

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) CHECKLIST
*Rehabilitation of an existing road and walking path from the settlement "Porta" to the settlement "Mechkin Kamen"
in Municipality of Krushevo*

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ABBREVIATIONS

E&S	Environmental and Social
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
EU	European Union
H&S	Health and Safety
IBA	Important Bird Area
IPA	Important Plant Area
LRCF	Local Roads Connectivity Project
MSDS	Material Safety Data Sheets
MTC	Ministry of Transport and Connection
OH&S	Occupational Health and Safety
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
RM	Republic of Macedonia
RNM	Republic of North Macedonia
WB	World Bank

1. Introduction

The road infrastructure in the Republic of North Macedonia consists of national, regional and local roads where approximately 65% of the total length of all roads are local roads. National and regional roads are under the competences of the institutions and enterprises at the national level, while for the local roads infrastructure the competences are under the local authorities.

The local roads network is in poor condition, as a result of unsatisfactory road maintenance due to non-existent financing mainly because of weakness of international investment in the transport and distribution sector etc. As the main reason for the bad condition of the roads is that, every Region of the Republic of North Macedonia manages with different financial capacities that renders some Regions with not enough finances to upgrade/rehabilitate the existing roads leading to hospitals, schools and markets so this issue brings social problems as well.

For the purpose of rehabilitation of existing local road infrastructure (urban / rural streets, regional and local roads), pedestrian paths, street lighting, water drainage and capacity building of the municipal staff, 70 million Euro investment secured by the World Bank, will be invested through the Ministry of transport and communications by implementation of the Local Roads Connectivity Project (LRCP).

2. Environmental Category

For addressing the potential environmental and social concerns of the Project the Environmental and Social Management Framework (ESMF) will be prepared (as part of the LRCP of the MTC) in October 2019, by the Environmental and Social (E&S) Specialist which is in accordance with the requirements of the World Bank. The ESMF represents a tool for conducting Environmental and Social Assessments and Management of Project's compliance with Environmental and Social Framework (ESF) Standards, which allows conducting of an in-depth analysis of the environmental and social issues.

Preliminary screening according to the World Bank risk classification identifies two risk categories of the sub-projects: with substantial risk or with moderate risk for which different due diligence instruments need to be prepared.

"Projects with substantial risk" require site-specific ESMPs, which should include site-specific information with mitigation measures and monitoring plan.

"Projects with moderate risk" require preparation of the ESMP Checklist that identify potential environmental improvement opportunities and recommend measures for the prevention, minimization and mitigation of adverse environmental and social impacts.

Sub project environmental screening table for LRCP Project.

Types project activities	Environmental Assessment due diligence documents required	Applicable to:
1	Environmental and Social Management Plans (ESMP) for each individual upgrading (sub-project)	Upgrading work of the local roads (intervention into the road body, structure, in addition to substituting of

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Types project activities	Environmental Assessment due diligence documents required	Applicable to:
		the pavement whereby upgrade works will intervene in reinforcing of the road body and installing of new pavements)
2	ESMP Checklist	Rehabilitation of the existing local roads/streets (improving the condition of the road without changing the basic functional characteristics – changing of the asphalt layer and substitution with the new layer, re-pavement, pothole repairing, patching and any other road surface fixing, etc.)

3. Potential Environmental Impacts

From the implementation of the LRCP rehabilitation sub-projects potential risks and impacts are expected to be temporary and/or reversible; low in magnitude and typical. These impacts are related to:

- ❖ dust nuisance and gaseous emissions,
- ❖ potential pollution of soil and water resources (accidental spillage of machine oil, lubricants, fuel, etc...),
- ❖ generation of different types of non - hazardous waste as well as limited amounts of hazardous waste,
- ❖ noise and vibrations,
- ❖ brief disturbance to biotope,
- ❖ possible temporary disruption of current traffic circulation,
- ❖ traffic safety,
- ❖ occupational health and safety (OHS),
- ❖ localized disturbance of soil and impacts to water,
- ❖ construction of access roads and/or damage to access roads.

4. Purpose of the Checklist ESMP

ESMP checklist will be used for the projects for rehabilitation of the local roads - plain, less risky sub projects that usually only involve change of asphalt or drainage on exiting road. ESMP checklist provides “pragmatic good practice” and it is designed to be user friendly and compatible with WB safeguard requirements. This document will help assess potential environmental impacts associated with the proposed sub-project, identify potential environmental improvement opportunities and recommend measures for to the prevention, minimization and mitigation of adverse environmental and social impacts.

ESMP Checklist is a document prepared and owned by beneficiary. The design and implementation process for the envisaged in the subproject will be conducted in three phases:

- 1) General identification and scoping phase, in which the rehabilitation of the road works that need to be carried out. At this stage according to the carried out works the potential

negative/adverse impacts can be identified. The parts 1, 2 and 3 are drafted. The second part of the ESMP Checklist contains all of the typical activities and their relation with the typical environmental issues and appropriate mitigation measures.

- 2) This phase contains the project specifications and the bill of quantities for the construction works and other services related to the subproject. In this phase, the tender and the award of the works contracts and the obligations defined in the contract of the Contractor are defined. At the tendering stage, the ESMP Checklist needs to be publicly consulted and finalized. ESMP Checklist is an indispensable part of bidding and contracting documentation.
- 3) During the implementation phase the Contractor implements ESMP Checklists mitigation and monitoring measures, while environmental compliance (with ESMP Checklist and environmental and health and safety (H&S) regulation) and other qualitative criteria are implemented on the respective site and application checked/supervised by the site supervisor, which include the site supervisory engineer or supervisor of the project, engaged by the Municipality.

