NON-TECHNICAL SUMMARY

Rehabilitation of State Road A2, Section Kriva Palanka – Deve Bair

April 2018
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<tr>
<td>CESMP</td>
<td>Construction Environmental and Social Management Plan</td>
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<tr>
<td>EBRD</td>
<td>European Bank for Reconstruction and Development</td>
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<td>EEP</td>
<td>Elaborate for Environmental Protection</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>ESAP</td>
<td>Environmental and Social Action Plan</td>
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<td>ESP</td>
<td>Environmental and Social Policy</td>
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<td>ESMS</td>
<td>Environmental and Social Management System</td>
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<td>EU</td>
<td>European Union</td>
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<td>LAF</td>
<td>Land Acquisition Framework</td>
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<td>LRP</td>
<td>Livelihood Restoration Plan</td>
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<td>MoEPP</td>
<td>Ministry of Environment and Physical Planning</td>
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<td>MoTC</td>
<td>Ministry of Transport and Communications</td>
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<td>NTS</td>
<td>Non-Technical Summary</td>
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<td>OESMP</td>
<td>Operation Environmental and Social Management Plan</td>
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<td>O.G.</td>
<td>Official Gazette</td>
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<td>OHS</td>
<td>Occupational Health and Safety</td>
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<td>PAP</td>
<td>Project Affected People</td>
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<td>PESR</td>
<td>Public Enterprise for State Roads</td>
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<td>PR</td>
<td>Performance Requirement</td>
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<td>RAP</td>
<td>Resettlement Action Plan</td>
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<td>RM</td>
<td>Republic of Macedonia</td>
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<td>SEP</td>
<td>Stakeholder Engagement Plan</td>
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1. Introduction

The Public Enterprise for State Roads (PESR) intends to rehabilitate and reconstruct the existing state road Kriva Palanka – border crossing “Deve Bair” (the Project), a part of the national A2 road network with international importance that connects Republic of Bulgaria with Republic of Albania. The road section forms part of the core national transportation network and is categorized as a state road – A2 according national Categorization of the state roads.

The Elaborate for Environmental Protection for reconstruction and rehabilitation of the state road A2 section Kriva Palanka – border crossing Deve Bair has been prepared according to Macedonian legislation (Law of Environment O.G. of RM No.53/05) and has been approved by the Ministry of Environment and Physical Planning (MoEPP) as the responsible authority.

The European Bank for Reconstruction and development (EBRD) is considering providing financing support to the PESR in realization of the Project. The loan will be sovereign guaranteed by the Republic of Macedonia. The project is considered to be a Category B project in accordance with the EBRD’s Environmental and Social Policy (“ESP” 2014). EBRD is working with the PESR to ensure that the Project’s environmental and social risks are appraised and managed in accordance with the required Policy.

The following map shows the position of the project in the area and its relative location in the wider country neighbouring context is shown in Figure 1.

![Figure 1 Overview of the location of the road](image_url)

This Non – Technical Summary (NTS) describes the Project and summarizes the finding of the environment and social investigations conducted and the risks identified. A Stakeholder Engagement Plan (SEP) has been developed for the Project describing the planned stakeholder consultation activities and engagement process. An Environmental and Social Action Plan (ESAP) has been prepared in relation to the proposed Project in order to further structure the future Project preparation activities to
be in line with the EBRD’s Environmental and Social Policy ("ESP" 2014) and related Performance Requirements.

The land acquisition process is currently at an early stage, and a **Land Acquisition Framework (LAF)** has been developed for the Project presenting the displacement impacts associated with the Project and the compensation and resettlement principles and responsibilities to ensure no one affected by the Project’s implementation is disadvantaged compared to current conditions. A detailed **Resettlement Action Plan (RAP) or Livelihood Restoration Plan (LRP)** will then also be developed in accordance with this LAF, to guide and document the land acquisition process. The RAP / LRP will be disclosed separately once prepared by PESR. The key environmental & social (E&S) project preparation documents – the NTS, SEP, LAF and ESAP have been uploaded to the PESR website (www.roads.org.mk) and the EBRD website (http://www.ebrd.com).

2. **Project need and background**

The Republic of Macedonia is engaged in the development of Macedonia’s national road network in conjunction with plans adopted by the EU such as the Trans-European Network transport development plans up to 2020.

The Project falls under the current National Transport Strategy (2007-2017) and PESR’s Annual Program for Construction, Reconstruction, Rehabilitation, Maintenance and Protection of the State Roads. This Project also fits within the European Bank for Reconstruction and Development’s Strategy for the country, which promotes regional transport integration and supports the development of strategic connections with neighbouring countries. There is no reason to consider the additional expense (and environmental and/or social impacts) of opening up a new alignment, rather than upgrading the existing road. No alternative alignment to the current A2 was therefore considered.

The Project has been developed by PESR in response to the national legislative environmental, health & safety and social requirements and those of the EBRD.

Overall, the Project is expected to deliver a number of benefits:

- Improved externally connectivity with the neighbouring country Bulgaria;
- Improved internal connectivity in the northeast part of the Republic of Macedonia including improved facilitation of exchange of goods and services, better access for support of tourism, industry, agriculture etc.; and
- Improved safety along the road.

3. **Project description**

The project is situated in the northeast part of the Republic of Macedonia, next to the border with Republic of Bulgaria (see Figure 1). The project alignment follows the road that goes from the city of Kriva Palanka toward the border crossing with Bulgaria, called Deve Bair. Total length of the affected road is ca. 13km.
The existing section of the road does not satisfy the required driving speed. Some locations of this road are considered as quite dangerous with insufficient road visibility. Significantly sharp curves also impact the road traffic and road safety. Further, a score of traffic accidents has been recorded by responsible authorities on this part of the road.

The existing A2 road is two lanes wide for the majority of its length. For the purpose of enabling continuous traffic flow, due to the steep terrain, a third, slow lane exists for approximately 5 km before the Macedonian / Bulgarian border.

The layout of the Project is shown in Figure 2 below.

The Project will involve the widening of parts of the road, re-alignment of one short stretch, repair or replacement of some of the existing bridges, and the replacement of the asphalt wearing course and safety barriers for the entire stretch.

The project is divided in three subsections. The first subsection covers road rehabilitation activities and its end by the chainage km 3+550.0. Works in this Section comprise:

- Repair and re-surfacing of the section.
- Cleaning and repair works to the existing drainage channels, culverts, kerbs, embankments and verges where necessary.
- Replacement of the safety barriers throughout the alignment.
- The addition of a third lane to part of the route from KM 2.660 to 3.550.
Second subsection includes both, rehabilitation and reconstruction, whereas a new road structure will be constructed. This subsection starts at km 3+550.0 and ends at km 8+130.0 next to the settlement called Uzem. Works in this Section comprise:

- Repair and re-surfacing of the section.
- Cleaning and repair works to the existing drainage channels, culverts, kerbs, embankments and verges where necessary.
- Replacement of the safety barriers throughout the alignment.
- A realignment of a short stretch of road between KM 3.550 and KM 4.125 to remove some tight horizontal curves and allow the design speed to increase.
- Construction of 4 new bridges along the realigned route.
- The addition of a third lane to part of the route from KM 4.125 to KM 7.764.
- Rehabilitation of the existing bridge at KM 5.524 – KM 5.583.
- Demolishing and replacement (and widening by one lane) of the existing bridge at KM 6.904.
- Demolishing and replacement (and widening by one lane) of the existing bridge at KM 7.950.

