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## ROAD REHABILITATION AND SAFETY PROJECT (RRSP)

# ***ENVIRONMENTAL MANAGEMENT PLAN***

Heavy maintenance (road rehabilitation-upgrading) of the  
State Road of the IB Category No. 21,

Section: Pozega – Ivanjica

Final

BELGRADE, May 2018

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## ABBREVIATIONS AND ACRONYMS

AADT	Annual Average Daily Traffic
BoQ	Bill of Quantities
CEP	Contractor's Environmental Plan
EBRD	European Bank for Reconstruction and Development
EEC	European Economic Community
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EMP	Environmental Management Plan
GoS	Government of Serbia
HSE	Health, Safety and Environment
IFC	International Finance Corporation
IFIs	International Financing Institutions
INP	Institute for Nature Protection of the Republic of Serbia
IPCM	Institute for Protection of Cultural Monuments
ME	Montenegro
MoEP	Ministry of Environmental Protection
MCTI	Ministry of Construction, Transport and Infrastructure (fmr. Ministry of Infrastructure and Energy – MoIE)
MS	Method Statement
OP	Operational Policy
PAP	Project Affected People
PE	Public Enterprise
PERS	Public Enterprise "Roads of Serbia"
PPE	Personal Protective Equipment
PSC	Project Supervision Consultant
RE	Resident Engineer
RRSP	Road Rehabilitation and Safety Project
RS	Republic of Serbia
SE	Site Engineer
SLMP	Safety Labour Management Plan
SSIP	Site Specific Implementation Plan
ToR	Terms of Reference
WB	The World Bank Group
WMP	Waste Management Plan
PAP	Project affected persons
SEP	Stakeholder Engagement Plan
NTS	Non Technical Summary

## INTRODUCTION

The Environmental Management Plan (EMP) has been prepared for the proposed heavy maintenance and rehabilitation (road rehabilitation-upgrading) of the State Road of the IB Category, No. 21 section Pozega – Ivanjica to ensure application of the good environmental practice and document compliance with the requirements of the contract.

This Section, between Pozega and Ivanjica (Figure 3) is located in Zlatiborski and Moravicki district on the direction of IB 21 road. The section is situated on the territory of Pozega, Arilje and Ivanjica Municipalities.

In total, Pozega –Ivanjica road section is 38,930 km long. The section starts from km 209+141 (the node 2318) and ends on km 248+071 in Ivanjica (Figures 1 and 2). The road section has three subsections:

1. Subsection 1: Pozega – Arilje,
2. Subsection 2: Arilje – Prilike,
3. Subsection 3: Prilike – Ivanjica.



Figure 1. Beginning of the section



Figure 2. End of the section

The Project Proponent is the Government of Serbia, acting through its Ministry of Environmental Protection (MoEP). Project implementing entity is Public Enterprise “Roads of Serbia” (PERS).

The Project has been classified as Environmental Category B. i.e. a project requiring an EMP pursuant to IFIs Safeguard Policies.

The EMP is analysing the rehabilitation and implementation phase of the project. It is specifying measures and Contractor’s obligations for the purpose of environmental protection during rehabilitation phase.

The aim of the environmental management plan is to highlight the negative environmental impacts and management problems during the construction period, as well as the necessary mitigation measures that the Contractor must apply. The key components of the Environmental Management Plan are: Plan for the mitigation of adverse impacts on the environment and Plan for monitoring the impact on the environment. It is prepared based on field investigations and contract requirements.

State Road IB Class, No. 21, Section: Pozega – Ivanjica  
Environmental Management Plan – EMP



Figure 3. Location of Pozega – Ivanjica section

## EXECUTIVE SUMMARY

### Project description

Project of urgent maintenance and rehabilitation of state road IB Category No.21 section Pozega – Ivanjica is part of the support project of the International Financial Institutions (World Bank, European Investment Bank and European Bank for Reconstruction and Development) to RS government for the implementation of Road Rehabilitation and Safety Project (RRSP). This project represents the first phase of the Government's National Road Rehabilitation Program and covers, over a period from 2014 – 2019:

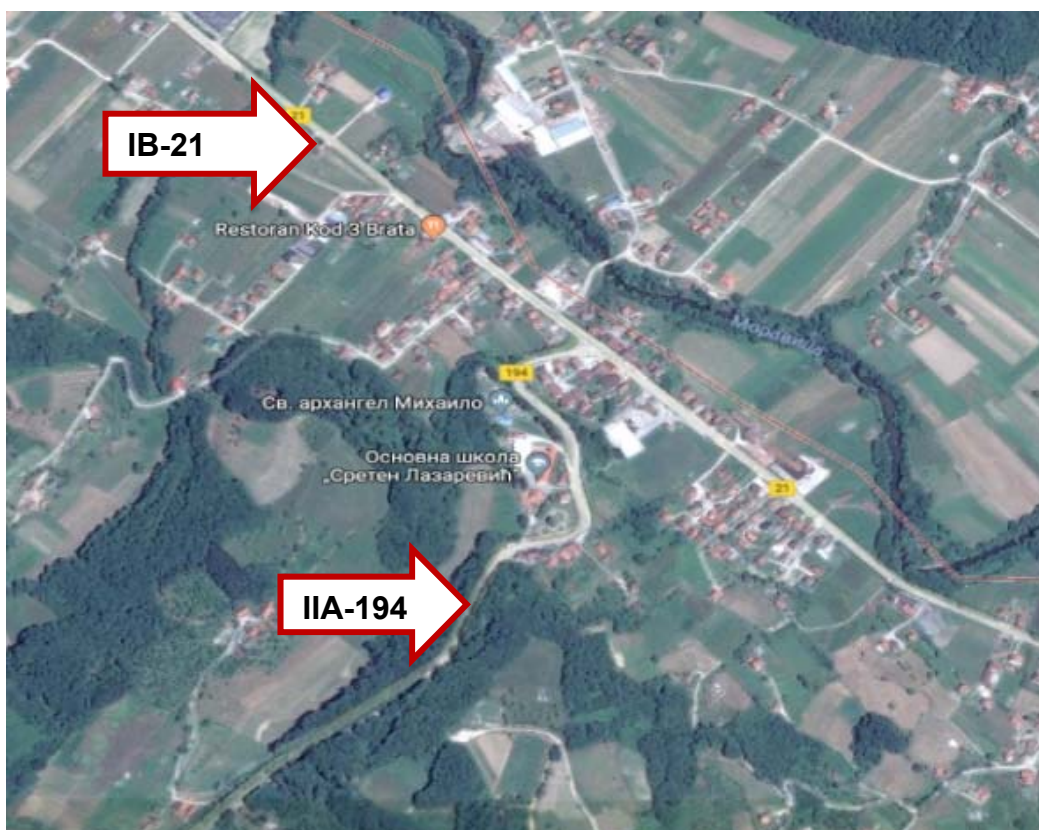
- Improvement of the national road network through rehabilitation of about 1,100 km of existing road network spread over the entire country,
- Increasing the safety level on the roads by applying safety measures in all project phases,
- Capacity building and coordination of traffic safety institutions through implementation a number of different services.

Section Pozega – Ivanjica 38,930 km long. According to its characteristics is treated as road out of urban areas. The section is part of the State road IB Category No. 21 Novi Sad – Irig – Sabac – Koceljeva – Valjevo – Kosjeric – Pozega – Arilje – Ivanjica – Sjenica (old road code M-21.2) in the state road network represents connection of the Republic of Serbia and Republic of Montenegro (state border RS/ME Boljare). The road IB-21 crosses the State roads IIA-196, IIA-194 and IIA-180 that lead to the east and west of the Country.



Intersection of IB-21 and IIA-196





Intersection of IB-21 and IIA-194



Intersection of IB-21 and IIA-180

Figure 4. Crossroads of the State road IB-21 and other State roads



Functionally, according to Regulations for safety conditions of the roads and other road construction (“Official Gazette RS” No. 50/2011) this section represents inter regional road (connecting inter regional road).

Pozega – Ivanjica road section is a roadway of an average width of 6m, designed for two-way traffic with one line in each direction.

The section is divided in three subsections:

Subsection 1 Pozega – Arilje,

Subsection 2 Arilje – Prilike,

Subsection 3 Prilike – Ivanjica.

While old road codes were in power, there were only two of them: Prilike – Ivanjica (Guca), Ivanjica (Guca) – Ivanjica.

Although, according to its characteristics the section is treated as road out of urban areas, it mainly runs through settlements and part of it through the canyon of the Moravica River. The settlements along the road are: Pozega, Gorobilje, Milicevo selo, Grdovici, Arilje, Vigoste, Bogojevici, Stupceveci, Prilike, Bukovica, Ivanjica. Outside the settlements there are rural areas on both sides of the road.

The road works covered by the Project will be carried out on the existing road with no change of the alignments of the existing road. The project entails no resettlement and land acquisition as defined by OP 4.12, nor long lasting disruptions to the natural environment and human settlements and activities.

Total length of the section that is analysed in the Main Design, according to Road Database, is cca 38,930 km. Precise length of the section will be defined according to measurements taken on site.

According to implementation plan, the main objectives of the project are to increase the use value and durability of the road, improve traffic safety, consider requirements of the local community (social aspect) and comply with the environmental requirements to the maximum extent possible in the circumstances of physical constraints and limitations arising from the nature of the permitted construction and traffic interventions.





Figures 5. Typical landscape of the section



Figures 6. Specific segments along the section

Special attention should be paid on the sections passing through urban areas, close to schools, kindergartens, intersections and public buildings. On these locations it is necessary to construct or rehabilitate existing footpaths and improve traffic safety.



## Policy, legal and administrative framework

The Ministry of Environmental Protection (MoEP), is the key institution in the Republic of Serbia responsible for formulation and implementation of environmental policy matters.

In the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment, which is completely in line with European EIA Directive - 85/337/EEC.

The road rehabilitation and maintenance projects do not require The Environmental Impact Assessment. It is required when construction of regional or main roads is planned.

Under the terms Ref. No. 982/3, issued on August 22, 2016 by the Institute for Protection of Cultural Monuments "Kraljevo" there are several cultural monuments of high importance for RS in this area:

- The Klisura Monastery in Dobrace (Figure 7);
- Remains of Barrow Necropolis,
- Historical and still active cemetery,
- Fountain in memorial of II World War 1941-1945 victims,
- Gypsy cemetery.

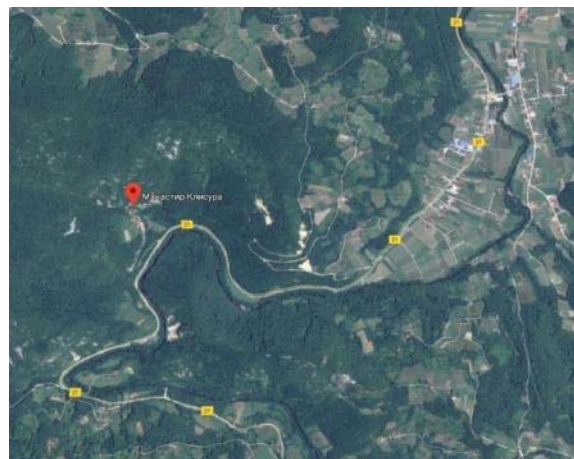


Figure 7. The Klisura Monastery

Works on road rehabilitation will not directly affect these monuments but, during execution of the works, conditions mentioned in the received document have to be respected. Conditions are mainly addressed to the excavation works and discovering of potential new archaeological sites. The permit is attached to this document, Appendix V, Annex 1.

Based on the decision Ref. No. 020-1268/3 issued on July 7, 2016 of the Regional Institute for Nature Protection of Serbia, section Pozega – Ivanjica does not pass by any protected areas where protection process is initiated or implemented. The section passes close to the canyon of Moravica river which is an ecological corridor of international importance. Works on road rehabilitation are permitted but conditions mentioned in the received document have to be respected during execution of the works. The permit is attached to this document, Appendix V, Annex 2.

Request for opinion regarding necessity of EIA procedure for this project was submitted to the Ministry of Environmental Protection. According to received response Ref. No. 011-00-0161/2017-02 issued on August 29, 2017, (See Appendix V, Annex 3) EIA is not required according to procedures defined by Law on Environmental Impact Assessment (“Official Gazette RS” No. 135/04, 36/09).

Lender requirements will also apply to this project and include the following Environmental Policies:

- Operational Policy OP 4.01 Environmental Assessment;
- EBRD Environmental and Social Policy 2008
- EIB Statement of Environmental and Social Principles and Standards (2008).

The World Bank, European Bank for Reconstruction and Development (EBRD) and European Investment Bank (EIB) will require that the project complies with the Republic of Serbia national laws and EU standards.

The list of the main laws and regulations that are permanently in force in the Republic of Serbia are attached to this document in Appendix III.

### **Baseline conditions assessed during route survey**

The section of state road of IB category No. 21 connects Pozega and Ivanjica. Length of the section to be rehabilitated is 38,930 km.

There are six bridges and overpasses on the section.

Table 1. Existing bridges and overpasses

No.	Name	Location	Length (m)	Section
1.	Road overpass the railway Cacak-Pozega	209+560	36,5	Pozega – Arilje
2.	Bridge over unnamed stream	210+135	16,0	Pozega – Arilje
3.	Bridge over the Rzav	221+097	52,3	Pozega – Arilje
4.	Bridge over the Grabovica	243+288	28,0	Prilike – Ivanjica (Guca)
5.	Bridge over the DJetinja	211+355	58,9	Pozega – Arilje
6.	Bridge over the Panjica	234+784	23,3	Arilje – Prilike

According to survey record, along the section there are 82 culverts.

Table 2. The road section crosses the following watercourses:

No.	Name	Location	Comment
1.	Stream	210+139	Periodical stream
2.	DJetinja	211+352	River
3.	Stream	212+701	Periodical stream
4.	Milovica Stream	215+141	Steady stream
5.	Rzav	221+045	River
6.	Stream	224+501	Periodical stream
7.	Stupacki Stream	228+421	Periodical stream
8.	Stream	233+448	Steady stream
9.	Panjica	234+791	River
10.	Kalajanski Stream	238+141	Steady stream
11.	Milovica Stream	238+873	Steady stream
12.	Stream	240+451	Steady stream
13.	Stream	240+973	Steady stream
14.	Red Stream	241+788	Steady stream
15.	Grabovica	243+341	River
16.	Bukovica	244+851	River
17.	Stream	247+958	Steady stream

Within the corridor of road section Pozega – Ivanjica there is no significant point sources of noise or air pollution.