During the construction phase of the project the mitigation and monitoring measures prescribed in the ESMP Checklists are implemented by the Contractor. However, the overall responsibility for the compliance remains with the Borrower. The compliance of the environmental and qualitative criteria are examined by the supervisor i.e. engineer. The Contractor's environmental compliance is proven through the monitoring and mitigation plan.

Practical application of the ESMP Checklist will include the achievement of Part I for having and documenting all relevant site specifics. In the second part, the activities to be carried will be checked according to the envisaged activity type and in the third part the monitoring parameters (Part 3) will be identified and applied according to activities presented in Part 2. In addition to defined parameters, the monitoring also includes supervision of mitigation plan implementation.

The whole ESMP Checklist filled in table for each of the type of work will be attached as integral part of bidding and work contracts and as analogue with all technical and commercial conditions that should be signed by the contracting parties.

5. Application of the Checklist ESMP

After completing the Environmental and Social Screening Checklist by the ESS Specialist it has been determined that, this project is classified as a "project with moderate risk".

The ESMP Checklist is used for projects that cover **only rehabilitation of the existing local roads/streets** (changing of the asphalt layer and substitution with the new layer, re-pavement, pothole repairing, patching and any other road surface fixing.).

The Checklist is divided in 4 parts:

- Introduction in which the project is described, definition of the environmental category, and Checklist ESMP concept explained;
- Part 1 - Descriptive part of the project ("site passport") where the location, legislation, project description and public consultation process is given;

- Part 2 - Analysis of the environmental and social aspects for every activity through yes/no questions followed by mitigation measures for each activity;
- Part 3 - Plan for monitoring of the activities during the 3 phases: preparation, construction and operation.

The ESMP Checklist for the rehabilitation works contains the environmental impacts and suitable mitigation measures in order to reduce to minimum the impacts on the environment (air, noise and water pollution). It also offers management practice for hazardous and non-hazardous wastes and measures for control of the discharged medium at the construction site. In the ESMP Checklist there are steps that need to be done if at the rehabilitation site in the case objects of cultural / archeological significance were discovered (chance-finds clause).

6. Monitoring and reporting

For the monitoring of the due diligence, the site supervisor or responsible person appointed by the Municipality including environmental and civil engineer that will supervise their part of the project activities as listed in the monitoring plan (part 3).

In the table part of the document clear mitigation and monitoring measures are explained in detail with the purpose to be included in the works contracts.

The mitigation measures for the project activities include, but are not limited to: the use of Personal Protective Equipment (PPE) by workers on site, air pollution prevention, amount of water used and discharged at the site, wastewater treatment, maintenance of the proper sanitary facilities for workers, waste collection of separate types (soil, metals, plastic, hazardous waste, e.g. paint residues, motor hydraulic oil), amounts of waste, proper organization of disposal pathways and facilities, or reuse and recycling wherever possible. In addition to Part 3, the site supervisors should check whether the contractor complies with the mitigation measures in Part 2.

If there are non-compliances in the implementation of ESMP Checklist and/or recorded in the monitoring report, penalties previously introduced in the contract will be issued. For extreme cases, a termination of the contract shall be contractually tied in.

Good communication between all involved stakeholders (Contractor, Supervisor, municipal staff, PIU from MTC and other relevant persons from the Municipality) is very important for providing continuous performance of the project activities and successful completion of overall project.

ANNEX I: Checklist ESMP for the rehabilitation works

PART 1: INSTITUTIONAL & ADMINISTRATIVE				
Country	Republic of North Macedonia			
Sub-Project title	Local Road Connectivity Project, Republic of North Macedonia			
Scope of sub-project and particular activities	Rehabilitation of the existing road from the settlement "Porta" to the settlement "Mechkin Kamen" in Municipality of Krushevo			
Institutional arrangements (Name and contacts)	WB (Project Team Leader)	Project Management	Local Counterpart and/or Recipient	
	To be decided Tel: email:	To be decided Tel: email:	To be decided Tel: email:	
Implementation arrangements (Name and contacts)	Safeguard Supervision	Local Counterpart Supervision	Local Inspectorate Supervision	Contactor
	To be decided Tel: email:	To be decided Tel: email:	To be decided Tel: email:	To be decided Tel: email:
Implementation arrangements (Name and contacts)	Supervision** (Upon completion of the procedure, the name and contact of the Supervising Engineer will be added to the fields below).			
	Will be determined after completing the public procurement procedures for the sub-project need.			
SITE DESCRIPTION				
Name of site	Road from the settlement "Porta" to the settlement "Mechkin Kamen" in Municipality of Krushevo			
Describe site location (geographic description)	The nearest places along the project location are the settlement Ostrilci located at 1.200 m south-west, the monastery of St. Vasilij located 1.000 m to the east, the monastery St. Spas located to the north-east at about 1.100 m, the City of Krushevo located at 800 m to the north and the petrol station located to the north at less than 200 m. The road connects the cultural place Meckin Kamen and the sports complex Krusevo Start with the local road that goes to Krushevo.		Annex 1: Site information (figure from the site) [x]Y [] N	
Who owns the land?	Republic of North Macedonia			
Geographic description	Country: RNM Region: Pelagonija region Municipality: Krushevo Settlement: Krushevo			
LEGISLATION				
Identify national & local legislation & permits that apply to sub-project activity(s)	<ul style="list-style-type: none"> ▪ Law on Environment (Official Gazette No.53/05,81/05,24/07,159/08, 83/2009, 124/2010, 51/2011, 123/12, 93/13, 163/13, 42/14, 44/15 129/15, 192/15, 39/16, 99/18); ▪ Law on Waters (Official Gazette No. 87/08, 6 / 09, 161/09, 83/10, 51/11, 44/12, 163/13); 			

