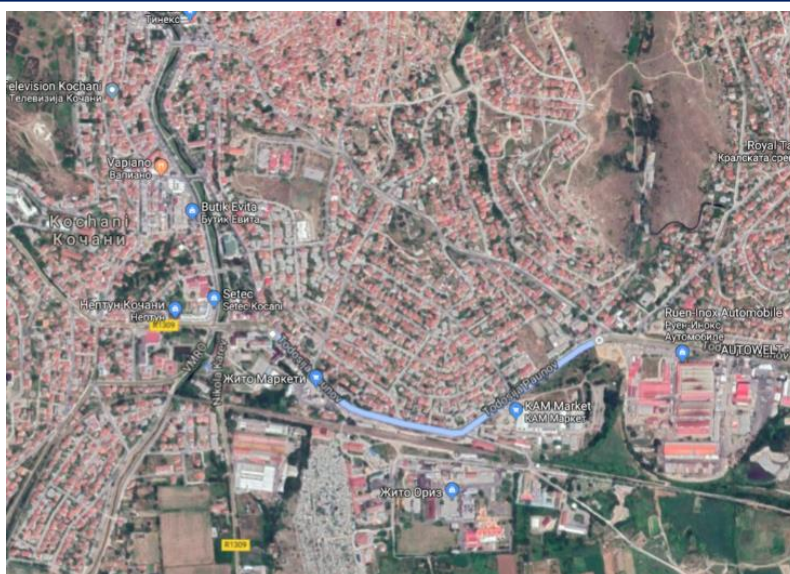




Rehabilitation of an existing road bul. “Todosija Paunov” in the City of Kocani, in Municipality of Kocani



ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) CHECKLIST
Rehabilitation of an existing road bul. "Todosija Paunov" in the City of Kocani, in Municipality of Kocani

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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 |
| LRCP | 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 implementation of 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 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 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 potential risks and impacts of the smaller scale sub-projects 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 small 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 ESF standards. 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 envisaged for 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 potential negative/adverse impacts of the works to be carried out can be identified. Parts 1, 2 and 3 are drafted. The second part of the ESMP Checklist contains all of the typical activities and associated typical environmental issues and appropriate mitigation measures.
- 2) This phase covers 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 also the obligations defined in the contract of the Contractor are considered. 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. 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. However, the overall responsibility for the compliance remains with the Borrower/PIU.

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 plan 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 ES 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 and social risk rating, 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 as well as mitigation measures implementation levels.

If there are non-compliances in the implementation of ESMP Checklist measures and/or recorded in the monitoring report, penalties previously introduced in the contract will be issued. In 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 undisturbed 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 local road bul. "Todosija Paunov" in the City of Kocani, in Municipality of Kocani | | | |
| 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 | Boulevard "Todosija Paunov" | | | |
| Describe site location (geographic description) | In the close environment there can be found two elementary schools to the west and east of the street located at about 50 m. The Kocanska river is located to the west at 100 m. In the close proximity to the north of the street, there are residential buildings, whereas to the south of the street there is an industrial area. | | Annex 1: Site information (figure from the site) [x]Y [] N | |
| Who owns the land? | Republic of North Macedonia | | | |
| Geographic description | Country: RNM Region: East region Municipality: Kocani Settlement: Kocani | | | |
| 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); ▪ 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, | | | |

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| | <p>13/13, 163/13, 146/15);</p> <ul style="list-style-type: none"> ▪ 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 | <p>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, accompanied by a call for comments (containing contact info such as 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></p> |
| INSTITUTIONAL CAPACITY BUILDING | |
| Will there be any capacity building? | [x] N or []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. (No interventions are planned in the water aspect) | |
| | <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 checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input 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 type="checkbox"/> Yes <input checked="" 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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| PART 2: ENVIRONMENTAL /SOCIAL SCREENING | | |
|---|---|--|
| | 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 |
| | <ul style="list-style-type: none"> Storage of machine oils and lubricants | |
| | | If "Yes", See Section A, B, H below |
| | I. Installation of power line poles | |
| | <ul style="list-style-type: none"> Relocation of power line poles | [] Yes [x] No |
| | <ul style="list-style-type: none"> Dismantling of the power line poles | |
| | <ul style="list-style-type: none"> 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 Kocani will be notified for the project activities rehabilitation of the local road/street;</p> <p>(b) The public in the Municipality of Kocani 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 https://kocani.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 and speed-reduction signs; • Access to the family houses, markets, play yards for kids, religious objects and other important buildings e.g. hospitals should be maintained; • Placed warning tapes signaling forbidden entrance of unemployed 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>(j) It is essential good communication between the Contractor, school principals and staff and local representatives of local self-government in order to prevent possible injuries of the</p> |