Current traffic load (AADT) on the sections is shown in the table.

Table 3. Current traffic load (AADT) on sections

Section	AADT (veh/day)
Pozega – Arilje	6.300
Arilje – Prilike	1.979
Prilike - Ivanjica	7.062

During the site survey, construction material landfill was identified on the chainage km 234+160 in the canyon of Moravica river on the left side of the road, out of the Right of Way. Considering that there is not available data relating to the subject landfill, it was concluded that it was a "wild" landfill.

Accordingly, the competent local institutions will be proposed to find a permanent solution to the problem of waste disposal in accordance with the Waste Management Law and the Waste Disposal Regulation.





Figure 8. The identified wild landfill

The noise and air pollution sources are identified. The roads are identified as linear sources, while quarries represent a point sources of both air pollution and noise.

Along the section there are five quarries. Four of them are close to the section, while one of them-Rascici, is 7 km of the intersection of the State roads IB – 21 and IIA – 180. Two quarries are active, quarry No 1 and quarry No 4 - „Kramer”. The dredged material is collected by the loader, without mining.



Figures 9. Location of the quarries 1,2,3, Kramer (No 4) and Rascici along the road section



Figure 10. Active quarries No 1 and Kramer No.4

## Summary of environmental impacts

Road rehabilitation works on proposed section will have only minor impacts on the environment (environmental category B). Most impacts are temporary and they will disappear after the road rehabilitation works get completed.

The possible temporary impacts, as a consequence of construction activities, will consist of, among others, disruption of current traffic circulation, reduced roadway safety, damage to access roads, dust nuisance, gaseous emissions, potential pollution of soils and water resources, temporary disturbance to biota, and temporary interference to neighbouring settlements through various operation activities. The contractor's yard and workers' camp can be potential sources of temporary adverse impacts.

Potentially low impacts can include activities out of the work site, such as quarries, borrow pits and asphalt plant. Temporary office places and auxiliary facilities may be potential sources of short-term adverse effects.

Since identified wild construction landfill is close to the road alignment, any impact on works will be treated according to Waste Management Law and in coordination with local Authorities.

No relocation and resettlement issues as defined by OP 4.12 are anticipated. Local residents will be affected with minor air and noise pollution during rehabilitation works on proposed road section.

In respect to future use of the rehabilitated road section – this section belongs to the interregional roads network, on which significant increase of road traffic as a result of rehabilitation works is not expected.

Possible water contamination cases that can occur during the rehabilitation of the road and in future during operation are identified. Adequate mitigation measures (waste water collection from the road surface and bridges, installation of oil separators before discharging waste water into recipient) and monitoring activities are planned, in accordance with the Law on water ("Official Gazette of RS", 30/10, 93/12).

As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

In respect to impact of the potential increase of the vehicle speed on rehabilitated roads, this issue will be addressed through the project's road safety component, which will include implementation of the active and passive measures to control the vehicle speed on rehabilitated road sections.

The proper implementation of the EMP measures, as listed in Appendix I would offset or minimize any impact on local human and biotic environment that might be related with any long-term cumulative negative effects.

## **Environmental management plan**

Possible environmental impacts will be mitigated during the design/pre-rehabilitation, rehabilitation, and operation Phases, are summarized and shown in Appendix I.

The rehabilitation impacts will be minor, reversible and manageable if the mitigation measures, as given in the EMP, are properly implemented.

EMP has 2 main parts:

1. Mitigation Plan (Appendix I),
2. Monitoring Plan (Appendix II)

with Institutional arrangements and reporting procedures.

During the rehabilitation, the Contractor will work according to the Contractor's Environmental Plan (CEP) which is based on the EMP.

The findings and proposed mitigation measures have been compiled into an Environmental Mitigation Plan (Appendix I). It summarizes all the anticipated environmental impacts and its associated mitigation measures during the design, rehabilitation and operational phases. It makes reference to the laws and contract documents, approximate location, timeframe, and the responsibility for its implementation and supervision.

A monitoring plan for the proposed Project (Appendix II) has been prepared too.

The main components of the monitoring plan are the following:

1. Environmental issues to be monitored and the means of verification,
2. Specific areas, locations and parameters to be monitored,
3. Applicable standards and criteria,
4. Duration and frequency and
5. Institutional responsibilities for monitoring and supervision.

## **Public consultation**

As required by the WB Safeguards Policies, public consultations will be organized during the preparation of EMP and before the works start. The EMP and other project information will be disclosed to the Public and available locally to the communities. All documentation will be delivered to the Municipalities, publicly available on site, placed at PERS web site and announced in the newspapers.

The public will be informed through local media of the time and place of public consultations.

Detailed Report on Public Consultation process will be presented within the Appendix VI of this EMP document.

Beneficiary consultations will be conducted during the construction phase too, and records of environmental and social issues raised and complaints received during consultations, field visits, informal discussions, formal letters, etc. will be followed up and the records will be kept by the Contractor.

A Grievance Mechanism will be implemented to ensure that all complaints from local communities are dealt with appropriately, with corrective actions being implemented and the complainant being informed of the outcome. It will be applied to all complaints from affected parties. A grievance form is attached in Appendix IV and hard copies will be made available at community centres.







Figures 12. Railway Cacak-Pozega

The area is hilly, with the altitude from cca 320m (Pozega) up to 470m (Ivanjica). The section is typically urban, passing through small settlements.

Settlements and their locations along the road are the following:

- Pozega km 210+087 – 211+071,
- Grdovici km 218+768 – 220+503,
- Arilje km 222+603 – 224+400,
- Bogojevici km 226+221 – 227+043,
- Stupceveci km 227+043 – 228+391,
- Prilike km 240+536 – 241+344,
- Bukovica km 244+427 – 245+613,
- Ivanjica km 247+340.



Figure 13. Project area and location of road section Pozega – Ivanjica

Planned construction works on the section include strengthening existing road construction, reconstruction of the existing waste water collection system from road, collection and drainage water from terrain and design of all components that will improve traffic safety conditions.

The width of existing asphalt pavement with edge strips is within the range of 5,50m to 12,50m.

There are six bridges along the route:

- Road overpass the railway Cacak – Pozega,
- Bridge over unnamed stream,
- Bridge over the DJetinja,
- Bridge over the Rzav,
- Bridge over the Panjica,
- Bridge over the Grabovica.

All bridges are longitudinally and transversely one side inclined and there is no controlled drainage. Water is flowing longitudinally and spills over road alignment.

Planned works include widening of the road, milling of the existing asphalt layer, construction or replacement of waterproofing, construction of asphalt layers, demolition and reconstruction of the curbs, repair or replacement of the bearing paths, repair or replacement of the expansion devices, repair of the protective layers, bridge drainage, repair of fences and guardrails.

The bridges reconstruction will be performed where necessary according to approved Main design. For bridge reconstruction, no works in the water are planned.

Since road is passing through settlements Pozega, Grdovici, Arilje, Bogojevici, Stupceveci, Prilike, Bukovica and Ivanjica where there are no sidewalks, construction of sidewalks is planned on parts of the road section where they are missing and where is possible to construct them.

The works will be done within the road alignment. The project entails no land acquisition.

Water from the road and bridges will be collected and taken to waste water treatment systems (oil and fat separators placed close to the recipient).

According to design, separators will be placed on the following locations:

- Bridge over unnamed stream km 210+135,
- Bridge over the DJetinja km 211+355,
- Bridge over the Rzav km 221+097,
- Bridge over the Panjica km 234+784,
- Bridge over the Grabovica km 243+288.

As for the potential pollution during construction works, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

## **Rehabilitation works description**

According to the design, widening of the road is planned, solved problems of frequent intersections and connections, access to the state road settled, resolved problem of pedestrian's movement and improved traffic safety.

The road works covered by the Project will be carried on the existing road with no change of the alignments. The improvement of the road geometry shall be done, if necessary, with the goal of traffic safety. The project therefore entails no resettlement and land acquisition as defined by OP 4.12, nor long lasting disruptions to the natural environment and human settlements and activities.

The major planned construction works include improvement and widening of the existing road construction with corresponding elements on transversal profile within existing road alignment, reconstruction and remediation of existing drainage system, construction of elements in order to prolong durability of construction and improve traffic safety.

New intersections in level will be designed too. Except new solutions for intersections, pedestrian and bicycle paths and bus stops in the settlements will be designed where possible, according to requirements of the locals and conditions on site.

Due to widening of the road, extension of existing (that are not damaged) or construction of new culverts is designed.

Reconstruction and extension of existing drainage systems (construction of ditches and open channels) will be done in line with Main Design. Most convenient recipients will be defined too.

On the locations where road is passing over watercourses separators will be placed. They will treat water collected from road and bridges before they are discharged into the recipient.

Drainage system in the settlements and intersections will be constructed as closed system if there is not enough space for construction of road ditches.

In line with ToR and according to situation on the site, reconstruction and rehabilitation works on reconstruction of bridges will be designed. This includes widening of the road, rehabilitation of the damaged bridge surfaces, replacement of dilatations, placing of hydro insulation, construction of sidewalks, new curbs and replacement of all construction elements that are identified as damaged, placing of fences and guardrails. Size of the road and sidewalks along the bridges (profile of the bridge) will be adjusted to the road profile. There are no works that will have the negative impact to the quality of water bodies.

Hydraulic characteristics of the elements for drainage along the road will be checked and corrected with the goal to get efficient and controlled system for collection of rainwater.

If any part of identified construction landfill is in the area of the road alignment, it will be treated according to Waste Management Law and in coordination with local Authorities.



## **POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK**

### **Relevant institutions**

Ministry in charge of environmental protection (The Ministry of Environmental Protection-MoEP) is the key institution in Republic of Serbia responsible for formulation and implementation of environmental policy matters.

The other aspects of environmental management related to road rehabilitation projects are dealt with several other institutions, among which are the Institute for Nature Protection of Serbia (INP) and the Institute for Protection of Cultural Monuments (IPCM) of Kraljevo, and the Public Enterprise “Roads of Serbia” (PERS).

### **Existing Serbian legislation**

Environmental protection in Republic of Serbia is regulated by several national and municipal laws and by-laws. The environmental legislation in force in Serbia is summarized in Appendix III.

### **EIA procedure in the Republic of Serbia**

In the juridical system of the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment, which is completely in line with European EIA Directive - 85/337/EEC. Therefore, Environmental Impact Assessment is not required for road rehabilitation projects unless their alignment is placed within or in the vicinity of natural/cultural protected areas. In that case Project proponent is obliged to submit Request for Decision-making on the necessity of preparation of the Environmental Impact Assessment to the MoEP. Depending on assessment of significance of potential environmental impacts of project it could be decided that it is necessary to implement full EIA procedure for that kind of projects.

Based on the above criteria, the project does not require EIA.

### **Relevant International Financing Institutions policies and statements**

As the road rehabilitation will be funded by International Financing Institutions (IFIs) the following Lender requirements will need to be applied to any works:

- WB: Operational Policy OP 4.01 Environmental Assessment, which require partial EIA and development of site specific EMPs for projects belonging to Category B.;
- EBRD: Environmental and Social Policy 2008
- EIB: Statement of Environmental and Social Principles and Standards (2008).

Government of Serbia (GoS) regulations do not require separate section-specific EMP to be undertaken for this type of investments (road rehabilitation), while the WB policy requires partial EIA assessment and preparation of site-specific EMP for each section.

## **BASELINE CONDITIONS ASSESSED DURING ROUTE SURVEY**

Road section Pozega - Ivanjica is located in western Serbia, and it is a part of the State Road IB No. 21. Length of the section is 38,930 km.

There will be no land acquisition as defined by OP 4.12 during the project implementation.

### **Natural resources and cultural heritage**

According to the decision of the Regional Institute for Nature Protection of Serbia on the alignment of the State Road IB No. 21 Pozega – Ivanjica there are no protected areas where protection process is initiated or implemented. There is an ecological corridor of international importance-the Moravica River Canyon and prevention measures mentioned in the document have to be respected.

In Terms published by the Institute for Protection of Cultural Monuments “Kraljevo” the archaeological sites are listed, as well as the monuments and registered goods that are nearby.

Following cultural properties of special importance for the Republic of Serbia are listed:

- The Klisura Monastery is located near the road,
- Remains of Barrow Necropolis, located on the section Pozega – Arilje,
- Historical and still active cemetery, Arilje,
- Fountain in memorial of II World War 1941-1945, located at the exit of the Moravica canyon,
- Gypsy cemetery, Ivanjica.

### **Settlements**

The section goes through the following settlements:

- Pozega,
- Gorobilje,
- Milicevo selo,
- Grdovici,
- Arilje,
- Vigoste,
- Bogojevici,
- Stupcevidi,
- Prilike,
- Bukovica,
- Ivanjica.

### **Watercourses**

The road section is intersected by following river flows:

- 4 periodical streams,
- 5 rivers: DJetinja, Rzav, Panjica, Grabovica, Bukovica,
- 8 steady streams.

The design documentation for the rehabilitation of the bridges was made in accordance with the project task as well as on the basis of site visits.

Following bridges will be rehabilitated:

- Overpass over the railway Cacak – Pozega,
- The bridge over the unnamed stream,
- Bridge over the Rzav river,
- Bridge over the Grabovica river.

Adequate mitigation measures and appropriate monitoring plan are included in this EMP document.

### **Air pollution**

The existing sources of air pollution have been identified on field. These are quarries and landfills, which represent the source of pollution sources, as well as existing traffic as linear sources of air pollution.

The air pollution values in the subject area were not available.

Within the corridor of road section Pozega – Ivanjica, no significance increase of road traffic will occur after the rehabilitation works on proposed road section.

Based on experience and expected traffic load during and after the planned road rehabilitation works, the increase of existing levels of air pollutants within the corridor of proposed road section is not expected.

### **Noise**

Existing state road of the IB class, No. 21 on Pozega – Ivanjica road direction as linear source is the only dominant noise source.

Based on experience and expected traffic load during and after the planned road rehabilitation works, the increase of existing levels of noise within the corridor of proposed road section is not expected.