The third subsection starts by the settlement Uzem, at the beginning of the third (slow) lane, and ends with the finish of the border crossing called Deve Bair. Total length of this subsection is 5+222.79 km and only road rehabilitation and bridge construction works are planned. Works in this Section comprise:

- Widening by one lane and rehabilitation of the existing bridge at KM 9.114.
- Widening by one lane and rehabilitation of the existing bridge at KM 10.692.
- Repair and re-surfacing of the section.
- Cleaning and repair works to the existing drainage channels, culverts, kerbs, embankments and verges where necessary.
- Replacement of the safety barriers throughout the alignment.

The design and construction will be done to meet requirements of the current Macedonian road design standard and the standards of EBRD. The project will have road markings, road signs and drainage in accordance with national design standards. Junctions and access/local side road arrangements are included in the Project design because access must be maintained to local land and villages.

Surveys of the route and geotechnical investigations have been performed. The final alignment has now been determined and the Main Design is complete; however, PESR does not have a firm timetable for issue of the public tender for works yet or an estimate of the numbers of workers that will be needed for construction; however, it is common for the construction workers to include some local workers.
The Project will require the acquisition of some land and assets in order to accommodate the new Project structures. This land is currently a mix of State and privately-owned land. No land or assets have been acquired / expropriated to date and it is not expected that the project would result in any physical / involuntary resettlement.

4. **Summary of environmental & social legal and policy framework**

The environmental legal framework is defined by the national Law of Environment\(^1\). This Law transposes the requirements of various EU requirements, including those within the Environmental Impact Assessment (EIA) and Pollution Prevention & Control Directives.

Macedonia has ratified the main International Labour Organisation Conventions, and has signed several international environmental and social treaties and conventions which are also applicable: Convention on Environmental Impact Assessment in a Transboundary Context, Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), Convention on Biological Diversity, Convention on the Conservation of Migratory Species of Wild Animals, Convention on the Conservation of European Wildlife and Natural Habitats, and, the Convention concerning the Protection of World Culture and Natural Heritage.

Other national laws exist which cover environmental and social aspects. These include the following, along with their amendments and pertinent secondary legislation:

- Law on Water (Official Gazette (O.G.) of Republic of Macedonia (RM) 87/08). This Law sets out the legislative framework governing surface waters, waterside land and water habitats and their management.
- Rulebook on conditions, manner and limit values of waste water discharge emissions (O.G. of RM, no. 81/11). Where emissions are also regulated at a European Union (EU) level, the Macedonian limits are consistent.
- Law on Waste Management (O.G. of RM no. 68/04).
- Law on the Quality of Ambient Air (O.G. of RM no. 67/04) and Regulation on Determining Types of Pollutants, Emission Limits and Other Air Standards (this transposed the requirements of the EU Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe, so the national limit values are in compliance with the EU levels.
- Law on Protection of Cultural Heritage (O.G. of RM no. 20/04).

\(^1\) O.G. of RM (No.53/05)
Law on Protection from Noise in the Environment (O.G. of RM no. 79/07). Noise limits for different areas are established in the Rulebook for limit values of noise in the environment (O.G. of RM no. 147/08).

Law on Agriculture and Rural Development (O.G. of RM no. 49/2010).

Labour Law (O.G. of RM no. 62/05).

Law on Occupational Health and Safety (O.G. of RM no. 92/07).

Law on Fire Prevention (O.G. of RM no. 67/04.)

Law on Public Roads (O.G. of RM no. 84/2008): Construction and reconstruction of public roads is done in accordance with the law. The Law covers road safety management from the aspect of road infrastructure.


Law on transportation of hazardous substances in road and railway traffic (O.G. of RM no. 92/07).

The requirements for stakeholder engagement within these Laws are described in more detail in the Project Stakeholder Engagement Plan.

**Summary of EIA & Permitting Process**

The overall EIA process is regulated by the Law on Environment and several secondary regulations that define the screening and scoping process, the EIA content, the procedure for its evaluation and disclosure as well as adoption/rejection. Under Annex 1 of the ‘Decree Determining the Projects and the Criteria under which the Requirement for Environmental Impact Assessment Procedure Performance is Established’ (Official Gazette of R. Macedonia No.74/05), an EIA is mandatory for the ‘construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less, in order to provide four or more lanes, where such new road or realigned or widened section of road would be 10 km or more in a continuous length’.

As the Project is only 3 lanes at its maximum, the Project does not require an EIA and instead an Elaborate of Environmental Protection (EEP) should be prepared according to the Law on Environment. The goal of the EEP is to establish potential negative impacts from the project activities and to recommend measures for their reduction and/or mitigation. According to the Decree for amending the decree on actions and activities for which an elaborate must be prepared, the planned project activities fall under chapter XI – Infrastructural projects, item 15. Reconstruction of motorways and regional roads with length of over ten kilometres.

According to the Law on Environment the competent authority responsible for review and approval of the EPP is the Ministry of Environment and Physical Planning (MoEPP), the state administration body responsible for environmental protection for projects for which approvals, permits and licenses are issued by other state administration bodies.

The request for approval of the water management basis (permit) for the repair or reconstruction / construction of bridges has also been submitted to the MoEPP, Water Department. Approval is
awaited, and the receipt of these water permits is required before the application for the construction permit can be made.

Under the Law on Construction (Official Gazette of R. Macedonia No. 130/2009) the national responsible body for issuing the construction permit for this Project is the Ministry of Transport and Communication (MoTC).

**Legal Framework for Nature Protection**

The Law on Nature Protection\(^2\) sets out various principles including of: protection, restrictions regarding use of nature and natural resources, impact assessment, planning, compensation measures, protection of biodiversity, protection of internationally important species, wildlife conservation, genetic diversity, habitats and ecosystems, ecological networks, minimum environmental release, restrictions for construction activities in riparian habitats and littoral areas, protected areas, management plans for protected areas, landscape diversity, etc. Establishment of the National Ecological network is defined in the Law. The law transposes the following EU Directives: Habitats Directive 92/43/EEC, Birds 79/409/EEC & Council Regulation (EC) No 338/97\(^3\) etc. The full transposition of the Habitats Directive and the Birds Directive is pending.

**Legal Framework for Land Acquisition**

The Law on expropriation (O.G. of RM No.95/12, 131/12, 24/13, 27/14 and 104/15) http://www.finance.gov.mk/mk/node/3102, regulates the procedure for the expropriation of property for projects that are of public interest and the connected rights for real estates (immovable properties). Construction of the state road falls under a project of national/public interest. The legal justification of why the project is of public interest is submitted together with the request for expropriation (as part of the same process), by the expropriation beneficiary (the State Attorney on behalf of PESR). The justification is submitted to the relevant offices for legal and property affairs which govern the project.

The following laws govern land tenure and property rights in Macedonia:

- Law on Real Estate Cadastre (O.G. of RM no. 55/13) and Law on amendments and addenda to the law on real estate cadastre (O.G. of RM no. 115/14).
- Law on national spatial data infrastructure of Republic of Macedonia (O.G. of RM no. 38/14).
- Law on Obligations (O.G. of RM no. 18/01, 78/01, 04/02, 59/02, 05/03, 84/08, 81/09, 161/09).

According to the Macedonian Law on expropriation, compensation cannot be lower than the market value of the affected properties; compensation is assessed against recent market transactions in neighbouring areas. The market value of the expropriated immovable property and the immovable property given as compensation shall be determined by an authorized appraiser in accordance with the Law on Appraisal.