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	<ul style="list-style-type: none"> ▪ Law on Waste (Official Gazette No. 68/04, 71/04, 107/07, 102/08, 134/08, 124/10 and 51/11, 123/12, 147/13, 163/13, 146/15, 192/15); ▪ List of Waste Types (Official Gazette No. 100/05); ▪ Law on Nature Protection (Official Gazette No. 67/06, 16/06, 84/07, 59/12, 13/13, 163/13, 146/15); ▪ Law on Noise Protection (" Official Gazette No. 79/07, 124/10, 47/11, 163/13, 146/15); ▪ Law on Chemicals (Official Gazette of the Republic of Macedonia No. 145/10, 53/11, 164/13, 116/15 and 149/15); ▪ Law on Ambient Air Quality (Official Gazette No. 67/04 with amendments Nos. 92/07, 35/10, 47/11, 59/12, 163/13, 10/15, 146/15); ▪ Law on Protection of Cultural Heritage (Official Gazette No. 20/04, 115/07, 18/11, 148/11, 23/13, 137/13, 164/13, 38/14, 44/14); ▪ Law on Occupational Health and Safety (Official Gazette No. 92/07, 98/10, 93/11, 136/11, 60/12, 23/13, 25/13, 164/13); ▪ Law for Health Protection (Official Gazette No. 07/07, 44/11, 145/12, 87/13); ▪ Law on Access to Public Information (Official Gazette of RM no. 13/06, 86/08, 06/10, 42/14, 148/15, 55/16); ▪ Law on Traffic Safety (Official Gazette of RM no. 169/15, 55/16); ▪ Law on public roads (Official Gazette of RM no. 84/08).
PUBLIC CONSULTATION	
Identify when / where the public consultation process took place and what were the remarks from the consulted stakeholders	The draft Environmental and Social Management Plan (ESMP) Checklist (for the projects with moderate risk) will be available for the public for 14 days on web site of the Municipality and the web site of the MTC PIU. The document will be accompanied by a call for comments with submission details (e.g. email and postal address). All relevant comments and suggestions received by the stakeholders will be included into the final ESMP checklist and will be submitted to the PIU for the approval by the MTC Environmental Expert and World Bank Specialist. <u>Approved Final version of ESMP Checklist should be included in the Grant Agreement with the proponent and respective bidding documents and construction contracts.</u>
INSTITUTIONAL CAPACITY BUILDING	
Will there be any capacity building?	<input checked="" type="checkbox"/> N or <input type="checkbox"/> Y

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PART 2: ENVIRONMENTAL /SOCIAL SCREENING			
Will the site activity include/involve any of the following potential issues/risks:	Activity	Status	Additional references
	A. General conditions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Section A
	B. General Rehabilitation activities		
	<ul style="list-style-type: none"> • Site specific vehicular traffic • Increase in dust and noise from rehabilitation activities • Generation of waste • Transport of materials and waste 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes", See Section A, B below
	C. Activities taking place near water bodies such as rivers, lakes, international waters, etc.		
	<ul style="list-style-type: none"> • Increase in sediments loads in water bodies • Changes of water flow • Pollution of water due to temporary waste disposal or spill leakages 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes", See Section A, B, C below
	D. Impacts on forests and/or protected areas		
	<ul style="list-style-type: none"> • Vicinity of recognized protection area • Disturbance of protected animal habitats • Cutting of trees/forest 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes", See Section A, B, D below
	E. Impacts on surface drainage system	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes", See Section A, B, E below
	F. Vicinity of any historical building/s or areas		
	<ul style="list-style-type: none"> • Risk of damage to known/unknown historical buildings/areas 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes", See Section A, B, F below
	G. Traffic and Pedestrian Safety		
	<ul style="list-style-type: none"> • Site specific vehicular traffic • Site is in a populated area 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes", See Section A, B, G below

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	H. Usage of hazardous or toxic materials and generation of hazardous waste¹	
	<ul style="list-style-type: none"> • Removal and disposal of toxic and/or hazardous waste during the rehabilitation activities [x] Yes [] No • Storage of machine oils and lubricants 	If "Yes", See Section A, B, H below
	I. Installation of power line poles	If "Yes", See Section A, B, I below
	<ul style="list-style-type: none"> • Relocation of power line poles [x] Yes [] No • Dismantling of the power line poles • Underground cabling of power line 	
	J. Land acquisition ²	[] Yes [x] No If "Yes", See Section A, B, J below

¹ Toxic/hazardous materials include but not limited to fuels, motor/hydraulic oils, lubricants, toxic paints, etc.

² Land acquisition covers people's displacement, lifestyle changes, disturbance of private ownership and affecting people living and / or staying or running a business (kiosks) on the land or near by

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ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
A. General Conditions	Community H&S and OH&S for workers	<p><u>Community H&S measures:</u></p> <p>(a) The local construction and environment inspectorates and communities in the Municipality of Krushevo will be notified for the project activities rehabilitation of the local road/street;</p> <p>(b) The public in the Municipality of Krushevo will be notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works, municipal information table and municipal website http://krusevo.gov.mk/);</p> <p>(c) All legally required permits, authorisations, opinions, etc. have been acquired for the project activities;</p> <p>(d) Contractor and sub-contractor have valid operating licenses;</p> <p>(e) Preparation and implementation of the Site Management Plan;</p> <ul style="list-style-type: none"> • Appropriate installation of signposting of the project site will inform workers of key rules and regulations to follow; • Ensure appropriate marking in and out of the construction site /section by section; • Unrestricted access to the family houses, markets, play yards for kids, hospitals, religious facilities and other important buildings should be provided; • Placed warning tapes signaling forbidden access to unauthorized persons to the working site. The site will be fenced off; • Temporary material storage should be clearly marked. <p>(f) Preparation prior to commencement of works and implementation of the Traffic Management Plan;</p> <p>(g) All work will be carried out in a safe and disciplined manner designed to minimize impacts on workers, citizens using the road and environment.</p> <p>(h) Safe passages are provided for the pedestrians;</p> <p>(i) All dangerous spots in the working sites such as pits, trenches, etc. will be clearly marked and fenced.</p> <p><u>OH&S measures for workers:</u></p> <p>(j) Machines should be handled only by experienced and trained personnel, thus reducing the risk of accidents;</p>