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|----------|--------------------------------|--|
| | | <p>pupils and to fulfill smooth running of the project activities. The local population (especially pupils who daily visits the primary schools at the project location in City of Kocani) should respect the preventive measures given from the Contractor;</p> <p>(k) It should be organize lectures for the primary school pupils on safety measures around project site. In order to prevent possible risk on pupils (who visit the primary schools), the Contractor should schedule the project activities in the summer period, when the frequency of the pupils is decreased because of the summer break;</p> <p><u>OH&S measures for workers:</u></p> <p>(l) Machines should be handled only by experienced and trained personnel, thus reducing the risk of accidents;</p> <p>(m) 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>(n) Community and Worker's OH&S measures should be applied (first aid, protective clothes for the workers, appropriate machines and tools);</p> <p>(o) Procedures for cases of emergency are available at the site.</p> <p><u>Firefighting measures:</u></p> <p>(p) 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>(q) Supervision of fire protection/fire-fighting facilities to be carried out by a designated staff;</p> <p>(r) Procedures in the case of fire are conveyed to all employees;</p> <p>(s) 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</p> |

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| | | <p>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; No archeological/cultural heritage sites are identified near project site, so adverse impacts are not expected;</p> <p>(c) Adequate care and awareness rising shall be taken to enlighten construction workers on the possible unearthing of archaeological relics;</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> <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> |
| B. General Rehabilitation activities | Air Emission and Air Quality | <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). Avoid work of mechanization in idle mode.;</p> <p>(f) All machinery needs to be equipped with appropriate emission control equipment;</p> |

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|----------|-------------------|--|
| | | <p>(g) 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>(h) Ensure all transportation vehicles and machinery is regularly maintained and attested;</p> <p>(i) 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> |
| | Noise disturbance | <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); 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); The project location belongs to this area. 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); <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</p> |

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| | | <p>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> <p>(c) Small amount of solid municipal waste can be found (beverages, food), as well as packaging waste (bottles, paper, glass, etc.); The waste will be collected regularly, and disposed/processed 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; 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.).</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 be reused if it is proven harmless and use is appropriate. All donations and reuse must be recorded;</p> |

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| ACTIVITY | PARAMETER | MITIGATION MEASURES CHECKLIST |
|----------|----------------|---|
| | | <p>(h) 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 on 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> |
| | Water and soil | <p>(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;</p> <p>(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;</p> <p>(c) According to the national legislation (List of wastes - Official Gazette no.100/05) the hazardous wastes need to be identified and classified;</p> <p>(d) Applying appropriate packaging and labelling of the boxes with hazardous waste;</p> <p>(e) The packaging should follow the requirements of national legislation;</p> <p>(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;</p> |

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| ACTIVITY | PARAMETER | MITIGATION MEASURES CHECKLIST |
|----------|-------------------|---|
| | | <p>(g) The transport of hazardous waste is forbidden if it is not packaged and labeled according the national legislation requirements;</p> <p>(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;</p> <p>(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;</p> <p>(j) Waste water collected at the site must not be released to the environment without prior treatment;</p> <p>(k) The temporary or final disposal of any waste stream near the water courses is forbidden;</p> <p>(l) Servicing of vehicles and machinery is forbidden to be conducted on the construction-site;</p> <p>(m) Prevent as much as possible, oil and other pollutants leakages to water and soil;</p> <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> |
| | 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> |

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| | | <ul style="list-style-type: none"> (h) Strictly forbidden collection of plants and herbs from the vicinity of the site; (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. |
| | Transport and Materials Management | <ul style="list-style-type: none"> (a) Rehabilitation routes are clearly defined; (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; (c) All materials prone to dusting are transported in closed or covered trucks; (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; |

