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## Road Rehabilitation and Safety Project

Rehabilitation and maintenance of I and II category State  
roads in the Republic of Serbia

# ENVIRONMENTAL MANAGEMENT PLAN

for

Main Design for Heavy Maintenance  
of the State Road IB 35  
(old road mark M-25),  
section: Beloljin - Kursumlija - Rudare

Chainage: km 237 + 881 - km 262 + 052  
Length: 24.171 km

- Environmental Category B -

FINAL

Belgrade, September 2018

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## **ABBREVIATIONS AND ACRONYMS**

BoQ	Bill of Quantity
CEP	Contractor's Environmental Plan
EBRD	European Bank for Reconstruction and Development
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EMP	Environmental Management Plan
ESAP	Environmental and Social Action Plan
H&S	Health and Safety
IFIs	International Financing Institutions
INC	Institute for Nature Conservation
IPCM	Institute for Protection of Cultural Monuments
MoEP	Ministry of Environmental Protection
MoCTI	Ministry of Construction, Transport and Infrastructure
NGO	Non-Governmental Organisation
OP	Operational Policy
PERS	Public Enterprise "Roads of Serbia"
PPE	Personal Protective Equipment
PSC	Project Supervision Consultant
RAP	Resettlement Action Plan
RE	Resident Engineer
RRSP	Road Rehabilitation and Safety Project
RS	Republic of Serbia
SE	Site Engineer
SLMP	Safety and Labour Management Plan
SSIP	Site Specific Implementation Plan
WB	The World Bank

## INTRODUCTION

The Environmental Management Plan (EMP) has been prepared for the proposed Design for heavy road maintenance of the State Road IB 35, section Beloljin – Kursumlija - Rudare, in order to ensure application of the good environmental practice and document compliance with the requirements of the International Financing Institutions (IFIs) which will finance this Project.

The road section is 24.121 km long, between chainages km 237+881 and km 262+052. The Project has been classified as Environmental Category B. i.e. a project requiring an EMP pursuant to IFIs Safeguard Policies.

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 aim of the EMP is to highlight the negative environmental impacts and management problems during the execution of construction works, as well as the necessary mitigation measures that the Contractor must apply. The key components of the EMP are: Mitigation Plan and Monitoring Plan.

Project will comply with Serbian legislation, procedures and policies, international conventions and IFIs safeguard policies. The activities related to subsequent regular maintenance of this section are not the main focus of this EMP, but are presented herewith for the purpose of completeness.

The preparation of this EMP was undertaken through a desk study and field investigations, including consultations with regional level representatives and local stakeholders. The EMP is based primarily on field investigations performed during October 2017.

## EXECUTIVE SUMMARY

### Project description

Road Rehabilitation and Safety Project (RRSP) represents the implementation of the first phase of the Government's National Road Rehabilitation Program which is expected to rehabilitate about 1100 km of national roads across the country, from 2014 to 2019. The subject section is a part of the RRSP planned for heavy maintenance during the fourth year of the Project implementation.

Subject section belongs to the Toplicki Administrative district, located in the southern part of the Republic of Serbia (RS). The section belongs to the State Road IB no. 35 (old road mark M-25) ("Official Gazette of RS", No. 93/2015). It is an important traffic connection between border crossing Djerdap (State border with Romania) and southern Serbia, and with the province of Kosovo and Metohija as well. The section Beloljin - Kursumlija - Rudare connects the local community Beloljin with the Municipality of Kursumlija and with the nearby village Rudare. The beginning of the section is at the chainage km 237+881 in the node 3533, the intersection of the State Road IB 35 and IB 38, in the locality of Beloljin (Figure 1), while the end is defined at the chainage km 262+052 in the node 3535, 50 m after the intersection for Prolom banja (Figure 2).



Figure 1. Beginning of the section



Figure 2. End of the section

On the section Beloljin - Kursumlija - Rudare, there are three stretches reconstructed in the previous period and the existing pavement structure shall be retained without intervention. The beginning of the first reconstructed stretch is defined in the node 3533 Beloljin itself (beginning of the subject section), while the end is defined 2.465 km after this node, at chainage km 240+346 - entrance in the settlement of Tulare. The beginning of the second stretch is defined at chainage ~km 241+556 (bridge over Backa River) up until the beginning of the Municipality of Kursumlija at chainage ~km 245+531 (Figure 3). The third stretch is defined inside the area of the settlement Pepeljevac (~km 250+741~km 251+741). The total length of the reconstructed stretches on the subject sections is 7.440 km (Figure 4).



**Section intended for enhanced maintenance L=24.121 km**

Figure 3. Scheme of the section foreseen for heavy maintenance

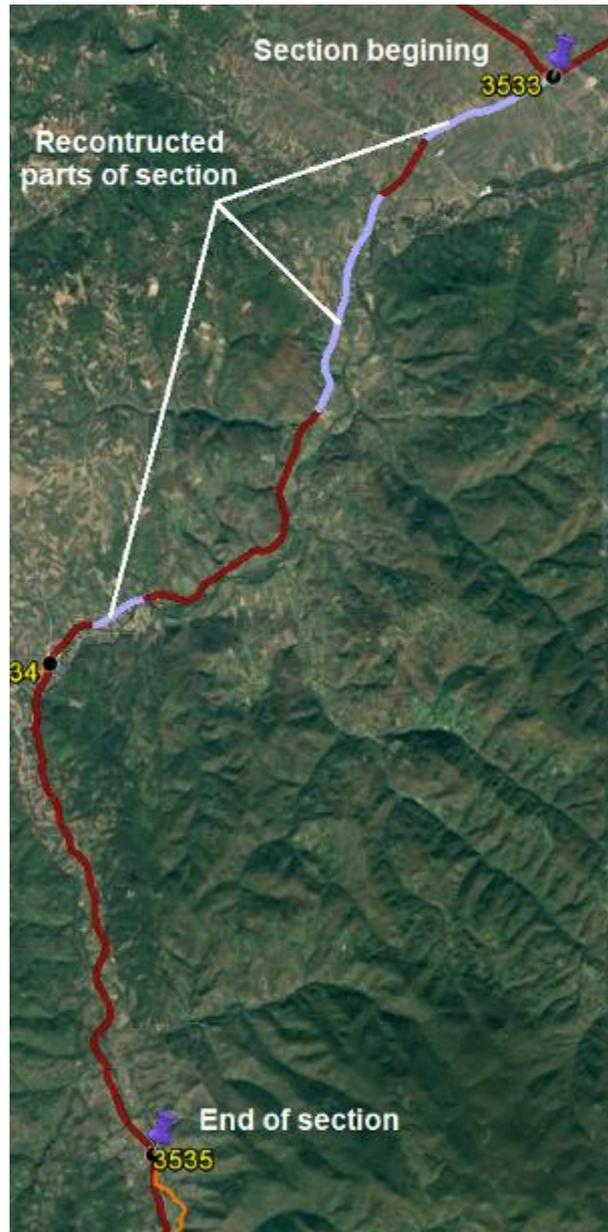


Figure 4. Overview of reconstructed stretches on the subject section

The road passes through the following settlements: Beloljin, Tulare, Bace, Plocnik, Barlovo, Novo selo, Pepeljevac, Kastrat, Visoka and Rudare. The Toplica river flows parallel to the route from the beginning of the section to the chainage ~km 253+320 where the river crosses the route. In the immediate vicinity of this bridge, the Kosanica river flows into the Toplica river, which continues parallel to the route observed in direction of chainage increase, crossing the route in two places, at chainages ~km 258+440 and ~km 261+870. In addition to the aforementioned rivers, the subject section is intercepted by two occasional watercourses - Backa River (~km 241+561) and Vojnicki Stream (~km 260+312). From the beginning of the section to the chainage ~km 253+280, the railway Nis - Doljevac - Prokuplje - Kursumlija - Merdare is parallel with the road and is located on the left side of the road observed in direction of chainage increase (Figure 5). At the mentioned chainage, the railway passes under the bridge and up to the chainage ~km 258+170 (Figure 6) is on the right side of the road. Passing below the other bridge

it goes again to the left side of the road and maintains this position until the end of the section foreseen for heavy maintenance.



Figure 5. Location of the railway Nis - Doljevac - Prokuplje - Kursumlija - Merdare in relation to the road



Figure 6. Interchange of Nis - Doljevac - Prokuplje - Kursumlija - Merdare railway with road section

Part of the subject section at which the heavy maintenance is carried out, from Visoka to Rudare, is located in an ecologically significant area - the Landscape of

Outstanding Features Radan (from the chainage km 256+880 to km 259+870 and from the chainage km 260+770 to the end of the section) which is an integral part of the ecological network of the RS. The ecological network in this area covers the PBA 26 (Prime Butterfly Area) (Figure 7).

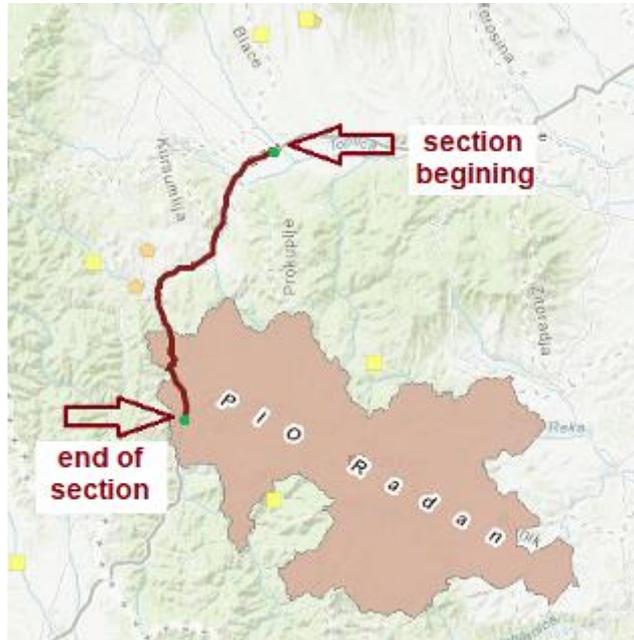


Figure 7. Protected area on the road section Beloljin - Kursumlija - Rudare

The Institute for Protection of Cultural Monuments (IPCM) Nis has registered two immovable cultural properties on the section Beloljin - Kursumlija - Rudare. The first immovable cultural property represents an archaeological site Plocnik (~km 242+000), within which there are also Roman thermae (~km 241+780) dating from the 3<sup>rd</sup> century AD. Roman thermae are located along the route, below the overpass (Figure 8). The archaeological site Plocnik and Roman thermae are located on a part of the road that is not foreseen for heavy maintenance (Figures 9 and 10).



Figure 8. Roman thermae below the overpass

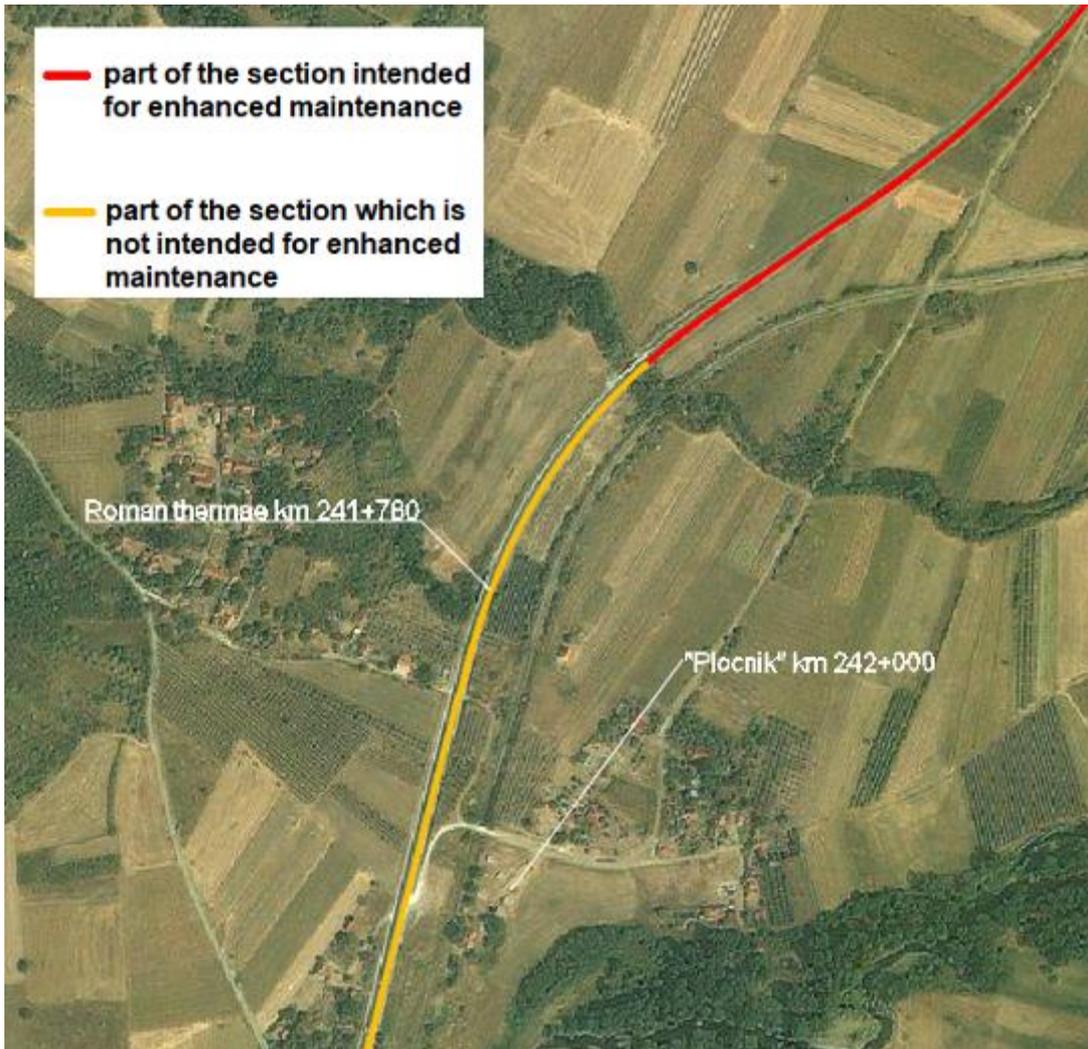


Figure 9. Position of the Archaeological site "Plocnik" and Roman thermae in relation to the road

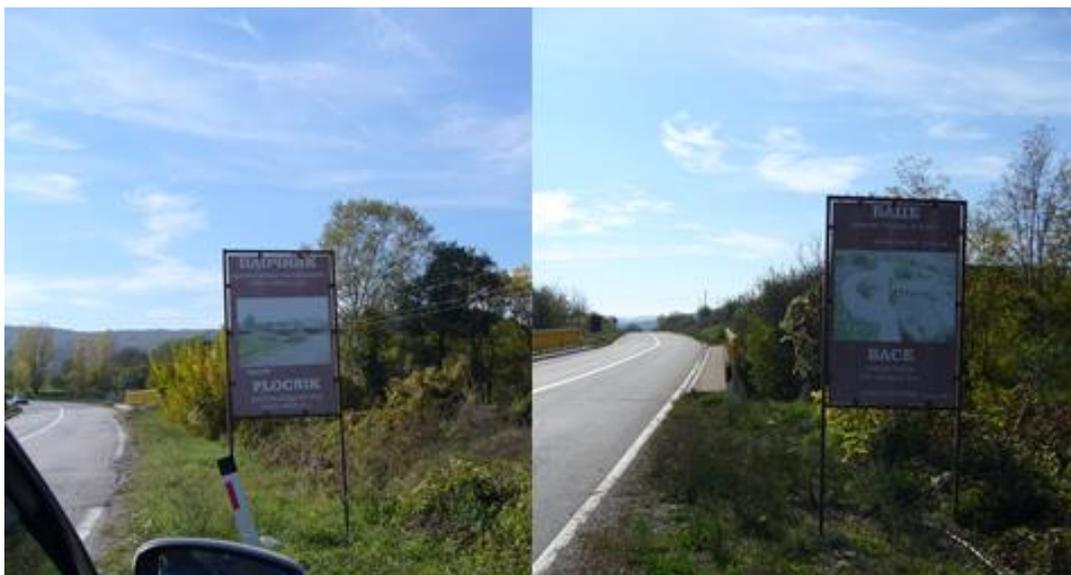


Figure 10. Sign boards for "Plocnik" and Roman thermae

Another immovable cultural property that is located next to the subject section is Markova crkva - the late antique basilica at Kastrat in the municipality of Kursumlija (~km 253+461) (Figure 11 and Figure 12).



Figure 11. The late antique basilica at Kastrat in the municipality of Kursumlija



Figure 12. The coordinates of the late antique basilica "Markova crkva"

The works foreseen by this design, will be implemented within the right-of-way 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. More details on the subject are available in Project's Resettlement Policy Framework.

### **Policy, legal and administrative framework**

The MoEP is the key institution in the RS responsible for formulation and implementation of environmental policy matters.

The environmental legislation currently in force in the RS is summarized in Appendix III.

