plans)	To minimise accidents and incidents with road users, local communities and livestock	EBRD PR4	Own resources, PIU, CSCs and Contractors	Prior to and during construction	Within annual monitoring report
4.7	Review locations and safety measures for new bus stops on road where pedestrians will need to cross road. Seek to minimise at grade crossing of highway by pedestrians, livestock and agricultural equipment. (Refer to Road Safety Audit)	To minimise accidents and incidents with road users and maintain access for local communities	EBRD PR4	Own resource (with design company), PIU, CSC and/or contractors	In final design and before tenders for construction issued	Report on findings, with changes to road design as needed
4.8	In addition to cattle underpass for Aksuek Town, provide	To minimise accidents	EBRD PR4	Own resource (with	In final design	Report on findings, with

	an underpass for agricultural and other vehicles. This has been requested in public consultation meetings as the town residents often cross over the road (Refer to Road Safety Audit)	and incidents with road users and maintain access for local communities		design company), PIU, CSC and/or contractors	and before tenders for construction issued	changes to road design as needed
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PR5 Land Acquisition, Involuntary Resettlement and Economic Displacement

5.1	Implement the SEP (See Action 10.1 to develop an SEP) and a formal grievance mechanism, and continued consultation with people affected by land acquisition and / or livelihood impacts (temporary or permanent)	Avoid misunderstandings and provide up-to-date information on land acquisition activities	EBRD PR5, PR10	Own resources, local authorities, PIU with a key role for the CLO and/or Social Affairs Officer	Prior to and during land acquisition	Document stakeholder engagement activities to include land acquisition Annual report on stakeholder engagement
5.2	Identify formal and informal land owners and users, any formal and informal businesses who will be affected by land acquisition and develop a Land Acquisition and Compensation Framework to set out the principles of land acquisition and determine compensation measures in line with EBRD's policy. The Compensation Framework is to identify any losses related to the project including land, livelihoods and business losses regardless of formal title	Mitigation for the risks of land acquisition and compensating for lost income and land	EBRD PR5	Own resources, local and district level authorities, PIU with a key role for the CLO and/or Social Affairs Officer	Prior to land acquisition	Livelihood Restoration Framework (LRF) identifying all affected people and compensation frameworks The report shall be provided within the annual monitoring report
5.3	Land acquired for temporary structures for the duration of the construction will be re-cultivated and returned to the original owner. The re-cultivation will include the removal of any waste, structures, equipment and materials. According to H&S regulations, any hazardous chemicals, waste or other substances will be safely removed from the area to mitigate impacts on the community	To minimise long-term impacts of land acquisition	EBRD PR5	Own resources, PIU, CSCs, Contractors	After construction	Land cleared, re-cultivated and returned to original owner
5.4	Independently audit land acquisition and compensation activities to ensure compliance with EBRD PR5. The audit will assess all aspects of land acquisition and will undertake a gap analysis to identify any gaps or missed actions during the land acquisition process	Ensure compliance with EBRD requirements	EBRD PR5	PIU and CSCs	After completion of land acquisition	Within the annual monitoring report

PR6 Biodiversity and Living Natural Resources

6.1	Undertake pre-construction surveys using a trained ecologist to check for the presence of protected species. Fence off as appropriate based on findings Do not undertake vegetation clearing during bird breeding season Identify ecologically sensitive areas and fence off as appropriate Hold toolbox talks for construction workers, on identifying key protected species that may discover. And what to do in the event of discovering one.	Avoidance of wildlife severance	EBRD PR6	Own resources, PIU, CSC, Contractors and / or resourced externally (for ecological expertise, as required)	Prior to construction During construction	Within the annual monitoring report
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PR7 Indigenous People

- Not applicable as there are no indigenous people affected by this project

PR8 Cultural Heritage

8.1	Introduce mitigation measures to preserve sites of cultural significance and archaeological sites in the area to include at least a 50 meter buffer fencing of sites and ensuring that construction activities will not prevent access to sites or will damage the sites	Preserve sites of cultural significance	EBRD PR8 Law of the Republic of Kazakhstan 02.07.1992 no. 1488-XII (amended 21.07.2007) 'On protection and use of historical and cultural heritage' Government of Kazakhstan Resolution 28.10.2011 no. 0218 'On approval of the definition of protected zones, regulation of development zones and zones of protected landscape of historical and cultural	Own resources, local authorities, PIU, CSCs and contractors	Prior to and during construction	Document plans and actions to preserve cultural heritage sites or provide the report of the authority. Consolidated with p.8.2 Within the annual monitoring report
8.2	Introduce mitigation measures to preserve memorial sites along the road and if necessary identify the appropriate relocation processes with the informed consent of the owner of the memorial site (relatives)	Respecting traditions and customs	EBRD PR8	Own resources, local and district authorities	Prior to and during construction	Document plans and actions to preserve cultural heritage sites or provide the report of the authority. Consolidated with p.8.1 Within the annual monitoring report
8.3	Set up a Chance finds procedures and report 'Chance finds' to the authorities and other relevant institutions to undertake excavation and full archaeological assessment of the finds	To preserve cultural heritage	EBRD PR8 National legislation	Own resources, PIU, CSCs and Contractors	During construction	Chance finds procedure Report on any archaeological findings and excavation