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|--|---|--|
| | | <p>(n) Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested;</p> <p>(o) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.</p> |
| C. Activities taking place near water bodies such as rivers, lakes, international waters, etc.? | Water pollution | <p>(a) Good construction practices have to be implemented to avoid pollution of water in river/lake;</p> <p>(b) Organization of proper storage, handling and daily refilling the hazardous materials;</p> <p>(c) It is prohibited temporary or final storage or disposal of waste, raw materials or any substances harmful to water (e.g. fuels for construction machinery, construction waste, etc.) near/in river bend of river/lake in wider surrounding of project locations, in order to prevent adverse impact on water quality and good ecological status of water courses;</p> <p>(d) The access roads to the project locations should be kept clean and tidy to prevent the build-up of oil and dirt that may be washed or drain during heavy rainfall.</p> |
| E. Impacts on surface drainage system | Water quality | <p>(a) 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> <p>(b) There will be proper storm water drainage systems installed and care taken not to silt, pollute, block or otherwise negatively impact natural streams, rivers, ponds and lakes by rehabilitation activities;</p> <p>(c) There will be procedures for prevention of and response to accidental spills of fuels, lubricants and other toxic or noxious substances;</p> <p>(d) Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.</p> |
| G. Traffic and Pedestrian Safety | Direct or indirect hazards to public traffic and pedestrians by | The construction site including the regulation of the traffic will be accordingly secured by the Contractor. This includes but is not limited to: |

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|----------|---------------------------|---|
| | rehabilitation activities | <p>(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;</p> <p>(b) The neighboring communities (located along/near the project site) need to be timely informed of the upcoming works;</p> <p>(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;</p> <p>(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;</p> <p>(e) It is essential good communication between the Contractor, school principals and staff and local representatives of local self-government in order to prevent possible injuries of the pupils and to fulfill smooth running of the project activities. The local population (especially pupils who daily visits the primary schools at the project location in City of Kocani) should respect the preventive measures given from the Contractor;</p> <p>(f) It should be organize lectures for the primary school pupils on safety measures around project site. In order to prevent possible risk on pupils (who visit the primary schools), the Contractor should schedule the project activities in the summer period, when the frequency of the pupils is decreased because of the summer break;</p> <p>(g) Installed boards and signs must not interfere with traffic safety and visibility;</p> <p>(h) Adequate warning tapes and signage need to be provided and placed;</p> <p>(i) Forbidden of entrance of unemployed persons within the fence;</p> <p>(j) 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;</p> <p>(k) Active traffic management should be conducted by trained and visible staff at the site, if required for safe and convenient passage for the public;</p> |

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|---|---|--|
| | | <ul style="list-style-type: none"> (l) 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; (m) Announce timely alternative traffic regulation during the rehabilitation works to the local communities (if there will be one); (n) 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.); (o) Ensuring safe and continuous access to office facilities, shops and residences during rehabilitation activities; (p) Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement. |
| H. Usage of hazardous or toxic materials and generation of hazardous waste | Toxic / hazardous materials management and Hazardous waste management | <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); (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; |

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| | | (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. |

| 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 bul. "Todosija Paunov" | At the city Administration in Kocani | Inspection of all required documents | Before works start | Contractor; Supervisor of the Rehabilitation works; Construction Inspector in Municipality of Kocani, LRCP PIU, MTC | Included in the project budget |
| Public and relevant institutions are notified in City of Kocani | Contractor's premises | Inspection of all required documents | Before works start | Contractor; Supervisor of the rehabilitation works; | Included in the project budget |
| Safety measures for workers, employees and | On project site/along the bul. "Todosija Paunov" in City of Kocani | Visual checks and reporting | Before rehabilitation works start | Contractor, Supervisor | Included in the project budget |

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| PART 3: MONITORING PLAN | | | | | |
|--|---|--|---|---|---|
| What <i>parameter is to be monitored?</i> | Where <i>is the parameter to be monitored?</i> | How <i>is the parameter to be monitored (what should be measured and how)?</i> | When <i>is the parameter to be monitored (timing and frequency)?</i> | By Whom <i>is the parameter to be monitored– (responsibility)?</i> | How much <i>is the cost associated with implementation of monitoring</i> |
| citizen which will be affected near project location in Municipality of Kocani | | | | | |
| Rehabilitation phase | | | | | |
| Work and communal safety on construction site | Within the project area | Visual checks and reporting Unannounced inspections during work | Unannounced controls during work | Supervisor | Included in the project budget |
| Safe traffic flow within the project area in City of Kocani according to the Traffic management plan | Along and around project area in Municipality of Kocani | Visual checks and reporting; Check the documentation: - Whether all competent authorities have been notified, - Whether all the necessary permits and approvals have been obtained, Visual check of the transport of materials, pedestrian corridors | During equipment delivery | Contractor, Supervisor | Included in the project budget |