In the RS, the Environmental Impact Assessment (EIA) procedure is regulated by the Law on EIA, which is completely in line with European EIA Directive - 85/337/EEC. PERS has submitted a Request for an opinion on the assessment of the project's impact on the environment to the MoEP. Based on the obtained condition (No. 011-00-349/2017-02 Appendix V - Conditions from the relevant public institutions), the EIA Study is not required. Based on the condition (No. 020-749/3 Appendix V - Conditions from the relevant public institutions), issued by the Institute for Nature Conservation (INC) of Serbia, one part of the section Beloljin - Kursumlija - Rudare is located within the protected area of the Landscape of Outstanding Features Radan, which is classified in the I category of national natural goods i.e. area of exceptional importance. Subject works can be implemented under the conditions defined by this decision, because it is estimated that they will not affect the natural values of the protected area. Based on the condition (No. 1125/2 Appendix V - Conditions from the relevant public institutions), issued by the IPCM Nis, there is an archeological site – Plocnik, immediately on the road alignment (located on the stretch not foreseen for heavy maintenance) and one cultural monument - Markova crkva, the late antique basilica at Kastrat in Kursumlija municipality.

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

- Operational Policy (OP) (4.01) Environmental Assessment;
- European Bank for Reconstruction and Development (EBRD): Environmental and Social Policy (2008);
- European Investment Bank (EIB): Statement of Environmental and Social Principles and Standards (2008).

EBRD and EIB will require the project to comply with the RS national laws and EU standards.

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

Immediately on the route Beloljin - Kursumlija - Rudare, there is a protected natural good, the Landscape of Outstanding Features Radan. Based on the decision issued by the INC of Serbia, works on heavy maintenance can be carried out in accordance with the issued conditions of nature protection. The IPCM Nis has registered an archeological site - Plocnik (located on the stretch not foreseen

for heavy maintenance) and a cultural monument Markova crkva on the subject section of the road. The investor is obliged to give the notification of the commencement of works to the IPCM Nis, and to notify the same Institute within 15 days from the date of completion of works, for the purpose of reviewing and checking on site, whether the works have been carried out in accordance with the issued conditions.

During the Project implementation, there will be no land acquisition, as defined by OP 4.12.

The first 15,4 km out of total 24,121 km of the road are laid, at a greater or lesser distance, along the Toplica River, to the chainage ~km 253+320 where the road crosses the flow of the Toplica River. At the same chainage, the Kosanica River flows into the Toplica River, from where the road continues along the Kosanica River, intercepting its course in two places (~km 258+440 and ~km 261+870). The road alignment intercepts 3 smaller watercourses as well, the stream in the locality of Tulare (~km 240+380), Backa River (~km 241+561) and Vojnicki Stream (~km 260+312).

The atmospheric precipitations are currently drained by free spilling over shoulders, discharging into the gutters, over the embankment slopes to the ditches and longitudinally through the gutters and ditches to the culvert. Based on the conditions issued by the INC of Serbia, grease and oil separators are foreseen for the water generated by washing out from the pavement, especially on the part of the route along the rivers, principally along the Toplica and Kosanica rivers, in order to protect them from pollution.

On the rivers Toplica and Kosanica, there are hydrological stations for monitoring the quality of surface waters. On the Toplica River, there are two measuring stations - Doljevac and Pepeljevac, and one on Kosanica - Visoka. Due to the nature of the works on heavy road maintenance and with the construction of a drainage system that is in accordance with the required conditions of the INC of Serbia, the mentioned watercourses will not be under negative influence.

Based on the data obtained from the Republic Hydrometeorological Service of Serbia from 2014, on the considered section, the Toplica River belongs to the second to third class, and the Kosanica River to the second class.

The second class corresponds to the good ecological status according to the classification given in the Rulebook, which prescribes the parameters of ecological and chemical status for surface waters ("Official Gazette of the RS", No. 74/2011). Surface waters belonging to this class provide, based on the limit values of quality, conditions for the functioning of the ecosystem, life and protection of fish (cyprinids) and can be used for the following purposes: potable water supply with pretreatment by filtration and disinfection, bathing and recreation, irrigation, industrial use (process and cooling waters).

The third class corresponds to the moderate ecological status according to the classification given in the Rulebook, which prescribes the parameters of ecological and chemical status for surface waters. Surface waters belonging to this class provide, based on the limit values of quality, conditions for life and protection of cyprinids and can be used for the following purposes: potable water supply with pretreatment by coagulation, flocculation, filtration and disinfection, bathing and recreation, irrigation, industrial use (process and cooling waters).

For the studied area, there are no industrial facilities that would cause an increase in the level of concentration of pollutants in the atmosphere.

Current traffic load (AADT) for 2016 on the section Beloljin - Kursumlija is 2670 vehicles/day, while on the section Kursumlija - Rudare 2033 vehicles/day.

There are two linear sources of noise on the section Beloljin - Kursumlija - Rudare in the form of the existing road IB 35 and the railway Nis - Doljevac - Prokuplje - Kursumlija - Merdare.

There are no point sources of noise that would contribute to the cumulative impact on the subject section.

### **Summary of environmental impacts**

The possible temporary adverse impacts resulting from construction activities would consist of: disruption of current traffic flow, reduced roadway safety, damage to access roads, dust, and gaseous emissions, potential pollution of soils and water resources, brief disturbance to biota, and momentary interference to neighboring settlements through various operation activities. Off-site activities include quarry, borrow pit and asphalt plant operations, which if not managed properly, may cause localized adverse impacts. The Contractor's yard and workers' camp can be potential sources of temporary adverse impacts on the environment.

No relocation and resettlement issues are anticipated by OP.

When it comes to exploitation, the section is an important traffic connection between border crossing Djerdap (State border with Romania) and southern Serbia, and with the province of Kosovo and Metohija as well. The section Beloljin - Kursumlija - Rudare connects the local community of Beloljin with the municipality of Kursumlija, as well as with the local community of Rudare. As a result of heavy maintenance, road traffic is not expected to increase. In respect to impact of the potential increase of vehicle speed on subject section, this issue will be addressed through the project's road safety component, which will include implementation of active and passive measures to control vehicle speed on rehabilitated road sections.

Local residents will be affected with air and noise pollution during the heavy road maintenance works.

Various cases of water contamination can occur during the rehabilitation of the road and future operation. Wastewater discharged during the construction works can jeopardize the quality of surface and underground water. Adequate mitigation measures and monitoring activities are planned, in accordance with the Law on Water ("Official Gazette of RS", 30/10, 93/12 and 101/2016-9). 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 Law on Water, will apply.

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

## **Environmental management plan**

Possible environmental impacts will be mitigated during the design, works and road operation phases, as summarized in the EMP as shown in Appendix I.

An assessment of the proposed road rehabilitation project concluded that the negative impacts would be negligible if the mitigation measures are properly implemented. The EMP consists of 3 parts: Mitigation Plan (Appendix I), Monitoring Plan (Appendix II) and Stakeholder Engagement and reporting from public consultations (Appendix IV). Prior to the commencement of work, the Contractor shall prepare the Contractor's Environmental Plan. During the heavy maintenance, the Contractor will execute the works according to the requirements of the Contractor's Environmental Plan (CEP)(based on the EMP). The CEP will amplify how the Contractor will address the activities in the rehabilitation section of the EMP. The contractor will submit the CEP to PERS for approval.

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

It is the Contractor's obligation to include implementation of environmental mitigation measures in his overall cost. The Contractor will be required to provide a short statement that confirms that:

- The EMP has been included into 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 sub-contractors will comply with RS national laws, EU standards and Lender requirements.

PERS is in charge of issuing and enforcing fines and penalties for any non-compliance with the contract.

A Monitoring Plan for the proposed Project (Appendix II) has been prepared. The main components of the monitoring plan are the following:

- Environmental issues to be monitored and the means of verification;
- Specific areas, locations and parameters to be monitored;
- Applicable standards and criteria;
- Duration and frequency;
- Institutional responsibilities for monitoring and supervision.

## **Stakeholder engagement - Information disclosure, consultations and public participation**

As required by IFIs Safeguards Policies, public consultations are undertaken during the preparation of EMP. The EMP was disclosed to the Public in accordance with the World Bank OP 4.01 and was available locally to the communities at the PERS office and Community centres.

PERS took the views of stakeholders (affected groups, local NGOs see Appendix IV for the project stakeholder list) fully into account in project design and implementation. This process is important in order to understand both the nature and extent of any social or environmental impact and the acceptability of proposed mitigation measures, particularly to affected groups. Consultations were a way to improve decision making, to obtain feedback on the EMP process and to increase community cooperation in implementing the project.

In order for meaningful consultations to take place between the PERS and affected groups and local NGOs, PERS provided information prior to consultations. The information was provided in a timely manner and in a form that was meaningful for, and accessible to, the groups being consulted.

Stakeholders will be consulted on the detailed design and in particular project affected people who live locally who may be affected by changes to access arrangements (permanently or temporarily).

PERS will maintain a grievance procedure for the project which will be publicly available (see Appendix IV).

### **Summary of public disclosure process**

In accordance with the operational policy of the World Bank 4.01, the Highway Institute JSC Belgrade has prepared the document – Environmental Management Plan for heavy maintenance of the state road IB 35, section: Beloljin - Kursumlija - Rudare, in length of 24.121 km.

PE "Roads of Serbia" has issued on August 23<sup>rd</sup>, 2018, a call for public consultations to all stakeholders, institutions, organizations interested in Environmental Management Plan for the section: Beloljin - Kursumlija - Rudare. Prior to advertising in newspapers, the Environmental Management Plan (in paper and electronic form) was delivered to the Municipal Administration of Kursumlija. The City Administration representatives have informed the public via local media on exact time and place of the public debate. This call was also published on the website of JP "Roads of Serbia". This document is available at the following addresses:

- At the premises of the Public Enterprise "Roads of Serbia", Sector for Investments, Vojkovičeva 19a, Belgrade, on the first floor, every working day from 11:00 AM to 01:00 PM, within 14 days from the date of the publication of this notice publication
- At the premises of the Municipal Administration of Kursumlija, every working day from 08:00 AM to 03:00 PM within 14 days from the date of the publication of this notice
- On the website of the Public Enterprise "Roads of Serbia" <http://www.putevi-srbije.rs>

Public consultation and presentation of the Environmental Management Plan were held in the premises of the Municipal Administration of Kursumlija on August 31<sup>st</sup>, 2018. The meeting has started at 12 PM. The representatives of the Highway Institute presented in detail the Environmental Management Plan to the attendees. The public consultations were attended by 10 participants.

During the public consultations, there were no significant remarks in regards to environmental protection issues. There were no complains on prepared draft EMP

document. Question raised and clarification provided are presented within the Report on Public Consultations (Appendix IV). The meeting was ended at 01:20 PM (local time).

## **1. PROJECT DESCRIPTION**

RRSP represents the implementation of the first phase of the Government's National Road Rehabilitation Program for the period of 2014-2019 from which it is expected to rehabilitate about 1100 km of national roads across the country. The subject section is a part of the RRSP planned for heavy maintenance during the fourth year of the Project implementation.

The main objective of the RRSP is to provide support to the Government of the RS in improving the efficiency and safety of traffic within the network of arterial and regional roads. This will be achieved through improvement of one part of road network, proportional to the increase of implementation of efficient solutions in the management of the resources of the road economy, through the institutionalization of the principles of road safety design and control of traffic safety as well as by strengthening the institutional capacities of the PERS.

### **Location Description**

The subject section belongs to the Toplicki Administrative district, located in the southern part of the RS.

The section belongs to the State Road of IB category no. 35. All chainages are provided in accordance with the Reference System from December 2015.

The Main Design for Heavy Maintenance is performed in the length of 24.121 km. On the subject section, there are three stretches rehabilitated within the previous period, thus they are not covered under this Project. The beginning of the section is at the chainage km 237+881 in the node 3533, the intersection of the State Road IB 35 and IB 38, in the locality of Beloljin, while the end is defined at the chainage km 262+052 in the node 3535, 50 m after the intersection for Prolom banja (Figure 13).





Figure 14. "Mak gradnja"



Figure 15. "Milanovic" warehouse

In the territory of the municipality of Kursumlija, the hunting ground "Kosanica" with its headquarters in the City of Kursumlija extends. This hunting ground is run by the hunting association "Soko" (Figure 16) and its total hunting area is 68,207 ha. Continually grown game species in the hunting ground are roe deer, wild boar, rabbit, pheasant and grey partridge. Given that the section of the road passes next to the territory of the hunting ground "Kosanica", it is necessary to set warning signs - the animals on the road.



Figure 16. Sign board for hunting ground "Soko"

The subject section passes through several settlements. Four gas stations were spotted along the section by field investigation (Figure 17).



Figure 17. Position of the gas stations on the section Beloljin - Kursumlija - Rudare

In the locality of Rudare, on the right side of the road, in direction of chainage increase (~km 261+221) there is a smaller landfill, unregulated, with a large amount of accumulated asphalt (Figure 18).



Figure 18. Asphalt landfill along the road

## **Description of rehabilitation works**

Based on the analysis of traffic safety (primarily data analysis on the type of traffic accidents), and the structure of traffic flow on parts of the route, the existing road should be expanded.

On the subject section, outside of the settlement, the existing pavement width is predominantly about 7m. In the settlements of Tulare, Barlovo, Pepeljevac, the minimum allowable pavement width is 6.0m. The nominal adopted width of the traffic lane is  $t_v=3.25\text{m}$  and the width of the edge strip  $t_{iv}=0.35\text{m}$ , which makes the total pavement width of 7.20m. The extension in the curve was carried out for two passing trucks. Design level was placed so it would fit as much as possible to the existing condition.

All culverts and bridge spans are of a satisfactory capacity. The only intervention from a hydro-technical aspect involves cleaning of the deposited material in the said zones, in order to achieve smooth drainage.

The conducting of atmospheric water from the pavement will be performed using drain holes on the curbs that would allow the water from the pavement to be discharged into the road channel. Such a type of drainage would be applied at places where the fall of the carriageway goes towards the curb and the footway, while at places where the fall of the carriageway goes from the footway, a free overflowing over the shoulder is foreseen. The treatment of rainwater is planned with separators that will be installed in all places where rainwater is discharged into local watercourses so that the existing biological balance would not be disturbed. Separation systems are provided at the following chainages: ~km 240+381, ~km 241+541, ~km 253+361, ~km 258+441, ~km 260+301, ~km 261+861.

The project entails no resettlement and land acquisition, nor long lasting disruptions to the natural environment and human settlements and activities.

## **2. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORKS**

### **Relevant Institutions**

The MoEP is the key institution in the RS responsible for formulation and implementation of environmental policy matters.

The other aspects of environmental management related to road rehabilitation projects are dealt with by several other institutions, among which, the INC of Serbia and the IPCM Nis, and the PERS.

### **Existing Serbian legislation**

Environmental protection in the RS is regulated by several national laws and by-laws. The environmental legislation in force in Serbia is given in Appendix III.

## **EIA procedure in the RS**

In the juridical system of the RS, the EIA procedure is regulated by the Law on EIA, which is completely in line with European EIA Directive - 85/337/EEC. Therefore, EIA is not required for road rehabilitation projects unless their alignment is placed within or in the vicinity of natural/cultural protected areas. The Designer, on behalf of PERS, shall acquire the conditions of the INC of the RS and the competent Institute for the Protection of Cultural Monuments under which the project can be carried out. After that, the Designer prepares and delivers to the PERS the Request for issuing an opinion on the need for EIA, together with the obtained conditions of the competent institutions, in order for the PERS to contact the competent ministry for the opinion. In the event that the ministry prescribes the obligation to implement the EIA procedure, the Designer is obliged to prepare and submit to the PERS a Request for decision on the need for EIA.

Based on the above-mentioned criteria, the MoEP stated that the project does not require the Study on EIA (Appendix V).

## **Relevant IFIs Policies and Statements**

As the road rehabilitation will be funded by IFIs the following Lender requirements will need to be applied to all the works:

- The World bank (WB): 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).

EBRD and EIB will require that the project complies with the RS national laws and EU standards.

Accordng to the WB guidelines, a partial EIA and EMP are required for the heavy maintenance projects such as the subject project.

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

The section Beloljin - Kursumlija - Rudare, in the length of 24,171 km, is situated in the Toplicki Administrative district, located in the southern part of the RS and passes through the territory of the Municipality of Prokuplje and Kursumlija.

The road from Visoka to Rudare is located in an ecologically important area - the Landscape of Outstanding Features Radan, which is an integral part of the ecological network of the RS.

The IPCM Nis has registered two immovable cultural properties on the subject section - the archaeological site Plocnik (on the section not intended for rehabilitation) (~km 242+000) in the homonymous place (Municipality of Prokuplje) and "Markova crkva" - the late antique basilica (~km 253+461) in the locality of Kastrat (Municipality of Kursumlija).

## Natural resources and cultural heritage

Part of the road passes through the protected natural good (third zone of protection), the Landscape of Outstanding Features Radan. The legal basis for proclamation is:

- Law on nature protection ("Official Gazette of RS" no. 36/2009, 88/2010, 91/2010 – correction and 14/2016);
- Regulation on ecological network ("Official Gazette of RS" No. 102/2010).

The Nature Park Radan is located in southern Serbia and it belongs to the South Morava Valley (Juzno Pomoravlje) in a wider sense, between the upper courses of Kosanica and Toplica rivers. The Radan Mountain fills the central part of the area, according to which the whole area of natural good is called Radan (Figure 19). The boundaries of the Park include parts of the territory of the following municipalities: Kursumlija, Bojnik, Prokuplje, Lebane and Medvedja. The total surface of the Nature Park is 41,312.66 ha, on which the regimes of I, II and III degree of protection are established. The Radan Mountain is a typical highland area of Serbia, with elements of submediterranean species and with the dominance of postglacial species. According to the Rulebook on criteria for evaluation and categorization procedure of protected areas, the Nature Park Radan is classified as the I category of national natural goods, i.e. area of extreme importance. The Radan area was registered as an area of international importance for the preservation and protection of butterflies Prime Butterfly Area 26 (PBA 26). The road enters the Landscape of Outstanding Features Radan at the territory of the localities of Visoka and Rudare.