According to the Macedonian Law on expropriation compensation can be provided in the form of either a replacement property or in cash. Where another immovable property is offered as

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\(^2\) O.G. of RM (No.67/04)

\(^3\) Council Regulation (EC) No.338/97
compensation for the expropriated immovable property, it should be proportional in the value to the expropriated immovable property. Macedonian law allows compensation for the loss profit/income for affected businesses, if this is incurred as a result of expropriation.

The owner of the immovable property that is expropriated shall also have the right to compensation for the plantations, sown fields, forests on the land and the orchards, provided that they are not included in the market value of the land. The Law also recognises temporary land take.

In case of disputes, the courts will rule and decide on any compensation payable.

Municipal Centres for Social Welfare can also provide some assistance, under the Law on Social Welfare.

The Law on Expropriation differs from the requirements of EBRD in several areas. EBRD require a socio economic survey to be completed on the parties affected. Additionally, EBRD requires those users of the land who have no recognisable legal right or claim to the land they occupy to receive compensation. Similarly, those carrying out informal business activities should also be entitled to compensation. EBRD would require the provision of livelihood restoration measures, where business activities are affected, and also requires an independent grievance mechanism. EBRD requires that public consultations are held with all categories of project affected people prior to expropriation, and that the expropriation, resettlement and livelihoods restoration processes are planned and monitored. The LAF addresses these items and commits PESR to meet the requirements of EBRD.

5. **Environmental Impact Assessment & Land Acquisition process**

Implementation of the Project will follow the framework laws and regulations of the Republic of Macedonia as well as applicable EBRD policies and standards. In accordance with EBRD’s Environmental & Social Policy (2014) the Project has been screened as a Category B project.

**Environmental Impact Assessment**

An Elaborate for Environmental Protection was prepared by Geing Krebs und Kiefer International Ltd., this EEP was performed after the process of screening and scoping were carried out by PESR and MoEPP. The EPP followed the Macedonian requirements and contains: information on the environmental characteristics of the area likely to be affected; environmental protection objectives for the area; likely environmental and social effects; measures to reduce and offset and monitor adverse effects; and an assessment of alternatives.

A subsequent assessment process conducted by EBRD has also assessed the potential environmental and social benefits and adverse impacts. Assessment topics included: ambient air, water, noise and vibration, biodiversity & habitats; landscape; local communities, employment and livelihoods, access and severance, cultural heritage, community, health, safety and security (including road safety and emergency response) and labour and workforce issues.

**Stakeholder Engagement**
The EBRD is committed to promoting environmentally sound and sustainable development in accordance with its Environmental and Social Policy (May 2014) and the Performance Requirement (PR) 10: Information Disclosure and Stakeholder Engagement. EBRD sets out their stakeholder engagement requirements in the following documents:

- Environment and Social Policy (2014);
- Public Information Policy (2014); and

The EBRD considers public consultation and stakeholder engagement as an on-going process, to be started at the earliest stage of the environmental and social impact assessment process, and to be continued throughout the entire life of the EBRD-financed project. Special attention should be paid to the identification of vulnerable stakeholders whose life and well-being is directly affected by the Company’s activities.

Furthermore, the EBRD requires that the project developer establish and maintain an effective grievance mechanism, ensuring that any stakeholder complaints and concerns are received, handled and resolved effectively, in a prompt and timely manner.

PESR has based its stakeholder engagement to date on the requirements of national law, which has included the issuing the EPP to the MoEPP and correspondence with the Municipality of Kriva Palanka Municipality with information about project, and request for opinion and possible cumulative effect with other urban plans of the municipality in the project area.

PESR are planning further engagement, including a public meeting in Kriva Palanka in the first quarter of 2018, engagement with the Municipality of Kriva Palanka and local communities and village councils, and disclosure of the NTS, SEP, ESAP and LAF, to ensure engagement continues in line with EBRD PR10. Engagement will clearly present how local access will be retained as part of the Project so as to confirm the understanding and support of local communities on the access to be provided.

A Stakeholder Engagement Plan has been prepared to identify key Project stakeholders and define relevant procedures and plans for engagement prior to and during construction and operation. PESR is implementing a grievance mechanism in line with the SEP. The PESR is committed to respond to all comments and complaints, either verbally or in writing. In the SEP, a contact point for grievances is given from PESR. A grievance mechanism form is developed for the local people from the affected municipalities and local communities for submission of complaints in written form to the PESR.

The Grievance Form (in Macedonian and English) will be made available on the web site www.roads.org.mk and the concerned municipality will receive pre-printed forms to be readily-available for the public. A worker’s Grievance Mechanism will also be established for the employees of construction companies (as a separate system).

**Land Acquisition Planning Process**

The Project will require the acquisition of some land and assets in order to accommodate the new Project structures. This land is currently a mix of State and privately-owned land. No land or assets have been acquired / expropriated to date.
Permanent Land Take: Permanent land acquisition between KM 2.660 and KM 7.964 will be required for the widening of parts of the road and the short section of new alignment.

Temporary Land Take: The Project will also require some temporary land take for temporary access roads, construction laydown areas, temporary storage of excavated materials/soil, cut trees etc. However, information and details regarding temporary land take are not known at this time as the construction Contractor will input to these needs and so they will be described in the RAP / LRP.

During the design of the Project land acquisition requirements were a key consideration. In the selection of which side to undertake the widening consideration was given regarding land use effects, for example widening on the opposite side of the road to residential structures, avoiding their expropriation. Therefore, physical displacement of households has generally been avoided with a very small risk of physical displacement remaining which needs to be confirmed during the future land acquisition planning.

According to preliminary investigations the land in question contains mainly forest or agricultural and/or pasture land, and portions of meadow, orchard and residential [back yard] plots, plus a small area of built land. The pending socio-economic survey combined with the land & asset inventory undertaken for the land acquisition process will specifically identify all affected land and assets.

As the Project involves economic displacement and potentially physical displacement related to one possibly residential structure (understood to be unoccupied but to be confirmed during pending surveys), a Land Acquisition Framework (LAF) has been prepared by PESR. This document has been developed in accordance with the Macedonian legal framework and in compliance with EBRD’s Environmental & Social Policy 2014 (ESP 2014), and specifically Performance Requirement 5 (PR5) – Land Acquisition, Involuntary Resettlement & Economic Displacement. The LAF presents the displacement impacts associated with the Project and the compensation and resettlement principles and responsibilities to ensure no one affected by the Project’s implementation is disadvantaged compared to current conditions. The LAF includes a grievance mechanism for people affected by land acquisition to raise their concerns.

A detailed Resettlement Action Plan or Livelihood Restoration Plan will be developed in accordance with the LAF and is included as a condition of the ESAP. A LAF differs to a RAP / LRP because it sets out the Project’s planned approach to land acquisition and resettlement, rather than providing the full details of actual land ownership and use and the nature of the displacement impacts, which will be provided in the RAP / LRP. A Socio-economic survey will be undertaken during the next phase of Project development to understand more fully the scale and magnitude of the economic and physical displacement and these impacts on the Project Affected Persons (PAPs). The socio-economic survey will be used to inform the RAP / LRP. The RAP / LRP will indicate which households and businesses will be affected by the physical and economic displacement (e.g. from loss of agriculture land or assets).