## SUMMARY OF ENVIRONMENTAL IMPACTS

The following table provides a summary of the Environmental Impacts that are predicted for the project

Impact	Significance	Comment
Impacts on land use/ settlements	low	There will be no land acquisition as defined by OP 4.12 during the project implementation.
Ground and surface water	low	Due to low amount of drainage water that can be drained the consequential impact is minimal to negligible
Air quality	low	Temporary impact
Flora and fauna (protected areas and species)	low	No specific issues
Noise	low	Temporary impact
Access/crossing points of the main road and local roads	low	The rehabilitation and widening works won't affect existing crossing points. No specific issues
Soil management	low	With application of waste management measures
Waste	low	waste and wastewater management plans will be prepared and implemented
Cumulative impacts, etc.	Medium/moderate	Temporary, rehabilitation works may cause a slight increase of noise levels and air pollutants concentrations only during the works

Road rehabilitation works on Pozega – Ivanjica section will have only minor impacts on the environment (environmental category B). Most of the impacts are of temporary character and they disappear after the road rehabilitation works are completed.

The possible temporary impacts as consequence of the construction activities will consist of among others: disruption of current traffic circulation; roadway safety; damage to access roads; noise, waste and dust nuisance; and air emissions; potential impacts of soils and water resources; brief disturbance to biota, and momentary interference to neighbouring settlements through various construction and operation activities.

The Contractor's yard and workers' camp can be potential sources of temporary adverse impacts, too.

## **Air and noise pollution within the residential areas**

It is expected that local residents who are living along will be affected with minor air and noise pollution during rehabilitation works on proposed road section.

Local Air quality may experience some moderate and temporary deterioration due to dust from construction traffic and elevated levels of nitrogen oxide (NO<sub>x</sub>) and sulphur oxide (SO<sub>x</sub>) from construction equipment exhaust are the primary pollutants. The dust may settle on vegetation, crops, structures and buildings, and may cause some degree of impact.

Noise caused by the rehabilitation works will be only a temporary impact. Relatively small traffic load on proposed road and non-presence of significant amount of residential buildings placed close to the road lead to the conclusion that noise barriers will not be implemented within this project. Noise barriers should be constructed only if they are determined to be "reasonable" and "feasible" which is not the case in proposed road rehabilitation project.

The proposed section belongs to the state road network on which increase in road traffic due to road rehabilitation is not expected. Potentially increasing the speed limits of vehicles on the reconstructed section, shall be defined by the project of road safety that will include the use of active and passive measures to control vehicle speed.

Possible temporary negative impacts as a result of construction activities consist of: obstruction of traffic, road safety, damages on the access roads, noise, dust, waste and air pollution, potential impacts on soil and water resources, a short term impact on flora and fauna and surrounding settlements. The construction out of site activities involving work in the quarry, quarries and asphalt bases, which, if not managed properly, can cause local adverse impacts. Temporary offices and ancillary facilities can be potential sources of short-term negative impacts.

EMP focuses more on the stage of works on the heavy maintenance, because it is going to become a part of the obligations of the Contractor. Activities related to the regular maintenance of the section will not be in focus of the Environmental Management Plan, but only be presented in order to acquire an overall view.

## **Potential Water Contamination**

Cases of water contamination may occur during the rehabilitation of the project road from site run off, spills and water from the equipment maintenance areas and sanitary wastewater effluent from the work camps.

As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

Fuel and lubricant spills can, in most instances, occur at the Contractor's work camp and motor pool while maintaining and washing equipment and work vehicles. The oily wash-water should be passed through an adequately sized, gravity oil separator prior to discharge.

Should spills occur in any part of the road, to mitigate the problem the Contractor should use absorbing materials, such as absorbent mats/fabrics, or sand and scrape off the contaminated



soils and dispose them in approved facility, in accordance with the Law on water (“Official Gazette of RS”, 30/10, 93/12, 89/15).

Works over bridges will be done with a special care to avoid water pollution. Prior to start of any activity, MS for proposed works have to be submitted for approval to the Supervisor. Each MS will have environmental protection section and propose measures to be undertaken in order to avoid incidents and accidents during construction works. Mitigation measure or monitoring activities related to possible river contamination are part of this EMP.

### **Potential Cumulative impacts**

The works execution on the heavy maintenance of the state road IB 21, on the section Pozega – Ivanjica could have some cumulative impacts that are temporary (noise, air pollution, water and soil).

Possible cumulative negative impacts, as a result of construction activities, are temporary and consist of:

- obstruction of traffic,
- road safety,
- damages on the access roads,
- noise, dust, waste and air pollution,
- potential impacts on soil and water resources,
- a short term impact on flora and fauna and surrounding settlements.

The construction out of site activities involving work in the quarry, quarries and asphalt bases, which, if not managed properly, can cause local adverse impacts. Temporary offices and ancillary facilities can be potential sources of short-term negative impacts.

However, they, due to their intensity, origin and short duration are assessed to be of Environmental Category B.

EMP focuses more on the stage of works on the heavy maintenance, because it is going to become a part of the obligations of the Contractor. Activities related to the regular maintenance of the section will not be in focus of the Environmental Management Plan, but will be presented only in order to acquire an overall view.

## **ENVIRONMENTAL MANAGEMENT PLAN**

Possible environmental impacts will be mitigated during the design/pre-rehabilitation, rehabilitation, and operation phases, as summarized in the Environmental Management Plan.

A basic assessment of the proposed road reconstruction and rehabilitation project concluded that the rehabilitation impacts will be minor, reversible and manageable if the mitigation measures as given in the EMP are properly implemented.

The EMP (Appendix I and Appendix II) is based on the type, extent and duration of the identified environmental impacts. PERS (the Implementing Agency) will guide the design and supervision engineers and contractors on the implementation of the EMP.

### **A. MITIGATION PLAN**

The findings and proposed mitigation measures have been compiled into an Environmental Mitigation Plan (Appendix I). It summarizes all the anticipated environmental impacts and its associated mitigation measures during the design, rehabilitation and operational phases. It makes reference to the preconditions obtained from the relevant institution (MoEP, Institute for the Nature Protection of Republic of Serbia and Institute for Monument Protection Kraljevo, Water directorate), law and contract documents, approximate location, timeframe, and the responsibility for its implementation and supervision.

### **Contractor Management**

The recommendations and proposed mitigation measures, as shown in Appendix I are Contractor's obligations. Mitigation measures will be incorporated in the design and rehabilitation practices and as such their costs will be included in the rehabilitation cost.

The EMP is part of the work program and will be carried out by Contractor by qualified and experienced staff that will be responsible for the environmental compliance requirements of the EMP. The Contractor and its sub-contractors will fully comply with Republic of Serbia national laws, EU standards and Lender requirements.

The contractor will use this document to cost his compliance with the EMP. It is the Contractor's obligation to cost the implementation of environmental mitigation measures in his overall cost.

The Contractor will be required to provide a short statement that confirms that:

- the EMP conditions have been accounted for in the bid price,
- the Contractor has a qualified and experienced person on the Contractor's team who will be responsible for the environmental compliance requirements of the EMP.

The Contractor and its suppliers and sub-contractors will comply with Republic of Serbia national laws, EU standards and Lender requirements.

## Design Phase

In the Republic of Serbia, the Environmental Impact Assessment procedure is regulated by the Law on Environmental Impact Assessment. According to it, the Environmental Impact Assessment is not required for road rehabilitation projects if their alignment is not within natural/cultural protected areas.

Since the natural or protected cultural areas will not be endangered by the road rehabilitation works on this road section, EIA is not required but certain mitigation measures have to be applied.

Measures needed to mitigate the negative environmental impact of the road works are part of the design and rehabilitation practices and the costs will be included in the rehabilitation cost.

In addition to addressing the requirements of the Mitigation Plan the following additional activities will be carried out during the design phase in preparation for the mobilisation of the project:

The Site Organization Plan will be prepared as part of Detailed design. Design phase will take place just after the appraisal of the project. Site organization study incorporates environmental, health and safety protection measures that meet legal and Lender requirements (including the measures defined in the EMP and Safety Labour Management Plan).

As for the potential pollution during operation, these are limited to accidents only. In such a case, procedures for action in incidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

The plan will contain basic requirements related to:

1. Provision of materials needed for construction works;
2. Material transport;
3. Material installation;
4. Site organization;
5. Waste management;
6. The right-of-way arrangement (cleaning).

Technical specifications for work execution which address environmental, health and safety protection measures:

1. Preliminary works;
2. Rehabilitation works on the existing pavement;
3. Earth works;
4. Drainage;
5. Traffic signage systems.

Supervisor and PERS are responsible for checking that the EMP requirements are incorporated into the site organization.

## Site Organization Plan

The plan of construction site organization is the responsibility of the Contractor and the obligation is to comply with it and treat it.

Preparation of site and establishment of Contractor's facilities: this applies to all of the Contractor's facilities, storage areas, workshops, worker's camps (when needed), concrete batching areas, asphalt plant, etc. The location and development of the Contractors facilities will be approved by the Resident Engineer (RE).

Taking into account the conditions of nature protection, legislation and environmental requirements when choosing a location and organization of the construction site, as well as

1. Temporary location for storing the necessary construction and other material and equipment needs to be located outside sections with tall vegetation and river flooding zones, and limited only to the duration of the works execution;
2. Provide temporary or permanent locations (existing regulated utility facilities/landfills) for disposal of service rubble and other waste material in any state, and municipal waste generated during the construction. Restrict storage / disposal in coastal area of smaller watercourses of a temporary nature, as well as on agricultural land;
3. Provide after completion of the works that all areas which are in any way degraded by construction works should be remedied as soon as possible;
4. During the works execution, strictly observe the planned alignment and corridor around it, in order for the earthworks and the use of machines not to leave consequences on the environment;
5. When performing the construction works on the alignment of the road located next to the rivers, it should be predicted to ensure the maximum preservation of the coastline and coastal vegetation, wild species and their habitats;
6. During the execution of works , the disposal and deposit of any waste, in particular construction material, in the coastal area of any watercourse is prohibited;
7. In the zone of transition of the road (bridge) over the watercourses, where works on the coastline or riverbed are necessary, the project/the design should foresee the usage of stone and other natural materials and largely avoid concreting of coast and riverbeds of the watercourses;
8. Prohibit the servicing of machinery and vehicles along the road alignment. In case of accidental spills of fuel, oils / lubricants and other harmful substances, the surface must be repaired and reset;
9. The respective construction works on the road alignment that passes through the populated places should be executed only during the daylight (07-19h) because of the potential impact of noise from construction equipment and vehicles;
10. Envisage the setting up of the protective fences and pedestrian crossings and passages at the places where it is most appropriate, especially on the locations near existing settlements;
11. During the construction along the whole alignment the maximum level of communal hygiene should be maintained. Define locations for containers for temporary storage of waste;
12. The size of Contractor's facilities is limited to absolute minimum to reduce unnecessary clearing of vegetation;
13. The contractor's facilities are to be contained within an adequate security fence.

14. The sites are to be properly drained. Paved areas, including vehicle parking areas, workshops and fuel storage areas are to drain to an oil and water separator;
15. Sanitary waste and grey waters are treated before their release into surface water systems, in accordance with the Law on water ("Official Gazette of RS", No. 30/10, 93/12, 89/15).
16. Fuel storage areas are not located within 20m of a water course.
17. Where fuel in excess of 5,000 litres is stored on site, it will be stored in sealed tanks on a concrete base that is bounded to hold 110% of the tank capacity;
18. All workshops would be provided with oil and water separators;
19. The contractor must have trained personnel who are competent in fuel handling procedures and for cleaning up accidental spills;
20. All waste oil, oil and fuel filters will be collected and disposed of in secure landfill areas. At the closure of the site, all contaminated soil will be excavated, removed and replaced with fresh topsoil;
21. Cleared material is to be piled into manageable sized heaps according to disposal or re-use requirements.
22. Limit the extent of excavation to reduce soil erosion potential. The contractor will be responsible for ensuring that the erosion is contained by soil conservation protection methods.
23. Apply soil conservation protection methodology to susceptible areas to prevent / minimize storm water runoff carrying eroded materials off-site.
24. Avoid excavation and operating machinery in wet ground conditions.
25. Upon the completion of all works, it is necessary to remove the machinery, construction materials, containers, spare parts and other. equipment, as soon as possible;
26. After the completion of all works, it is required to cultivate the ground at all vulnerable areas by using the appropriate flora and species that are biologically stable under the given climatic conditions, resistant to adverse impacts (exhaust gases) and compatible with the surrounding area and purpose;

PE "Roads of Serbia" is obliged to check through the engaged consultant for monitoring/supervision whether the requirements of the environmental management plan and management safety organization plan are implemented at the site.

### **Rehabilitation Phase Mobilisation – Contractor EMP**

During the rehabilitation, the Contractor will work according to the requirements of the Contractor's Environmental Plan (CEP) (based on the EMP) which will be prepared by the Contractor and approved by PERS.

Supervision and monitoring of the CEP activities will be undertaken as follows:

- I. The contractor has the initial responsibility for preparing and implementing the CEP as per the works contract.
- II. The Resident Engineer (RE) will direct the Contractor with regard to compliance with the CEP.
- III. The PERS will carry out independent monitoring of the work and can issue Defect Notices to the RE who will transmit these to the Contractor.

IV. The contractor will have his own representative on site – the Site Engineer (SE) who will be responsible for implementing the contract and complying with the CEP.

Contractor prepares CEP before commencing the work. The Contractor will prepare a Contractor's Environmental Plan (CEP) that addresses the conditions of the rehabilitation in the EMP and include measures to comply with national legalisation and Lender requirements. The CEP will detail how the Contractor will address the activities in the rehabilitation section of the EMP. The contractor will submit the CEP to the PERS for approval.

Following the approval of the CEP, the Contractor together with the person on the Contractor's staff who will be responsible for supervising the CEP will meet the Project Supervision Consultant PSC (Environment) on-site. If the plan is appropriate and implementable, the PSC will advise the PE that the Contractor can now commence work.

### **Rehabilitation works**

Preparation of site and establishment of Contractor's facilities: This applies to all of the Contractor's facilities, storage areas, workshops, labour camps (when needed), concrete batching areas, asphalt plant, etc.

The location and development of the Contractor's facilities will be approved by the RE.

Locations will be selected so that:

1. Do not interfere with the environment and social well-being of the surrounding communities re noise, dust, vibration, etc.;
2. The size of contractor's facilities is limited to absolute minimum to reduce unnecessary clearing of vegetation;
3. Sanitary waste and waste waters are treated before release into surface water systems, in accordance with the Law on water ("O.Gazette of RS", 30/10, 93/12, 101/16);
4. The sites are properly drained. Paved areas, including vehicle parking areas, workshops and fuel storage areas are to drain to an oil and water separator;
5. Fuel storage areas are not located within 20m of a water course. The contractor's facilities are to be contained within an adequate security fence.
6. Clearing of sites and removal and disposal of vegetation;
7. Wherever possible limit area to be cleared and avoid excessive machine disturbance of the topsoil;
8. Cleared material is to be piled into manageable sized heaps according to disposal or re-use requirements;
9. Prevention of soil erosion on construction site: The contractor will be responsible for ensuring that the erosion is contained by soil conservation protection methods.