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		<p>(k) Workers who will be engaged, will be trained and regularly use/wear Personal Protective Equipment - PPE complying with international good practice (will always wear hats, masks and safety glasses, harnesses and safety boots, and other work specific protective equipment);</p> <p>(l) Community and Worker's OH&S measures should be applied (first aid, protective clothes for the workers, appropriate machines and tools);</p> <p>(m) Procedures for cases of emergency are available at the site</p> <p><u>Firefighting measures:</u></p> <p>(n) Constant presence of attested firefighting devices should be ensured on site in case of fire or other damage. Their position is communicated to workers and marked. The level of fire-fighting equipment must be assessed and evaluated through a typical risk assessment;</p> <p>(o) A person will be appointed on the site responsible for the fire protection;</p> <p>(p) Procedures in the case of fire are conveyed to all employees;</p> <p>(q) The part of the road that is not under rehabilitation will be kept clean.</p>
	Cultural heritage preservation	<p>(a) In the case of chance finding, the site will be fenced (protected) and authorities (Ministry of Culture, Directorate for Protection of Cultural Heritage) will be informed within 24 hours following the national procedures. Works will recommence upon approval of competent authorities. Their instructions will be followed in the further works;</p> <p>(b) If rehabilitation works take place close to a designated archeological sites, , notification shall be made and approvals/permits be obtained from local authorities and all rehabilitation activities planned and carried out in line with local and national legislation;</p> <p>(c) Adequate care and awareness rising shall be taken to enlighten construction workers on the possible unearthing of archaeological relics;</p> <p>(d) Because of the aforementioned cultural heritage sites are located in the wider surrounding of the project location, no adverse impact are expected for this aspect;</p>
	Accidents prevention	<p>(a) Spill prevention kit, which will prevent further extension of the spillage, should be available on site. In the case of the spill, the contaminated soil/water will be confined, removed to a closed container and treated as a hazardous-waste;</p> <p>(b) Firefighting distinguishers should be attested and in proper condition;</p>

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		<p>(c) Work site should be protected by a fence and proper signalization;</p> <p>(d) Traffic around the project site should operate strictly in accordance with the Traffic Management Plan approved by the Ministry of Interior (local traffic police);</p> <p>(e) Vehicles and construction machinery should be attested and in proper working condition.</p>
<p>B. General Rehabilitation activities</p>	<p style="text-align: center;">Air Emission and Air Quality</p>	<p>(a) On dry and windy days the construction site, transportation routes and materials handling sites should be water sprayed if needed. Prevent dusting during upload and unload. Loads likely to emit dust must be transported covered;</p> <p>(b) Washing of road transport vehicles and wheels will be conducted regularly, in previously identified sites equipped with, minimally, oil and grease collector;</p> <p>(c) To minimize dust the construction materials should be stored in appropriate places and be covered;</p> <p>(d) When transporting waste/materials the vehicles must be covered in order to decrease the dust emission;</p> <p>(e) The speed of the vehicles needs to be adjusted accordingly on the project location (40 km/h);</p> <p>(f) Avoid mechanization working in the idle mode;</p> <p>(g) All machinery needs to be equipped with appropriate emission control equipment;</p> <p>(h) Ensure all vehicles and machinery use petrol from official sources (licensed gas stations) and on fuel determined by the machinery and vehicles producer;</p> <p>(i) Ensure all transportation vehicles and machinery is regularly maintained and attested;</p> <p>(j) Excavation and other clearing activities and earthwork must be done during agreed working times and permitting weather conditions to avoid drifting of sand and dust into neighboring area.</p>
	<p style="text-align: center;">Noise disturbance</p>	<p>(a) The level of noise will not exceed national limited level (according to national legislation and EU requirement)</p> <ul style="list-style-type: none"> • Area with a first degree of noise protection, includes areas of tourism and recreation, areas near health institutions for hospital treatment, and areas of national parks and natural reserves (Ld – 50 dB, Le – 50 dB, Ln – 40);

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		<ul style="list-style-type: none"> • Area with a second degree of noise protection, includes areas primarily intended for residential use, residential districts, areas in the vicinity of educational institutions, educational facilities and social protection services for adults and children(Ld – 55 dB, Le – 55 dB, Ln – 45); • Area with a third degree of noise protection, correspond to an area where some human activities with noise disturbance are accepted. These include commercial areas, areas with mixed housing/residential, craft activities and production activities (combined areas) (Ld – 60 dB, Le – 60 dB, Ln – 55); • Area with fourth degree of noise protection, correspond to an area in which actions are allowed that can cause the appearance of greater environmental noise. It includes non - residential areas exclusively intended for industrial activities (Ld – 70 dB, Le – 70 dB, Ln – 60); The project location belongs to this area. <p>(b) The construction work should be not permitted during the nights, the operations on site shall be restricted to the hours 7.00 -19.00;</p> <p>(c) Noise suppression measures must be applied to all construction equipment. During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed. Should the vehicles or equipment not be in good working order, the constructor may be instructed to remove the offending vehicle or machinery from the site;</p> <p>(d) Mechanical equipment is effectively maintained.</p>
	Waste management	<p>(a) The different waste types that could be generated at the rehabilitation site need to be identified and classified according to the List of Waste (Official Gazette no.100/05);</p> <p>(b) Containers for each identified waste category are provided in sufficient quantities and positioned and marked for separate collection;</p> <p>The main waste would be classified under the Waste Chapter 17 "Construction and demolition wastes (including excavated soil from contaminated sites)" with the waste code 17 01 – Waste from concrete, asphalt, 17 05 04 – Excavated soil, 17 09 04 – Mixed waste from construction site;</p>