The RAP / LRP will set out the commitments of PESR relating to land acquisition, resettlement and livelihood restoration which will ensure compliance with both applicable Macedonian legislation and the requirements of EBRD. The RAP / LRP will include a clear commitment to provide replacement value for lost assets and land, and how to include those without formal land title/ownership.
PESR intends to provide all relevant information to the public. All interested and affected parties will be able to find the following documents, as a minimum, on the PESR website (www.roads.org.mk). Documents will be available in Macedonian and English language, as follows:

- Non-technical Summary;
- Environmental and Social Action Plan;
- Stakeholder Engagement Plan; and
- Land Acquisition and Framework.

6. **Summary of environmental baseline & social conditions**

The Project is located in the north-eastern part of Macedonia, about 80 km east-north-east of the capital of Skopje and close to the border with Bulgaria. The area is mountainous and rural with a low population-density. With the exception of a 700m stretch of new alignment, the Project follows the existing A2 road, which is in part situated in the flat terrain of the Kriva River valley, with hills rising up from the valley corridor on both sides. The wider area is mountainous and rural with a low population-density.

**Environmental Setting – Physical Environment**

Climate - The climate of the Project area ranges from predominantly a temperate continental climate to a mountain climate. Temperature varies according to altitude. In lower areas, the winter is moderately cold, summer is moderately warm, spring is chilly, and autumn is relatively warm. The higher elevations of the Osogovo Mountains are under the influence of a steppe climate. As a result of low temperatures, the vegetation period lasts about 7 months. At higher elevations, low temperatures are felt throughout the year.

Geology and Hydrogeology - The most striking geomorphological form is the Osogovo Mountain range. Along the route, there are zones of volcanic eruptive pieces. The Kriva River has cut a valley through the surrounding hillsides. In seismic terms, most of the Project area belongs to the Serbo-Macedonian massif, which is predominantly stable. The area is characterised by reasonably favourable seismic-engineering–geological conditions, with a ‘slightly sensitive’ seismic environment, and a seismic intensity of 7°.

Water in the area is taken from springs rather than wells. The city of Kriva Palanka takes spring water for the city water supply from the locality of Kalin Kamen, around 7 km south of the A2 road, in the Osogovo Mountains. The alluvial deposits of the Kriva Reka in the area upstream of Kriva Palanka have a small thickness and do not have major reserves of groundwater.

Air Quality - Air quality in the Project area is good, as there are no industrial facilities in the Project area that might detrimentally affect it. The main air polluting source is the A2 road itself. Stationary sources include the households along the road which most likely burn wood and coal. Baseline measures of particulates along the road are well below the World Health Organization Ambient Air Quality Guidelines, which are the internationally recognised guideline.
Noise - Given the rural character of the area and limited industrial activity (mainly primary timber processing), most noise and vibration is likely to result from traffic along the A2 road. Noise measurements carried out for the Project environmental study revealed that noise levels taken close to the road are generally higher than the Macedonian guideline limit of 60 dB(A).

Soil – Soils at the higher altitudes are mainly covered by forests and pastures. On the hillsides at lower elevations, soils are found that support agriculture.

Landscape - Once out of the urban environment of Kriva Palanka, the landscape in the Project area is dominated by natural, hilly mountainous landscapes, some of which are cut with river valleys. The mountain areas are covered by coniferous forests and degraded forests of xero-thermophilic and mesophilic oak. This type of landscape is widely distributed in mountainous areas of Macedonia. At lower altitudes and on the flatter areas and near the road, there are patches of pasture or agricultural arable land. The Kriva River Valley is the dominant cut in the area. In some areas, particularly close to the road, human activities have modified the landscapes, most notable around the villages of Zidilovo and Uzem, as well as around the occasional hamlets and clusters of dwellings situated along the roadside.

Surface Water and Drainage - The main surface water feature in the area is the Kriva Reka (river). In the Project area, the Kriva Reka first flows roughly in a north and north-westerly direction towards its confluence with the Kiselichka river, at which point it changes direction to flow in a south-westerly direction. Within the Project area, the main tributary on the north bank is the Kiselichka Reka, and on the south bank, the Krkljanska Reka. The main intermittent streams flowing into the Kriva are the Zhidilovski Dol, Arabanski Dol and the Uti Potok. Streams on the southern bank run through partially forested areas and generally have high water levels during the whole year. Tributaries on the northern bank run from the mountains of German, Kozjak, and Belino and due to the topography and variable tree cover in the areas through which they run, have inconsistent water levels and occasionally dry out during the summertime.

Since the surface water in the Project area comes from mountain sources, it is generally of high quality, with the highest water quality classifications of I or II. With little industry and a low population density, the main source of surface water pollution in this area is sewage from settlements near the water courses.

The A2 road currently crosses the Kriva River at only one point in the Project area, via an existing bridge structure, at the village of Zidilovo (KM 5.524). It crosses over several tributaries, the main one of which is the Arbanaski at KM 6.900.

Biodiversity Context & Setting

The Elaborat for Environmental Protection describes the habitats in the wider area in general terms, noting that the main habitats in the area are the thermophilic and mesophilic oak forests on the hills and mountains. The thermophilic oak forests are mostly communities of Hungarian Oak and Turkish Oak and are widespread. As well as forests, there are some partially wet grassy areas interspersed between the oak forests, notably in the Uzem area. In certain locations, meadow habitats are also found, especially along the river valley and notably near the village of Zidilovo.
Common species of mammals likely to be found in the Project area are the Lesser white-toothed shrews (*Crocidura suaveolans*) and the Wood mouse (*Apodemus sylvaticus*). Red fox (*Vulpes vulpes*), wild boar (*Sus scrofa*), red squirrel (*Sciurus vulgaris*), European mole (*Talpa europaea*) and least weasel (*Mustela nivalis*) are also common in the habitats in the area, and the otter (*Lutra lutra*) may also be present.

The Elaborat notes that in the Kriva Reka river itself, the following fish species may be found: *Squalius cephalus, Chondrostoma nasus, Gobio gobio, Barbus macedonicus, Barbus balcanicus, Vimba melanops, Alburnus alburnus, Cobitis taenia*, and *Salmo trutta* (although only in the upper streams).

The Elaborate does not indicate that any flora or fauna species likely to be found in the area are of conservation concern.

The Environmental Assessment Report for the Small Hydro Power Plant ‘Kriva Reka’ Macedonia⁴, provides more detail, including a detailed habitat map which covers the combined Kriva Reka/A2 road corridor between Kriva Palanka and Zidilovo. This indicates that the northern bank of the river in the Project area is dominated by thermophilious and mesophilious oak forests, river bank gravels, conifers and mixed conifer-black locust plantations with oak, as well as orchards, rural settlements and riparian shrub communities, while the southern bank of the road is largely mesophilious oak forest. Some of the habitat types found along the river corridor are listed in Annex I of the EU Habitats Directive, as follows:

- **Riparian Willow-Poplar Woodlands** is listed in Annex I as 92A0. This habitat type develops on alluvial sandy soils along the riverbank terraces, which are flooded regularly. This biotype is common for almost all lowland rivers in Macedonia and is well preserved along parts of the Kriva Reka valley.

- The riverine habitats along the Kriva Reka and Kiselichka Reka are listed as 3260 *Watercourses of plain to montane levels with the Ranunculion fluitantis and Callitricho – Batrachion vegetation*.

No habitats identified in the Project area are listed as Annex I Priority Habitats or would be considered to be critical habitat as defined by EBRD PR6.