The INC of Serbia estimated that the planned works on the heavy maintenance on the section Beloljin - Kursumlija - Rudare can be carried out in accordance with the defined conditions and will not endanger the natural values of the area.



Figure 19. Nature Park "Radan"

## Settlements

The following settlements are located along the section: Beloljin, Tulare, Bace, Plocnik, Barlovo, Novo selo, the City of Kursumlija, Pepeljevac, Kastrat, Visoka and Rudare. Some of these settlements, such as: Beloljin, Bace and Plocnik, are located along the parts of the road that are not intended for rehabilitation. However, the works on heavy maintenance will effect the population of these settlements as well.

Beloljin is a farming/cattle-breeding rural settlement, in the zone of the intersection of Kursumlija-Prokuplje and Blace roads, next to the Nis - Doljevac - Prokuplje - Kursumlija - Merdare railway line. Beloljin belongs to the municipality of Prokuplje and according to the 2011 census, it has 485 inhabitants. The settlement has a four-year primary school "Svetislav Mirkovic" (Figure 20), a health clinic, a veterinary clinic, and a railway station.



Figure 20. Primary school "Svetislav Mirkovic"

**Tulare** is a farming/cattle-breeding and fruit-growing rural settlement (Figure 21). The settlement has an eight-year primary school. Tulare belongs to the municipality of Prokuplje and according to the 2011 census, it has 262 inhabitants.



Figure 21. Entrance to the settlement of Tulare

**Bace** is a farming rural settlement. It has a four-year primary school. The village belongs to the municipality of Prokuplje and according to the 2011 census, it has 228 inhabitants.

**Plocnik** is a farming/cattle-breeding and fruit-growing rural settlement. The village belongs to the municipality of Prokuplje and according to the 2011 census, it has 120 inhabitants.

**Barlovo** is a farming/cattle-breeding rural settlement, next to the Nis - Doljevac - Prokuplje - Kursumlija - Merdare railway line. The village belongs to the municipality of Kursumlija and according to the 2011 census, it has 151 inhabitants.

**Novo selo** is a cattle-breeding rural settlement, about 20 km from Kursumlija. Novo selo belongs to the municipality of Kursumlija and according to the 2011 census, it has 61 inhabitants.

**Kursumlija** is an urban settlement in the municipality of Kursumlija in Toplicki district (Figure 22). The City of Kursumlija represents the administrative and cultural center of the homonymous municipality and is one of the few towns in Europe that extends over three rivers - Toplica, Kosanica and Banjska River. According to the 2011 census, the city has 13 200 inhabitants, while the entire municipality of Kursumlija has 19011 inhabitants, distributed in 90 settlements.



Figure 22. Entrance to the municipality of Kursumlija

**Pepeljevac** is a farming/cattle-breeding rural settlement (Figure 23), along the road and the railway line Nis - Doljevac - Prokuplje - Kursumlija - Merdare. This settlement has only 15 inhabitants according to the 2011 census.



Figure 23. Entrance to the settlement of Pepeljevac

**Kastrat** is a suburban farming/cattle-breeding rural settlement in the municipality of Kursumlija (Figure 24), along the road and the railway line Nis - Doljevac - Prokuplje - Kursumlija - Merdare. The settlement has a four-year primary school, gas station, railway station etc. Kastrat has 229 inhabitants according to the 2011 census.



Figure 24. Entrance to the settlement of Kastrat

**Visoka** is a cattle-breeding rural settlement and it belongs to the municipality of Kursumlija. There are railway and bus station in the settlement. Visoka has 103 inhabitants according to the 2011 census.

**Rudare** is a farming rural settlement, next to the Nis - Doljevac - Prokuplje - Kursumlija - Merdare railway line. The village has a four-year primary school, gas station, bus and railway station. There are 190 inhabitants according to the 2011 census.

### **Watercourses**

Along the section, there are two larger watercourses, Toplica and Kosanica rivers. The subject road crosses the course of the rivers in several places, as well as the occasional torrential streams: stream in the locality of Tulare, Backa River and Vojnicki Stream (Figure 25). The Toplica River springs on the eastern side of Kopaonik under Pancicev vrh, and flows into South Morava River near Doljevac. It is about 136 km long. In the upper section of the river course, above Kursumlija, at the length of about 50 km, it runs through a narrow and deep valley. In this part, Toplica is up to 15m wide, and up to 1m deep. Downstream from Kursumlija, it flows through the narrow and up to 500 m deep Toplicka kotlina (Toplica basin). Its valley is up to 20 m wide and shallow, only 1.5 m deep. At Prokuplje, it runs through a short narrowing, and then enters the Dobrica plain and up to the estuary, it has the appearance of a plain river. Its most significant tributary is Kosanica River. The route of the subject section crosses the Kosanica River in two places.



Figure 25. Watercourses intercepted by the section Beloljin - Kursumlija - Rudare  
There are eight bridges on the route foreseen for rehabilitation, although two bridges (the bridge over the Backa River and the bridge over the archaeological site) are located on the part of the section where no heavy maintenance is foreseen.

Structure name	Chainage (km)	Length (m)	Obstacle
Bridge over the stream in the village of Tulari (Figure 26)	240+380	13.8	stream
Bridge over the Backa River (Figure 27)	241+561	24.9	Backa River
Bridge over the archaeological site (Figure 28)	241+781	31.2	Archaeological site
Bridge over the Toplica River (Figure 29)	253+320	120	Toplica River
Bridge over the railway (Figure 30)	258+190	33	Railway
Bridge 1 over the Kosanica River (Figure 31)	258+440	20.6	Kosanica River
Bridge over the Vojnicki Stream (Figure 32)	260+312	20.7	Vojnicki Stream
Bridge 2 over the Kosanica River (Figure 33)	261+870	42	Kosanica River



Figure 26. Bridge over the stream in the village of Tulari



Figure 27. Bridge over the Backa River



Figure 28. Bridge over the archaeological site



Figure 29. Bridge over the Toplica River



Figure 30. Bridge over the railway



Figure 31. Bridge 1 over the Kosanica River



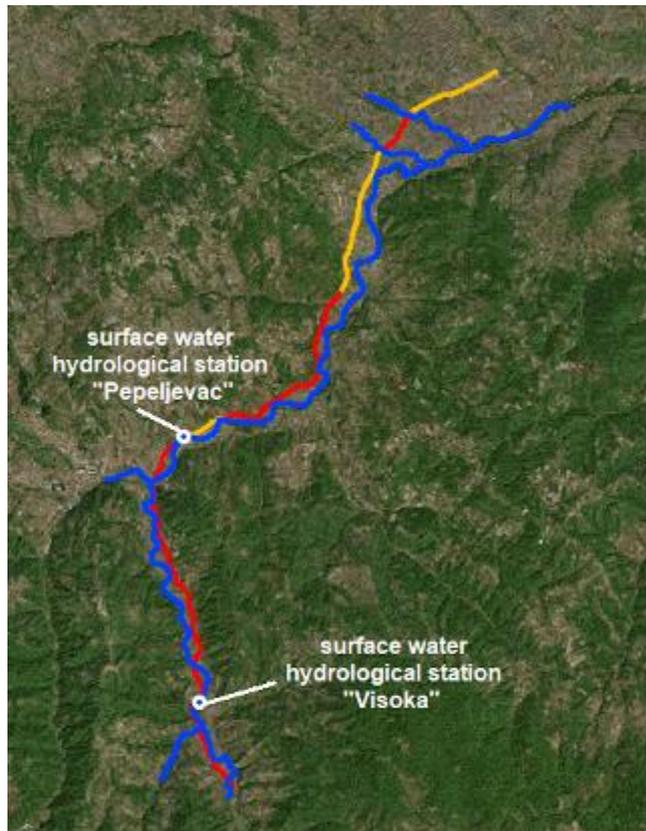
Figure 32. Bridge over the Vojnicki Stream



Figure 33. Bridge 2 over the Kosanica River

On the alignment of the road, there are several box culverts for occasional torrential streams.

Data on the quality of surface and groundwater are available for this section. There are two hydrological measuring stations on the Toplica River: Prokuplje and Pepeljevac. Measuring station Pepeljevac is closer to the road section and therefore is a more relevant source of water quality data on the subject section. On the Kosanica River, there is one measuring point located in Visoka, through which the road section passes (Figure 34).



34. Hydrological stations on the rivers Toplica and Kosanica

Due to the nature of road heavy maintenance works, watercourses will not be affected by the works through the implementation of good construction management practices.

## **Air**

In the corridor of the section Beloljin – Kursumlija - Rudare, there are no point sources of air pollution.

There are no industrial plants that affect air pollution. PERS will monitor all the activities of the Contractor, including possession of valid working permits and environmental approvals for all subcontractors.

Data on the measured values of air pollution in the observed corridor were not available.

Based on previous experience and expected traffic load, during and after planned rehabilitation work, the current level of air pollutants is not expected to increase.

## **Roads and Railways**

On the observed section, there are numerous accesses from municipal roads and unclassified roads.

From the beginning of the section to the chainage ~km 253+280, there is the railway Nis - Doljevac - Prokuplje - Kursumlija - Merdare, which is parallel with the road and is located on the left side of the road observed in direction of chainage increase. At the mentioned chainage, the railway passes under the bridge and up to the chainage ~km 258+170 is on the right side of the road. Passing below the other bridge it goes again to the left side of the road and maintains this position until the end of the section foreseen for heavy maintenance.

## **Noise**

Based on experience and expected traffic load, the planned heavy maintenance works, and operation of road after the rehabilitation, will not increase the levels of noise within the proposed road section.

#### 4. 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	No land acquisition is planned within the project
ground and surface water	low	Due to low amount of drainage water that can be drained into Toplica and Kosanica rivers, the consequential negative impact is minimal to negligible.
air quality	low	Temporary impact
flora and fauna (protected areas and species)	low	According to the recommendations presented in the framework of the conditions obtained by the INC of Serbia.
noise	low	Temporary impact
access/crossing points of the main road and local roads	low	Heavy maintenance works won't affect existing crossing points.
land management	low	With the application of appropriate measures of waste management.
waste	low	Ensured through environmental management - waste and wastewater management plan will be prepared and implemented
cumulative impacts etc.	low/ medium	Temporary, rehabilitation works may cause a slight increase of noise levels and air pollutants concentration.

Project for heavy maintenance works on the proposed section Beloljin – Kursumlija – Rudare, will only have 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.

This section belongs to the local and regional road network, on which significant increase of road traffic as a result of rehabilitation works is not expected. In respect to the impact of the potential increase of the vehicle speed on the rehabilitated section, this issue will be addressed through the project's road safety component. The project's road safety component will include implementation of active and passive measures to control the vehicle speed.

The possible temporary adverse impacts as consequence of the construction activities will consist of: disruption of current traffic circulation; roadway safety; damage to access roads; noise; waste and dust nuisance; air emissions; potential impacts of soils and water resources; momentary disturbance to biota, and interference to neighboring settlements. Off-site activities include quarry, borrow pit and asphalt plant operations, which if not managed properly, may cause localized adverse impacts. The Contractor's yard and workers' camp can be potential sources of temporary adverse impacts.

This site specific EMP is focusing more on the rehabilitation phase of the selected project, as it will become part of the respective Contract for the implementation of civil works, and as such, the future Contractor's obligation. The activities related to subsequent regular maintenance of this section are not the main focus of this EMP, but are presented here for the purpose of completeness.

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

It is expected that local residents will be affected with air and noise pollution during heavy maintenance works. There are few residential buildings on the section. Individual structures are largely present. A larger group of structures is located mainly in the zone of three previously rehabilitated stretches along the 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 as the primary pollutants. The dust may settle on vegetation, crops, structures and buildings.

Noise caused by the rehabilitation works will only be a temporary impact. Relatively small traffic load leads to the conclusion that noise barriers will not be implemented within this design.

### **Potential water contamination**

Cases of water contamination may occur during the rehabilitation of the road from site run off, spills of liquids 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 Law on Water, will apply.

Fuel and lubricant spills can, in most instances, occur at the Contractor's work camp and motorpool 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, especially where it crosses watercourses or comes in line contact with them, to mitigate the problem, the Contractor should use absorbing materials, such as absorbent mats/fabrics, or sand and to remove the contaminated topsoil related to a particular location, in accordance with the Law on water (“Official Gazette of the RS”, no. 30/10, 93/12, 101/2016-9).

### **Potential cumulative impacts**

The works on heavy maintenance on the section Beloljin – Kursumlija – Rudare could have some cumulative impacts that are temporary (noise, air, water and soil pollution).

In the observed area, potential sources of environmental pollution are the observed road section and the railway line Nis - Doljevac - Prokuplje - Kursumlija - Merdare. Proper application of the EMP would minimize any negative impact on people and the biotope, which could be associated with negative long-term cumulative effects. If the foreseen protection measures are implemented, the cumulative impact will be minimal.

## **5. ENVIRONMENTAL MANAGEMENT PLAN**

Possible environmental impacts will be mitigated during the design, before and during the rehabilitation and operation phase, as summarized in the EMP.

A basic assessment of the proposed road rehabilitation project concluded that the rehabilitation impacts would 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 monitor 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 the 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 refers to the law and contract documents, approximate location, timeframe, and the responsibility for its implementation and supervision.

#### **Contractor Management**

The recommendations and proposed mitigation measures are shown in Appendix I. Mitigation measures will be incorporated as an integral part of the design and works on heavy maintenance, and as such, their costs will be included in the rehabilitation cost.

Experience shows that inadequate application of the EMP by the Contractor may occur due to weak linkages of the EMP with the contract documents. The EMP is a

part of the work program and as such, it must be addressed by the Contractor and carried out as required.

The Contractor shall use this document to verify compliance with the EMP. The Contractor's obligation is to calculate the implementation of environmental mitigation measures in the price of its total costs.

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

- The EMP conditions have been included into 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 sub-contractors will comply with RS national laws, EU standards and Lender requirements.

### **Design Phase**

Mitigation measures will be incorporated as part of the standard design and heavy maintenance practices and, as such, their costs will be included in the heavy maintenance cost.

### **Site Organization Plan**

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

The subject section on which heavy road maintenance is performed, is partly located in the ecologically significant area of Radan (No. 89) - the section from Visoka to Rudare, which is an integral part of the ecological network of the RS. Accordingly, the INC has issued the requirements relating to the organization of the site (Appendix V) and which must be taken into account during the preparation of the Plan of construction organization.

Preparation of site and establishment of facilities, applies to all of the Contractor's facilities such as: storage areas, workshops, concrete batching areas, asphalt plant, etc. The location and development of the Contractors facilities will be approved by the 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 during the actual construction, the following must be respected:

1. Temporary locations for the storage of the necessary construction and other materials and equipment can not be located within the ecologically significant area (from the chainage km 256+880 to km 259+870 and from km 260+770 to the end of the section), i.e. on the part of the section from Visoka to Rudare, in the area with high vegetation and in the flood zones of the rivers Kosanica, Toplica and other watercourses.
2. Temporary or permanent locations (existing, regulated municipal facilities/landfills) for disposal and deposit of building rubbish and other waste, including municipal waste deriving from execution of works.

3. After the completion of the works, provide that all areas, which were in any way degraded by construction and other works, are remedied as soon as possible.
4. During the execution of works strictly adhere to the corridor of the road so that when handling vehicles and machines, no consequences are left to the wider area.
5. Use the existing road network without the construction of new roads, with the aim of preventing the fragmentation of space and the existing habitats.
6. During the execution of works, take all precautionary measures in order to maximally protect the tree rows in the settlement or individual trees along the route from possible damage, such as breakage of the branches and removal of the bark from the trunk during the movement of machinery, and avoid disrupting their essential properties in any other way.
7. The design should anticipate catch basins and grease and oil separators for waters generated by washing out from the pavement, especially on the route along the rivers, particularly along Kosanica and Toplica rivers, in order to protect them from pollution.
8. In order to preserve Kosanica and Toplice rivers, along whose course is a section of the road that crosses the watercourses in certain places, the following must be foreseen by the Design:
  - During the execution of works, the coastal belt of the rivers should be maximally preserved, i.e. the destruction of coastal vegetation, disturbance of wild species and their habitats should be prohibited;
  - The disposal/deposit of any kind of waste, especially construction waste in the coastal belt in the river bed itself is to be forbidden;
  - The strict care should be taken that in the bridge zone, where the road crosses the watercourse, during the construction works, the building material does not fall into the riverbed of Kosanica and Toplica rivers.
9. If the regulation is necessary in the area of road crossing (the bridge area) over the watercourses (Kosanica, Toplica), the use of stone and other natural materials shall be foreseen, and to the greatest extent, the concreting of the banks and watercourse beds shall be avoided (implement the so-called natural regulation of the watercourse), whereby the maximum preservation of the beds themselves, as well as the banks with the existing vegetation is necessary.
10. Fuel storage areas shall not be located within 20m of a water course.
11. During the execution of construction works (asphalt lifting, etc.), in the immediate vicinity of residential buildings, dewing shall be planned in order to prevent dust lifting and negative impact on people.
12. Servicing of machinery and vehicles along the road alignment and the corridor is prohibited; in case of accidental spills of fuel, oils/lubricants and other harmful substances, the surface must be repaired and returned to its prior state.
13. It is not allowed to perform works during the night hours due to the possible noise impact from construction machines.