The contractor will:

1. Limit the extent of excavation to reduce soil erosion potential.
2. Apply soil conservation protection methodology to susceptible areas to prevent / minimize storm water runoff carrying eroded materials off-site.
3. Avoid excavation and operating machinery in wet ground conditions.
4. Where fuel in excess of 5,000 litres is stored on site, it will be stored in sealed tanks on a concrete base that is bounded to hold 110% of the tank capacity.
5. All workshops would be provided with oil and water separators.



6. The contractor must have trained personnel who are competent in fuel handling procedures and for cleaning up accidental spills.
7. All waste oil, oil and fuel filters will be collected and disposed of in secure landfill areas. At the closure of the site, all contaminated soil will be excavated, removed and replaced with fresh topsoil.

### **Environmental Management during Rehabilitation works**

Considering all identified impacts, it becomes essential for the Contractor to prepare and later conscientiously implement the EMP throughout the duration of the project to ensure compliance with legislative and Lender requirements.

The emphasis of the EMP shall be on the following:

1. Layout of the work camp and details of the proposed measures to address environmental impacts resulting from its installation. Description and layout of equipment maintenance areas and lubricant and fuel storage facilities including distance from water sources/bodies;
2. Sewage and septage management plan for provision of sanitary latrines and proper sewage collection and disposal system to prevent pollution of watercourses;
3. A plan (grievances mechanism and organizational structure) detailing the means by which local people and other project affected persons (PAP) can raise grievances arising from the rehabilitation process and how these will be addressed (e.g. through dialogues, consultations, etc.) (see Appendix IV for the Project grievance mechanism);
4. Soil Management Plan detailing measures to be undertaken to minimize effects of wind and water erosion on stockpiles, measures to minimize loss of fertility of topsoil, timeframes, haul routes and disposal site;
5. Dust management plan which shall include schedule for water spraying on access road and in nearby settlements along the project road, as well as list of equipment to be used; This applies to all of construction sites and haul roads. During rehabilitation, when dust may be generated, the Contractor will monitor the worksite conditions and apply dust control measures, which include reducing construction traffic movements and spraying water on exposed areas.
6. A plan indicating the location of the proposed material extraction site as well as rehabilitation measures to be implemented for the borrow areas and access roads upon project completion;
7. Waste and wastewater management plan. Disposal of waste materials: All construction waste materials including drums, lumber, sand and gravel, cement bags etc. are to be suitably disposed of. If these cannot be recovered for scrap value these materials should be taken to an approved landfill sites for safe disposal. Hazardous waste will be stored and removed from the construction site on demobilization, in accordance with the Law on Waste management ("Official Gazette of RS", 36/09, 14/16) The CEP should cover all aspects of waste management, including implementation of practice standards such as reduce, re-use and recycle. It should specify final disposal alignments for all waste and demonstrate compliance to national legislation and best practice procedures on waste management. The Waste Management Plan will, as a minimum, include details of temporary waste storage, waste transfer and pre-treatment prior to final disposal or recycling.

Licensed/approved facilities for solid and liquid waste disposal must be used and a duty of care and chain of custody for all waste leaving the site will be followed. As part of the plan Contractors will be expected to produce waste handling forms for chain of custody, which will be used to control waste leaving site. Thus the waste controller will keep a copy of the form and the driver will always carry a copy and will ensure that the load is signed for at the final disposal site. All records will be kept by the Contractor for audit purposes and to demonstrate that the project is complying with best practice and applicable legislation;

8. Oil and fuel storage management plan. The CEP should cover all procedures for storage, transportation and usage of oils and fuels, refuelling of plant and machinery and procedures for minimizing the risk of ground and water contamination. All oils and fuels will be required to be stored within secondary containment of 110 % capacity and all spillages shall be cleaned up immediately. Re-fuelling vehicles will carry Spill Kits to enable spillages to be cleaned up as soon as possible. All categories of spillage will be reported in accordance with the Plan to be developed by The Contractor. Toolbox Talks would be expected to be delivered on an ongoing basis as „continued training“ and extraordinary following any significant incident;
9. In-river works management plan. The CEP should cover procedures and plans for safeguarding aquatic habitats and fish during in-river work and will complement the Construction Method Statements;
10. Camp management plan. The CEP should contain procedures for establishing and operating construction camps in order to safeguard nearby communities and environmental resources;
11. Emergency response plan. The CEP should contain procedures for emergency response in the event of accidents or major incidents, in order to safeguard people, property and environmental resources. Details of the spill response equipment to be provided on site are to be specified;
12. Noise – all equipment is licensed and approved in accordance with EU standards. This applies to all machinery, vehicles and construction sites where noise and vibration may affect susceptible receptors. The contractor will be responsible for ensuring that noise and vibration does not affect the adjacent communities, in accordance with the Law on noise protection (“Official Gazette of RS”, 36/09, 88/10). While it is unlikely that noise and vibration will be an issue due to the large distances between the activities and the communities the Contractor will confine all work to daylight hours (07.00hrs - 19.00hrs) should the community find that any night time operations become a nuisance;
13. Rehabilitation Plan: Clearance and rehabilitation of construction sites and removal of contractor’s facilities: It is Contractor’s responsibility to address site clean-up. This includes the removal of all waste materials, machinery and any contaminated soil. The contractor will develop a plan for handover, sale or removal of all plant, vehicles and machinery to ensure that no unserviceable items are left on the construction site, in accordance with the Law on Waste management (“Official Gazette of RS”, 36/09, 14/16). All construction sites and work areas will be rehabilitated so that these can be returned as close as possible to their previous uses. This includes the stabilization and landscaping of all of the construction sites. No waste will be left on site after the work is completed, in accordance with the Law on environmental protection (“Official Gazette of RS”, 135/04, 36/09, 72/09, 43/11, 14/16). Should the Contractor fail to remove the waste, the PERS is entitled to withhold payment and arrange the clean-up and deduct the cost of the clean-up and administrative charges from the final payment.

## **Safety**

### **Safety and Hazard Assessment:**

Before commencing work, the Contractor will be required to identify potential hazards. Provisions for emergency responses are to be included in the Contractor's site safety plan which is to include nomination of a person who will be immediately contacted should an accident occur. The site safety plan will be submitted to the PSC for approval one week prior to starting work.

1. The contractor will be required to keep the site free of drugs and alcohol;
2. The Contractor's site safety plan will include provision for a safe work environment and provide safety measures and protective equipment to all workers including; hand, head, eye and ear protection and safety footwear;
3. The site safety plan will include provision for first aid facilities on-site and employ a trained first aid person, in accordance with the Law on Safety and Health at work ("Official Gazette of RS", 101/05, 91/15, 113/17);
4. The contractor will provide supplies of potable water, toilets and wash water to the workers;
5. Safety and Labour Management Plan (SLMP) prepared by the PERS has to ensure H&S provisions during rehabilitation works;
6. Contractor is obliged to perform all project activities by respecting SLMP recommendations and all Serbian laws and sub-laws which are covering Health & Safety issues.

The PERS and Contractor together have responsibility for reporting and investigating incidents.

### **Community safety from increased vehicle movements:**

This applies to all vehicles and particularly to haul trucks that pass through settlements. The contractor will ensure that all vehicles which pass through villages are operated safely without endangering these communities. The contractor is to ensure that:

1. All trucks and equipment is maintained in a safe operating condition;
2. All drivers and machinery operators are trained and act responsibly (to be stipulated in the Contractor's site safety plan);
3. All truckloads are secured and all truckloads with potential dust generating materials (e.g. excavated soil and sand) will be covered with tarpaulins;
4. The Contractor will immediately remove any drivers that ignore any of the community safety requirements;
5. Speed limits will be observed.

Prior to commencement of construction activities/site works, all of the above plans will be submitted by the Contractor to the Sector for Investment within the PERS for approval.

Following the completion of works a Site restoration will take place. It's Contractor's obligation to restore location of the project as it was at beginning of the project.

## **Operational Phase**

People Safety: During operation, according to the assessment performed within the design phase, road safety features will include:

1. Measures to slow the traffic; e.g. decreasing of speed at selected places (e.g. settlements, schools, markets, etc.);
2. Dust suppression sealing;
3. Improvements in road signage and pavement markings, and
4. Attention to road accident black spots.

Road Maintenance:

- Routine maintenance (grading, grass cutting, drain clearing, and pothole patching and shoulder repairs, together with regular control and maintenance of drainage structures and retention) will be undertaken on regular basis;
- Seasonal maintenance such as flood repairs, emergency maintenance to reinstate roads after major failures, and the regular upkeep of safety features and road signs will be undertaken as necessary;
- Major maintenance that include resurfacing and repairs are typically scheduled over periods of several years.

## **B. MONITORING PLAN**

A monitoring plan for the proposed Project (Appendix II) has been prepared. The main components of the monitoring plans include:

- Environmental issue to be monitored and the means of verification,
- Specific areas, locations and parameters to be monitored;
- Applicable standards and criteria;
- Monitoring of noise levels near residential areas;
- Monitoring of the procurement of materials (checks that valid permits are in place);
- Duration and frequency and estimated monitoring costs; and
- Institutional responsibilities for monitoring and supervision.

A field monitoring checklist has been prepared based on the EMP and monitoring plan (Appendix II). The field monitoring checklist will be used by the supervising field engineers. The signed checklists will be provided to the PERS who will be responsible for the follow-up and compliance reporting.

The PERS will maintain a Complaints Database, which will contain all the information on complaints or grievances received from the communities or other stakeholders. This would include: the type of complaint, location, time, actions to address these complaints, and final outcome.

## C. INSTITUTIONAL IMPLEMENTATION AND REPORTING ARRANGEMENTS

### Project Implementation

PERS is the Implementing Agency for the Project and will be responsible for the implementation and compliance with the EMP and Monitoring Plan. Day-to-day implementation and compliance will be the task of PSC.

Prior to the commencement of works PERS will submit to the Bank for its approval this section specific Environmental Management Plan.

The Contractor will provide “Zero monitoring” results prior to commencement of earth works, during its own mobilization phase.

To ensure that the proposed mitigation measures will be carried out by the Contractors during the construction stage, the Project Proponent undertook the following:

- I. Clearly set out in the tender and contract documents the Contractor’s obligation to prepare CEP and undertake environmental mitigation measures as specified in the Environmental Mitigation Plan in Appendix I (appended to Contract specifications);
- II. No compensation for the costs of the required environmental mitigation measures and monitoring activities in the form of the particular item in the BoQ shall be given to the Contractor, except for the water quality analysis and noise measurement. The Contractor had to include these costs in the other items of the BoQ. Real expenditures of water quality analysis and noise measurement in scope defined by the BDs and the Contract shall be compensated to the Contractor in the form of the particular item in the BoQ;  
For noncompliance with requested environmental mitigation measures and monitoring activities the Contractor shall suffer specific liquidated damages in a form of demerit points. Demerit points are provided as a measure that should stimulate the Contractor to carry out his obligations in an organized and timely way and to perform his duty meeting high standards. Demerit points have in the same time two meanings – numeric and monetary.  
Each demerit point has associated monetary value which represents permanent payments reduction for determined noncompliance of the contracted obligations. Number of received demerit points has a cumulative effect. If during the Contract the Contractor receives more than a certain number of demerit points specified in the BDs and the Contract, the Contractor will for a period of 2 years not be allowed to compete for any other PERS works contract.  
Also, if the Contractor is awarded over a specified number of demerit points, the Employer has a right to terminate the Contract. Monetary value of each demerit points as well as limits for other possible actions by the Employer is specified in the BDs and the Contract.  
Application of explained two measures - compensation for specific costs and penalties for noncompliance – should assure implementation of all requested environmental mitigation measures and monitoring activities;
- III. Explicitly require the Contractor to recruit an environmental specialist. The contractor will be responsible for the implementation of environmental mitigation measures

during construction and shall employ an environmental specialist who will supervise implementation of the Contractor's environmental responsibilities and coordinate with the PERS and MCTI. The contractor, in coordination with PERS, shall set-up a grievance redress committee that will address any complaints during project implementation. During project implementation, the PERS shall monitor the compliance of the Contractor with the EMP provisions. It is proposed that the project supervision consultants (PSC) employ an environment specialist (with civil engineering/environmental management background) to assist the environmental supervision.

Upon Project completion, the PERS will be in charge of the operation and maintenance of the road. Routine and random monitoring will be undertaken as scheduled in the monitoring plan.

Contractor will make proposal for environmental protection, including safety of persons associated with the works and the public, during a pre-construction period within the Environmental Management Plan. This proposal will be reviewed by PERS in order to obtain the "no objection" to the proposal's recommendations.

In this regard, attention will be given to:

- Taking all reasonable steps to protect the environment on and off site and avoid damage or nuisance to persons or property arising from its operations,
- Maintaining conditions of safety for all persons entitled to be on site and
- Provision of all lights, guards, fencing, warning signs, traffic control and watching for protection of the works and other property and for the safety and convenience of the public.

During the implementation of this Project, the public has the right to participate either directly or indirectly, which introduces the possibility to present its interests and opinion in the process of decision making. In order to reach the best option during this process, PERS will disclose this EMP document to the public, including local municipalities and NGOs (See Appendixes IV and VI). Draft EMP document will be published on PERS web site as well ([www.putevi-srbije.rs](http://www.putevi-srbije.rs)). During process of public consultations interested public has collected all project information, including all environmental issues related to this project. Opinions and suggestions are incorporated within the final version of EMP document.

During rehabilitation works, a public liaison officer, named by the Contractor will establish communication with the local residents affected with the project and will be responsible to inform them about all project activities, especially related to environmental impacts of the project and planned mitigation measures.

## **Reporting Arrangements**

Public consultation and presentation of EMP will be held and a report will be accompanied by the EMP.

Contractor will provide quarterly reports to the PERS which document the environmental mitigation and protection measures, together with prescribed monitoring activities carried out



during the reporting period. Contractor will take care on environment quality according to the mitigation and monitoring plan and will report to the PERS.

If any kind of accident or endangerment of environment happens, reporting will be immediate. Contractor will inform the project manager and local authorities about accidents immediately after it happened. In case that project manager is not responding on a call, the Contractor will inform PERS about the accident.