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| PART 3: MONITORING PLAN | | | | | |
|--|--|---|---|--|---|
| What <i>parameter is to be monitored?</i> | Where <i>is the parameter to be monitored?</i> | How <i>is the parameter to be monitored (what should be measured and how)?</i> | When <i>is the parameter to be monitored (timing and frequency)?</i> | By Whom <i>is the parameter to be monitored– (responsibility)?</i> | How much <i>is the cost associated with implementation of monitoring</i> |
| | | and crossings, traffic regulation, etc. | | | |
| Collection, transport and final disposal of the solid waste according to the waste management plan | At and around the project site in City of Kocani/ near the Kocanska river | Visual monitoring and inspection of the transport lists of the contractor | Daily level after the collection and transportation of the solid waste Do not leave the solid waste on the construction site and to avoid negative impact to the local environment | Contractor; Supervisor of the rehabilitation works; Authorized environmental inspector, Construction inspector, LRCP ESS | Part of the regular Contractor cost |
| Collection, transport and hazardous waste according to the waste management plan | At the safe temporary location on construction site in separate waste containers | 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 |
| Level of noise and vibration | At and around the project location in Municipality of | Monitoring on the level | Upon complaint or negative | Contractor; Accredited company | Part of the regular |

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| PART 3: MONITORING PLAN | | | | | |
|--|---|---|---|---|---|
| What <i>parameter is to be monitored?</i> | Where <i>is the parameter to be monitored?</i> | How <i>is the parameter to be monitored (what should be measured and how)?</i> | When <i>is the parameter to be monitored (timing and frequency)?</i> | By Whom <i>is the parameter to be monitored– (responsibility)?</i> | How much <i>is the cost associated with implementation of monitoring</i> |
| | Kocani | of noise dB (with suitable equipment) | inspection finding | for measuring the level of provided by the contractor; Authorized environmental inspector, Construction inspector, LRCP ESS | Contractor cost |
| Air pollution parameters of dust, particulate matter | Within the project location | Sampling by authorized agency | Upon complaint or negative inspection finding | Supervisor | Contractor budget |
| Water pollution | Check for spills. The spills are curbed and contaminated soil/water removed, treated as hazardous waste. In the case of larger spills, test soil/water for contaminants and inform environmental inspectorate. Follow their instructions | Visual. Laboratory tests for larger spills. | Regularly | Supervising engineer, Inspection | Part of the regular Contractor cost |

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| PART 3: MONITORING PLAN | | | | | |
|--|---|--|--|---|---|
| What <i>parameter is to be monitored?</i> | Where <i>is the parameter to be monitored?</i> | How <i>is the parameter to be monitored (what should be measured and how)?</i> | When <i>is the parameter to be monitored (timing and frequency)?</i> | By Whom <i>is the parameter to be monitored– (responsibility)?</i> | How much <i>is the cost associated with implementation of monitoring</i> |
| Water quality | Any disposal of the waste streams (solid and liquid) near the river/lake as potential pollution of good ecological status of water course | Visual check if the waste is disposed near the river/lake | Regularly | Contractor – Bidder | Included in the project budget |
| Operation Phase | | | | | |
| Proper waste management | At the site and the surrounding/near Kocanska river | Waste is properly Collected/sorted | Weekly | Authorized waste collection company | Variable and not included in the project budgeted |
| Regular maintenance of the road a | Along the road | By regular visual checks of the road 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 rehabilitation of the street will be performed, is located in the southern part of the Municipality of Kocani, precisely in the city of Kocani. The planned project activities will be performed in three phases: preparatory activities (marking out and clearing up of the construction site – street), rehabilitation of the street (putting asphalt layer, etc.), and operational phase – activities related to regular and preventive maintenance of relevant street. The total length of the new road will be 955,39 m. In Figure 1 is given project location and nearby sensitive receptors.