14. Take measures to protect the population from accidents; in this respect, it is necessary to 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.
15. During the construction along the whole alignment, the maximum level of communal hygiene should be maintained; Define locations for containers for temporary storage of municipal waste.
16. It is necessary to remove as soon as possible all machinery and building materials after the completed work, and if there has been a disturbance of the area along the route, it should be repaired (cultivate the terrain, or establish a plant cover with the application of appropriate species that are biologically stable under given climatic conditions).
17. In the area of immovable cultural properties, no works are allowed that would endanger the immovable cultural properties - the architectural remains and/or areas of archaeological sites.
18. On the behalf of the Employer, the Contractor shall provide a permanent archaeological supervision during the execution of works on the route of the subject section in the zones of immovable cultural properties.
19. Given that, the earth works are foreseen by the Design even outside the zones of cultural properties, along the whole section (construction of retaining structures, widening of pavement and construction of pedestrian walkways etc.) in accordance with the stated conditions of the IPCM of Nis, it is necessary to have a permanent archaeological supervision on all works in accordance with the dynamics of execution of works which is to be foreseen by the Contractor. The most critical sites will be excavations concerning the retaining structures both of the existing wall (~ km 259+600) and of the new walls foreseen by the Design ( ~ km 246+800 - ~ km 252+000).
20. In the event that, during the earth works, an unrecorded site or its part is discovered, the Contractor is obliged to immediately stop the works and inform the IPCM of Nis without delay, to provide conditions for archaeological research, conservation and presentation.
21. The Employer is obliged to provide funds for preservation, publication and presentation of the same.
22. The Contractor's facilities are to be contained within an adequate security fence.
23. The site shall be properly drained; Paved areas, including vehicle parking areas, workshops and fuel storage areas are drained to an oil and water separator.
24. 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 designed to hold 110% of the tank capacity.
25. All workshops should be provided with oil and water separators.
26. All waste oil, oil and oil filters will be collected and disposed of in secure landfill areas; at the closure of the site, all contaminated soil will be excavated and replaced with fresh topsoil.

27. Cleared material is to be piled into manageable sized heaps, according to disposal or re-use requirements.
28. Limit the extent of excavation to reduce the possibility of soil erosion; the Contractor will be responsible for ensuring that the erosion is contained by soil conservation protection methods.
29. Apply soil conservation protection methodology to susceptible areas in order to minimize storm water runoff carrying eroded materials off-site.
30. Avoid excavation and operating machinery in wet ground conditions;
31. 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.
32. If there has been a disturbance of the area along the route, it should be repaired (cultivate the terrain, or establish a plant cover with the application of appropriate species that are biologically stable under given climatic conditions).

PERS is obliged to check through the engaged consultant for monitoring/supervision whether the requirements of the EMP and Management Safety Organization Plan are implemented at the site.

#### **Mobilisation phase – Contractor’s EMP**

During the rehabilitation works, the Contractor will work according to the requirements of the CEP (based on the EMP) which has been prepared by the Contractor and approved by PERS. Supervision and monitoring of the CEP activities will be undertaken as follows:

- The Contractor has the initial responsibility for preparing and implementing the CEP as agreed;
- The Resident Engineer (RE) will refer the Contractor to comply with the CEP;
- 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;
- The Contractor will have his own representative on site – the Site Engineer (SE) who will be responsible for implementing the contract and its complying with the CEP.

Before commencing the work, the Contractor will prepare a CEP. The CEP will address the conditions of the rehabilitation in the EMP that has been attached to Contract Documents including measures to comply with national legislation 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 designated 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 then commence work.

### **Works on heavy maintenance**

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

- Preliminary works
- Rehabilitation works on the existing pavement
- Earth works
- Drainage
- Traffic signage systems

### **Environmental Management during heavy maintenance works**

Considering all the identified impacts, it becomes essential for the Contractor to prepare and later conscientiously implement the Contractor's EMP, in order to ensure compliance with legislative and Lender requirements. The emphasis of the Contractor's EMP shall be on the following:

- Layout of the work camp and details of the proposed measures to address adverse environmental impacts resulting from its existence. Description and layout of equipment maintenance areas and lubricant and fuel storage facilities, including distance from water sources/bodies;
- Sewage and septage management plan for provision of sanitary latrines and proper sewage collection and disposal system to prevent pollution of watercourses;
- A plan (mechanism and organizational structure) detailing the means by which local people and other project affected persons can draw attention and raise grievances and how these will be addressed (e.g., through dialogues, consultations, etc., see Appendix IV, the Project Grievance Mechanism);
- 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 landfills;
- Dust management plan which shall include schedule for water spraying on access road and in nearby settlements along the project route, 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;
- 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;

- 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 this can not restore the old value of the area, these materials should be taken to an approved landfill sites for safe disposal. Hazardous waste will be stored and removed from the construction site in accordance with the Law on Waste management ("Official Gazette of the RS", No. 36/09, 88/10 and 14/16). The Contractor's Site Specific Implementation Plan (SSIP) should cover all aspects of waste management, including implementation of practice and standards such as reduce, re-use and recycle;
- 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, the Contractor 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;
- Oil and fuel storage management plan. The Contractor's SSIP 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;
- In-river works management plan. The Contractor's SSIP should cover procedures and plans for safeguarding aquatic habitats during in-river works along Toplica and Kosanica rivers;
- Camp management plan. The Contractor's SSIP should contain procedures for establishing and operating construction camps in order to safeguard nearby communities and environmental resources;
- Emergency response plan. The Contractor's SSIP 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;
- Noise – all equipment is licenced 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 vibrations do not affect the adjacent communities, in accordance with the Law on noise protection ("Official Gazette of the RS" no. 36/09 and 88/10). The Contractor will limit all the works to a period from 07:00 to 19:00h;

- Rehabilitation Plan. Clearance and rehabilitation of construction sites and removal of Contractor's facilities. It is the 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 plants, vehicles and machinery in order to remove them from the construction site, in accordance with the Law on Waste management ("Official Gazette of the RS" no. 36/09, 88/10 and 14/16). All construction sites and work areas will be rehabilitated so that these can be returned as close as possible to their previous state and uses. This includes the stabilization and landscaping of all construction sites. In accordance with the Law on environmental protection ("Official Gazette of the RS" No. 135/04, 36/09, 36/09 - State Law and 72/09 - State Law, 43/2011-Decision of Constitutional Court and 14/16), after the end of the work, the waste will not remain on-site. 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 shall 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 before the work starts.

- The Contractor will be required to keep the site free of drugs and alcohol;
- 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;
- 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 the RS", 101/05 and 91/15);
- The Contractor will provide supplies of potable water, toilets and wash water to the workers;
- Safety and Labour Management Plan (SLMP) is necessary in order to ensure H&S provisions during rehabilitation works;
- Contractor is obliged to perform all project activities by respecting SMP recommendations and all Serbian laws and by-laws which are covering H&S issues.

The PERS and the 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 settlements are operated safely, without endangering these communities. The Contractor is to ensure that:

- All trucks and equipment is maintained in a safe operating condition;
- All drivers and machinery operators are trained and act responsibly (to be stipulated in the Contractor's site safety plan);
- All loads are secured and all loads with potential dust generating materials (e.g. excavated soil and sand) will be covered with tarpaulins;
- Safety and immediate removal of any driver that ignore any of the community safety requirements;
- Speed limits are respected.

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.

Site restoration will follow the completion of works. It is 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); (2) dust suppression by wetting; (3) improvements in road signage and pavement markings; and (4) attention to traffic accidents that are repeated in the same places by placing a "black spot" signs.

**Road Maintenance:** Routine maintenance (grass cutting, clearing of drainage systems, and pothole patching and various repairs, together with regular controls and maintenance of drainage structures) will be undertaken on regular basis. Seasonal maintenance, regular maintenance of safety features and road signs will be undertaken as necessary. Major maintenance, that include resurfacing and bigger 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 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, 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 engineer. 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 includes: the type of complaint, location, time, actions to address these complaints, and final outcome.

## **C. INSTITUTIONAL IMPLEMENTATION AND REPORTING**

### **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 of the Project and monitoring its compliance will be the task of PSC.

Prior to the commencement of works, the PERS will submit to the Bank for its approval this section specific EMP.

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 Contractor during the construction stage, the Project Proponent will undertake the following:

- That the Contractor’s obligation is to prepare CEP and undertake environmental mitigation measures as specified in the Environmental Mitigation Plan (Appendix I).
- No compensation for the costs of the required environmental mitigation measures and monitoring activities in the form of the particular item in the Bill of Quantity (BoQ) shall be given to the Contractor, except for the water quality analysis and noise measurement. It shall be regarded as if the Contractor has included these costs in the other items of the BoQ. The actual costs of analyzing water quality and noise measurement within the defined contract will be reimbursed to the Contractor in the form of a specific item in the total price. For non-compliance with the requested measures for mitigating the environmental impact and monitoring activities, the Contractor will receive a specific penalty in the 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 in a quality manner. 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. The number of demerit points received will have a cumulative effect. If during the Contract the Contractor receives more than certain number of demerit points specified in the Contract, the Contractor will not be allowed, for a period of 2 years, 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. The monetary value of each demerit

point, as well as the deadlines for other possible actions by the Employer must be clearly stated in the Contract. The explanation for the application of these two measures - compensation for specific costs and penalties or non-compliance, should ensure the implementation of all required measures to mitigation of environmental impact and monitoring activities.

- 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. He will coordinate between the Contractor, PERS and the competent ministry, and 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 PSC employs 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 project. Routine and random monitoring will be undertaken as scheduled in the Monitoring Plan.

The PERS is also responsible for:

- Implementation of requests for environmental protection given by: Government environmental authorities, IFIs and other institutions, Law on Environmental Protection ("Official Gazette of the Republic of Serbia", No.135/04, 36/09, 36/09 - State Law and 72/09 - State Law, 43/2011-Constitutional Court Decision and 14/16);
- Implementation of requests for environmental protection through Contractors specifications;
- Supervision of the project through the consulting services for supervision and implementation of the project;
- Supervision of environmental monitoring through the consulting services for environmental monitoring;
- Preparation of the final environmental reports.

The Contractor, during a pre-construction period, will make a proposal for environmental protection, including safety of persons associated with the works and the public, within the EMP. This proposal will be reviewed by PERS in order to obtain its acceptance. 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;
- Provision of all lights, guards, fencing, warning signs, traffic control, looking to protect the works and other property as well as the safety and public interests.

The Competent Ministry, MoEP, will have the authority for immediate suspension of works, if performance is not in accordance with environmental standards and regulations. Inspection will then inform the PERS about suspension and order to proceed according to its directive.

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 was disclosed this EMP document to stakeholders (See Appendix IV) such as interested public, including local municipalities and NGOs. Draft EMP document was placed in PERS web site too ([www.putevi-srbije.rs](http://www.putevi-srbije.rs)). During process of public consultations interested public collected all project information, including all environmental issues related to this project. Opinions and suggestions are incorporated within the final version of EMP document which will be an integral part of project bidding documentation.

### **Reporting Arrangements**

#### **A) Contractor – PERS**

The Contractor will prepare his compliance reports in respect to this EMP and his SSIP as a Quarterly Progress Reports and submit them to PERS, in both Serbian and English language, in hard copy and electronic version.

The Contractor will provide quarterly reports to the PERS as a document for the environmental mitigation and protection measures, together with prescribed monitoring activities carried out during that reporting period. The Contractor will take care of environment quality, according to the Mitigation and Monitoring Plan, which are a consisting part of EMP (Appendix I and Appendix II) and will report quarterly to the PERS.

If some kind of accident or endangerment of environment happens, reporting will be immediate. Contractor is obliged to inform the project manager and local authorities about the accident immediately after it happened. In case that the project manager is not responding to the call, the Contractor is obliged to inform PERS about the accident (phone number +381113040701 or via E-mail on following address: [office@putevi-srbije.rs](mailto:office@putevi-srbije.rs)).

The Contractor will monitor quality of environmental conditions according to the monitoring plan which is a consisting part of EMP (Annex II) and will report quarterly to the PERS. These reports will encompass a list and explanation of all undertaken activities at the site and results of the field research, as well as recommendations for future field activities and protection measures.

#### **B) Project Supervision Consultant – PERS**

The findings of the regular monitoring activities, including activities specified in the Monitoring Plan (Appendix II) carried by the Contractor will be included in the quarterly PSC progress reports.

If some kind of accident or endangerment of environment happens, reporting will be immediate.

#### **C) PERS – Ministry of Construction, Transport and Infrastructure (MoCTI), WB, EBRD and EIB**

Annual Environmental Health and Safety (EHS) report, including monitoring indicators and reporting on the implementation of the requirements set forth in the EMP, will be prepared by the PERS and submitted for IFIs review. IFIs will review the reports and verify their contents through periodic site visits. The PERS shall provide Annual reports to MoCTI and IFIs regarding the status of implementation of mitigation measures by the Contractor, additional mitigation measures that may need to be implemented, incidents of non-compliance with applicable environmental permits, complaints received from local residents, Non-Governmental Organisations (NGOs), etc. and how these were addressed.

In case of fatalities or major incidents on site, PERS will immediately report to the Bank, which is financing the road section.

## 6. STAKEHOLDER ENGAGEMENT - INFORMATION DISCLOSURE, CONSULTATIONS, AND PARTICIPATION

As required by the IFIs Safeguards Policies, public consultations were undertaken during the preparation of EMP. The EMP and other project information were disclosed to the Public and will be available locally to the communities.

PERS office	Investment sector, 19a, Vlajkoviće St. Belgrade, first floor, on working days from 11:00 AM to 01:00 PM (local time), within 10 days of publication of notification-August 23 <sup>rd</sup> , 2018.
Community centres	Municipal Administration of the Municipality of Kursumlija bb, Proleterskih brigada St. 18430 Kursumlija
Community centres	Municipal Administration of the Municipality of Prokuplje 2, Nikodija Stojanovica St. 18400 Prokuplje
PE “Roads of Serbia“ - web site	<a href="http://www.putevi-srbije.rs">www.putevi-srbije.rs</a>

Interested parties who may have an interest in the Project will be identified and listed in Appendix IV and may be consulted and informed on issues related to the Project.

Detailed Report on public consultation process is presented within the Appendix IV of this EMP and includes a list of identified stakeholders.

Beneficiary consultations will be conducted during the construction phase, 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 in the project office at PERS.

Before the commencement of work, the PERS will provide information through:

- Newspaper articles in one national and also in one local media;
- Posters on main notice board at all community centers of potential affected Communities;

- Radio announcement of road diversions;
- Provide contact details of community liaison officer who is appointed to work with local communities.

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 centers.

## **7. REFERENCES**

1. Environmental Assessment Sourcebook No. 25, Environmental Management Plans, The World Bank Environment Department, January 1999.
2. Roads and the environment: Handbook, The World Bank Environment Department.
3. EIB, Environmental and Social Practices Handbook, Environment and Social Office Projects Directorate Version 2 of 24/02/2010.
4. EBRD Environmental and Social Policy 2008.
5. EIB, Statement of Environmental and Social Principles and Standards (2008).
6. Environmental Management Plan for rehabilitation of roads, bridges and tunnels under the World Bank road management and safety project, Republic of Srpska Road Directorate, Banja Luka, 2001.
7. Environmental Assessment REPORT & Environmental Management Plan for Serbian Transport Rehabilitation Project, Report No: E866, project name/ID: YF - Transport Rehabilitation Project –No. P075207, document date 30/11/2003.