The A2 corridor and Project area of impact does not intersect with any Important Bird and Biodiversity Areas, International Plant Areas, Primary Butterfly Areas, World Heritage Sites, or Ramsar Sites, or with any of the protected area classifications in the Republic of Macedonia (e.g. Strict Nature Reserve, National Park, Monument of Nature, Nature Park, or Protected Landscape).

The Project interacts to a very small extent with one of the two candidate Emerald sites which are found close to the Project area, and with a proposed Transboundary Man and Biosphere Reserve. The Ministry of Environment and Physical Planning is fully aware of the proximity of these proposed protected areas, has no concerns over the road Project, and took them into account in issuing the Permit.

**German Pchinja candidate Emerald Site:** Figure 3 shows the relevant part of the **German Pchinja candidate Emerald Site**. The site boundary is shown as the double red line, and the A2 road is shown

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⁴ prepared by Empiria EMS DOOEL for PCC New Hydro Dooel, published in June 2013.
leaving Kriva Palanka to the north east. The existing A2 road intersects with the candidate Emerald Site for about 1 km, although for all except for 200 m of this, no road widening and land take is required, only rehabilitation of the existing road and road surface. The 200 m length of this proposed protected area, which will be affected by the Project, involves the taking of a narrow 3.5 m wide strip of land immediately adjacent to the existing road, which is already significantly degraded. The effect of this on the overall site is insignificant. Note that none of the new alignment section (between KM 3.550 and KM 4.125) falls within the candidate Emerald site.

**Figure 3 German Pchinja Candidate Emerald Site**

![Image of German Pchinja Candidate Emerald Site]

*Source: MOEPP*

**Osogovski Planini Candidate Emerald Site;** The second candidate Emerald site in the Project area – the Osogovski Planini (MK0000027), an area of 56,630 ha – is not intersected by the A2 road, and will not be affected by the Project. The extent of this proposed site is shown in Figure 4 below, confirming that the road does not intersect it.

**Figure 4 Osogovo Mountain Candidate Emerald Site**
Proposed Osogovo Mountain Transboundary Man and Biosphere Reserve: The Osogovo Mountain area also extends into Bulgaria and has been proposed as a UNESCO Transboundary Man and Biosphere Reserve. FYR Macedonia and Bulgaria signed a bilateral agreement in 2000 committing to improve the state of the environment and citing Osogovo Mountains as a priority area for conservation and part of the Balkan Green Belt. The Osogovo area is also under consideration as a Category V Protected Landscape. A Feasibility Study (Valorization study) for Transboundary Biosphere Reserve at Osogovo, funded by the European Union was produced in 2015, and a new project started in 2016 on ‘Supporting a Sustainable Future for People and Nature in Osogovo Mountain’. Figure 5 shows the area proposed for the Osogovo Mountain Man and Biosphere Reserve.

Figure 5 Transboundary Osogovo Study Area – From Feasibility Study

Source: Feasibility Study for Transboundary Biosphere Reserve Osogovo, IPA Cross Border Programme, 2012

The existing A2 road passes through this proposed protected area between the village of Uzem and the Border (a distance of around 5 km along the road). However, in this area, the road already
exists, and no widening will occur. The only works are the rehabilitation of the existing road and surface, and the restoration of the existing bridges. This interaction is therefore not significant.

The Kiselichka Reka Valley - This valley hosts the Kiselichka Reka river which is a tributary to the Kriva Reka, flowing in from the north side about 2.7 km west of Zidilovo. The area is proposed for protection as a Park of Nature due to its importance for mammal and bird species. The road will not bisect this area.

Deve Bair Bio-Corridor - The existing A2 road corridor also bisects a bio-corridor identified by a project on the development of a national ecological network in Macedonia, being implemented by the Macedonian Ecological Society and the European Centre for Nature Conservation in cooperation with the MoEPP. This network includes ecological corridors which are thought to connect the core areas of national importance, and are potentially used by wildlife as crossing points. One such ecological corridor is the Deve Bair corridor which extends in a south-north direction across the A2 and links the northern slopes of the Osogovo Planini Mountains with the Kozjak/German/Bilina Planina mountainous area to the north. The corridor is marked on Figure 6, prepared by a study into bear crossing points. The total surface area of the biocorridor is 3,998 ha, and was defined for its importance to large mammals, including the brown bear. Without monitoring data, it is not known for sure what other species use the bio-corridor. The current A2 road bisects this corridor for a stretch of 5 - 6 km between the village of Zidolovo and the Bulgarian border. To the west of Zidilovo as far as the confluence with the Kiselichka Reka, the biocorridor runs only along the northern side of the road and the road does not bisect it.

Pre-construction observations using camera traps, will be conducted in this area, to build up information on animals crossing the road.

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5 Brown Bear Corridors Management Plan, Macedonian Ecological Society, Skopje, 2011
The Ministry of Environment and Physical Planning is fully aware of the location of this road corridor, which was described in the Elaborat for Environmental Protection, and taken into account when issuing the Environmental Permit.

**Social & Land Use Baseline Setting**

The immediate Project area is composed of intermittent settlements along the A-2 road surrounded by slopes of semi-natural vegetation, grasslands, shrub and deciduous woodland, crossed by narrow roads. Given the rural character of the municipality, the construction land makes up a low percentage of the territory. Cultivated land under crops composes a small percentage of the municipal area but is present in the Project area. The land in the area to be expropriated is a mix of undeveloped and developed state and private land, including some portions of the gardens or cultivated areas alongside the current road.

The main local communities in the Project area are indicated on Figure 7 below. Those villages expected to be most directly affected, based on proximity to the Project, are: Kriva Palanka; Varovishte; Drenje; Zhidilovo; and Uzem; however, all the villages shown are dependent to some degree on the existing A2 road corridor for access, including to public transport and the city of Kriva Palanka, where the main community related services are located.
According to the 2002 Census, the total population in settlements through which the road passes is 16,209 with approximately 6,600 households; however, 14,558 of these residents live in Kriva Palanka, with the village sizes outside of Kriva Palanka ranging in size from just 21 residents (Koshari) to 350 (Gradec). The largest and the only urbanised settlement is Kriva Palanka while the majority of other villages are scattered along the slopes at different elevations with poorly developed infrastructure, including the local dirt roads (90%). The primary form of transport is by car, van and bus. Populations have been reducing over time as a result of young people out-migrating, leaving the remaining population in some villages increasingly elderly.

Residential houses in the area are predominantly one to two storey buildings in moderate to good condition. Individual small holdings usually comprise a plot of land with a house, a few outbuildings (e.g. for livestock etc.) and an area for growing produce. Bee hives are also present near one section of the road.

The ethnic majority in the project area is Macedonian and the predominant religion in the project area is Christian-orthodox.

The local economy is based on small and medium enterprises, the majority of them located in Kriva Palanka, dealing with wholesale and retail trade and transport services, due to the proximity of the Bulgarian border. The industry has been based on agriculture (mostly people cultivated potatoes, but at the same time cultivated corn, wheat, barley, rye, oats, etc.). Some villages may potentially farm land on a customary basis, but this needs to be confirmed in the future land acquisition process. Production of herbs and forest fruits (particularly mushrooms) is well developed and organised, resulting in a solid income for farmers and local companies. Also the Municipality is known by the mining industry for

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6 There may be other small/very small villages within the area not indicated in the schematic plan but impacts on them will be covered (if affected) during the future project planning and the RAP / LRP. The socio-economic survey will confirm the villages in the Project area whose land and access may be affected by the Project.
Toranica mine for zinc and lead which is located on the slopes of Osogovo Mountain near the border with Bulgaria (there is a turn off to the mine on the A2 road near the border). Many enterprises went out of operation in the 1990s, only the timber/wood industry has continued in small family enterprises with limited capacities, primarily producing sawn timber and wood production for furniture. The average monthly net wage is generally lower than the state average.