A Grievance Mechanism will be implemented to ensure that all complaints from local communities are dealt with appropriately, with corrective actions being implemented, and the complainant being informed of the outcome. It will be applied to all complaints from affected parties. A grievance form is attached in Appendix IV and hard copies will be made available at community centres.

# Appendix I

## MITIGATION PLAN

## MITIGATION PLAN

Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
<b>PRE-CONSTRUCTION</b>	<b>Main Design phase</b>				
	Design in conflict with EMP	Contractor is obliged to obtain preconditions from Institutions dealing with environmental issues in order to avoid environmental risks during rehabilitation works	Designer	Technical control / PERS	
	Selected location for contractor's site facilities not appropriate	It has to be approved by the PE. Locations will be selected so that they do not interfere with the environment and social well-being of the surrounding communities (noise, dust, vibration, etc.), limited size of contractor's facilities, reduce unnecessary clearing of vegetation, production of waste. Waste waters will be treated before being released into surface water systems Paved areas, including vehicle parking areas, workshops and fuel storage areas to be equipped with oil and water separator, and fuel storage areas to be located more than 20m from a water course. Avoid excessive machine disturbance of the topsoil. Prevention of soil erosion on construction site.	Designer	Technical control / PERS	

State Road IB Class, No. 21, Section: Pozega – Ivanjica  
Environmental Management Plan – EMP

Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
		Limit the extent of excavation to reduce soil erosion potential. Avoid excavation and operating machinery in wet ground conditions.			
	Road safety issues associated with pedestrian crossing	Plan for safe and adequate pedestrian crossing facilities equipped with ramps and structures that allow the use of wheelchairs, pushcarts, bicycles and prams.	Designer	Technical Control / PERS	
<b>CONSTRUCTION</b>	<b>Site Induction</b>				
	Safety on the site	All workers and visitors to site shall pass Health& Safety and Environment training and be instructed in the need and use of PPE.	Contractor H&S and environmental officer	Supervisor	
	Stakeholder engagement	Details of the proposed road alignment, access points and safety features will be disclosed in the locality of the planned works. Feedback from local stakeholders will be sought and recorded. Evidence of how feedback has been considered in the final design will be recorded.			
	<b>MANAGEMENT PLANS</b> Contractor to prepare the following plans as described in the EMP to ensure compliance with legislative and Lender requirements.		Contractor	Supervisor/ PERS	

Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
	<ul style="list-style-type: none"> <li>• Site organisation plan,</li> <li>• Sewage and septic management,</li> <li>• Project grievance mechanism),</li> <li>• Soil Management Plan,</li> <li>• Dust management plan,</li> <li>• A plan indicating the location of the proposed material extraction site as well as rehabilitation measures to be implemented for the borrow areas and access roads upon project completion,</li> <li>• Waste and wastewater management plan in accordance with the Law on Waste management (“Official Gazette of RS”, 36/09, 14/16)</li> <li>• Oil and fuel storage management plan,</li> <li>• In-river works management plan,</li> <li>• Camp management plan.</li> <li>• Emergency response plan.</li> <li>• Rehabilitation Plan</li> <li>• Safety and Hazard Assessment</li> <li>• Safety and Labour Management Plan (SLMP),</li> </ul>				
<b>CONSTRUCTION</b>	<b>Material supply</b>				
	asphalt base dust, fumes, health effects and work safety, ecosystem disturbances	utilization of existing asphalt bases, requirement of official approval or valid operation license	Asphalt plant	Asphalt plant	Supplier from the offer / approved

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Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
	Stone quarry dust, fumes, health effects and work safety, ecosystem disturbances	utilization of existing quarries, requirement of official approval or valid operation license	Contractor / Stone quarry	Supervisor	supplier
	<i>sand and gravel excavation sites</i> riverbed and water quality disturbances, ecosystem disturbances	utilization of existing excavation sites or purchase of material from registered producers, requirement of official approval or valid operation license	Contractor / sand and gravel excavation management	Supervisor	
	<i>concrete base</i> dust, fumes, health effects and work safety, ecosystem disturbances	utilization of existing concrete base or purchase of concrete slabs from registered dealers, material should include appropriate quality attestation	Contractor / concrete base management	Supervisor	
<b>CONSTRUCTION</b>	<b>Transport of materials</b>				
	Asphalt dust, fumes	All trucks are to be covered	Contractor	Supervisor	
	Stone / Dust	Wet / cover truck load	Contractor / truck driver	Supervisor	
	Sand, gravel, dust	Wet or cover truck load	Contractor / truck driver	Supervisor	



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Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
	Cement, concrete	Remove fresh concrete that has spilled from the in-transit mixers from transport roads within 6 hours	Contractor / truck driver	Supervisor	
	Traffic management noise, vehicle exhaust, road congestion	Respect working hours (preferably 8-16h); use alternative routes to minimize major traffic sites Adequate temporary road signalization	Contractor / Transport manager; Truck operator	Supervisor	
	Chance of Archaeological finds	In case of chance finds Contractor is obliged to stop the works immediately and inform institute for protection of Cultural Monuments and PERS about it	Contractor	Supervisor	
<b>CONSTRUCTION</b>	<b>Construction site</b>				
	Noise effects to local residential blocks, fauna and workers	Limit activities to daily working hours (no works between 8 PM and 7 AM) or conduct them during the cited period, but with consent of the residents and management; Utilization of construction machinery with noise abatement equipment; ensure maximum functionality of machinery by regular (periodic) or extraordinary technical checkups of vehicles and equipment;	Contractor	Supervisor	
	Dust	Implement measures to avoid/minimize dust emissions, wetting /spraying the site, accesses,	Contractor	Supervisor	

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Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
		materials stockpiles and during loading/unloading activities; covering of vehicles carrying dusty materials; wheel washing/spraying of vehicles; speed limit of vehicles, site cleaning			
	Vibrations	Limit activities to daily working hours (no works between 8 PM and 7 AM) or conduct them during the cited period, but with consent of the residents and management	Contractor	Supervisor	
	Traffic disruption during construction activity	Traffic management plan with measures to redirect traffic that are easily seen or easy to follow; include traffic police assistance if needed Construction Traffic Management Plan will establish speed limits for construction vehicles and organize traffic to avoid as much as possible populated areas. Local residents will be kept informed of planned works	Contractor	Construction Contractor	
	Reduced access to roadside activities	Provide alternative access to roadside activities at all times	Construction Contractor	Construction Contractor	
	Vehicle and pedestrian safety when there is no construction activity	Lighting and well-defined safety signs and protection measures.	Construction Contractor	Construction Contractor	

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Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
	Water and soil pollution from improper material storage, management and usage	<p>Organize and cover material storage areas; isolate concrete, asphalt and other works from watercourse by using sealed formwork or covers; isolate wash down areas of concrete and asphalt trucks and other equipment from watercourse by selecting areas for washing that are not free draining directly into watercourse. Operate construction site in a way to reduce the risk of generating sediments and wastewater that may pollute local soils or receiving water bodies (considering situations such as including storm water runoff, wastewater generated from facilities on site such as wheel washing facility).</p> <p>Soil Management Plan shall be prepared for the controlled removal of top soil, storage and reuse. Prevent sediments flowing into surface waters and drainage channels by localized control measures (e.g. sediment fences, check dams, mulch barriers, rock groins, or geo-fabric barriers, sediment basins), contouring to optimise slope angle and steepness, Prevent wind erosion via fencing, covering, etc.</p>	Construction Contractor	Construction Contractor	
	Water and soil	Dispose waste material at location protected	Construction	Construction	

Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
	pollution from improper disposal of waste materials	from washing out, should be marked in the site plan; if not on site, then at authorized landfill / depot	Contractor	Contractor	
	Water and soil pollution from improper storage of waste materials	Storage of wastes according to international best practice (IFC EHS General Guideline). Apply additional measures for storage of hazardous wastes (such as use of secondary containment, access restriction, provision of PPE etc.) as necessary to prevent harm to construction staff, environment and public. Use and labelling of designated waste collection containers and storage areas for different kinds of wastes (hazardous and non-hazardous).	Construction Contractor	Construction Contractor	
	Potential contamination of soil and water from improper maintenance and fuelling of equipment	Apply best engineering practice in safe storage and handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all waste and dispose to permitted waste recovery facility	Construction Contractor	Construction Contractor	
	Water and soil pollution from improper disposal of waste materials	Transport of waste in marked vehicles designed to the type of waste to minimise the risk of release of materials (hazardous and non-hazardous materials) and windblown debris. Training of drivers in handling and disposal of	Construction Contractor	Construction Contractor	

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Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
		their cargo and the documentation of the transport describing the nature of the waste and its degree of hazard.			
	Workers safety	Provide workers with safety instructions and protective equipment; safe organization of bypassing traffic	Construction Contractor	Construction Contractor	
	Landscaping	Undertaking of re-vegetation progressively with cover crop and native endemic species and monitor its effectiveness. Where initial plantings were not successful, replacement plantings will be carried out.			
	Nature protection	Comply with the existing road alignment and corridors that work does not leave consequences for the wider area and existing habitats; to preserve as much as possible the existing trees in settlements and along the route; after completion of the project rehabilitation of disturbed area during the works	Construction Contractor	Supervisor	

Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
	Culture Heritage Protection	Prevention of landslide near Cultural Monuments; provision of archaeological supervision in case of works execution close to the monument; in case of archaeological discoveries hold up works and inform the competent institution	Construction Contractor	Supervisor	
<b>OPERATION</b>	<b>Maintenance</b>				
	Noise disturbance to human and animal population and workers	Limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public); equipment operating with noise mufflers	Road maintenance company	Road maintenance company	To be specified in maintenance contract documents- Technical Specifications for realization of maintenance works
	Possible air, water and soil pollution dust, vehicle exhaust, fuel and lubricants	Apply best engineering practice in safe storage and handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all	Road maintenance company	Road maintenance company	



Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
	spills	waste and dispose in line with the Law on waste management; organize and cover material storage areas; isolate asphalt from watercourse by using sealed formwork; selecting areas for washing that are not free draining directly or indirectly into watercourses; dispose waste material at location protected from washing out			
	Vibrations	Limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public and authorities)	Road maintenance company	Road maintenance company	
	Workers safety	Provide safety measures for the workers along with the appropriate equipment; safe organization through alternative roads and appropriate traffic signalization. All workers and visitors to site shall be given a Health, Safety and Environment Induction and instructed on the need to use of PPE.	Road maintenance company	Road maintenance company	
	Maintenance	Regularly maintain curbs; mow and maintain the grass and dispose of it in a landfill; regularly clean drainage structures (drains) and dispose of the waste material in a registered landfill; regular cleaning of road surface, filling of holes, binders and cracks; the remains of	Road maintenance company	Road maintenance company	

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Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
		asphalt originating from works on hole filling should be transported and disposed of in an appropriate landfill for construction materials; conduct regular and timely interventions of cleaning road surface and surrounding road structures in case of a traffic accident or tanker and other trucks overturning; conduct repairs			
	Increased vehicle speed	Install traffic signs for speed limit	Road maintenance company	Road maintenance company	To be specified in TS for maintenance works
	Possible air, water and soil pollution dust, vehicle exhaust, fuel and lubricants spills	Ensure proper handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all waste and properly dispose; properly organize and cover material storage areas; isolate asphalt from watercourse by using sealed formwork; selecting areas for washing that are not free draining directly or indirectly into watercourse; dispose waste material at appropriate location protected from washing out	Road maintenance company	Road maintenance company	
	Erosion, rock fall,	install warning signs (rock fall, landslide, wet	Road	Road	

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Phase	Issue	Mitigating measure	Institutional Responsibility		Comments
			Implementation	Supervision	
	hazardous conditions	or slippery conditions, dangerous curve, animal or pedestrian crossing, school, slow moving vehicles, merge), reflective markers to indicate steep edge or convex mirrors to see oncoming traffic at blind curves; locate warnings at points considered necessary by good engineering practice, or as agreed in writing with public and authorities	maintenance company	maintenance company	

# Appendix II

## MONITORING PLAN

## MONITORING PLAN

Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Implementation
<b>CONSTRUCTION</b>			<b>Material supply</b>			
<i>Asphalt plant</i>	Possession of official approval or valid operating license	Asphalt plant	Inspection / supervising engineer	Before work begins	Assure compliance with environment, health and safety requirements	Plant Operator
<i>Stone quarry</i>	Possession of official approval or valid operating license	Stone quarry	Inspection / supervising engineer	Before work begins		Quarry Operator
<i>Sand and gravel borrow pit</i>	Possession of official approval or valid operating license	Sand and gravel borrow pit or separation	Inspection / supervising engineer	Before work begins		Borrow pit or Separation Operator
<b>CONSTRUCTION</b>			<b>Material transport</b>			
<i>Asphalt</i>	Truck load covered	Job site	Supervising engineer	Unannounced inspections during work, at least once per week	Assure compliance of performance with environment, health	Supervision Contractor

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Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Implementation
<i>Stone</i>	truck load covered or wetted	Job site	Supervising engineer	Unannounced inspections during work, at least once per week	and safety requirements and enable as	Supervision Contractor
<i>Sand and gravel</i>	truck load covered or wetted	Job site	Supervision	Unannounced inspections during work, at least once per week	As little as possible disruption to traffic	Supervisor/ Contractor
<i>Traffic management</i>	hours and routes selected	Job site	Supervision	Unannounced inspections during work, at least once per week		Supervisor / Contractor
<b><u>CONSTRUCTION</u></b>			<b>Construction Site</b>			
<i>Noise disturbance to workers and neighbouring population</i>	Noise levels	Job site; nearest homes of settlements along the site	Equipment – hand-held analyser with application software	Once at the beginning of the project, on half basis, and on complaint. If the results of monitoring are not satisfactory, monitoring should be conducted on monthly basis	Assure compliance of performance with environment	Contractor
<i>Water and soil pollution from improper material storage, management and usage</i>	Water and soil quality (suspended solids, oils, pH value, conductivity)	Watercourses	Unannounced sampling; analysis at accredited laboratory with necessary equipment	Monitoring should be done prior construction ( on a referent point upstream of construction site) and once during rehabilitation works. If the results of monitoring are not satisfactory, monitoring should be repeated on monthly basis till the completion of works on the location	Assure compliance of performance with environment	Contractor