# Appendices

# **Appendix I**

## **Mitigation Plan**

### MITIGATION PLAN

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
<b>PRE-CONSTRUCTION</b>	<b>Main Design</b>				
	Obtaining the conditions related to the protection of the environment	The Highway Institute JSC Belgrade, based on the authorization given by the PERS, obtained the Conditions of the INC and the IPCM Nis, in order to avoid the risks to the environment in the period of heavy maintenance.	PERS The Highway institute, JSC Belgrade	PERS	
	The location and organization of construction site must be approved by the PERS and chosen to fulfill the following:	<ul style="list-style-type: none"> <li>- temporary locations for the storage of the necessary construction and other materials and equipment can not be located within the ecologically significant area (from the chainage km 256+880 to km 259+870 and from the chainage km 260+770 to the end of the section), i.e. on the part of the section from Visoka to Rudare, in the area with high vegetation and in the flood zones of the rivers Kosanica, Toplica and other watercourses</li> <li>- they do not interfere with the environment and social well-being of the surrounding communities (e.g. noise, dust, vibration, etc.);</li> <li>- the size of Contractor's facilities is limited to absolute minimum to reduce unnecessary clearing of vegetation;</li> <li>- sanitary waste and grey waters are treated before release into surface water systems, and in accordance with the Law on water ("Official Gazette of the RS" no. 30/10, 93/12, 101/2016-9)</li> </ul>	PERS Contractor	PERS	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		<p>these locations are properly drained;</p> <ul style="list-style-type: none"> <li>- paved areas, including vehicle parking areas, workshops and fuel storage areas, areas for conducting oil and water into separators, and fuel storage areas;</li> <li>- wherever possible, limit the area to be cleared and avoid excessive machine disturbance of the topsoil;</li> <li>- cleared material is to be collected, removed and/or reused as needed;</li> </ul> <p>Prevention of soil erosion on construction site:</p> <ul style="list-style-type: none"> <li>- The Contractor will be responsible for ensuring that the erosion is contained by soil conservation protection methods;</li> <li>- The Contractor is obliged to limit the extent of excavation to reduce soil erosion;</li> <li>- The Contractor is obliged to apply soil conservation protection methodology to susceptible areas to prevent/minimize storm water runoff carrying eroded materials off-site;</li> <li>- The Contractor should avoid excavation and operating machinery in wet ground conditions.</li> </ul>			
	Site selection for construction camps, near or within existing settlements. Impact on public health and sociological setting.	Proper site selection, observing criteria, which primarily protect the public interest. Observe a minimum distance (buffer zone) between camp site and nearest residential area. Observe local wind conditions to reduce nuisances. Work safety and environmental protection measures to be specified by the Contractor in his Site Management Plan. Plan an independent water and electric supply network and a medical service	Designer - Main Design Consultant	Technical Control of Main Design PERS	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		station at the site.			
	Road safety issues associated with pedestrian crossing	Plan for safe and adequate pedestrian crossing facilities that will be equipped with ramps and structures that allow the use of wheelchairs, pushcarts, bicycles and prams.	Designer - Main Design Consultant	Technical Control of Main Design PERS	
	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.	Designer - Main Design Consultant	PERS Technical Control of Main Design	
<b>CONSTRUCTION</b>	<b>Management Plans</b>				
	<p>Contractor provides the implementation of the following Plans, as described in the EMP, in order to ensure compliance with legislative and Lender requirements.</p> <ul style="list-style-type: none"> <li>• Site organization plan</li> <li>• Sewage and septage management</li> <li>• Project grievance mechanism</li> <li>• Soil Management Plan</li> <li>• Dust management plan</li> <li>• 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, 88/10 and 14/16)</li> <li>• Oil, fuel and lubricants storage management plan</li> </ul>				

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
	<ul style="list-style-type: none"> <li>• In-river works management plan</li> <li>• Emergency response plan</li> <li>• Rehabilitation Plan</li> <li>• Safety and Hazard Assessment</li> <li>• SLMP</li> </ul>				
<b>CONSTRUCTION</b>	<b>Site Induction</b>				
	All workers and visitors to site shall be referred to the SLMP and instructed in the need and use of Personal Protective equipment (PPE).				
<b>CONSTRUCTION</b>	<b>Material supply</b>				
	Asphalt plant: dust, fumes, workers health and safety (H&S), ecosystem disturbance	use existing asphalt plants; official approval or valid operating license is required	Asphalt plant	Asphalt plant	
	Stone quarry: dust, workers H&S, ecosystem disturbance	use existing stone quarries, official approval or valid operating license is required	Stone quarry	Stone quarry	
	Sand and gravel borrow pit: disturbance of river bed, water quality, ecosystem disturbance	use the existing borrow pits or buy material at licensed separations; official approval or valid operating license is required.	Contractor or sand and gravel separation	Contractor or sand and gravel separation	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
<b>CONSTRUCTION</b>	<b>Material transport</b>				
	Asphalt: Dust, smoke	All trucks are to be covered. (This is a problem area through-out the region and it will be solved by proper selection of contractors operating trucks)	Truck operator	Truck operator	
	Stone: Dust	Wet the truck load	Truck operator	Truck operator	
	Sand and gravel: Dust	Wet the truck load	Truck operator	Truck operator	
	Traffic noise, vehicle exhaust, and road congestion management	Haul material at off-peak traffic hours (preferably between 9-14h); use alternative routes to minimize major traffic routs; it is necessary to ensure adequate signs of construction sites, in order to minimize 'wrong turn' chances causing even more congestion;	Transport manager; Truck operator	Transport manager; Truck operator	
	Permanent archaeological supervision in the zone of the existing cultural properties	The Contractor shall provide a permanent archaeological supervision during the execution of works on the route of the subject section in the zones of immovable cultural properties.	Contractor	Contractor's Supervision	
	Permanent archaeological supervision, a chance to find a new archaeological site	Given that, the earth works are foreseen by the Design even outside the zones of cultural properties, along the whole section (construction of retaining structures, widening of pavement and construction of pedestrian walkways etc.) in accordance with the stated conditions of the	Contractor	Supervision	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		<p>IPCM of Nis, it is necessary to have a permanent archaeological supervision on all works in accordance with the dynamics of execution of works which is to be foreseen by the Contractor. The most critical sites will be excavations concerning the retaining structures both of the existing wall (~ km 259+600) and of the new walls foreseen by the Design (~ km 246+800 - ~ km 252+000).</p> <p>In the case of running on a new archaeological site, the Contractor is obliged to stop the works immediately and inform the IPCM Nis and PERS about it.</p>			
<b>CONSTRUCTION</b>	<b>Construction Site</b>				
	Noise disturbance to workers and neighbouring population	<p>Limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public and authorities); equipment operating with noise mufflers and licenced and approved in accordance with EU standards; noise barriers for noisy works for those longer than one day in the same location/area.</p> <p>Noisy equipment will be located as far as possible from residential or other sensitive receptors.</p>	Contractor	Contractor	
	Dust	<p>Water the construction site and cover material storage areas and limit the speed of vehicles.</p> <p>Implementation of Dust Management Plan: measures to avoid/minimize dust emissions, including use of hoardings; dewing of all transport and manipulation surfaces of construction</p>	Contractor	Contractor	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		<p>machinery; accesses, materials stockpiles and during loading/unloading activities, covering of vehicles carrying dusty materials; wheel washing/spraying of vehicles, etc. thus preventing the raising of dust and negative impact on people and planted crops within their households (curtilages) in the immediate vicinity of the State Road alignment IB no. 21.</p>			
	Vibrations	<p>Limit activities to daylight working hours (not between 8 p.m. and 7 a.m. or as agreed with public and authorities); If any material damage proved to have been caused to local houses, buildings and other infrastructure (including access roads) by the works will be compensated for and subject to repair on a timely basis. Earthmoving equipment will be located as far away as possible from vibration-sensitive receptors.</p>	Contractor	Contractor	
	Traffic disruption during construction activity	<ul style="list-style-type: none"> <li>- Traffic management plan with measures to redirect traffic, that are easily seen or easy to follow, including traffic police assistance if needed.</li> <li>- Preparation of Traffic Management Plan that establishes a speed limit for construction vehicles and organizes traffic so that it is mostly performed outside the populated areas.</li> <li>- During work execution, maximize the existing network of roads and avoid the construction of new roads for temporary use, which would further increase the fragmentation of space and existing</li> </ul>	Contractor	Contractor	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		habitats. Local residents will be kept informed about planned works. Adhere to the road alignment so that manipulation of vehicles and machinery would not leave any consequence on the wider area.			
	Reduced access to roadside activities	Provide alternative access to roadside activities at all times.	Contractor	Contractor	
	Vehicle and pedestrian safety when/where there is no construction activity	Take measures to protect the inhabitants from accidents. - Lighting and well defined safety signs and protection measures. - The installation of protective barriers, pedestrian crossings and passages shall be foreseen in places where it is most appropriate, especially at locations near the existing settlements.	Contractor	Contractor	
	Water and soil pollution due to improper storage of construction and other materials and equipment, management and usage	- Temporary locations for the storage of the necessary construction and other materials and equipment can not be located within the limits of the ecologically significant area, i.e. on part of the section from Visoka to Rudare; - Furthermore, temporary locations for the storage of the necessary construction and other materials and equipment should be located outside the area with high vegetation as well as outside the flood areas of the rivers Toplica and Kosanica and of other watercourses, and should be limited exclusively to the duration of the works. Maximally preserve the bank area of the rivers, i.e. prohibit	Contractor	Contractor	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		<p>the destruction of bank vegetation;</p> <ul style="list-style-type: none"> <li>- Organize and cover the areas for material storage; isolate concrete, asphalt and other works from water impact by using sealed formwork or covers; isolate washing areas for concrete and asphalt trucks and other equipment from water impact by selecting washing areas from which the water does not rinse freely, directly or indirectly into watercourses.</li> <li>- Asphalt and parking areas, workshops and fuel depots should be properly drained and the collected water treated through a separator that divides oil and petroleum;</li> <li>- Regulate the construction site in a way to reduce the risk of generating sediments and wastewater that may pollute the surrounding soil or waters (considering situations such as storm water runoff, including wastewater generated from facilities on site).</li> <li>- Soil Management Plan should provide controlled removal of topsoil, storage and reuse.</li> <li>- Prevent the leaching of sediments into surface watercourses and drainage channels by localized control measures. Some of the measures are the placement of physical obstacles (e.g. fences, mulch barriers, geofabric, overflow cascades, sediment basins and rock barriers) in order to mitigate the waves.</li> <li>- In order to prevent leaching of sediments, it is also necessary to take into account the slope of the terrain and protection from wind erosion by fencing, covers installation, etc.</li> </ul>			

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		<ul style="list-style-type: none"> <li>- Depositing of surplus of earth, stone and similar may only be temporary and limited in time to the completion of the planned works.</li> <li>- After the completion of works, all excesses of soil, stones and other waste materials should be removed and the full rehabilitation of degraded areas during works should be performed.</li> </ul>			
	Water and soil pollution from improper disposal of waste materials	<ul style="list-style-type: none"> <li>- During the execution of works along the entire route, maintain the maximum level of public order.</li> <li>- Define locations for placing containers for the temporary disposal of municipal waste, generated during the execution of works.</li> <li>- Disposal of waste material at location protected from leaching, at the marked site; if not on site, then at authorized landfill (Lakovski bregovi-Bacoglava village, Public Utility Enterprise dumpsite; landfill of PERS for reclaimed asphalt, in the center of Kursumlija at the Hall of Sports).</li> <li>- Storage of waste according to the best international practice (International Finance Corporation, EHS - General Guidelines). 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. Appoint responsible persons for waste collection and its storage (hazardous and non-hazardous).</li> </ul>	Contractor	Contractor	
	Potential contamination of soil and water from	<ul style="list-style-type: none"> <li>- When carrying out the works, strictly adhere to the corridor of the road, so that when handling</li> </ul>	Contractor	Contractor	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
	improper maintenance and fuelling of equipment	<p>vehicles and machines, no consequences will be left to the wider area. Furthermore, use the existing road network without constructing new roads, in order to prevent the fragmentation of space and existing habitats.</p> <ul style="list-style-type: none"> <li>- The construction site must be properly drained. Asphalt surfaces, including parking areas, workshops and fuel depots, are drained towards the water and oil separator.</li> <li>- During the execution of works, take all precautionary measures in order to ensure that the alleys in the settlement or individual trees along the road alignment are maximally protected from possible damage, such as breakage of the branches and removal of the bark from the trunk during the movement of machines, or in any other way their essential properties are not disrupted.</li> <li>-Apply best engineering practice in handling and safe storage of lubricants, fuels and solvents, ensure proper loading of fuel and maintenance of equipment, collect all waste and dispose it to permitted waste recovery facilities.</li> <li>- Servicing of vehicles and machines along the route and the corridor of the road is not permitted. If an accidental spilling of fuel, oil/lubricant and other harmful substances occurred, it would be necessary to repair the surface and restore it to its original condition.</li> <li>- All waste oils, oil and fuel filters will be collected and stored in safe locations.</li> <li>- After the completion of works, it is necessary to remove the machinery, construction material,</li> </ul>			

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		containers, spare parts and other equipment as soon as possible.			
	Water and soil pollution from improper transport of waste materials	Transport of waste in marked vehicles designed to the type of waste, in order to minimize the risk of release of materials, hazardous and non. Training of drivers in handling and disposal of their cargo and the following documentation describing the nature of the load (waste) and its degree of hazard.	Contractor	Contractor	
	Potential pollution of water after completion of the Project and during the exploitation of the State Road IB no. 21.	The design shall envisage catch basins and separators of grease and oil for waters generated by leaching from the pavement, especially on the part of the road alignment along the rivers, in order to protect them from pollution. At defined locations for installing the separation systems for wastewater treatment, apply the best engineering practice in choosing the plant type and the method of installation.	Contractor	Contractor's Supervision	
	Preservation and regulation of watercourses	- In order to preserve Kosanica and Toplica watercourses during the execution of works, prevent the destruction of vegetation, disturbance of wild species and their habitats, prohibit disposal, i.e., storage of any kind of waste, especially construction waste in the bank belt and in the riverbed itself; strictly keep in mind that, in the zone of bridges crossing over watercourses, during the execution of works, the construction material does not fall into the riverbeds of the Kosanica and Toplica rivers;	Contractor	Contractor's Supervision	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		<ul style="list-style-type: none"> <li>- In the zone of road (bridges) crossing over watercourses (Toplica and Kosanica), the use of stone and other materials (avoid as much as possible the concreting of banks and waterbeds - the implementation of natural watercourse regulation), whereby maximum preservation of waterbeds themselves as well as the banks with the existing vegetation is necessary.</li> </ul>			
	Immovable cultural property / archeological site	<ul style="list-style-type: none"> <li>- In the area of immovable cultural properties, works that would endanger the immovable cultural properties - the architectural remains and/or areas of archaeological sites are not permitted.</li> <li>- On the behalf of the Employer, the Contractor shall provide permanent archaeological supervision during the execution of works on the route of the subject section in the areas of immovable cultural properties, as well as outside the mentioned zone at locations where earthworks are executed along the entire section.</li> <li>-In the event that, during the earth works, an unrecorded site or its part is discovered, the Employer shall immediately stop the works and inform the Institute for Protection of Cultural Monuments Nis without delay, provide conditions for archaeological research, conservation and presentation.</li> <li>- The Employer shall provide funds for its research, protection, preservation, publication and presentation.</li> </ul>	Employer and Contractor	Archaeological supervision	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
	Worker safety	Provide workers with safety instructions and protective equipment; provide safe organization of bypassing traffic.	Contractor	Contractor	
	Temporarily occupied areas	<ul style="list-style-type: none"> <li>- Upon completion of works, all surfaces that are degraded in any way by construction or other works shall be repaired as soon as possible. In this sense, establish a plant cover (cultivate the terrain) in all endangered areas by using an appropriate flora that is biologically stable under given climatic conditions (resistant to harmful effects of exhaust gases), and make sure that the choice of species is in line with the surrounding area and its purpose. This means restoring vegetation with autochthonous species and following their development.</li> <li>- Where the planting was not successful, make a replacement.</li> <li>- Where initial plantings were not successful, replacement plantings will be carried out.</li> </ul>	Contractor	Contractor	
<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); Use of equipment operating with noise mufflers.	Maintenance Contractor	Maintenance Contractor	
	Possible air, water and soil pollution: Dust, vehicle exhaust, fuel, oil and lubricants	- Apply best engineering practice in handling and safe storage of lubricants, fuels and oils; ensure proper loading of fuel and maintenance of equipment; collect all waste and dispose it in	Maintenance Contractor	Maintenance Contractor	

Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
	spills.	accordance with the Law on Waste Management; - Organize and cover material storage areas properly; isolate concrete, asphalt works from water impact by using sealed formwork; isolate washing areas for concrete and asphalt trucks as well as the other equipment from water impact by selecting areas for washing from which the water does not rinse freely, directly or indirectly, in the watercourses (of the rivers Toplica, Kosanica, Backa River and Vojnicki Stream); 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);	Maintenance Contractor	Maintenance Contractor	
	Worker safety	Provide workers with safety instructions and protective equipment; safe organization of bypassing traffic. These measures can be extended.	Maintenance Contractor	Maintenance Contractor	
	Increased vehicle speed	Place traffic signs for speed limit	Maintenance Contractor	Maintenance Contractor	
	Erosion, rockfall, hazardous conditions	Install warning signs (rock fall, landslide, wet or slippery conditions, dangerous curve, animal or pedestrian crossing, school, slow moving vehicles), reflective markers to indicate steep edge or convex mirrors to see oncoming traffic at blind curves; place warning signs at points considered necessary by good engineering practice, or as agreed in writing with public and	Maintenance Contractor	Maintenance Contractor	

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Phase	Issue	Mitigating measures	Institutional responsibility		Comments
			Implementation	Supervision	
		authorities.			