In recent years the Municipality of Kriva Palanka is increasingly investing in tourism as one of the important branches of the economy in Macedonia.

Cultural Heritage - Cultural heritage sites are described in the Environmental Protection Elaboration. There are no known nationally protected cultural heritage sites in the immediate Project area. The nearest site is the St. Joakim Osogovski Monastery, which is more than 1km from the existing road and will not be affected by the Project.

### 7. Environmental & Social benefits, impacts and mitigation measures

During the preparation of the Elaborate for Environmental Protection and the subsequent assessment process conducted by EBRD (2017), the potential environmental and social benefits and adverse impacts of the Project were assessed. Assessment topics included: ambient air, water, noise and vibration, biodiversity & habitats, landscape, local communities, employment and livelihoods, access and severance, cultural heritage, community, health, safety and security (including road safety and emergency response) and labour and workforce issues.

The benefits of the Project are summarised below:

- **Improve Connectivity & Facilitate Economic Development:** The Project is part of a wider program to improve international connectivity in the western Balkans, in this case, improving the effectiveness of the border crossing with Bulgaria. The rehabilitation of the road surface, together with the additional climber lane, the widened bridges, and the removal of a short stretch of low speed horizontal curves will allow the design speed to increase on approach to the border. This improved connectivity will further facilitate the exchange of goods and services between north-eastern Macedonia and Bulgaria, which will have a knock-on positive benefit to the regional and national economy.

- **Improvements in Road & Community Safety:** The Project will deliver road safety improvements by replacement of the safety barriers, and by providing safer driving conditions in general. Possible mitigation of community safety impacts of road traffic within the Project area are also possible through discussion with the Municipality of Kriva Palanka on pedestrian safety. A Road Safety Audit has been undertaken for the Project by EBRD according to the provisions of EU Directive 2008/96/EC, and PESR will incorporate the findings of this audit into the Project design in discussion with EBRD.

- **Short-term Local Employment During Construction:** The Project will provide some short-term opportunities for local employment during the construction period.
The potential adverse effects are summarised in the Table 1 below along with the proposed key mitigation measures and an assessment of the residual level of effects. Additional measures to structure the Project in accordance with EBRD’s PRs are captured in the ESAP that PESR will be required to implement during future construction and operations. The ESAP is disclosed alongside the SEP, NTS and LAF on PESR’s website.
### Table 1 Summary of E&S Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Topic</th>
<th>Summary of Impacts</th>
<th>Summary of Key Mitigation/Management Measures</th>
<th>Residual Impact Significance</th>
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<tbody>
<tr>
<td><strong>Environment</strong></td>
<td></td>
<td>Good maintenance of plant to reduce unnecessary emissions, and to remove and replace any heavily polluting plant. Standard construction measures to reduce dust (wetting down dusty areas, covering vehicles, etc.). Air quality along the road section will be monitored during construction and potentially for an initial period during operation to ensure compliance with standards.</td>
<td>During construction - Negative impacts of medium significance reduced to low significance with effective contractor management. During operation - Negative impacts will be of low significance.</td>
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<tr>
<td><strong>Air Quality</strong></td>
<td>Emissions of dust from working areas, access roads, stockpiles and during loading/unloading activities; emissions from concrete and asphalt plants; exhaust emissions from construction machinery; emissions due to peaks in traffic movements, will result. (Phase – During Construction) Emissions of particulates, exhaust gases and volatile organic compounds, including Greenhouse Gas emissions, will increase slightly with the increased design speed over part of the Project corridor, and gradually over time as traffic levels increase. (Phase – During Operation)</td>
<td>Management controls typical for construction work include: restriction to daytime working hours and informing local communities on the construction schedule. Noise levels will be monitored during construction and potentially for an initial period during operation to ensure compliance with standards at specific nearby settlements. Local communities will be consulted on the potential for installation of noise barriers.</td>
<td>During construction and operation - Negative impacts of low significance reduced farther with effective management.</td>
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<tr>
<td><strong>Noise and Vibration</strong></td>
<td>Noise will be generated by construction plant and activities and any blasting and rock breaking. (Phase – During Construction) Traffic noise levels will increase gradually over time with increased traffic flows, which will particularly affect communities close to the road, especially as current noise levels appear to be in exceedance of the applicable noise standard. (Phase – During Operation)</td>
<td>Management controls typical for construction work include: restriction to daytime working hours and informing local communities on the construction schedule. Noise levels will be monitored during construction and potentially for an initial period during operation to ensure compliance with standards at specific nearby settlements. Local communities will be consulted on the potential for installation of noise barriers.</td>
<td>During construction and operation - Negative impacts of low significance reduced farther with effective management.</td>
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<tr>
<td><strong>Soil and Groundwater</strong></td>
<td>Any major spillages – e.g. of oil or fuel - during construction or operation of the road could cause contamination of the soil and groundwater in the area. The risk of significant effects is low, and any effects would likely be confined to the local area. (Phase - During Construction and Operation)</td>
<td>Various construction management control measures to reduce spillage will be included in the CESMP. An Emergency Response Plan will address spills. See also Water and Water Resources below.</td>
<td>Negative impacts of low significance reduced further with management controls.</td>
</tr>
<tr>
<td><strong>Water Resources</strong></td>
<td>There is a risk of increased sedimentation and pollution in the Kriva River during construction activities. This will be particularly significant at the bridges, and especially the six new bridges. The river flow will be interrupted at works to form a new temporary crossing at the new bridges on the existing road (KM 6.9 and KM 7.9), and significantly increased sedimentation is possible at</td>
<td>Construction risks will be controlled by implementing actions and restrictions in the CESMP, including a Watercourse Management Plan which includes a method statement for each bridge work site including measures that demonstrate protection of the watercourse. This will include water quality monitoring.</td>
<td>Negative impacts of medium – high significance reduced to low significance with contractor management controls, and perhaps some seasonal</td>
</tr>
</tbody>
</table>
### Summary of Impacts

These locations. Spills (e.g. of oil or fuel or debris) during construction could also affect the river and adjacent groundwater. Any works in the river channel related to the formation of temporary access to the bridges or from reforming of the river banks for the road widening or placement of retaining walls may also affect the river water quality, although the risk of this is lower.

Apart from at the new bridges, the risk of significant effects is low, and any effects would likely be confined to the local area, except in the event of a major spill which carries downstream.

(Phase – During Construction)

There is a risk of pollution to the Kriva River and the groundwater if contaminated road runoff were to enter the River, or in the result of a major oil or chemical spill close to one of the river crossings. The risk of significant effects is low, and any effects would likely be confined to the local area, except in the event of a major spill which carried downstream. Spills during construction, or contaminated run off during operation could also affect the river or groundwater in some areas.