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Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Implementation
<i>Dust</i>	Air pollution (solid particles)	At and near job site	Inspection and visual observation	Unannounced inspections during material delivery and construction	Health and safety requirements and enable as little disruption to traffic as it is possible	Supervision / Contractor
<i>Vibrations</i>	Limited time of activities	Job site	Supervision	Unannounced inspections during work and on complaint		Supervision Contractor
<i>Traffic disruption during construction activity</i>	Existence of traffic management plan; traffic patterns	At and near job site	Inspection; observation	Before works start; once per week at peak and non-peak periods		Supervision Contractor
<i>Reduced access to roadside activities</i>	Provided alternative access	Job site	Supervision	Random checks at least once per week during construction activities		Supervision Contractor
<i>Vehicle and pedestrian safety when there is no construction activity</i>	Visibility and appropriateness	At and near job site	observation	Random checks at least once per week in the evening		Supervision Contractor
<i>Workers safety</i>	protective equipment; organization of bypassing traffic	Job site	inspection	Unannounced inspections during work.		Supervision Contractor



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Phase	What is the parameter to be monitored?	Where the parameter should be monitored?	How the parameter should be monitored?/ type of monitoring equipment	When the parameter should be monitored? (frequency of measurement or continuous)	Why the parameter should be monitored? (optional)	Institutional responsibility
						Implementation
<b>OPERATION</b>			<b>Maintenance</b>			
Noise disturbance to human population and workers	Noise levels	Job site; nearest homes	Equipment – hand-held analyser with application software	Unannounced inspections during maintenance activities and on complaint	Assure compliance of performance with environment, health and safety requirements	PERS
Vibrations	Limited time of activities	Job site	Supervision	Unannounced inspections during maintenance activities and on complaint		PERS
Workers safety	protective equipment; organization of bypassing traffic	Job site	Inspection	Unannounced inspections during maintenance activities and on complaint		PERS
<b>OPERATION</b>			<b>Road Safety</b>			
Increased vehicle speed	Condition of traffic signs; vehicle speed	Road section included in project	Visual observation; speed detectors	During maintenance activities; unannounced	Enable safe and economical traffic flow	Maintenance Contractor; Traffic Police
Erosion, rock fall, hazardous conditions	Road section included in project	Condition of hazard signs	Visual observation	During maintenance activities		Maintenance Contractor
Wastewater	Water quality	Before discharge into the recipient	Sampling and laboratory analysis	In accordance with the legislation	To be ensured the required water quality before discharging into recipient	Certified laboratory, appointed by the Beneficiary

**Proposed Template - additional data that should be incorporated into monitoring plans:**

1. General		
Is the project materially compliant with all relevant Performance Requirements (taking account of agreed action plans, exemptions or derogations)?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no, please provide details of any material non-compliances:
Is the project materially compliant with all applicable environmental and social laws and regulations?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no, please provide details of any material non-compliances:
Have there been any accidents or incidents that have caused damage to the environment, brought about injuries or fatalities, affected project labour or local communities, affected cultural property, or created liabilities for the company?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe, including details of actions to repair and prevent reoccurrence:
Have there been any changes to environment, social, labour or health and safety laws or regulations that have materially affected the company?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe:
How many inspections did you receive from the environmental authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found:
How many inspections did you receive from the health and safety authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found:
How many inspections did you receive from the labour authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found:
Have these visits resulted in any penalties, fines and/or corrective action plans?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe, including status of implementing corrective actions to address any violations found:

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## 1. General

Has the Company engaged any contractors for project-related work in the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please state for which types of work, and how the company has monitored the compliance of contractors with Performance Requirements and the Environmental and Social Action Plan:
Were any of the violations stated above the responsibility of contractors?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details, including how the Company is ensuring that corrective actions are implemented by the Contractor?
Have any operations been reduced, temporarily suspended or closed down due to environmental, health, safety or labour reasons?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe:
Please describe any environment or social programmes, initiatives or sub-projects undertaking during the reporting period to improve the company's environmental or social performance and/or management systems:		
Please indicate the level of associated expenditure (capital expenditure and operating expenditure), and whether this relates to the requirements of the Environmental and Social Action Plan, or to any other initiative:		

## 2. Status of the Environmental and Social Action Plan

Please provide information on the status of each item in the Environmental and Social Action Plan (ESAP). If the ESAP has been updated during the reporting period, please attach a copy of the new plan.

3. Environmental Monitoring Data <sup>1</sup>				
Please provide the name and contact details for your environmental manager:				
Parameter <sup>2</sup>	Value <sup>3</sup>	Unit	Compliance Status <sup>4</sup>	Comments <sup>5</sup>
<b>Waste Water</b>				
Total waste water generated				
BOD				
COD				
Suspended Solids				
Phosphorus				
Nitrates				
Heavy metals				
[Other]				
<b>Air Emissions</b>				
SO <sub>2</sub>				

<sup>1</sup> Please provide the results of any environmental monitoring carried out by the Company or its consultants. If you already have all the data requested available in another format, then this can be used instead.

<sup>2</sup> Not all parameters will necessarily apply. Please complete those rows that are most relevant to the industry sector. Additional parameters can be added as necessary.

<sup>3</sup> Please ensure that the units of measurement are clearly stated

<sup>4</sup> Please report on compliance against the standards for this project (typically local, EU and/or World Bank Group)

<sup>5</sup> In addition to any other comments, please indicate whether the measurements reported apply to all or only some process operations at the facility

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NO <sub>x</sub>				
Particulates				
CO <sub>2</sub>				
CH <sub>4</sub>				
N <sub>2</sub> O				
HFCs				
PFCs				
SF <sub>6</sub>				
[Other]				
<b>Other Parameters</b>				
Noise				
[Other]				
<b>Solid Waste</b>				
Please provide details of the types and amounts of solid wastes generated by the project. Indicate where wastes are classified as hazardous. Indicate the final re-use, recycle or disposal method for each waste type.				

4. Resource Usage and Product Output			
Parameter	Value	Measurement Unit	Comments <sup>6</sup>
<b>Fuels used</b>			
Oil			
Gas			
Coal			
Lignite			
Grid Electricity			
Heat Purchased			
Feedstocks and raw materials consumed			
Name 1			
Name 2			
<b>Product output</b>			
Product 1			
Product 2			

<sup>6</sup> In addition to any other comments, please indicate whether the measurements reported apply to all or only some process operations at the facility. Please include any fuel quality parameters (e.g. calorific value).

5. Human Resources Management			
Please provide the name and contact details for your Human Resources manager:			
	<b>Total</b>	<b>Recruited in this reporting period</b>	<b>Dismissed in this reporting period</b>
<b>Number of direct employees:</b>			
<b>Number of contracted workers:</b>			
Were there any collective redundancies during the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe the redundancy plan, including reasons for redundancies, number of workers involved, how they were selected, consultation undertaken, and measures to mitigate the effects of redundancy:	
Are there any planned redundancies to the workforce in the next year?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe the redundancy plan, including reasons for redundancies, number of workers involved, and selection and consultation process:	
Were there any changes in trade union representation at Company facilities during the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details, and summarise engagement with trade unions during reporting period:	
Were there any other worker representatives (e.g. in the absence of a trade union)?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details and summarise engagement with them during reporting period:	
Were there any changes in the status of Collective Agreements?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details:	
Have employees raised any grievances with the project during the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please state how many, split by gender, summarise the issues raised in grievances by male and female staff and explain how the Company has addressed them:	



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5. Human Resources Management		
Have employees raised any complaints about harassment or bullying during the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please state how many, split by gender, summarise the issues raised by male and female staff and explain how the Company has addressed them:
Have there been any strikes or other collective disputes related to labour and working conditions at the Company in the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please summarise nature of, and reasons for, disputes and explain how they were resolved
Have there been any court cases related to labour issues during the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please summarise the issues contested and outcome:
Have there been any changes to the following policies or terms and conditions during the reporting period in any of the following areas: <ul style="list-style-type: none"> <li>• Union recognition</li> <li>• Collective Agreement</li> <li>• Non-discrimination and equal opportunity</li> <li>• Equal pay for equal work</li> <li>• Gender Equality</li> <li>• Bullying and harassment, including sexual harassment</li> <li>• Employment of young persons under age 18</li> <li>• Wages (wage level, normal and overtime)</li> <li>• Overtime</li> <li>• Working hours</li> <li>• Flexible working / work-life balance</li> <li>• Grievance mechanism for workers</li> <li>• Health &amp; safety</li> </ul>	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please give details, including of any new initiatives:

6. Occupational Health and Safety Data					
Please provide the name and contact details for your Health and Safety manager:					
	Direct employees	Contracted workers		Direct employees	Contracted workers
Number of man-hours worked this reporting period:			Number of Fatalities <sup>7</sup> :		
Budget spent on OHS in this period (total amount and currency):			Number of disabling injuries:		
OHS training provided in this period in person-days:			Number of Lost Time Incidents (including vehicular) <sup>8</sup> :		
Number of lost workdays <sup>9</sup> resulting from incidents:			Number of cases of occupational disease:		
Number of sick days:					
Accident causes (falling, heavy loads, struck by object, contact with energy source etc.):					
Please provide details of any fatalities or major accidents that have not previously been reported to Banks, including total compensation paid due to occupational injury or illness (amount and					

<sup>7</sup> If you have not already done so, please provide a separate report detailing the circumstances of each fatality.

<sup>8</sup> Incapacity to work for at least one full workday beyond the day on which the accident or illness occurred.

<sup>9</sup> Lost workdays are the number of workdays (consecutive or not) beyond the date of injury or onset of illness that the employee was away from work or limited to restricted work activity because of an occupational injury or illness.

## 6. Occupational Health and Safety Data

currency):

Please summarise any emergency prevention and response training that has been provided for company personnel during the report period:

Please summarise any emergency response exercises or drills that have been carried out during the report period:

## 7. Stakeholder Engagement

**Please provide the name and contact details for your external relations or community engagement manager:**

Please provide information on the implementation of the stakeholder engagement plan and summarise interaction with stakeholders during the reporting period, including:

- Meeting or other initiatives to engage with members of the public or public organisations during the report period,
- information provided to members of the public and other stakeholders during the report period relating to environmental, social or safety issues
- coverage in media,
- and interaction with any environmental or other community groups.

Please describe any changes to the Stakeholder Engagement Plan:

How many complaints or grievances did the project receive from members of the public or civil society organisations during the reporting period? Please split by stakeholder group. Summarise any issues raised in the complaints or grievances and explain how they were resolved:

## 8. Status and Reporting on Resettlement Action Plan/Livelihood Restoration Framework

### Existing Land Acquisitions

Please report any further progress made during this reporting period in the implementation of the Resettlement Action Plan (RAP) or Livelihood Restoration Framework (LRF), using the monitoring indicators as detailed in the RAP or LRF, and complete the table below. Please provide the results of any other related monitoring carried out by the Company or its consultants and attach any additional information you think would be useful.

Have all the affected persons been fully compensated for their physical displacement and, if applicable, any economic losses resulting from the project?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no, specify how many compensation payments are still outstanding (in terms of number and percentage of recipients and payment amounts) and state when these payment will be made:
Has the land acquisition had any additional, unforeseen impacts on affected persons' standard of living or access to livelihoods that were not previously covered in the RAP?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, quantify these impacts and specify what measures have been undertaken to minimize and mitigate these impacts. If no, specify how potential impacts on livelihoods have been monitored.
Have any vulnerable groups been identified?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, list the groups that were identified and describe any additional measures undertaken in order to mitigate impacts specific to these groups.
If applicable, have all transit allowances been paid?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no, specify how many payments are still outstanding (in terms of number and percentage of recipients and payment amounts) and state when these payments will be made.

8. Status and Reporting on Resettlement Action Plan/Livelihood Restoration Framework		
Has legal support been provided to all the affected persons?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, specify how many persons effectively made use of the legal support.
Have all outstanding land and/or resource claims been settled?	Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/>	If no, specify how many claims are still outstanding and state what the expected timing is for settling them.
Have there been any new land acquisition-related complaints or grievances?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please state how many and summarize their content.
Has the company regularly reported to the affected communities on progress made in implementing the RAP?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please state how many meetings were held and how many participants attended.
<b>New Land Acquisitions</b> If the company acquired any new land for the project during the reporting year, please provide documents to show closure of land acquisition transactions. Please attach new/revised RAP covering the new land acquisition and describe mitigation measures, compensation, agreements reached, etc., and provide in tabular form a list of affected people and status of compensation.		
Have any persons been physically displaced?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, how many?
Have any persons been economically displaced?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, how many?

## 8. Status and Reporting on Resettlement Action Plan/Livelihood Restoration Framework

Was it a government assisted resettlement?	Yes <input type="checkbox"/> No <input type="checkbox"/>	

## 9. Community Interaction and Development

Please summarise any social or community development initiatives undertaken by the company during the reporting period, and any associated expenditure:

## Appendix III

# LEGISLATION

## REGULATION AND REQUIREMENTS

This section sets out the regulatory context regarding consultation and public disclosure in Serbia as it relates to this Project. Specific reference is made to relevant Serbian legislation, regional regulatory instruments, and relevant EBRD requirements, the World Bank Policy on Access to Information and WB OP 4.01 Environmental Assessment.

The main laws and regulations currently in force in Republic of Serbia which are relevant to the environmental protection during planning, design, construction and operating of this Project are listed below:

1. Law on planning and construction (“Official Gazette of RS” No. 72/09, 81/09, 64/10, 24/11, 42/13, 145/14),
2. Law on nature protection (“Official Gazette of RS”, 36/09, 88/10, 91/10, 14/16),
3. Law on environmental protection (“Official Gazette of RS” No. 135/04, 36/09, 72/09, 43/11, 14/16),
4. Law on EIA (“Official Gazette of RS” No. 135/2004, 36/2009),
5. Law on Strategic EIA (“Official Gazette of RS” No. 135/2004),
6. Law on waste management (“Official Gazette of RS”, 36/09, 14/16),
7. Law on noise protection (“Official Gazette of RS”, 36/09, 88/10),
8. Law on water (“Official Gazette of RS”, 30/10, 93/12, 101/16),
9. Law on forest (“Official Gazette of RS”, 30/10, 93/12, 89/15),
10. Law on air protection (“Official Gazette of RS”, 36/09, 10/13),
11. Law on Safety and Health at Work (“Official Gazette of RS”, 101/05, 91/15, 113/17),
12. Law on Agricultural Land (“Official Gazette of RS”, 62/06, 65/08, 41/09, 112/15)

Regulations established on the basis of the Law on EIA include the following:

1. Decree on establishing the List of Projects for which the Impact Assessment is mandatory and the List of projects for which the EIA can be requested (“Official Gazette of RS” No. 114/08),
2. Rulebook on the contents of requests for the necessity of Impact Assessment and on the contents of requests for specification of scope and contents of the EIA Study (“Official Gazette of RS” No. 69/05),
3. Rulebook on the contents of the EIA Study (“Official Gazette of RS” No. 69/05),
4. Rulebook on the procedure of public inspection, presentation and public consultation about the EIA Study (“Official Gazette of RS” No. 69/05),
5. Rulebook on the work of the Technical Committee for the EIA Study (“Official Gazette of RS” No. 69/05),
6. Regulations on permitted noise level in the environment (“Official Gazette of RS” No. 54/92),
7. Decree on establishing class of water bodies (“Official Gazette of SRS” No. 5/68),
8. Regulations on dangers pollutants in waters (“Official Gazette of SRS” No. 31/82).