# **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 plant compliance with environment, H&S requirements	Plant Operator
<i>Sand and gravel borrow pits</i>	possession of official approval or valid operating license	sand and gravel borrow pit or separation	inspection / supervising engineer	before work begins	assure borrow compliance with environment, H&S requirements	Borrow pit or Separation Operator

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 transport</b>					
<i>Asphalt</i>	truck load covered	job site	supervision	unannounced inspections during work, at least once per week	assure compliance with environment, H&S requirements	Contractor's Supervision
<i>Stone</i>	truck load, covered or wet	job site	supervision	unannounced inspections during work, at least once per week	assure compliance with environment, H&S requirements	Contractor's Supervision

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>Sand and gravel:</i>	truck load covered or wetted	job site	supervision	unannounced inspections during work, at least once per week	assure compliance with environment, H&S requirements	Contractor's Supervision
<i>Traffic management</i>	Hours and routes selected	job site	supervision	unannounced inspections during work, at least once per week	assure compliance with environment, H&S requirements and enable as little disruption to traffic as possible.	Contractor's Supervision

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>Construction Site</b>					
<i>Noise disturbance to workers and neighbouring population</i>	noise levels	construction site; the closest houses of the settlements of Tulare, Bace, Plocnik, Barlovo, Novo selo, Pepeljevac, Kastrat, Visoka and Rudare.	hand-held analyzer with application software	once at the beginning of the project and later on quarterly basis, and on complaint; if the results of monitoring are not satisfactory, monitoring should be conducted on monthly basis.	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible.	Contractor (monitoring)
<i>Dust</i>	air pollution (solid particles)	at and near job site, in the immediate vicinity of residential buildings, along all transport and manipulation surfaces of construction machinery.	inspection and visual observation	unannounced inspections during material delivery and construction,	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible.	Contractor's Supervision (monitoring)

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>Vibrations</i>	limited time of activities	job site	supervision	unannounced inspections during work and on complaint	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible.	Contractor's Supervision
<i>Traffic disruption during construction activity</i>	existence of traffic management plan; traffic patterns	at and near job site	inspection; observation	before works commencement; once per week at peak and non-peak periods	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible	Contractor's supervision
<i>Reduced access to roadside activities</i>	provided alternative access	job site	supervision	random checks at least once per week during construction activities	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible	Contractor's Supervision

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>Vehicle and pedestrian safety when there is no construction activity</i>	visibility and appropriateness	at and near job site, placing of protective barriers, pedestrian crossings and passages shall be foreseen at locations near the settlements	observation	random checks at least once per week in the evening	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible	Contractor's Supervision
<i>Water and soil pollution from improper material storage, management and usage</i>	water and soil quality (suspended solids, oils, pH value, conductivity)	on the rivers Toplica and Kosanica, downstream from the crossing point with the State Road IB no. 21	unannounced sampling; analysis at accredited laboratory with necessary equipment	At least 3 times during project period, monitoring should be done prior construction (or on a referent point upstream of construction site) and during and after rehabilitation works.	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible, control of the existing biological balance of watercourses is carried out and its disturbance is prevented.	Contractor (monitoring)

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>Potential pollution of water and soil after installation of separation systems for treatment of atmospheric waste waters from the surface of the pavement and their improper management and maintenance</i>	water and soil quality (suspended solids, oils, pH values, conductivity)	downstream from the crossing point of watercourses with the State Road IB no. 21 and the point of waste water discharging after the purification treatment in the separators located at the following chainages: km 240+381 Suvodolski Stream, km 241+541 Backa River, km 253+361 Toplica River, km 258+441 Kosanica River, km 260+301 Vojnicki Stream and km 261+861 Kosanica River);  on terrain near the State Road IB no. 21, in the right-of-way	analysis at accredited laboratory with necessary equipment	water monitoring shall be carried out six months after the completion of the Project, which would also be a control of the functioning of the separation systems for treatment, while the future measurements of water quality shall be performed once a year;  soil monitoring, after the completed measurements at the end of the Project (heavy maintenance on the State Road IB No. 21), is to be performed after 5 years.	monitoring of these parameters is in line with the requirements of safety, health and environmental protection;  separation systems will be installed in these locations that should prevent any pollution of watercourses from the pavement surface during the future exploitation of the subject State Road IB no. 21, and in accordance with the Conditions of the Institute for Nature Conservation of Serbia, which foresee such measure of watercourses protection.	PERS (monitoring)

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
Potential destruction of vegetation by the movement of machinery	vegetation along the road alignment	along the entire road	supervision	random checks at least once a week during construction activities	ensure that the works comply with the requirements of safety, health and environment, and minimize traffic disturbance; Take all precautionary measures in order to ensure that the alleys in the settlement or individual trees along the road alignment are maximally protected from possible damage. Minimize Contractor's structures and confine them with an adequate protective fence, in order to reduce unnecessary clearance of vegetation.	Contractor's Supervision

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>Cultural property</i>	archeological site	in the zone of the existing immovable cultural properties (~ km 241+780- ~ km242+000) as well as outside the zone of existing cultural properties where excavations are foreseen concerning the retaining walls (~ km 259+600, ~ km 246+800 - ~ km 252+000).	permanent archaeological supervision	during the execution of works	preservation of existing immovable cultural properties, possibility of finding a new archaeological site	Contractor's Supervision, Archaeological supervision

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>Worker safety</i>	protective equipment; organization of bypassing traffic	job site	inspection	unannounced inspections during work	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible	Contractor's Supervision
<b>OPERATION</b>	<b>Maintenance</b>					
<i>Noise disturbance to workers neighboring population</i>	noise levels	job site; nearest homes	equipment – hand-held analyzer with application software	unannounced inspections during maintenance activities and on complaint	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible	PERS

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>Vibrations</i>	limited time of activities	job site	supervision	unannounced inspections during maintenance activities and on complaint	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible	PERS
<i>Worker safety</i>	protective equipment; organization of bypassing traffic	job site	inspection	unannounced inspections during maintenance activities and on complaint	assure compliance of works with environment, H&S requirements and enable as little disruption to traffic as possible	PERS
<b>OPERATION</b>	<b>Road Safety</b>					
<i>Increased vehicle speed</i>	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

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>Erosion, rockfall, hazardous conditions</i>	condition of hazard signs	road section included in project	visual observation	during maintenance activities	enable safe and economical traffic flow	Maintenance Contractor, impact monitoring

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

<b>1. General</b>		
Is the project compliant with all relevant 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, lead to 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 H&S 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 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 environmental 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 measures?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe, including status of implementing corrective measures:
Has the Company engaged any sub-contractors for project-related work?	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 contractor's work with the Environmental and Social Action Plan (ESAP):
Were any of the violations stated above the responsibility of sub-contractor?	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 Sub-contractor?
Have any operations been reduced, temporarily suspended or closed down due to environmental, health, safety or legislation	Yes <input type="checkbox"/>	If yes, please describe:

reasons?	No <input type="checkbox"/>	
Please describe any environment or social program, initiatives or sub-projects undertaken by the Company in order to improve 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 ESAP, or to any other initiative:		

## 2. Status of the ESAP

Please provide information on the status of each item in the ESAP. If the ESAP has been updated during the reporting period, please attach a copy of the new plan.

## 3. Environmental Monitoring Data

3. Environmental Monitoring Data				
Please provide the name and contact details of 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>				
Sulfur Dioxide SO <sub>2</sub>				
Nitrogen Oxides NO <sub>x</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 (form), then this can be used instead.

<sup>2</sup> Not all parameters is necessarily to 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 agreed for this project (typically local, EU and/or World Bank).

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

<b>3. Environmental Monitoring Data</b>				
<b>Please provide the name and contact details of your environmental manager:</b>				
<b>Parameter<sup>2</sup></b>	<b>Value<sup>3</sup></b>	<b>Unit</b>	<b>Compliance Status<sup>4</sup></b>	<b>Comments<sup>5</sup></b>
particulates				
Carbon dioxide CO <sub>2</sub>				
Methane CH <sub>4</sub>				
Nitrous oxide N <sub>2</sub> O				
HFCs				
PFCs				
Sulfur hexafluoride SF <sub>6</sub>				
(Other)				
<b>Other Parameters</b>				
Noise				
(Other)				
<b>Solid Waste</b>				
Please provide details of the type 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.				

<b>4. Resource Usage and Product Output</b>			
<b>Parameter</b>	<b>Value</b>	<b>Measurement Unit</b>	<b>Comments<sup>6</sup></b>
<b>Fuels used</b>			
Oil			
Gas			
Coal			

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

<b>3. Environmental Monitoring Data</b>				
Please provide the name and contact details of your environmental manager:				
Parameter <sup>2</sup>	Value <sup>3</sup>	Unit	Compliance Status <sup>4</sup>	Comments <sup>5</sup>
Lignite				
Grid Electricity				
Heat Purchased				
<b>Raw materials consumed</b>				
Raw material 1				
Raw material 2				
<b>Product output</b>				
Product 1				
Product 2				

<b>5. Human Resources Management</b>			
Please provide the name and contact details of your Human Resources manager:			
	Total	Recruited in this reporting period	Dismissed in this reporting period
<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:	

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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 and explain how the Company has addressed them:
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 in grievances 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 by the Company:
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 their outcome:
Have there been any changes during the reporting period in any of the following areas: <ul style="list-style-type: none"> <li>• Representative union,</li> <li>• Collective Agreement,</li> <li>• Non-discrimination and equal opportunities for all,</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 work),</li> </ul>	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please give details, including any new initiatives, if they exist:

<ul style="list-style-type: none"> <li>• Overtime,</li> <li>• Working time,</li> <li>• Flexible working / work-life balance,</li> <li>• Grievance mechanism for workers</li> <li>• H&amp;S.</li> </ul>		
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### 6. Occupational Health and Safety Data

<b>Please provide the name and contact details for your H&amp;S manager:</b>					
	<b>Direct employees:</b>	<b>Contracted workers:</b>		<b>Direct employees:</b>	<b>Contracted workers:</b>
The amount of work that the average worker does in the reporting period in an hour:			Number of Casualties <sup>7</sup> :		
Budget spent on OHS in this period (total amount and currency):			Number of disabling injuries:		
OHS training provided in this period (per person or 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 currency):					

<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.

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	
<b>Please provide the name and contact details for your external relations or community engagement manager:</b>	
Please provide information on the implementation of the stakeholder engagement plan and summarise interaction with stakeholders during the reporting period, including:	
<ul style="list-style-type: none"> <li>- Meetings or other initiatives carried out during the reporting period through which communication with the public or public organizations is carried out;</li> <li>- Information provided to members of the public and other stakeholders during the reporting period, relating to environmental, social or safety issues;</li> <li>- coverage in media;</li> <li>- interaction with any environmental or other community groups.</li> </ul>	
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 (RAP)		
<b>Existing Land Acquisitions</b>		
Please report any further progress made during this reporting period in the implementation of the RAP, using the monitoring indicators as detailed in the RAP, and complete the table below. Please provide the results of any other related monitoring 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:

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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.
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.

**New Land Acquisitions**

If the company acquired any new land for the project during the reporting period, 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 endangered?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, how many?
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**

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## **MAIN SERBIAN LEGISLATIONS:**

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

- Law on Planning and Construction ("Official Gazette the RS" No.72/09, 81/09, 64/10, 24/11, 121/12, 42/13, 50/13, 98/13, 132/14 and 145/14);
- Law on nature protection ("Official Gazette of RS", no. 36/09, 88/10, 91/10 and 14/16);
- Law on environmental protection ("Official Gazette of the RS" No. 135/04, 36/09, 72/09, 43/11 and 14/16);
- Law on EIA ("Official Gazette of the RS" No. 135/2004 and 36/2009);
- Law on Strategic EIA ("Official Gazette of the RS" No. 135/2004 and 88/10);
- Law on Waste Management (Official Gazette of the RS No. 36/09, 88/10 and 14/16);
- Law on Noise Protection ("Official Gazette of the RS", No. 36/09 and 88/10);
- Law on Water ("Official Gazette of the RS", No. 30/10, 93/12, 101/2016-9);
- Law on Forests ("Official Gazette of the RS", No. 30/10, 93/12 and 89/15);
- Law on Air Protection ("Official Gazette of RS", 36/09, 10/13);
- Law on Occupational Safety and Health ("Official Gazette of the RS", No. 101/05, 91/15 and 113/17).
- Law on Public Roads ("Official Gazette of the RS" No. 41/18).

Regulations formed based on the aforementioned Laws:

- 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 the RS" No. 114/08);
- 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 the RS" No. 69/05);
- Rulebook on the contents of the EIA Study ("Official Gazette of the RS" No. 69/05);
- Rulebook on the procedure of public inspection, presentation and public consultation about the EIA Study ("Official Gazette of the RS" No. 69/05);
- Rulebook on the work of the Technical Committee for the EIA Study ("Official Gazette of the RS" No. 69/05)

- Decree on noise indicators, limit values, method for assessment of noise indicators, disturbance and harmful environmental impact of noise ("Official Gazette of the RS", No. 75/10);
- Regulation on watercourses categorization ("Official Gazette of the RS" No. 5/68);
- Decree on limit values for priority and priority hazardous substances which pollute surface water and deadlines for their achievement ("Official Gazette of the RS" No. 24/14);
- Decree on limit values of pollutants in groundwater, surface water and sediment and limits for their achieving ("Official Gazette of the RS" No. 50/12);

Other relevant Serbian legislation:

- Strategy for the Implementation of the Convention on Access to Information, Public Participation in Decision-Making and the Right to Legal Protection in Environmental Matters - the Aarhus Convention ("Official Gazette of the RS" No. 103/11)

# **Appendix IV**

## **Stakeholder Engagement and reporting from public consultations**

## Identified Stakeholders

Stakeholders can be defined as those people and organisations who may affect, be affected by, or perceive themselves to be affected by a decision or activity. For the Project, the stakeholders range according to the following main groups:

Potential affected parties:

- Employees of PERS and Contractors;
- Representatives of companies operating the area immediately adjacent to the Project;
- Residents from settlements within the zone of influence of the Project;
- Statutory regulatory authorities, on local or regional level, such as: Local landowners and leaseholders; and Potentially affected industries/businesses.

Other interested parties:

- General public;
- Other companies operating on the National Grid;
- NGO

It is acknowledged that, as the Project develops, more stakeholders may be identified and engaged. In this regard, once identified, each stakeholder will be characterized in terms of their interests, concerns and requirements and will be included within this list.

## Feedback from public consultation on EMP

### 1. BACKGROUND

The Government of the Republic of Serbia received financial support from the World Bank, European Investment Bank and European Bank for Reconstruction and Development, for the implementation of the Road Road Rehabilitation and Safety Project.

The design of the section Beloljin-Kursumlija-Rudare is reclassified as environmental category “B” i.e. a design that requires the preparation of an Environmental Management Plan, harmonized with the policy of international financial institutions in the area of environmental protection. According to the applicable Serbian legislation, especially after the adoption of the Law on Environmental Impact Assessment (Official Gazette of RS, No. 135/04, 36/09), and the Decree establishing the List of projects which may require the preparation of environmental impact assessment (Official Gazette of RS, No. 114/08) – preparation of an Environmental Impact Assessment Study is not necessary for the development of road rehabilitation designs.

The Highway Institute JSC Belgrade – Department for Environmental Protection has prepared the draft document – Environmental Management Plan for heavy maintenance of the state road IB 35, Section: Beloljin-Kursumlija-Rudare, submitted to Technical Control for review on July 23<sup>rd</sup>, 2018. The Environmental Management Plan was prepared in accordance with the requirements of international financial institutions which finance the Road Road Rehabilitation and Safety Project. The development of the Environmental Management Plan was supported by research studies and field investigations, including consultations with representatives of regional and local stakeholders. The Environmental Management Plan is primarily based on field tests carried out in October 2017.

On August 8<sup>th</sup>, 2018, World Bank representatives submitted documents to the Public Enterprise “Roads of Serbia” which contain comments and notices on the approval of the draft of the Environmental Management Plan. The Public Enterprise “Roads of Serbia” has forwarded the received comments and undertook and initiated the procedure of public consultations and presentation of the document.

The Public Enterprise "Roads of Serbia" has issued a call for public consultations to all stakeholders, institutions, organizations interested in Environmental Management Plan for the section: Beloljin-Kursumlija-Rudare in the newspaper “Politika” on August 23<sup>rd</sup>, 2018. On August 16<sup>th</sup>, 2018, prior to its advertising in newspapers, the Environmental Management Plan (in paper and electronic form) was delivered to the Municipal Administration of Kursumlija. The representatives of the Municipal Administration have informed the public via local media on the exact time and place of the public consultations. This call was also published on the website of the Public Enterprise "Roads of Serbia". This document is available at the following addresses:

- At the premises of the Public Enterprise “Roads of Serbia”, Sector for Investments, Vlajkovicева 19a, Belgrade, on the first floor, every working day from 11:00 AM to 01:00 PM, within 14 days from the date of the publication of this notice publication

- At the premises of the Municipal Administration of Kursumlija, every working day from 08:00 AM to 03:00 PM within 14 days from the date of the publication of this notice
- On the website of the Public Enterprise "Roads of Serbia" <http://www.putevi-srbije.rs>

The public consultations and presentation of the Environmental Management Plan were held in the premises of the Municipal Administration of Kursumlija on August 31<sup>st</sup>, 2018. The questions that were raised and clarifications of the documents are presented in the Report on public consultations.

## **2. REPORT ON THE PUBLIC CONSULTATIONS**

In accordance with the operational policy of the World Bank 4.01, the Highway Institute JSC Belgrade has prepared the document – Environmental Management Plan for heavy maintenance of the state road IB 35, Section: Beloljin-Kursumlija-Rudare, 24.171 km in length. Presentation of the document has started on August 23<sup>rd</sup>, 2018, by making a public call in the daily newspaper "Politika" to all stakeholders, competent authorities and relevant institutions to learn about the proposed works related to heavy maintenance of the road as well as the environmental impacts of the Design, and proposed mitigation and monitoring measures. Prior to advertising in the newspapers, the Environmental Management Plan was submitted in, paper form to the Municipal Administration of Kursumlija and to the Sector for Investments at the Public Enterprise "Roads of Serbia" and it was made available in electronic form on the website of the Public Enterprise "Roads of Serbia".

The representatives of the local self-government have informed the public via local media about the time and place of public consultations. The presentation of the Environmental Management Plan was completed on August 31<sup>st</sup>, 2018, when the public consultations were held in the premises of the Municipal Administration of Kursumlija.