(Phase – During Operation)

### Biodiversity

**Terrestrial Habitats:** The Project will have only a very limited land take – predominantly a narrow strip over a 5.5. km stretch alongside the existing road and the 700 m new alignment. Most of this will affect the degraded and modified strip alongside the road, but some of this will be on embankments leading to the River Kriva and a very small section is within a candidate emerald site. Although no mapping has been done, some of the vegetation affected may be a type of riparian or other habitat which would be considered a priority biodiversity feature. If so, the area should be re-seeded with plants from the same habitat type to allow habitat restoration. The long term effect will

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<td>Emergency Response Plan.</td>
<td>constraints. Negative impacts during operation are of low significance.</td>
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<td>A rapid pre-construction assessment will be performed by appropriately qualified biologist(s) to inventory and map any habitat types included in Annex I of the EU Habitats Directive that are present in the Project footprint. Where present, these priority biodiversity features must be avoided where possible, and the embankments at the works area be reinstated and re-vegetated appropriately to allow the habitat to re-develop. CESMP will also require the Contractor will implement good practice measures to minimise impacts on biodiversity in general such as: seasonal constraints related to bird breeding seasons, confining construction works (including spoil management) to the areas where</td>
<td>Negative impacts of potentially medium – high significance reduced to low significance with implementation of mitigation measures, which may include seasonal constraints.</td>
</tr>
</tbody>
</table>
### Summary of Impacts

**River Habitat:** The river is not protected, but any riverine habitats are also considered priority biodiversity features. The potential impacts on the river are described under Water Resources above. Resulting effects on biodiversity could involve disturbance to fish and other species from increased sedimentation (especially from works to the bridges), contamination introduced to the water, or from interruptions to flow. An ecologist will advise during the construction works on measures to avoid disturbance to fish spawning or passage along the river.

**Deve Bair Bio-corridor:** For a stretch of 2 km where the road bisects the Deve Bair biocorridor, a 3.25 m additional width of the road will be created, which will marginally increase the disruption created by the road. The rise in design speed between KM 6.000 and KM 7.960 will also marginally increase the danger to animals crossing over the road. East of this, the design speed remains unchanged, and the Project will have no effect. There is no data on the significance of this crossing, and there are already six major crossing points along the 5.5 km stretch through which the road bisects the bio-corridor, so the likely Project effect is marginal.

The Project will have no other significant effects on flora and fauna during operation, given the mitigation measures proposed for operation.

### Summary of Key Mitigation/Management Measures

Work is strictly necessary and vegetation clearance exclusively to the area approved in the Main Design; good site waste management. These measures will be included in a dedicated biodiversity management section with the CESMP.

See Water and Water Resources above. Contractor to prepare Watercourse Management Plan. Ecologist to advise on protection to fish passage and habitats.

The ESAP will require that the 2km stretch is monitored prior to & during construction and any local knowledge gained to help determine how it is functioning as a bio-corridor for large mammals and to identify if any additional measures could be implemented to mitigate the effects of the Project construction or for the road in general, for consideration by PESR. The CESMP will also ensure that all crossings under the road are kept free of unnecessary material and debris during construction and not used to store plant or material, to avoid potential disruption to animal passage.


### Residual Impact Significance

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<tr>
<td>Protected</td>
<td>The Project interacts with the German</td>
<td>These have already been taken into</td>
<td>Negative impacts</td>
</tr>
<tr>
<td>Topic</td>
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<tr>
<td>Areas</td>
<td>Pchinja candidate Emerald Site for a length of 200 m.</td>
<td>account in the biodiversity measures described above.</td>
<td>of potentially low - medium significance reduced to low significance with implementation of mitigation measures.</td>
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<tr>
<td></td>
<td>The existing A2 road bisects proposed Osogovo Transboundary Man and Biosphere Reserve for 5 km.</td>
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<td></td>
<td>No significant effects on either proposed protected area are anticipated as a result of the Project.</td>
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<td>Social</td>
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<tr>
<td>Utilities</td>
<td>The scheme construction may interfere with existing utilities in the area, including electricity transmission and distribution lines and telecoms cables, as well as water supply pipelines and possibly wastewater pipelines.</td>
<td>All utility companies will be provided notice before construction of the Project begins to make arrangements for interactions with utilities.</td>
<td>Risks reduced to low significance.</td>
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<td>(Phase – During Construction)</td>
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<tr>
<td>Nuisance</td>
<td>The local communities along the route will be subject to nuisance effects from the construction, including noise, dust and a general reduction in amenity of the local area during the construction period.</td>
<td>Nuisance effects will be short-term and manageable by good construction management and controls, and careful engagement with the local communities by the Contractor. The SEP includes a requirement for PESR to engage with the developer of the run-of-river small hydro scheme that is under construction nearby to discuss their respective construction programs with the goal of minimizing any cumulative construction impacts should the construction windows overlap. See also monitoring for noise and air quality.</td>
<td>Negative risk of medium significance of a short-term nature would reduce to low significance with adequate management controls.</td>
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<td>(Phase – During Construction)</td>
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<tr>
<td>Land Acquisition</td>
<td>The Project will require minimal land acquisition, predominantly of undeveloped land immediately adjacent to the road, but there will also be some privately owned residential / agricultural land take needed. This will give rise to some small-scale economic and (possibly) physical displacement from the loss of assets on the private land and any informal use of State-owned land. The risk of informal activities on the State-owned land is considered low.</td>
<td>Application of the provisions of the Law on Expropriation and EBRD’s PR5. A RAP / LRP will be developed.</td>
<td>Negative risk of low significance would reduce to not significant assuming implementation of all requirements of the Expropriation Law and EBRD PR5.</td>
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<tr>
<td>Access &amp; Severance</td>
<td>There will be temporary restriction to the traffic flow, with stretches of the road requiring single file traffic management to allow the works to continue. The Project may also result in localised, temporary restrictions (but not removal) of access at a small number of adjacent properties, during the construction process. <em>(Phase – During Construction)</em> No long term severance or restrictions to access are envisaged. <em>(Phase – During Operation)</em></td>
<td>A Traffic Management Plan, supported with effective consultations and engagement, to ensure that sufficient access to homes, businesses and all other community and personal assets is retained at all times, and that traffic is controlled clearly and safely.</td>
<td>Negative risk of medium significance of a short-term nature would reduce to low significance with adequate management controls.</td>
</tr>
<tr>
<td>Community Health &amp; Safety</td>
<td>The construction process may increase the risk of accidents to the public, largely through the movement of plant and machinery and the delivery of materials. There is also a risk of influx (albeit minor) from workers from outside the area which may give rise to certain risks to the communities. The public will be excluded from entering the works sites (though they will be in close proximity as adjacent traffic flow will continue) and the Contractor will need to implement measures for this. <em>(Phase – During Construction)</em></td>
<td>PESR to incorporate the findings of the Road Safety Audit into the Project design in discussion with EBRD. Contractor CESMP, including Traffic Management Plan. Good site management, security, health &amp; safety measures, warning signs etc. applied by the Contractor to minimise risks to an acceptable level. Fencing and signage to discourage public from entering the works area. Appropriate siting of any Workforce Accommodation (if any – considered unlikely) and good community engagement mechanisms along with a grievance process.</td>
<td>Negative impacts of medium significance of a short-term nature reduced to low significance with contractor management controls.</td>
</tr>
<tr>
<td>Worker Health &amp; Safety</td>
<td>The works will give rise to occupational, health and safety risks to workers, including those related to working with plant and machinery, formation of asphalt, use of cement, working at height, working near utilities, and working over water for the bridge sections. <em>(Phase – During Construction)</em></td>
<td>Contractor’s CESMP, including Health and Safety provisions, in accordance with the Employer’s Requirements and the Law on the Safety and Health at Work. Good workforce management, implementation &amp; enforcement of code of conduct, provision of health surveillance &amp; healthcare access for workers.</td>
<td>Negative impacts of medium to high significance of a short-term nature reduced to low significance with contractor management controls.</td>
</tr>
<tr>
<td>Cultural Heritage</td>
<td>Risk (very minor) to hitherto unknown cultural heritage sites from excavations along the road corridor. <em>(Phase – During Construction)</em></td>
<td>Chance Finds Procedure.</td>
<td>Risk is of low significance.</td>
</tr>
</tbody>
</table>
8. Environmental & Social management and monitoring