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		<p>Small amount of solid municipal waste can be found (beverages, food), as well as packaging waste (bottles, paper, glass, etc.;</p> <p>(c) The waste will be collected regularly and disposed/processed will be in the licensed landfill/processing plant. For the expected waste types from cleaning and rehabilitation activities the waste collection and disposal pathways and sites will be identified;</p> <p>(d) If stored temporary, the waste will be protected from adverse weather conditions and within the working site in a way that is not jeopardizing OHS;</p> <p>(e) The construction waste will be separated from the general waste, liquid and chemical waste on site, by sorting in appropriate containers and disposed at the licensed landfill;</p> <p>(f) Hazardous waste will be separated from other waste on site, by sorting in appropriate containers and disposed at the licensed landfill;</p> <p>(g) Construction and demolition waste from site will be instantly removed. Inert waste can reused if it is proven harmless and use is appropriate. All donations and reuse must be recorded;</p> <p>(h) The options for reuse/recycling of the generated waste streams should be taking into consideration (e.g. reuse of the removed layer of asphalt, excavated soil, etc.).The records of waste disposal (waste manifest) will be regularly updated and archived</p> <p>(i) Only licensed collectors of waste will collect and dispose of the construction waste;</p> <p>(j) All of the records of the disposed waste will be kept as proof for proper management;</p> <p>(k) For the possible hazardous waste (motor oils, vehicle fuels) an authorized collector needs to be appointed to collect and dispose of it properly to the licensed site/licensed processing plant;</p> <p>(l) The materials should be covered during the transportation to avoid waste dispersion;</p> <p>(m) Burning of any type of waste, discarding it to the nature, water streams or any other non-licensed location is strictly prohibited.</p> <p>(n) Upon finalization of works, no waste will be left on the site. Historical waste will be removed prior to works.</p>

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ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
	Water and soil	<ul style="list-style-type: none"> (a) In the event of hazardous spillage, it needs to be stopped and removed, then the site needs to be cleaned and the procedures and measures for hazardous waste management need to be followed; (b) Contractor must sign a Contract with authorized company/person to collect and transport the hazardous waste in accordance with national legislation with emphasis on the transportation of hazardous (toxic) goods: Issuing the license to company/person for collection and transportation of hazardous waste, Obligations for packaging and labeling of hazardous waste, Transportation of the hazardous waste; (c) According to the national legislation (List of wastes - Official Gazette no.100/05) the hazardous waste need to be identified and classified; (d) Applying appropriate packaging and labelling of the boxes with hazardous waste; (e) The packaging should follow the requirements of national legislation; (f) The label should present the hazardous classification code, attention note "HAZARDOUS WASTE", general data for the waste holder, R-risk phrase, S – safety phrase, quantity of waste, physical conditions of hazardous waste and graphical symbol; (g) The transport of hazardous waste is forbidden if it is not packaged and labeled according the national legislation requirements; (h) In the case of any run-off coming from the works, in order to avoid contamination of the area it needs to be collected on site and placed in a temporary retention basin; (i) Install/provide and maintain proper sanitary facilities for workers (mobile toilets). These toilets need to be cleaned and the wastewater needs to be properly transported to be further treated by the company that has a license for maintaining and cleaning of the mobile toilets; (j) Waste water collected at the site must not be released to the environment without prior treatment; (k) The temporary or final disposal of any waste stream near the water courses is forbidden; (l) Servicing of vehicles and machinery is forbidden to be conducted on the construction-site; (m) Prevent as much as possible, oil and other pollutants leakages to water and soil;

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ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
		<p>(n) If necessary, the stream flow is made to bypass the construction area within drainage lines.</p> <p>(o) Apply soil stability measures where necessary.</p> <p>(p) There will be no unregulated extraction of groundwater, nor uncontrolled discharge of process waters, cement slurries, or any other contaminated waters into the ground or adjacent streams or rivers; the Contractor will obtain all necessary licenses and permits for water extraction and regulated discharge into the public wastewater system;</p>
	Nature protection	<p>(a) Reducing the size of the construction site due to the minimization of the land that will suffer a negative impact - Minimal green surface is to be removed and re-greening applied after the works are completed;</p> <p>(b) Disturbance of animals and collection of plants in the area is prohibited;</p> <p>(c) Prohibit the collection of firewood from and around working areas;</p> <p>(d) Rehabilitation activities should be performed by avoiding the important reproduction stages of protected species if works are done in proximity of protected areas;</p> <p>(e) Collection of the generated waste on daily basis, selection of waste, transportation and final disposal on appropriate places;</p> <p>(f) Destroyed plants need to be replaced by planting the new native species;</p> <p>(g) There will be no felling. Individual trees can be removed only with a prior approval form the competent authority (e.g. forestry department).</p> <p>(h) Strictly forbidden collection of plants and herbs from the vicinity of the site;</p> <p>(i) After finishing with rehabilitation activities, the location should be return to the pre work condition and if not possible than it will be adequately rehabilitated. Only native plant species can be used in re-greening.</p>
	Transport and Materials Management	<p>(a) Rehabilitation routes are clearly defined;</p> <p>(b) Distribution of materials and other usages of the local road/street need to be announced and coordinated with the Municipality. The Contractor will take safety measures to prevent accidents;</p> <p>(c) All materials prone to dusting are transported in closed or covered trucks;</p>