Figure 1. Public consultations in Kursumlija, August 31<sup>st</sup>, 2018



Figure 2. Public consultations in Kursumlija, August 31<sup>st</sup>, 2018

The public consultations in Kursumlija were attended by 10 participants.

The meeting was attended by the following representatives of the Municipal Administration of Kursumlija: Emilija Cobakovic, Andriana Pantic, Natasa Djurovic, Ljubisav Veselinovic, Miroslav Radovanovic and Jovana Djukic, as well as the pensioner Zoran Komadinic.

On behalf of the Highway Institute JSC Belgrade, Department for Environmental Protection, the meeting was attended by Jovana Munjas, Vladan Tasic i Iva Kaplanec.

The meeting started at 12:00 PM. The representatives of the Highway Institute presented in detail the Environmental Management Plan to the attendees. After completion of the public debate, multiple questions were raised.

Natasa Djurovic from the Municipal Administration of Kursumlija asked the following question:

- 1."Will traffic be completely halted or diverted to alternative routes due to the works related to the heavy maintenance of the section?"

Answer: The chedule of work which may affect the flow of traffic will be determined by the Contractor and the Investor, so potential traffic halting and rerouting can not be predicted at this time.

- 2."Will the potential negative effects on alternative routes be considered in the Environmental Managment Plan and can any potential complaints about these alternative routes be filed through the complaint mechanism?"

Answer: This document also includes alternative routes in terms of transporting material and timely information of the local population about the rerouting of traffic to alternative routes.

Ljubisav Veselinovic asked the following questions:

- 3."To whom are the complaints filed to through the complaint mechanism sent?"

Answer: All complaints from the complaint mechanism are related to the execution phase of the work and are sent to the Contractor who will process the complaints.

- 4."Which institution is responsible for the implementation of the Environmental Management Plan and the prescribed protection measures?"

Answer: The Contractor is obligated to develop a Contractor's Environmental Management Plan which will adopt this Plan and apply all of its prescribed protection measures.

The meeting was ended at 01:20 PM (local time).

### 3. LIST OF PARTICIPANTS

#### ЛИСТА УЧЕСНИКА

Предмет ЈАВНИХ КОНСУЛТАЦИЈА: <b>ПЛАН УПРАВЉАЊА ЖИВОТНОМ СРЕДИНОМ (Environmental Management Plan – EMP)</b>		Место одржавања ЈАВНИХ КОНСУЛТАЦИЈА: <b>Куршумлија, Скупштинска сала Скупштине Општине Куршумлија Пролетерских бригада бб</b>	
Пут: IB реда бр. 35 Деоница: <b>Белољин-Куршумлија-Рударе</b>		Датум јавних консултација: <b>31. август 2018.</b>	
Редни број	Име и презиме	Организација - адреса	Телефон, fax, e-mail
1	Емилија Чолаковић	Општинска управа	064/3313837 letrbani@zdr.kursumlija.org.rs
2	Андрејана Јанковић	Општинска управа	066/8601218
3	Наташа Ђурковић	Општинска управа	064 817 3117 notasakursumlija@gmail.com
4	Јудита Веселиновић	-/-	064/8675278
5	Мирјана Радвановић	-/-	064/6403798
6	Јелена Комарић	Пензионер, Босовска 19 Куршумлија	0658827132
7	Јована Јукић	Општинска управа	062/96-51-84 jokadja@gmail.com
8	Јована Мунјас	Институт за путеве	06120-46-180 jmunjas@hightway.rs
9	Јаја Радаице	-/-	060 1474988 karpelincica@gmail.com
10	Владан Младић	-/-	06218017133 v.tasic@highway.rs
11			

#### 4. DOCUMENTATION

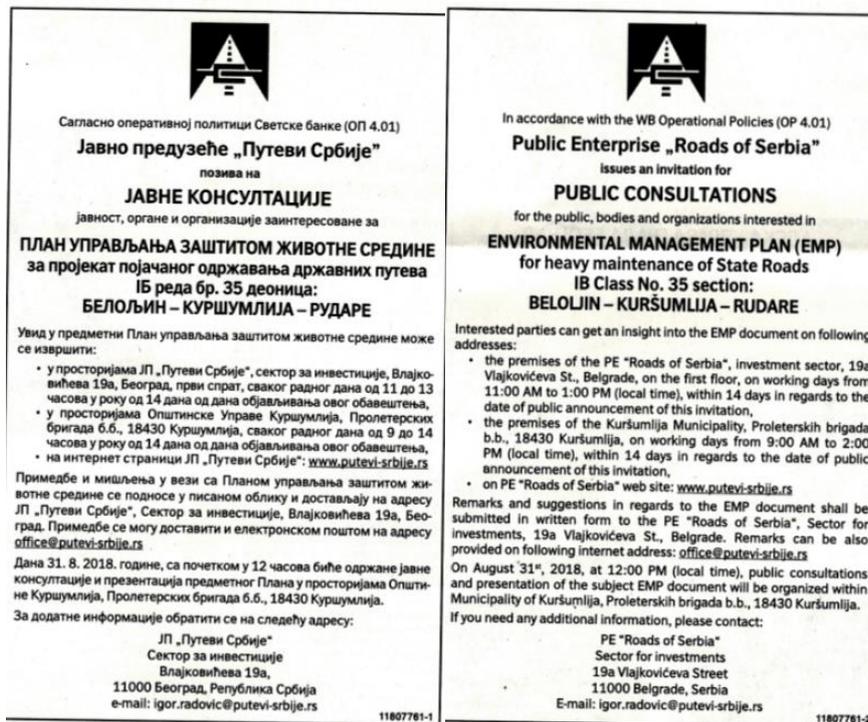


Figure 3. Public consultations announcement in daily newspaper "Politika"

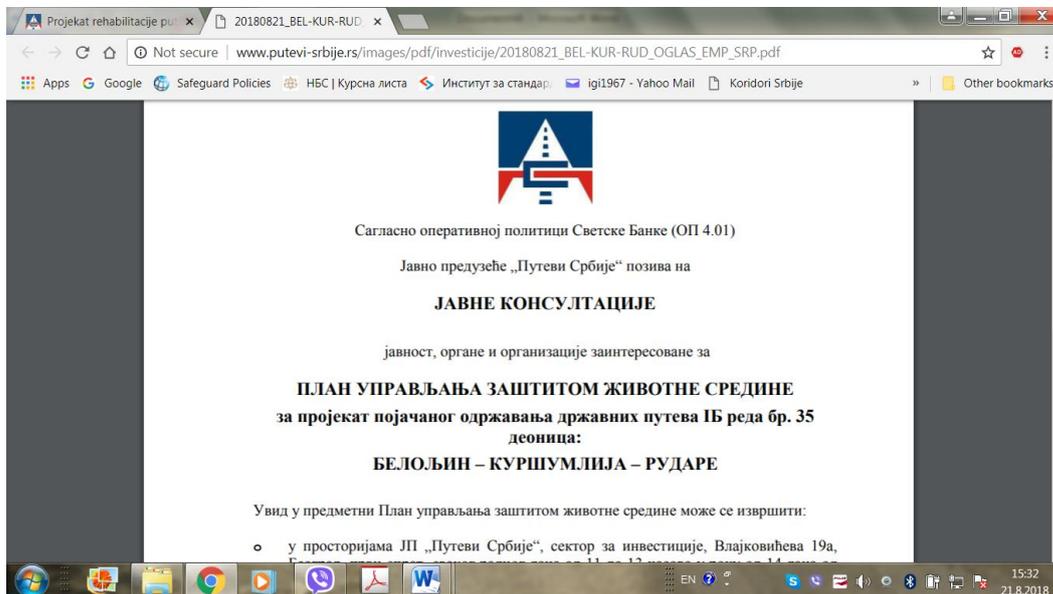


Figure 4. Public consultations announcement on the website of the Public Enterprise "Roads of Serbia"

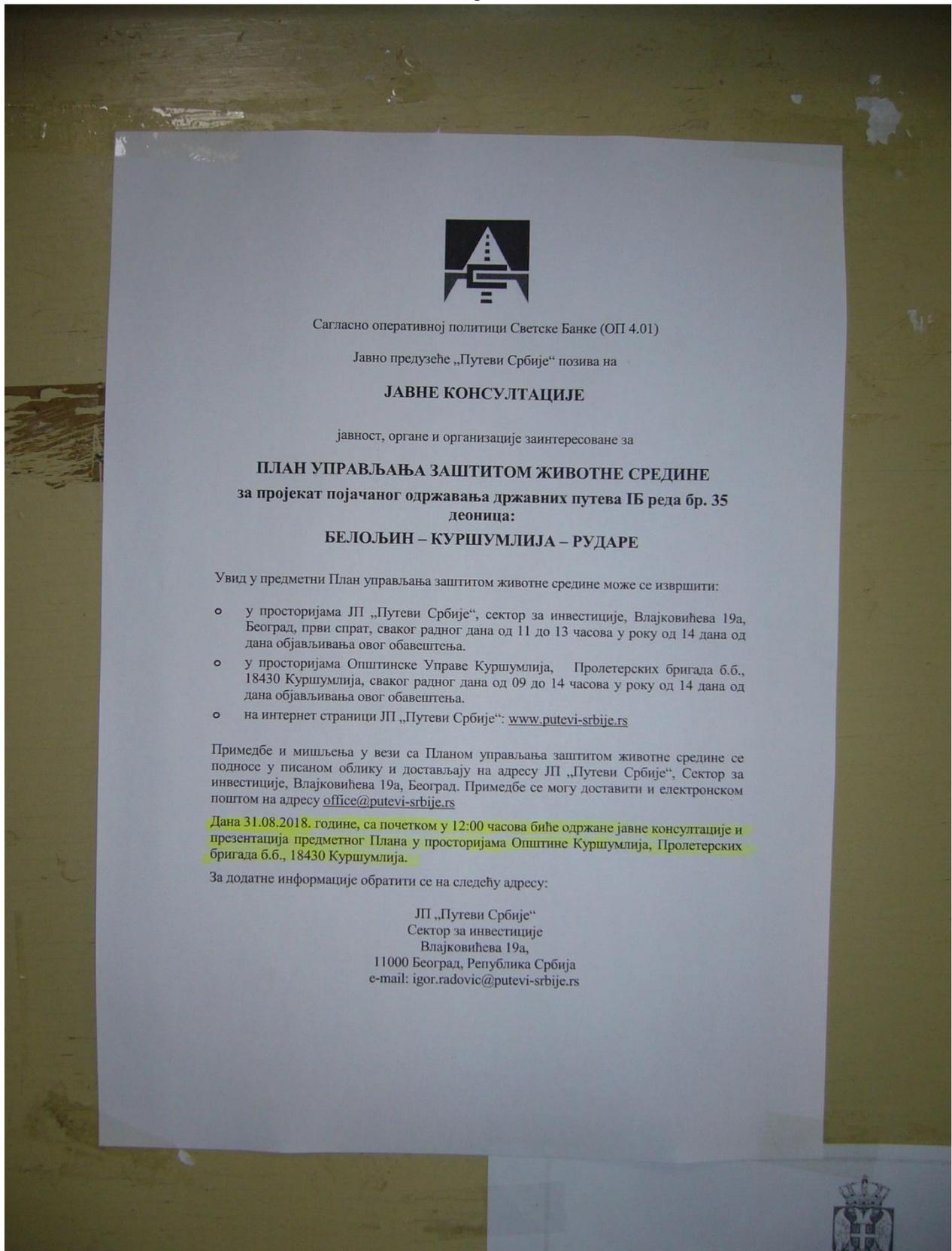


Figure 5. Public consultations announcement on the notice board at the Municipal Administration of Kursumlija

State Road IB no. 35, Section: Beloljin - Kursumlija - Rudare  
454-870, Environmental Management Plan – EMP, FINAL

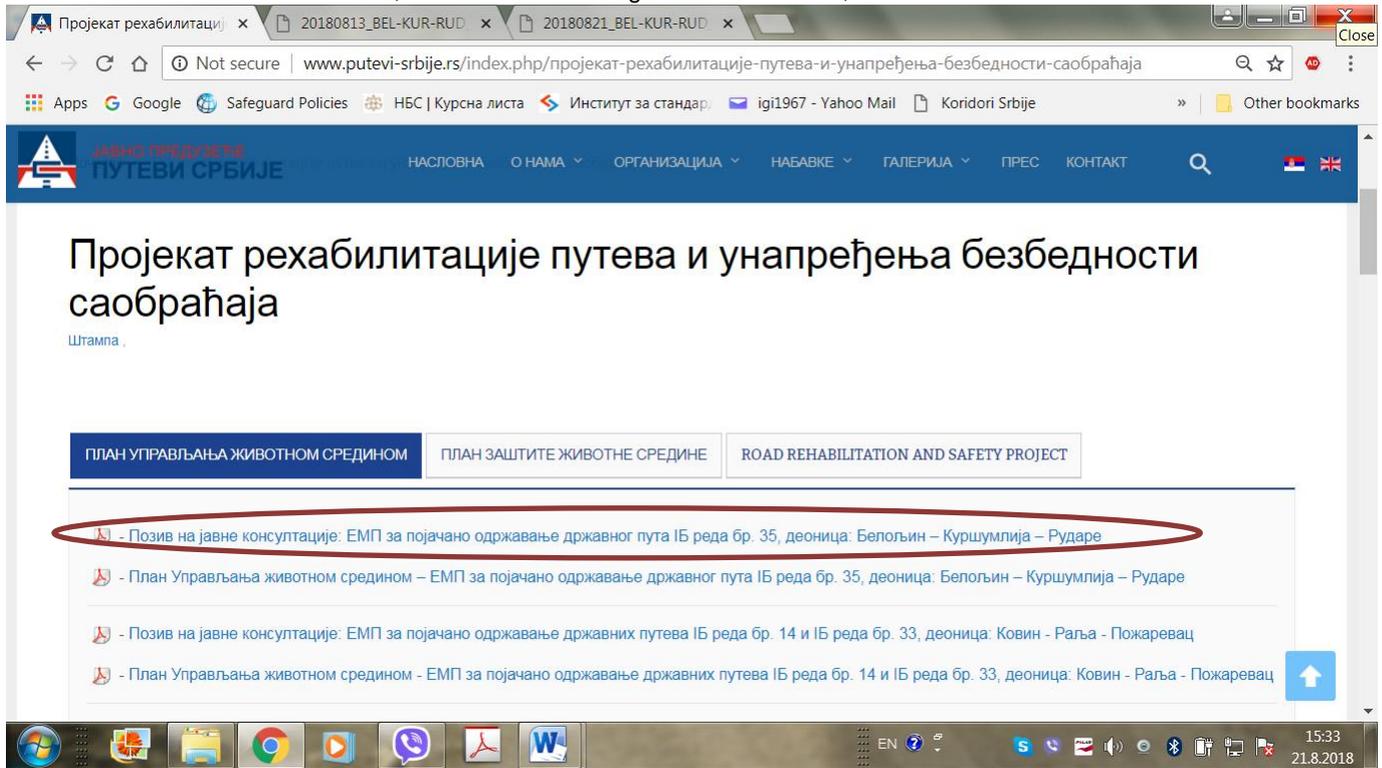


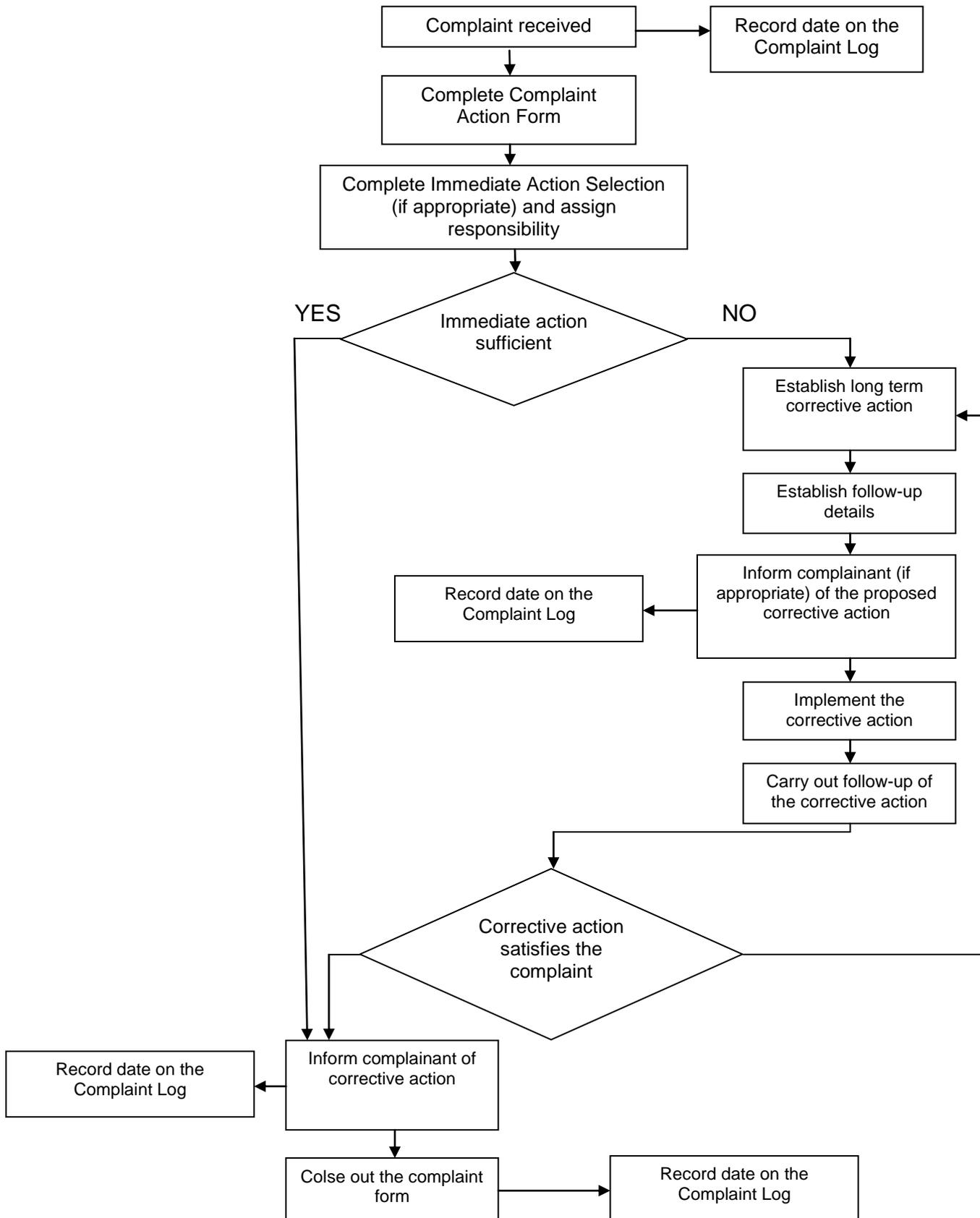
Figure 6. Electronic version of Environmental Management Plan available on the website of the Public Enterprise "Roads of Serbia"

# **Appendix V**

## **Grievance mechanism**

### Grievance mechanism and form

#### Flowchart of Complaints/Grievance Procedure



Grievances are to be resolved within 15 working days.