Environmental and Social Management

Measures to manage the environmental and social effects of the Project will be included in the Tender Documents. This will include the standard requirements of PESR, based on Macedonian law, along with the requirements of EBRD. Measures relating to public engagement are detailed in the Stakeholder Engagement Plan, and those remaining actions and commitments relating to the land acquisition are detailed in the Land Acquisition Framework and Resettlement Action Plan or Livelihood Restoration Plan, which is being developed by PESR. The key elements of the required mitigation measures have been summarised in the table above, and the steps which PESR must take are described in the Environmental and Social Action Plan. As part of this, PESR is required to develop a Commitments Register, to document all design, construction and operation related mitigation measures cited in the Environmental Elaborate, ESAP, SEP and LAF / RAP / LRP documentation, and identify how the commitments are addressed, and which party (e.g. PESR, Contractor, third parties etc.) is responsible.

An Environmental and Social Management System will be developed for the construction and operation of the road. This will include a Construction Environmental and Social Management Plan prepared by the engaged Contractor approved by the Supervisor engineer and PESR, which will draw together all the management requirements to minimise disturbance to environmental and social receptors during construction (including habitats, flora and fauna, watercourses, land and livelihoods, community relations, etc.). An Operational Environmental and Social Management Plan will be produced to address mitigation and monitoring actions which will continue during road operation.

Environmental and Social Monitoring

Monitoring will form an important part of the ESMS. During both construction and operation, certain activities, indicators and environmental and social resources will be monitored. Construction monitoring will include levels of noise and air quality at representative road side receptors, water quality in the Kriva River, disturbance to habitats, and observations on flora and fauna. Monitoring will also include land take, indicators of any problems from influx of workforce into the area, and labour and working conditions including occupational health and safety. Operations phase monitoring will also potentially include levels of noise and air quality at representative road side receptors.

Monitoring and management actions for the stakeholder engagement and the land & resettlement planning are proposed within the SEP and LAF. There will also be an ongoing requirement for PESR and (during construction) the Contractor to monitor stakeholder, individuals and community grievances and take appropriate management action should trends be identified, or key issues occur.

Monitoring reports will be required from the Contractor during the construction and operational phases. These will also be submitted to any relevant inspection authority.
monitoring results will be used to inform whether any ongoing impacts require further mitigation measures to be developed and implemented.

Finally, EBRD will also monitor the project during construction and operations, as well as requiring PESR to prepare Annual Environmental and Social Reports (AESRs) to demonstrate compliance against committed project standards and implementation of required ESAP actions.

9. **Grievance Mechanism, further information & contact details**

**GRIEVANCE MECHANISM**

A grievance mechanism will be adopted as presented in Figure 8.

PESR and its Contractor(s) will accept all comments and complaints associated with the Project, submitted either verbally or in writing. PESR recognizes that consultation is an ongoing process, and different concerns may arise as the Project moves into the construction phase.

A sample of the Project’s Public Grievance Form is provided in Annex 1. Any person or organization may send comments and/or complaints in person, by phone or via post or email using the contact information provided below.

All types of stakeholder grievances (apart from those raised by employees and contractors) relating to this Project should be channelled to PESR through the following designated staff member:

**Mrs Biljana Lazevska**, Manager of Human Resources Management and General Affairs Unit

Tel: + 389 (0)2 3118-044 ext.119  
Fax: + 389 (0)2 3220-535  
email: biljanal@roads.org.mk

Address: **Public Enterprise for State Roads**  
Dame Gruev str. 14,  
1000 Skopje, Republic of Macedonia
Figure 8 – Grievance Mechanism

Contact details of the construction Contractor will also be made publicly available in the local communities adjacent to the project works and included in a revised SEP, once a Contractor is appointed.

The Grievance Form (in Macedonian and English) will be made available on the web site www.roads.org.mk and the concerned municipality will receive pre-printed forms to be readily available for the public. A worker’s Grievance Mechanism will also be established for the employees of construction companies (as a separate system).

PESR will log and monitor the process of comments and complaints and the information will be summarized in annual EHSS reports, which will be prepared and posted on its website. PESR is
obliged to respond to all complaints according to procedures prescribed in national legislation and this SEP.

The response time for grievances will be in accordance with national legislation for the particular issue in question. PESR will endeavour to acknowledge receipt of the Grievance within 5 working days, and to respond within 15 days of receiving the grievance to inform the complainant of the corrective action taken or proposed corrective action. Individuals who submit their comments or grievances have the right to request that their name be kept confidential.

At all times, complainants are also able to seek legal remedies in accordance with the laws and regulations of the Republic of Macedonia.

FURTHER INFORMATION

Project preparation documents are available on the PESR website (http://www.roads.org.mk) and the EBRD website (http://www.ebrd.com).

CONTACT DETAILS

PESR:
Saska Bogdanova Ajceva
Environment Protection Adviser
Unit Tel: + 389 (0)2 3118-044, ext. 305
Fax: + 389 (0)2 3220-535
E-mail: saska@roads.org.mk
Address: Public Enterprise for State Roads, Dame Gruev 14, 1000 Skopje, Republic of Macedonia

EBRD’s office in Skopje:
Address: EBRD, Soravia Centre Skopje, VII floor,
Filip II Makedonski str. 3,
1000 Skopje, Republic of Macedonia
Tel: +389 2 3297 800
Fax: +389 2 3231 238

And EBRD headquarters are:
Address: EBRD Headquarters, London
Environment and Sustainability Department One Exchange Square
London EC2A 2JN UK
Tel: ++44 207 338 6504
http://www.ebrd.com
APPENDICES
## Appendix 1 – Public Grievance Form

### Public Grievance Form

<table>
<thead>
<tr>
<th>Reference No:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name and Surname (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wish to raise my grievance anonymously.</td>
</tr>
<tr>
<td>I request not to disclose my identity without my consent.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please note how you like to be contacted (mail, phone, e-mail)</td>
</tr>
<tr>
<td>By Post: Please provide mailing address:</td>
</tr>
<tr>
<td>By Phone:</td>
</tr>
<tr>
<td>By E-mail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preferred language for communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Macedonian]</td>
</tr>
<tr>
<td>[Other:____________________________]</td>
</tr>
</tbody>
</table>

### Description of Incident or Grievance:
What did happen? Where did it happen? Who did it happen to? What is the result of the problem?

<table>
<thead>
<tr>
<th>Date of Incident / Grievance</th>
</tr>
</thead>
<tbody>
<tr>
<td>One time incident/grievance (date ____________)</td>
</tr>
<tr>
<td>Happened more than once (how many times? _____)</td>
</tr>
<tr>
<td>On-going (currently experiencing problem)</td>
</tr>
</tbody>
</table>

### What would you like to see happen to resolve the problem?

| Signature: ___________________________ Date: ________________ |

Please return this form to:

**Ms Biljana Lazevska**  
Tel: + 389 (0)2 3118-044 ext.119  
Fax: + 389 (0)2 3220-535  
email: biljanal@roads.org.mk

**Public Enterprise for State Roads**  
Dame Gruev str. 14  
1000 Skopje, Republic of Macedonia