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		<ul style="list-style-type: none"> (d) All materials prone to dusting and susceptible to weather conditions are protected from atmospheric impacts either by windshields, covers, watered or other appropriate means; (e) Roads are regularly swept and cleaned at critical points. Spilled materials are immediately removed from a road and cleaned. Access roads are well maintained; (f) Spilled materials are immediately removed from tracks and cleaned. Tracks are well maintained; (g) Access of the construction and material delivery vehicles are strictly controlled, especially during the wet weather; (h) Topsoil and stockpiles are kept separate; (i) Stockpiles are located away from drainage lines, natural waterways and places susceptible to land erosion; (j) All loads of soil are covered when being taken off the site for reuse/disposal; (k) Stockpiles do not exceed 2m in height to prevent dissipation and risk of fall; (l) Producer of asphalt, gravel, concrete should possess all necessary working and emission permits and quality certifications; (m) Producer of asphalt, concrete has to present a proof of conformity with all national environmental and OHS legislation; (n) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested; (o) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.
<p>G. Traffic and Pedestrian Safety</p>	<p>Direct or indirect hazards to public traffic and pedestrians by rehabilitation activities</p>	<p>The construction site including the regulation of the traffic will be accordingly secured by the Contractor. This includes but is not limited to:</p> <ul style="list-style-type: none"> (a) The Traffic Management Plan will be prepared with the municipal staff in order to provide proper traffic flow within the project area (and beyond) and to prevent possible traffic accidents; (b) The neighboring communities (located along/near the project site) need to be timely informed of the upcoming works;

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		<ul style="list-style-type: none"> (c) In an event where the traffic will be interrupted the contractor in cooperation with the Municipality and traffic police need to organize alternative routes; (d) Placing of sign posts, warning signs, barriers and traffic diversions signs (vertical signalization and signs at the beginning of the rehabilitation site): the passing citizens will be warned about the potential hazards; (e) Installed boards and signs must not interfere with traffic safety and visibility; (f) Adequate warning tapes and signage need to be provided and placed; (g) Forbidden of entrance of unemployed persons within the fence; (h) Traffic management system and staff training should be executed, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes; (i) Active traffic management should be conducted by trained and visible staff at the site, if required for safe and convenient passage for the public; (j) Set up a special traffic regime for the vehicles of the contractor during the period of rehabilitation (together with the municipal staff and police department) and installation of signs to ensure safety, traffic flow and access to land and facilities; (k) Announce timely alternative traffic regulation during the rehabilitation works to the local communities (if there will be one); (l) Ensure pedestrian safety. Special focus for safety of children if the school is in the vicinity (fence off the site, install safe corridors, regulate traffic manually in the peak hours, etc.); (m) Ensuring safe and continuous access to office facilities, shops and residences during rehabilitation activities; (n) Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement.
<p>H. Usage of hazardous or toxic materials and generation of hazardous waste</p>	<p>Toxic / hazardous materials management and</p>	<ul style="list-style-type: none"> (a) Temporarily storage on site of all hazardous or toxic substances (including wastes) will be in safe containers labeled with details of composition, properties and handling information. Chemicals are managed, used and disposed, and precautionary measures taken as required in the Material Safety Data Sheets (MSDS);

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	Hazardous waste management	(b) The containers holding ignitable or reactive wastes must be located at least 15 meters (50 feet) from the facility's property line. Large amounts of fuel will not be kept at the site; (c) The containers of hazardous substances shall be placed in a leak-proof container to prevent spillage and leaking. This container will possess secondary containment system such as bunds (e.g. banded-container), double walls, or similar. Secondary containment system must be free of cracks, able to contain the spill, and be emptied quickly; (d) The containers with hazardous substances must be kept closed, except when adding or removing materials/waste. They must not be handled, opened, or stored in a manner that may cause them to leak; (e) Hazardous waste should not be mixed and will be transported and handled only by licensed companies in line with the national regulation; (f) Hazardous waste should be maintained according the national legislation by the company that has License for hazardous waste; (g) Paints with toxic ingredients or solvents or lead-based paints will not be used.
I. Installation/Relocation of power line poles	Occupational Health and Safety of workers	(a) All precautions should be taken when working on heights and under the voltage in line with national legislation and highest safety standards. Workers must be adequately trained and certified for working on heights, under the voltage and other high risk works; (b) No works on transformers will be carried out; (c) No work under live wire conditions will be done; (d) Energy efficient lights (LED) should be installed. The lights with reduced light-pollution will be installed and over-lighting avoided; (e) The lighting condition and the complete electrical installation will be checked before put in operation; (f) Works will be carried out in coordination with responsible company (EVN) for relocation of existing power poles as well as other interested services providers (e.g. telecommunication companies); (g) Local community will be timely informed of the works and power shortages;

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		(h) Safety measures will be taken during underground cabling. Interested utility companies will be informed and involved if needed e.g. telecommunication companies, gas and other.

PART 3: MONITORING PLAN					
What	Where	How	When	By Whom	How much
<i>parameter is to be monitored?</i>	<i>is the parameter to be monitored?</i>	<i>is the parameter to be monitored (what should be measured and how)?</i>	<i>is the parameter to be monitored (timing and frequency)?</i>	<i>is the parameter to be monitored– (responsibility)?</i>	<i>is the cost associated with implementation of monitoring</i>
Preparatory phase					
All required permits are obtained before works start at the project location (road from settlement "Porta" to "Mechkin Kamen")	At the city Administration in Krushevo	Inspection of all required documents	Before works start	Contractor; Supervisor of the reconstruction, upgrading land development works; Construction Inspector in Municipality of Krushevo, LRCP PIU, MTC	Included in the project budget
In the Municipality of Krushevo all the public and relevant institutions are notified	Contractor's premises	Inspection of all required documents	Before works start	Contractor; Supervisor of the rehabilitation works;	Included in the project budget
The safety measures for the workers/employees and	On project site along the road from settlement "Porta" to "Mechkin Kamen" in Municipality of Krushevo	Visual checks and reporting	Before reconstruction, upgrading and land development works start	Contractor, Supervisor	Included in the project budget