Other relevant Serbian legislation

1. Law on confirmation of convention on information disclosure, public involvement in process of decision making and legal protection in the environmental area (“Official Gazette of RS”, 38/09),
2. Law on public roads (“Official Gazette of RS” No. 101/05, 123/07, 101/11, 93/12, 104/13).

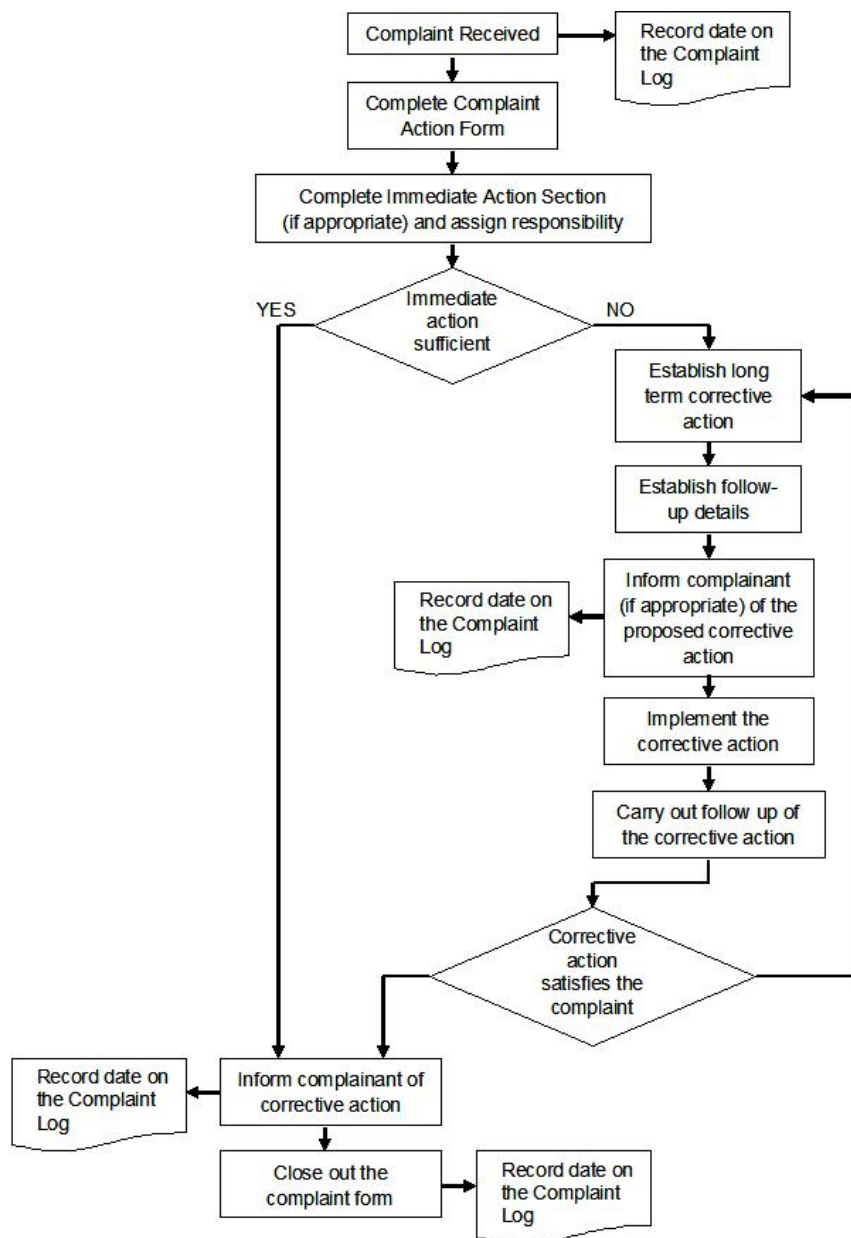


## Appendix IV

# GRIEVANCE MECHANISM

## Grievance mechanism and form

### Flowchart of Complaints/Grievance Procedure



Grievances to be resolved within 15 working days.

Grievance Reference Number (to be filled with number):			
Contact Details	Name:		
	Address:		
	Tel:		
	e-mail:		
How would you prefer to be contacted? Please tick box	By post	By phone	By e-mail
Name and the identification information (from identity card).			
Details of your grievance. Please describe the problems, who it happened to, when, where and how many times, as relevant			
What is your suggested resolution for the grievance?			
How to submit this form to /[name of concessionaire]	By Post to: [tbc]		
	By hand: please drop this form at [tbc]		
	By e-mail: Please email your grievance, suggested resolution and preferred contact details to: [tbc]		
Signature		Date	

## Appendix V

# THE PERMISSIONS AND CONDITIONS OF RELEVANT INSTITUTIONS

## Appendix V – Annex 1

ЗАВОД ЗА ЗАШТИТУ  
СПОМЕНИКА КУЛТУРЕ  
КРАЉЕВО  
Установа културе  
од националног значаја  
Краљево, Цара Лазара бр. 24  
Број: 982/3  
Датум: 22.08.2016.

V.  
ЈАВНО ПРЕДУЗЕЋЕ "ПУТЕВИ СРБИЈЕ"  
Број: 955-12613/162  
23-08-2016  
Датум: \_\_\_\_\_  
БЕОГРАД, Булевар краља Александра бр. 28с

Завод за заштиту споменика културе Краљево, Краљево, Улица Цара Лазара бр. 24, на основу члана 99 став 2. тачка 1 и 3, члана 100 став 1 и члана 104.109. и 110. Закона о културним добрима („Службени гласник РС“, бр.71/94, 52/2011-др.закон, 99/2011-др.закон), као и члана 131 Закона о општем управном поступку („Службени лист СРЈ“, бр.33/97 и 31/01), поступајући по захтеву Јавног предузећа "ПУТЕВИ СРБИЈЕ", Београд, Ул. Булевар краља Александра бр. 282, Сектор за инвестиције, Београд, Ул. Влајковићева бр. 19а, II Бр. 953-12613 од 15.06.2016.године, за потребе издавања услова за израду техничке документације Пројекта Појачаног одржавања државног пута IB реда бр. 21 (стара ознака магистрални пут М-21.1), деоница Пожега-Ариље-Ивањица, запримљеног у овом Заводу под бројем 982/1 од 04.07.2016.године, доноси

### РЕШЕЊЕ

I – Подносиоцу захтева, издају се услови за предузимање мера техничке заштите за израду техничке документације Пројекта Појачаног одржавања државног пута IB реда бр. 21 (стара ознака магистрални пут М-21.1), деоница Пожега-Ариље-Ивањица и могу се предузети према следећим условима:

- Констатовано је да се се у непосредној близини пута налази непокретно културно добро Манастир Клусура.
- Падина на којој је Манастир смештен склона је клизишту, па је неопходно у Пројекту предвидети санацију брда како не би дошло до угрожавања манастирског комплекса.
- На делу деонице Пожега-Ариље у прошлости су константовани остаци некрополе под тумулима. Некропола је евидентирана са леве стране пута према реци Моравица. Уколико се на деоници пута у близини моста на реци Моравица који из Милићевог села води ка Вирову предвиђају промене терена обезбедити археолошки надзор (централна тачка: 7428743, 4849399).
- На уласку у Ариље са десне стране пута налази се активно гробље са старијим хоризонтом сахрањивања (централна тачка: 7427550, 4847198). Уколико се на овој локацији предвиђају промене терена обезбедити археолошки надзор.
- На изласку из клисуре Моравице налази се спомен чесма погинулим у Другом светском рату 1941-1945 (централна тачка: 7428292, 4836792). За све радове у близини чесме прибавити посебне услове Завода у Краљеву.
- Циганско гробље (Простор комуналног предузећа у Ивањици). Уколико се на овој локацији предвиђају промене терена обезбедити археолошки надзор.
- Уколико се у току археолошког надзора наиђе на археолошки материјал стручно лице Завода има права прописи мере археолошких ископавања како налази не би били уништени.
- Трошкове истраживања, конзервације, чувања, публиковања и излагања добра које ужива претходну заштиту, све до предаје добра на чување овлашћеној установи заштите, сноси Инвеститор.
- Уколико се током радова на појачаном одржавању пута IB реда бр. 21 (стара ознака магистрални пут М-21.1), деоница Пожега-Ариље-Ивањица, открију до сада не евидентирани археолошки

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- локалитети, инвеститор или извођач дужни су да одмах обуставе даље радове и обавесте надлежни Завод.
- Приликом открића археолошког материјала Извођач/Инвеститор је у обавези да преузме мере заштите како налаз не би био уништен и оштећен, и да се сачува на месту и положају у коме је откривен;
  - Трошкове истраживања, конзервације, чувања, публиковања и излагања добра које ужива претходну заштиту, све до предаје добра на чување овлашћеној установи заштите, сноси Инвеститор.
  - За промене у Пројекту неопходно је прибавити нове услове Завода.

II - Инвеститор је дужан да према условима из тачке 1) овог Решења сачини пројектну документацију и на исту прибави сагласност овог Завода.

III – Ово решење не ослобађа подносиоца захтева обавезе прибављања и других услова, дозвола и сагласности предвиђених прописима о планирању и уређењу простора и насеља, изградњи објеката и осталих важећих законских прописа.

IV - Ово решење важи две године од дана издавања.

V – Жалба на решење не задржава извршење овог решења.

#### Образложење

Овом Заводу обратило се Јавно предузеће “ПУТЕВИ СРБИЈЕ“, Београд, Ул. Булевар краља Александра бр. 282, Сектор за инвестиције, Београд, Ул. Влајковићева 19а, захтевом за прибављање услова за предузимање мера техничке заштите за израду техничке документације Пројекта Појачаног одржавања државног пута IB реда бр. 21 (стара ознака магистрални пут М-21.1), деоница Пожега-Ариље-Ивањица.

Увидом у документацију овог Завода и на лицу места, као и на основу Извештаја број 982/2 од 04.08.2016. године, сачињеног од стране стручног сарадника овог Завода, утврђено је да се у непосредној близини пута налази непокретно културно добро Манастир Клусура (Добрача, Решење о утврђивању манастира Клисуре-Добрача за непокретно културно добро-споменик културе број 598/3 од 28.12.1966. године донето од стране Републичког завода за заштиту споменика културе), које ужива заштиту на основу Закона о културним добрима („Службени гласник РС“, бр. 71/94, 52/2011-др.закон, 99/2011-др.закон).

На делу деонице Пожега-Ариље у прошлости су константовани остаци некрополе под тумулима. Некропола је евидентирана са леве стране пута према реци Моравица. На уласку у Ариље са десне стране пута налази се активно гробље са старијим хоризонтом сахрањивања, а у Ивањици локалитет Циганско гробље (Простор комуналног предузећа у Ивањици).

Планирани радови могли би да девастирају позната добра или приликом земљаних радова постоји могућност појављивања нових добара под претходном заштитом јер су археолошки локалитети специфични са становишта заштите, јер се налазе испод површине земље и често није могуће знати за њихово постојање, приликом било каквих земљаних радова могуће је наићи на остатке материјалне културе из прошлости, те је у том случају неопходно организовати праћење спровођења мера заштите од стране археолога Завода.

На основу чл. 36. став 1 тачка 4. Закона о културним добрима прописано је да је сопственик дужан да прибави услове за предузимање мера техничке заштите и прибави сагласност надлежне установе за предузимање мера и радова на добру којима се могу проузроковати промене изгледа, облика или намене добра или повредити његова својства.

На основу чл. 99. став 2. тачка 3. Закона о културним добрима прописано је да се мере техничке заштите и други радови којима се могу проузроковати промене облика или изгледа непокретног

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културног добра или повредити његова својства, могу предузимати ако се прибаве потребни услови и одобрења на основу прописа о планирању и уређењу простора и изградњи објеката.

Чланом 109. Закона о културним добрима прописано је да уколико се у току извођења земљаних и других радова наиђе на археолошко налазиште или археолошке предмете, извођач радова дужан је да одмах, без одлагања, прекине радове и о томе обавести надлежни Завод за заштиту споменика културе, као и да обезбеди средства за заштитна археолошка истраживања и конзервацију налаза.

Чланом 110. Закона о културним добрима прописано је да је Инвеститор дужан да обезбеди средства за истраживања, заштиту, чување, публикување и излагање добра које ужива претходну заштиту, све до предаје добра на чување овлашћеној установи заштите.

Са изложеног, одлучено је као у диспозитиву овог решења.

На основу члана 104. став 3. Закона о културним добрима, жалба не одлаже извршење решења.

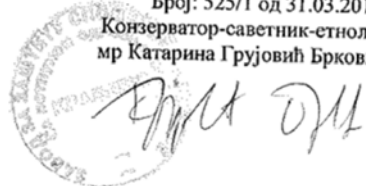
**ПРАВНА ПОУКА:** Против овог решења дозвољена је жалба Републичком заводу за заштиту споменика културе у Београду у року од 15 дана од дана достављања решења. Жалба се подноси преко доносиоца овог решења, а на основу члана 16. Закона о културним добрима ослобођена је плаћања републичке административне таксе.