Grievance Reference Number:			
Contact Details	Name:		
	Address:		
	Tel:		
	e-mail:		
How would you prefer to be contacted? Please tick the 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:		
	By hand: please drop this form at:		
	By e-mail: Please email your grievance, suggested resolution and preferred contact details to e-mail:		
Signature		Date	

# **Appendix VI**

## **Conditions from relevant public institutions**

Република Србија  
ЗАВОД ЗА ЗАШТИТУ ПРИРОДЕ СРБИЈЕ  
03 Број:020-749/3  
Датум: 21.04.2017.  
Нови Београд, Др Ивана Рибара бр. 91  
Тел: +381 11/2093-802; 2093-803  
Факс: +381 11/2093-867

ЈАВНО ПРЕДУЗЕЋЕ "ПУТЕВИ СРБИЈЕ"  
Број: 953-6070/17-1  
24-04-2017  
Датум: \_\_\_\_\_  
БЕОГРАД, Булевар краља Александра бр. 282

Завод за заштиту природе Србије, на основу члана 9. Закона о заштити природе („Службени гласник РС“, бр. 36/2009, 88/2010, 91/2010- исправка 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 Појачаног одржавања деонице државног пута IB реда бр. 35 (стара ознака: магистрални пут М-25), деоница Белољин – Куршумлија - Рударе, доноси

### РЕШЕЊЕ

1. Део предметног подручја (деоница Висока – Рударе) на коме се врши појачано одржавање пута налази се у еколошки значајном подручју „Радан“ (бр. 89) које је саставни део еколошке мреже Републике Србије. Сходно томе, издају се услови заштите природе:
  - 1) Пројектно-техничку документацију за Појачано одржавања деонице државног пута IB реда бр. 35 (стара ознака: магистрални пут М-25), деоница Белољин – Куршумлија - Рударе, урадити уз поштовање законске и техничке регулативе, а у складу са просторно-планском документацијом.
  - 2) На основу анализе постојећег стања и недостатака путног правца утврдити појачано одржавање кроз одговарајуће нивое и то: пресвлачење (ојачање) коловоза, обнову коловозне конструкције и обнову пута (коловоз и пратећи елементи коловоза) у границама постојећег путног земљишта.
  - 3) Пројекат појачаног одржавања путног појаса треба да обезбеди сигурност саобраћаја (видљивост, стабилност терена на путном правцу, итд.), угодну возњу (оптичко усмеравање возача, призор, итд.), функционалност (одржавање окружења пута, итд.) и минимално оштећење околног простора (спречавање ширење утицаја пута на околину).
  - 4) Саставни део предметног Пројеката треба да буде и део који се односи на организацију радилишта, при чему је неопходно дефинисати и обезбедити:
    - да се привремене локације за складиштење грађевинског и другог материјала и опреме, не могу лоцирати у границама еколошки значајног подручја, односно на делу деонице од Високе до Рудара, у простору са високом вегетацијом и у плавним зонама река Косанице, Топлице и других водотока;
    - 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 деградирале грађевинским и другим радовима, што пре санирају.

- 5) 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.
  - 6) 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.
  - 7) Пројектом предвидети таложнике и сепараторе масти и уља за воде које настају спирањем са коловоза, посебно на траси пута дуж река, нарочито Косанице и Јабланице, у циљу њихове заштите од загађења.
  - 8) У циљу очувања река Косанице и Јабланице дуж чијег тока је деоница пута која на појединим местима и прелази преко траса водотока, 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 Косанице и Јабланице.
  - 9) Уколико је неопходно уређење у зони прелаза пута (моста) преко водотока (Косанице, Јабланице...) 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.
  - 10) Током извођења грађевинских радова (подизања асфалта...) у непосредној близини стамбених објеката, планирати орошавање како би се спречило подизање прашине и негативан утицај на људе.
  - 11) Није дозвољено 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.
  - 12) Није дозвољено извођење радова у току ноћних сати због могућег утицаја буке грађевинских машина.
  - 13) 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.
  - 14) Током извођења радова дуж целе трасе одржавати максимални ниво комуналног реда.
  - 15) 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 обавезе подносиоца захтева да прибави и друге услове, дозволе и сагласности предвиђене позитивним прописима.

3. За све друге радове на предметном подручју носилац активности дужан је да поднесе Заводу за заштиту природе Србије 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 издато, дужан је да поднесе захтев за издавање новог решења.
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 бр. 282, Поштански фах 17, 11050 Београд обратило се Заводу захтевом П бр. 953-6010 од 24.03.2017. године за издавање услова заштите природе за израду техничке документације пројекта Појачаног одржавања деонице државног пута IB реда бр. 35 (стара ознака: магистрални пут М-25), деоница Белољин – Куршумлија - Рударе.

На основу достављеног захтева и пратеће документације подносиоца захтева, утврђено је да је Пројекат појачаног одржавања деонице пута IB реда бр. 35 (стара ознака: магистрални пут М-25), деоница Белољин – Куршумлија – Рударе 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.

Први циљ је израда техничке документације у виду Главног пројекта појачаног одржавања којим се обезбеђује повећање употребне вредности и трајности пута, унапређење безбедности саобраћаја, укључења захтева локалне заједнице и поштовање захтева заштите животне средине у максималној могућој мери у датим условима просторног ограничења и ограничења која произилазе из извршене дозвољених грађевинских и саобраћајних интервенција.

Почетак деонице је раскрсница државног пута IB реда бр. 35 и бр. 38 у месту Белољин (раскрсница за Блаце), а крај деонице је 50 m од раскрснице за Пролом бању, код НИС-ове пумпе.

Врста радова која се планира углавном обухвата радове ојачања постојеће коловозне конструкције, у постојећим габаритима коловозне конструкције са постојећим и санираним системом одводњавања уз пројектовање свих елемената који продужавају трајност радова и унапређују систем безбедности саобраћаја.

Увидом у Централни регистар заштићених добара, документацију Завода, а у складу са прописима који регулишу област заштите природе, утврђени су услови заштите природе из диспозитива овог решења.

Део предметног подручја (деоница од Високе до Рудара) налази се у границама еколошки значајног подручја „Радан“ које је саставни део еколошке мреже Републике Србије, („Службени гласник РС“, бр. 102/2010). Еколошком мрежом на овом простору обухваћено је Одабрано подручје за дневне лептире – РВА (Prime Butterfly Area) под називом „Радан“.

Законски основ за доношење решења:

Закон о заштити природе („Службени гласник РС“, бр. 36/2009, 88/2010, 91/2010- исправка и 14/2016); Уредба о еколошкој мрежи („Службени гласник РС“, бр. 102/2010).

Планирани радови на изради техничке документације пројекта Појачаног одржавања деонице државног пута IB реда бр. 35 (стара ознака: магистрални пут М-25), деоница Белољин – Куршумлија - Рударе могу се реализовати под условима дефинисаним овим решењем, јер је процењено да неће угрозити основне природне вредности 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:  
- Подносиоцу захтева  
- Архива x 2



AA

Република Србија

**ЗАВОД ЗА ЗАШТИТУ СПОМЕНИКА КУЛТУРЕ НИШ**

Ниш, Добричка 2, тел. 018/523-414, факс 018/523-412

E-mail: kontakt@zzsknis.rs

Број: 1125/2

Датум: 15.09.2017. год.

РЕПУБЛИКА СРБИЈЕ  
ПУТЕВИ СРБИЈЕ  
Број: 955 - 6005/17-1

Датум: 05-10-2017

ЗАВОД ЗА ЗАШТИТУ СПОМЕНИКА КУЛТУРЕ НИШ  
Булевар краља Александра бр. 282

Завод за заштиту споменика културе Ниш, на основу члана 104 Закона о културним добрима (Службени гласник РС бр. 71/94) и чл. 125, 131, 196, 197, 198, 199, 200 и 201 "Закона о општем управном поступку" (Сл. лист СРЈ бр.33/97, 31/01 и Сл. гласник 30/10) а у вези са чланом 99 и 27 Закона о културним добрима, решавајући по захтеву Јавног предузећа "Путеви Србије", са седиштем у Београду у Булевару краља Александра 282, доноси :

### РЕШЕЊЕ

**О утврђивању услова за предузимање мера техничке заштите  
за израду техничке документације пројекта Појачаног одржавања деонице  
државног пута IB реда бр. 35 (стара ознака: магистрални пут М-25), деоница  
Белољин – Куршумлија - Рударе**

**I** На предметној деоници државног пута IB реда бр. 35 (стара ознака: магистрални пут М-25), деоница Белољин – Куршумлија - Рударе налазе се следећа непокретна културна добра:

1. Плочник код Прокупља - археолошко налазиште. Утврђено је за н.к.д. Одлуком Владе РС бр. 05-633-2767/2012 од 10. маја 2012. године
2. Маркова црква – касноантичка базилика код Кастрата у Куршумлији – споменик културе. Утврђено је за н.к.д. на основу решења о заштити Републичког завода за заштиту и научно проучавање споменика културе Р Србије бр. 2056/48 од 11. новембра 1948. године.

**II** Мере техничке заштите – израда техничке документације пројекта Појачаног одржавања деонице државног пута IB реда бр. 35 (стара ознака: магистрални пут М-25), деоница Белољин – Куршумлија - Рударе, може се предузети под следећим условима:

- На простору непокретних културних добара нису дозвољени радова којима би дошло до угрожавања непокретних културних добара – остатака архитектуре и/или простора археолошких налазишта;
- Инвеститор је дужан да обезбеди стални археолошки надзор приликом обављања радова на траси предметне деонице у зонама непокретних културних добара;
- Уколико пројекат обухвата и земљане радове на ископу на самој траси пута или његовом проширењу, ван зона непокретних културних добара, Инвеститор је у обавези да обезбеди стални археолошки надзор у току извођења земљаних радова на читавој траси предметне деонице пута;
- У случају да приликом земљаних радова открије до сада неевидентни локалитет или његов део, инвеститор је дужан да одмах заустави радове и о томе без одлагања обавести Завода за заштиту споменика културе Ниш, обезбеди услове за археолошка истраживања, конзервацију и презентацију;

- Инвеститор је дужан да обезбеди средства за истраживање, заштиту, чување, публиковање и презентацију истог.

III Подносилац захтева дужан је да изради пројекат у свему у складу са издатим условима из тачке I и II овог Решења.

IV Инвеститор је у обавези да по изради пројектне документације исту достави Заводу ради добијања сагласности да је урађена према прописаним условима. Један примерак пројектне документације се доставља за потребе Завода.

V Ово решење важи годину дана.

VI Жалба на решење не задржава извршење.

### Образложење

Јавно предузеће "Путеви Србије", са седиштем у Београду у Булевару краља Александра 282, поднело је захтев 1125/1 од 14.09.2017. године за утврђивање услова за израду техничке документације пројекта Појачаног одржавања деонице државног пута 1Б реда бр. 35 (стара ознака: магистрални пут М-25), деоница Меровина – Прокупље.

Решавајући по захтеву, у току поступка је од стране Завода, као надлежног органа, утврђено је да су предметни радови планирани и на простору:

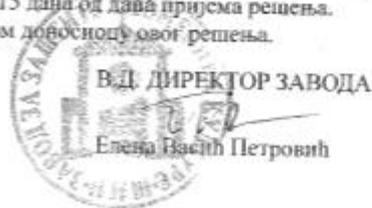
1. Археолошког налазишта Плочник код Прокупља, који је утврђен за н.к.д. Одлуком Владе РС бр. 05-633-2767/2012 од 10. маја 2012. Године
2. Споменика културе Маркова црква – касноантичка базилика код Кастрата у Куршумлији који је утврђен за н.к.д. на основу решења о заштити Републичког завода за заштиту и научно проучавање споменика културе Р Србије бр. 2056/48 од 11. новембра 1948. Године.

У циљу заштите н.к.д. и археолошких налазишта Јавно предузеће "Путеви Србије" дужно је да поступи по мерама прописаним овим решењем.

Имајући у виду наведено као и одредбе Закона о културним добрима које прописују обавезу предузимања мера техничке заштите у циљу очувања непокретног културног добра, донето је решење као у диспозитиву.

Чланом 104 стаа 3 "Закона о културним добрима" је прописано да жалба не задржава извршење решења.

ПРАВНИ ЛЕК: Против овог решења може се изјавити жалба Републичком заводу за заштиту споменика културе Београд у року од 15 дана од дана пријема решења. Жалба се непосредно предаје или шаље поштом доносиоцу овог решења.



Доставити:

- РЗЗСК
- Подносиоцу захтева
- Документацији Завода



Република Србија  
МИНИСТАРСТВО  
ЗАШТИТЕ ЖИВОТНЕ СРЕДИНЕ  
Број: 011-00-349/2017-02  
Датум: 31.10.2017.  
Београд

V  
ЈАВНО ПРЕДУЗЕЊЕ "ПУТЕВИ СРБИЈЕ"  
Број: 955-21822/121  
Датум: 06-11-2017  
БЕОГРАД Булевар краља Александра бр. 282

**ЈП „ПУТЕВИ СРБИЈЕ“ БЕОГРАД**

**ул. Булевар Краља Александра 282  
11000 Београд**

**Предмет:** Допис у вези са захтевом за давање мишљења

Министарству заштите животне средине обратили сте се 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 пројекат појачаног одржавања државног пута IB реда бр. 35 деонице: Белољин – Куршумлија – Рударе, дужина 24.171 км, стационажа: км 237+881 – км262+052, заведен под бројем 011-00-349/2017-02 од 23.10.2017 године.

У допису наводите да је предметни пројекат обухваћен и интегралним „Пројектом Рехабилитације путева и безбедности саобраћаја („Road Rehabilitation and Safety Project – RRSPP“), који се финансира из међународног кредита. Пројекат подразумева грађевинско – путарске радове у оквиру трасе већ постојећег пута. Предметна деоница је у мрежи државних путева и представља део саобраћајне везе између граничног прелаза Вердап и јужне Србије, као и Косова и Метохије.

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.

Сва решења приликом израде пројектне документације – Главни пројекат за појачано одржавање пута, морају бити у оквиру постојећег путног појаса (укупна ширина коловоза је 7.2 м), без експропријације нових површина земљишта. 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, у постојећем путном профилу, са постојећим и санираним системом одводњавања уз пројектовање свих елемената који продужавају трајност радова и унапређују систем безбедности саобраћаја.

Део предметне деонице (потез Висока – Рударе) налази се у еколошки значајном подручју „Радан“ (бр.89) које је саставни део еколошке мреже Републике Србије. Еколошком мрежом на овом простору обухваћено је Одабрано подручје за дневне лептире – ПБА (Prime Butterfly Area). Такође нема регистрованих рекреативних центара. У близини пројектне деонице налазе се следећа непокретна културна добра: 1. „Плочник“ код Прокупља – археолошки локалитет и 2. „Маркова црква“ касноантичка базилика код Кастрата у Куршумлији – споменик културе.

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:

- Закон о јавним путевима („Сл. гласник РС“ 101/2005), којим су дефинисане врсте радова, технички услови и начин извођења радова;
- Кратак опис пројекта;
- Решење о условима заштите природе бр. 020-749/3 од 21.04.2017. које је издао Завод за заштиту природе Србије;
- Решење бр. 1125/2 од 15.09.2017. које је издао Завод за заштиту споменика културе Ниш;
- Графички прилог - прегледна карта;

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 поменуте 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. 020-749/3 од 21.04.2017. године које је издао Завод за заштиту природе Србије, и 2) Решења са условима и мерама заштите непокретних културних добара бр. 1125/2 од 15.09.2017. године које је издао Завод за заштиту споменика културе у Нишу.



Доставити:

- Наслову
- Архиви