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What	Where	How	When	By Whom	How much
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citizens which will be affected at the project location in the Municipality of Krushevo					
Rehabilitation phase					
Safety measures at the project location in the Municipality of Krushevo	Within the project location	Visual checks and reporting; Unannounced inspections during work	Unannounced controls during work	Supervisor	Included in the project budget
Safe traffic flow on the roads under construction in Municipality of Krushevo according to the Traffic management plan	Along and around project area in Municipality of Krushevo	Visual checks and reporting	During equipment delivery	Contractor, Supervisor	Included in the project budget
Collection, transport and final disposal of the solid waste according to the waste management plan	At and around the project site	Visual monitoring and inspection of the transport lists of the contractor	On daily basis after the collection and transportation of the solid waste	Contractor; Supervisor of the rehabilitation works; Authorized environmental inspector, Construction	Part of the regular Contractor cost

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<i>parameter is to be monitored?</i>	<i>is the parameter to be monitored?</i>	<i>is the parameter to be monitored (what should be measured and how)?</i>	<i>is the parameter to be monitored (timing and frequency)?</i>	<i>is the parameter to be monitored– (responsibility)?</i>	<i>is the cost associated with implementation of monitoring</i>
				inspector, LRCP ESS	
Collection, transport of the hazardous waste according to the waste management plan	At the location where the collection and transport of the hazardous waste is done (separate waste container)	Inspection of the transport lists and the conditions of the storage space	Before the transportation of the hazardous waste	Authorized company for collecting and transportation of hazardous waste, Authorized environmental inspector, Construction inspector, LRCP ESS	Part of the regular Contractor cost
Air pollution (dust, gas), particulate matter (PM)	Along the project site	Monitoring by an authorized company	Upon complaint or negative inspection finding	Supervisor	Contractor budget
Relocation of power poles	At the site where the poles are taken out and at the site where they are placed	Visual checks and inspection if there is no current in the power lines	Upon relocation of the poles	Supervisor, Responsible person from company for relocation of power poles	Part of the regular Contractor cost
Operation Phase					
Proper waste management at the local road and path and at the surrounding area	Along the road and path	Visual checks for different wastes along the street/road	Waste present at the side of the roads	Collection company	Municipality budget

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What	Where	How	When	By Whom	How much
<i>parameter is to be monitored?</i>	<i>is the parameter to be monitored?</i>	<i>is the parameter to be monitored (what should be measured and how)?</i>	<i>is the parameter to be monitored (timing and frequency)?</i>	<i>is the parameter to be monitored– (responsibility)?</i>	<i>is the cost associated with implementation of monitoring</i>
Regular maintenance of the road and path	Along the road and path	By regular visual checks of the road and path condition, whether there are cracks and damages, condition of the traffic signalization	Continuously and especially in an event when is snowing, there are landslides etc.	Authorized company for maintenance of the road Supervisor	Municipality budget

ANNEX II: Site Description

The project area, where the project activities for reconstruction, upgrading of the roads will be performed, is located in the middle part of the Municipality of Krushevo, precisely south of the City of Krushevo. The location is shown in Figure 1. The planned project activities will be performed in three phases: preparatory activities (marking out and clearing up of the construction site – street), reconstruction of the carriageway (scraping and putting asphalt layer, etc.), upgrading of carriageway – parking (excavation and putting asphalt layer), land development of the pathway (excavation and putting bitumen layer) and operational phase – activities related to regular and preventive maintenance of relevant street. The total length of the reconstruction of the carriageway is 2.292,25 m, upgrading of carriageway – parking is 162,25 m, land development of the pathway is 1.876,25 m.