Обрађивачи:  
Марија Алексић Чеврљакковић, дипл. археолог  
Љилјана Александрић, дипл. правник

**Доставити:**

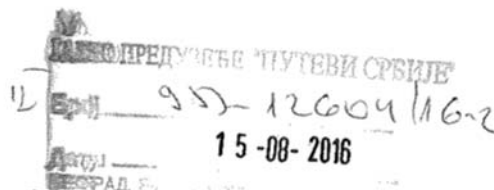
- ② Подносиоцу захтева  
Републичком Заводу за заштиту  
споменика културе у Београду
- Архиви Завода

По Овлашћењу в.д.директора  
Број: 525/1 од 31.03.2016.  
Конзерватор-саветник-етнолог  
мр Катарина Грујовић Брковић



## Appendix V – Annex 2

Република Србија  
ЗАВОД ЗА ЗАШТИТУ ПРИРОДЕ СРБИЈЕ  
03 Број: 020-1268/3  
Датум: 07. 07. 2016.  
Нови Београд, Др Ивана Рибара бр. 91  
Тел: +381 11/2093-802; 2093-803  
Факс: + 381 11/2093-867



Завод за заштиту природе Србије, на основу члана 9. Закона о заштити природе („Службени гласник РС“, бр. 36/2009, 88/2010, 91/2010 и 14/2016) и члана 192. став 1. Закона о општем управном поступку („Службени лист СРЈ“, бр. 33/1997 и 31/2001 и „Службени гласник РС“, бр. 30/2010), поступајући по захтеву Јавног предузећа „Путеви Србије“ из Београда за издавање услова заштите природе за израду техничке документације пројекта Појачано одржавање деонице државног пута IB реда бр. 21 (стара ознака: магистрални пут М-21.1), деоница Пожега – Ариље - Ивањица, доноси

### РЕШЕЊЕ

1. Предметно подручје (деоница пута) се не налази унутар заштићеног подручја за које је спроведен или покренут поступак заштите, али је дуж тока реке Моравице која представља еколошки коридор од међународног значаја у Републици Србији. Сходно томе, издају се услови заштите природе:
  - 1) Пројектом предвидети таква решења и мере који ће обезбедити услове за очување ваздуха, земљишта, подземних и површинских вода, посебно реке Моравице -еколошког коридора, као и Ћетиње, Рзава и других.
  - 2) Саставни део предметног Пројекта треба да буде и део који се односи на организацију радилишта, при чему је неопходно дефинисати и обезбедити:
    - привремене локације за складиштење потребног грађевинског и другог материјала и опреме, које је неопходно лоцирати ван обалског појаса реке Моравице (плавне зоне) и других водотока, простора са високом вегетацијом, као и ван пољопривредног земљишта, и ограничити их искључиво на време трајања радова;
    - привремене или трајне локације (постојеће уређене комуналне објекте/депоније) за одлагање и депоновање шута и другог отпада укључујући и комунални настао у току извођења радова;
    - да се након завршетка предметних радова све површине које су на било који начин деградиране грађевинским и другим радовима, што пре санирају.
  - 3) При извођењу радова строго се придржавати трасе и коридора пута како се при манипулацији возилима и машинама не би оставиле последице на шири простор. Такође, користити постојећу путну мрежу без изградње нових путева, у циљу спречавања фрагментације простора и постојећих станишта.
  - 4) Током извођења предметних радова предузети све мере предострожности како би се дрвореди у насељу или појединачна стабла уз трасу деонице пута максимално заштитила и сачувала од могућег оштећења, као што је ломљење грана и скидање коре са дебла при кретању механизације, или на било који други начин нарушила њихова битна својства.
  - 5) Пројектом предвидети таложнике и сепараторе масти и уља за воде које настају спирањем са коловоза, посебно на траси пута дуж река, нарочито Моравице - еколошког коридора, у циљу њихове заштите од загађења.
  - 6) У циљу очувања река, Моравице дуж чијег тока је деоница пута, као и Ћетиње и Рзава преко којих прелази траса пута, Пројектом је неопходно предвидети:



- да се у току извођења радова максимално очува обалски појас река, односно забрани уништавање приобалне вегетације, нарушавање дивљих врста и њихових станишта;
  - да се забрани одлагање/депоновање било каквог отпада, посебно грађевинског у обалском појасу и самом кориту река;
  - да се строго води рачуна да у зони моста, преласка пута преко водотока у току извођења радова грађевински материјал не пада у корито реке Ћетиње и Рзава.
- 7) Уколико је неопходно уређење у зони прелаза пута (моста) преко водотока (Ћетиње, Рзава,...) предвидети употребу камена и других природних материјала, и у највећој могућој мери избећи бетонирање обала и корита водотока (спровести тзв. природно уређење водотока) при чему је неопходно максимално очување самих корита, али и обала са постојећом вегетацијом.
  - 8) Током извођења грађевинских радова (подизања асфалта,...) у непосредној близини стамбених објеката, планирати орошавање како би се спречило подизање прашине и негативан утицај на људе.
  - 9) Забрањено је сервисирање возила и машина дуж трасе и коридора пута. Уколико дође до хаваријског изливања горива, уља/мазива и других штетних материја обавезна је санација површине и враћање у првобитно стање.
  - 10) Није дозвољено извођење радова у току ноћних сати због могућег утицаја буке грађевинских машина.
  - 11) Предузети мере заштите становништва од удеса. У том смислу потребно је предвидети постављање заштитних ограда и пешачких прелаза и пролаза на местима где је то најцелисходније, нарочито на локацијама у близини постојећих насеља.
  - 12) Током извођења радова дуж целе трасе одржавати максимални ниво комуналног реда.
  - 13) По изведеним предметним радовима неопходно је што пре уклонити сву механизацију и грађевински материјал, а уколико је дошло до нарушавања простора дуж трасе треба га санирати (култивисати терен, односно успоставити биљни покривач уз одговарајуће врсте које су биолошки постојане у датим климатским условима.
2. Ово Решење не ослобађа подносиоца захтева да прибави и друге услове, дозволе и сагласности предвиђене позитивним прописима.
  3. У случају измене Пројекта, потребно је Заводу за заштиту природе Србије поднети нов захтев за издавање услова заштите природе.
  4. Уколико подносилац захтева у року од две године од дана достављања овог Решења не отпочне радове и активности за које је ово Решење о условима заштите природе издато, дужан је да од Завода прибави ново решење о условима заштите природе.
  5. Такса за издавање овог Решења у износу од 30.000,00 динара је одређена у складу са чланом 2. став 5. тачка 1. Правилника о висини и начину обрачуна и наплате таксе за издавање акта о условима заштите („Службени гласник РС“, бр. 73/2011, 106/2013). Подносилац захтева је дужан да наведену таксу уплати у корист рачуна Завода у року од 5 дана од дана достављања предрачуна.

### **Образложење**

Јавно предузеће „Путеви Србије“ из Београда, Булевар краља Александра 282, 11050 Београд, обратило се Заводу дописом II бр. 953-12604 од 15.06.2016. године, са захтевом за издавање услова заштите природе за израду техничке документације пројекта Појачано одржавање деонице државног пута IB реда бр. 21 (стара ознака: магистрални пут М-21.1), деоница Пожега – Ариље – Ивањица.

На основу достављеног захтева и пратеће документације подносиоца захтева, утврђено је да је планирана израда пројекта Појачано одржавање деонице државног пута IB реда бр. 21 (стара ознака: магистрални пут М-21.1), деоница Пожега – Ариље – Ивањица. Предметни Пројекат је саставни део Пројекта рехабилитације путева и унапређења безбедности саобраћаја на мрежи државних путева, који је подршка међународних финансијских институција Националном програму рехабилитације државних путева Републике Србије. Почетак предметне деонице је раскрсница укрштања државних путева

IB реда бр. 21 и IB реда бр. 23 (Петља Пожега), а крај деонице је на уласку у општину Ивањица. Планирана врста радова обухвата радове ојачања постојеће коловозне конструкције (на појединим местима до дубине од 50-60 cm) у постојећим габаритима коловоза са постојећим и санираним системом одводњавања.

Увидом у Централни регистар заштићених природних добара Србије и документацију Завода за заштиту природе Србије, а у складу са прописима који регулишу област заштите природе, утврђени су услови заштите природе из диспозитива овог Решења. При томе се имало у виду да се предметно подручје (деоница пута) не налази унутар заштићеног подручја за које је спроведен или покренут поступак заштите, на основу Закона о заштити природе („Службени гласник РС“, бр. 36/2009, 88/2010, 91/2010 и 14/2016), али је дуж тока реке Моравице која представља еколошки коридор од међународног значаја у Републици Србији, према Уредби о еколошкој мрежи („Службени гласник РС“, бр. 102/2010).

Законски основ за доношење решења је: Закон о заштити природе („Службени гласник РС“, бр. 36/2009, 88/2010, 91/2010 и 14/2016); Уредба о еколошкој мрежи („Службени гласник РС“, бр. 102/2010).

Предметни радови могу се реализовати под условима дефинисаним овим Решењем, јер је процењено да неће угрозити природне вредности предметног подручја.

На основу свега наведеног, одлучено је као у диспозитиву овог Решења.

Подносилац захтева је ослобођен од плаћања таксе у складу са чланом 18. Закона о републичким административним таксама („Службени гласник РС“, бр. 43/2003, 51/2003, 61/2005, 5/2009, 54/2009, 50/2011, 93/2012 и 45/2015).

**Упутство о правном средству:** Против овог Решења може се изјавити жалба министарству надлежном за послове заштите животне средине у року од 15 дана од дана пријема решења. Жалба се предаје Заводу за заштиту природе Србије.


ДИРЕКТОР

Александар Драгишић

Достављено:

③ Подносилац захтева  
- Архива х 2

Appendix V – Annex 3

 <b>Република Србија</b> <b>МИНИСТАРСТВО</b> <b>ЗАШТИТЕ ЖИВОТНЕ СРЕДИНЕ</b> Број: 011-00-0161/2017-02 Датум: 29.08.2017. Београд	<b>SAFEGE DOO</b> Бр. 17/A-36 08.08.2017 БЕОГРАД
<b>„SAFEGE“ д.о.о. Београд</b>	
<b>Ул. Београдска 27/5</b> <b>11000 Београд</b>	
<b>Предмет: Допис у вези са захтевом за давање мишљења</b>	
<p>Министарству заштите животне средине обратили сте се у име ЈП Путеви Србије Београд (пуномоћје бр. 953-14411 од 12.07.2017 године) захтевом за давање мишљења о потреби покретања процедуре у складу са Законом о процени утицаја животну средину („Сл.гласник РС“, бр. 135/04, 36/09) за главни пројекат појачаног одржавања државног пута IB21 деоница: Пожега – Ивањица, дужина 38.930 м, стационажа: км 44+057 – км 58+831, заведен под бројем 011-00-161/2017-02 од 24.08.2017 године.</p> <p>У допису наводите да је предметни пројекат обухваћен и интегралним „Пројектом Рехабилитације путева и безбедности саобраћаја („Road Rehabilitation and Safety Project – RRSР“), који се финансира из међународног кредита. Предметна деоница од Пожеге до Ивањице се протеже кроз Златиборски и Моравички управни округ који су лоцирани у западном делу Републике Србије на путном правцу IB21 и представља део саобраћајне везе између Новог Сада, преко општина Пожега, Ариље, Ивањица, до општине Сјеница. Пројекат подразумева грађевинско – путарске радове у оквиру трасе већ постојећег пута а односиће се на санацију оштећених површина моста, замену дилатација, израду хидроизолације, израду пешачких стаза, уградњу нових ивичњака, постављање заштитне ограде за возила и пешаке.</p> <p>Планирано је да се Главним пројектом за појачано одржавање путева обезбеди: повећање употребне вредности пута, трајност пута, побољшање безбедности саобраћаја, укључивање захтева локалне заједнице и усаглашеност са захтевима заштите животне средине у највећој могућој мери под датим условима просторног ограничења и ограничења који произилазе из типа дозвољених грађевинских и саобраћајних интервенција.</p> <p>Сва решења приликом израде пројектне документације – Главни пројекат за појачано одржавање пута, морају бити у оквиру постојећег путног појаса. За рехабилитацију предметне саобраћајнице употребити би се уобичајени грађевински материјали за ову врсту радова (агрегат, цемент, бетонско гвожђе, итд.). Побољшање предметне деонице захтева коришћење енергената, укључујући електричну енергију и течна горива. Радови ће обухватити постојећу коловозну конструкцију, уз проширење коловоза и припадајућег садржаја попречног профила у постојећем путном појасу, уз санацију постојећег система одводњавања коловоза и тупа пута и пројектовање свих елемената који продужавају трајност радова и унапређују систем безбедности саобраћаја.</p> <p>На предметној деоници нема евидентираних станишта нити заштићених биљних и животињских врста с тим да ток реке Моравице представља еколошки коридор од међународног значаја у Републици Србији. Такође нема регистрованих рекреативних центара. У близини пројектне</p>	

деонице једино се налази непокретно културно добро манастир Клисура. У току извођења радова неће се произвести никакви материјали који загађују животну средину и који би могли доспети у земљиште и подземне воде.

Грађевинске машине ће током радова производити буку повишеног нивоа али се тај утицај сматра привременим и неће представљати трајну сметњу за становништво у окружењу. Потенцијално загађење ваздуха ће се огледати у појави прашине током извођења радова и транспорта материјала као и кроз привремено загађење ваздуха услед рада мотора грађевинских машина.

Уз Захтев је приложена и додатна документација:

- Кратак опис пројекта;
- Решење о условима заштите природе;
- Решење о условима које је издао Завод за заштиту споменика културе у Краљеву;
- Графички прилог - прегледна карта предметне деонице пута;

На основу увида у захтев обавештавамо вас о следећем:

- У складу са члановима 3. и 4. Закона о процени утицаја животну средину („Сл.гласник РС“, бр. 135/04, 36/09) предмет процене утицаја на животну средину су пројекти који се планирају и изводе, промене технологије, реконструкције, проширење капацитета који могу имати значајан утицај на животну средину, а притом су садржани у Уредби о утврђивању Листе пројеката за које је обавезна процена утицаја и Листе пројеката за које се може захтевати процена утицаја на животну средину („Службени гласник РС“, бр. 114/08).
- Пројекат појачаног одржавања пута не представља предмет процене утицаја на животну средину и није сврстан у Листама пројеката из поменутог Уредбе, па сагласно томе *носилац пројекта није у обавези* да отпочне процедуру процене утицаја на животну средину у складу са чланом 8. Закона о процени утицаја на животну средину.
- Носилац пројекта је обавези да се приликом извођења радова на појачаном одржавању предметне саобраћајнице у потпуности придржава услова и мера заштите животне средине из 1) Решења о условима заштите природе и заштите животне средине бр. 020-1268/3 од 07.07.2017 које је издао Завод за заштиту природе Србије, и 2) Решења са условима и мерама заштите непокретних културних добара бр. 982/3 од 22.08.2016. године које је издао Завод за заштиту споменика културе у Краљеву.

ПОМОЋНИК МИНИСТРА  
по решењу о овлашћењу  
бр. 021-01-5/2017-01  
од 26.07.2017.  
Александар Весић

Доставити:

- Наслову
- Архиви

## Appendix VI

# PUBLIC CONSULTATIONS