PR9 Financial Intermediaries

- Not relevant

PR10 Information Disclosure and Stakeholder Engagement

10.1	Introduce and implement a Stakeholder Engagement	EBRD performance	EBRD PR10	WSP PB has	After agreement	Disclosure of SEP
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	Plan, including a Grievance Mechanism (SEP)	requirements		developed an SEP for use by the PIU	with ARC (Automobile Road Committee) but before construction	
10.2	To disclose a Non-Technical Summary (NTS) providing a project description, the EIA process, the environmental and social benefits/impacts, mitigation and management measures and the contact details for communications with a link to the SEP	EBRD performance requirements	EBRD PR10	WSP PB has developed an NTS for public disclosure	After agreement with ARC but before construction	Disclosure of NTS in the public domain
10.3	Implement the SEP and grievance mechanism to ensure a continuous and systematic stakeholder engagement programme throughout the project life cycle. Documentation of all stakeholder activities and logging of grievances to inform the annual monitoring report. The SEP should be reviewed and if necessary updated annual or when changes occur in the Project Or to apply the grievance mechanism document developed by ABD for road sector and IFIs	Information dissemination and continuous engagement with affected stakeholders	EBRD PR10	PIU, authorities engaged in accordance with Grievance Committee	Prior to and during construction	Annual report on stakeholder engagement within the monitoring report
10.4	Appoint a Community Liaison Officer (CLO) with appropriate skills and experience to effectively manage the implementation of the SEP	Liaison with local communities and authorities on a regular basis, analyse interaction and provide updates and practical recommendations	EBRD PR 1 EBRD PR 10	PIU and CSC	Prior to construction	Appointment of CLO
10.5	Disclosure of documents that include the EIA, EIA supplements, SEP, NTS and the ESAP in accordance with requirements for EBRD Category A projects	EBRD performance requirements	EBRD PR10	PIU with a key role for the CLO	See SEP for full details of information to be disclosed and the timeframes	Disclosure of key documents in the public domain Document grievances and response to grievances with records maintained

APPENDIX B-2

**DOCUMENTS
CONSULTED**

Table 8-5 Documents Consulted

NO	DOCUMENT TITLE (ENGLISH / RUSSIAN / KAZAKH)	DOCUMENT DETAILS
1	Terms of Reference, EBRD (English)	Environmental and Social Assessment for EBRD, Gap Analysis & Disclosure Pack : Category A Road Project Kazakhstan – Kurty Buribaytal 62 km road project
2	Terms of Reference, EBRD (English)	Road Safety Audit for EBRD
3	Bill of Quantities (Russian)	20 pages Excel spreadsheet
4	Bill of Quantities Explanatory notes (Russian)	83 pages
5	Bill of Quantities for Detailed Design (Russian)	Issued by the contractor
6	Engineering Structures Inventory (Russian)	Indicates the types of structures (cattle underpass, drainage pipe, overpass etc.) (existing/proposed), their sizes and locations
7	Bridges Inventory (Russian)	Indicates the types of bridges, their sizes and locations.
8	Data on Road Accidents for 12 months in 2015 issued by Kazakhavtodor (Russian)	Location, date/time, characteristics of road accidents, type, reason, No. of persons died, persons injured
9	Project Information Summary Sheet (Russian)	1 page project presentation
10	Road and Junctions Surface (Russian)	Type of surface dressing for different types of soil, for road-sides and median strips.
11	Road Furniture from AutoCAD (Russian)	With all road components
12	Road and Furniture Plan (Russian)	Road and Furniture Plan
13	Public Hearing Docs (Russian)	Public notes, meeting minutes with participants, all in compliance with required in KZ procedures
14	General Explanatory Report (Russian)	Includes basis for project development, baseline conditions, main design solutions, construction management, land acquisition, environmental protection, health and safety, estimate documents, performance indicators, norms.
15	OVOS for Detailed Design (Russian)	A 142 page report has limited info on HSE and social aspects
16	OVOS Appendices (Russian)	Documents from NCPzem, archaeological report, temporary water intake working draft, etc
17	OVOS Approval (Kazakh)	Project approval without conditions: positive conclusion issued by the Natural Resources and Environmental Control Administration of Zhambyl Regional Council
18	Pre OVOS Mirke-Aksuek Rd (English)	The translated 100 page preliminary EIA for much larger road Mirke-Aksuek part
19	Design Explanatory Notes (Russian)	Road design explanatory notes
20	Road Surface, Longitudinal Profile, Transversal Profile (Russian)	Drawings
21	Junctions, rest areas, bus stops (Russian)	Drawings
22	Geological Report 1 (Russian)	Cross sections, road surface photos, general geology
23	Geological Report 2 (Russian)	Road material sources, road profile with boreholes, off ramps drainage pipes bridges overpasses etc plans 1:1000. Road material sources scheme and quarries plan 1:2000
24	Hydrological Report (Russian)	Water dynamics in seasonal water courses needed to avoid erosion and sediment transport during detour and road construction
25	Geodetic Report (Russian)	No useful information
26	Approvals Inventory	Table of 83 approvals of the project with dates and references
27	Presentation (Russian)	Project presentation
28	Drainate Pipes and Water Intake (Russian)	Drainage pipes, water redirection trough and Balkhash non potable water intake drawings
29	Bridges and Overpasses (Russian)	Folder with drawings, components and work volumes for six structures: → Bridges and Overpasses Summary Table → Junction 20+49

NO **DOCUMENT TITLE (ENGLISH /
RUSSIAN / KAZAKH)**

DOCUMENT DETAILS



- Bridge Karasay River 39+60
- Bridge Karaul-Kashkan River 401+80
- Bridge Kuyaly River 506+61
- Overpass Railway 580+96
- Bridge Botaborym River 609+06

END OF DOCUMENT