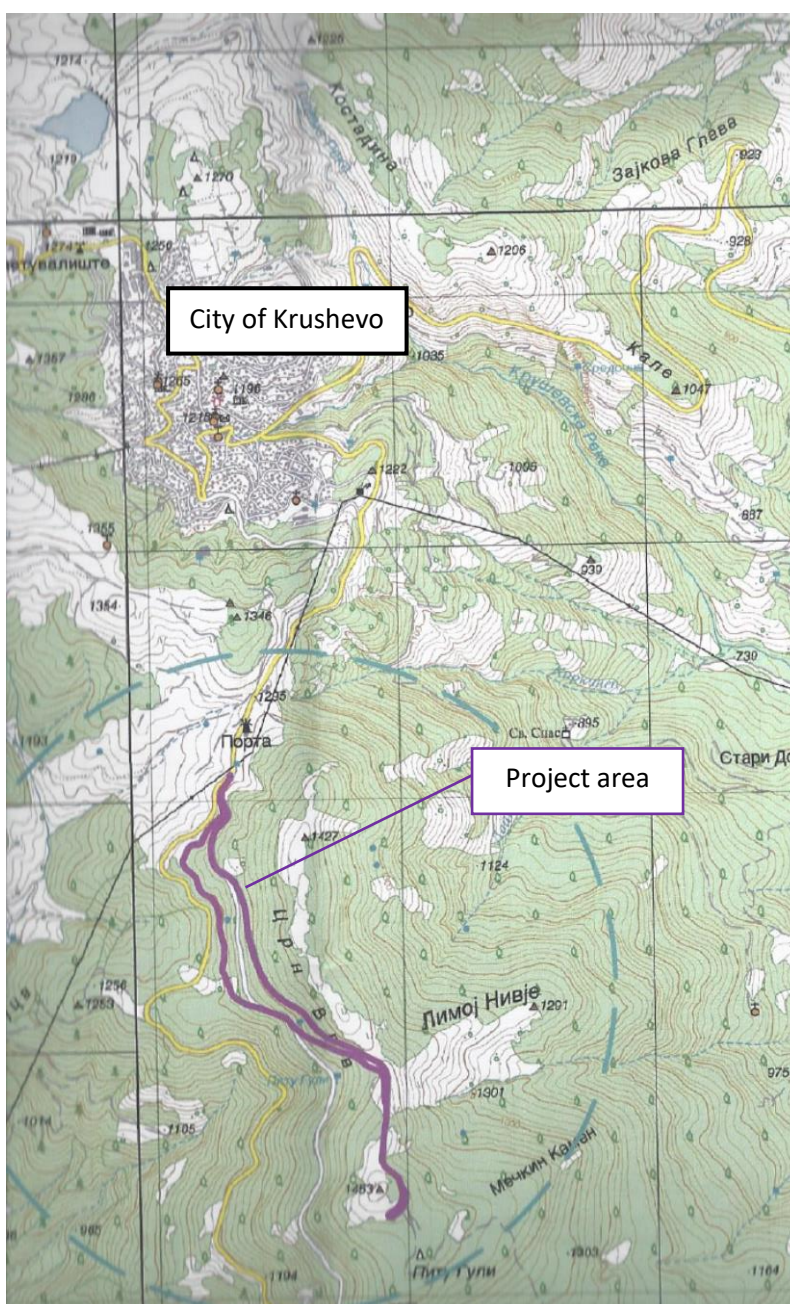


Figure 1 Location of the rehabilitation of the road and walking path in the Municipality of Krushevo

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Figure 2 Location of the rehabilitation of the road and walking path in the Municipality of Krushevo

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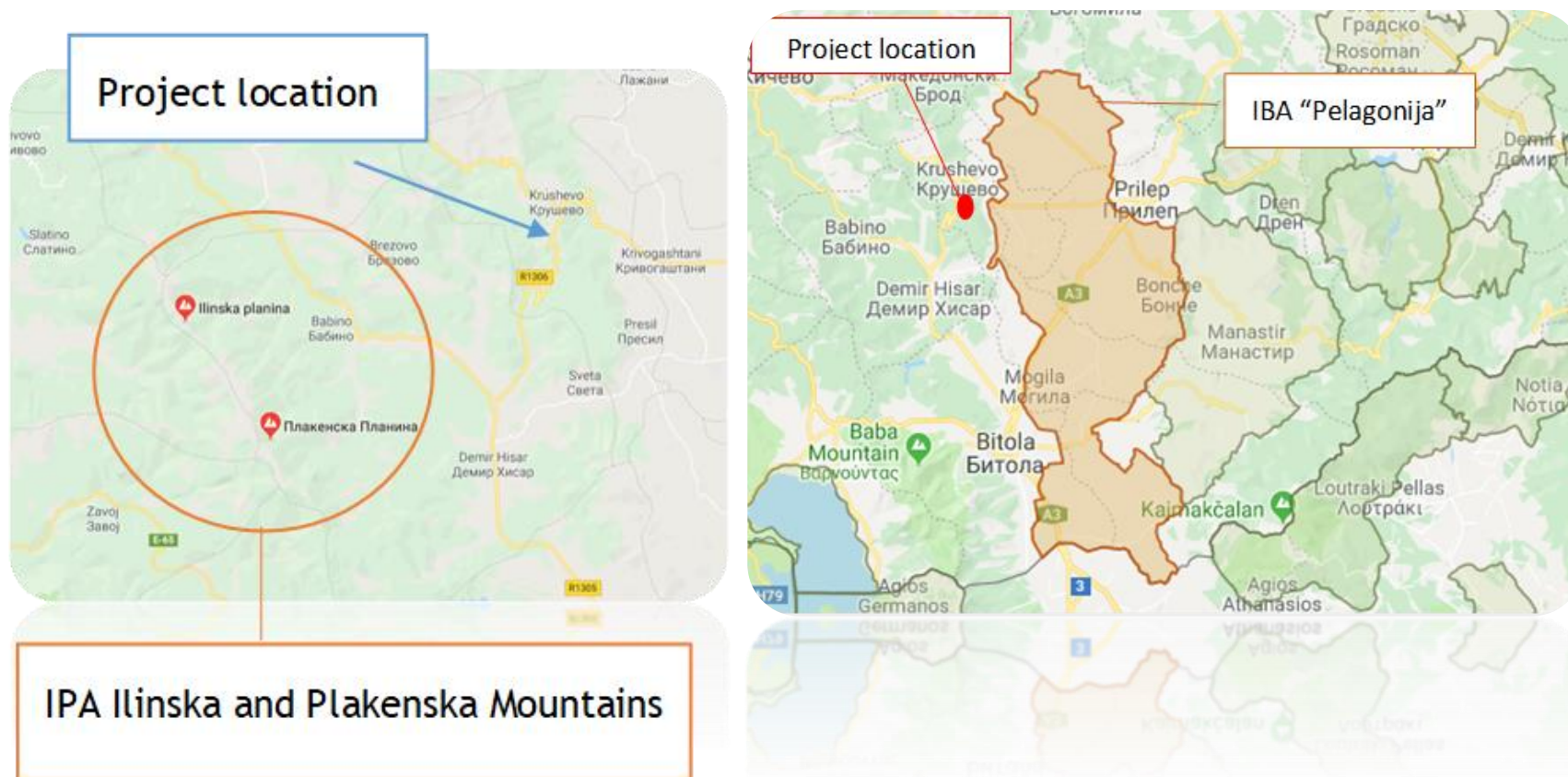


Figure 3 IBA and IPA sites in the wider area of the project location that will not be negatively affected by the construction activities