Figure 1 Location of the rehabilitation of the street in City of Kocani

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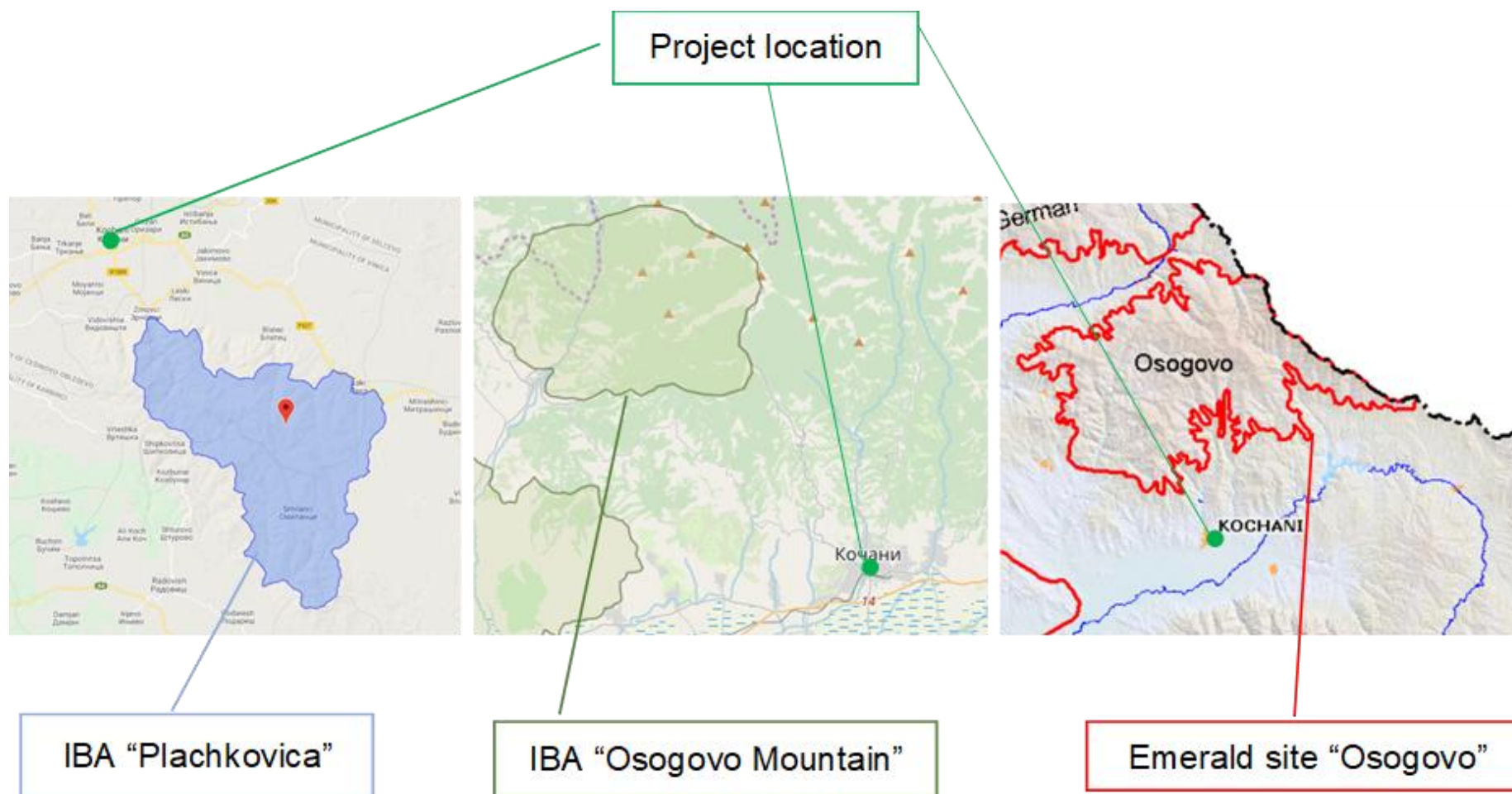


Figure 2 IBA and Emerald sites in the wider area of the project location that will not be negatively affected by the construction activities