

Investor: JP "Putevi Srbije"



ENVIRONMENTAL MANAGEMENT PLAN

-draft-

PREPARATION OF MAIN DESIGN FOR HEAVY MAINTENANCE (ROAD REHABILITATION-UPGRADING) OF THE STATE ROAD IB-21, SECTION: IVANJICA - SJENICA
CHAINAGE: km 249+951 - km 288+251
L= 38,300 m
ENVIRONMENT CATEGORY B



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Author	Mirko Jevtić, MSc Environmental Engineering
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Final		Mirko Jevtić, MSc Environmental Engineering Milijana Jevtić, MSc Environmental Engineering	Miodrag Jović, MSc Civil Engineering

CONTENT

INTRODUCTION.....	1
SUMMARY.....	2
1. PROJECT DESCRIPTION.....	8
2. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK.....	10
3. BASELINE CONDITIONS ASSESSED DURING ROUTE SURVEY.....	12
4. SUMMARY OF ENVIRONMENTAL IMPACTS.....	15
5. ENVIRONMENTAL MANAGEMENT PLAN.....	22
A. Mitigation plan.....	22
B. Monitoring plan.....	27
C. Institutional implementation and reporting arrangements.....	28
6. STAKEHOLDER ENGAGEMENT - INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION.....	31
7. REFERENCES.....	32
APPENDICES	
Appendix 1 MITIGATION PLAN	
Appendix 2 MONITORING PLAN	
Appendix 3 LEGISLATION	
Appendix 4 STAKEHOLDER ENGAGEMENT	
Appendix 5 CONDITIONS FROM RELEVANT PUBLIC INSTITUTIONS	
Appendix 6 FINAL ENVIRONMENTAL APPROVAL	

ABBREVIATIONS AND ACRONYMS

CEP	Contractor's Environmental Plan
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
IFIs	International Financing Institutions
INCS	Institute for Nature Conservation of Serbia
IPCMK	Institute for Protection of Cultural Monuments Kraljevo
MoEP	Ministry of Environmental Protection
MoCTI	Ministry of Construction, Transport and Infrastructure
PSC	Project Supervision Consultant
RE	Resident Engineer
SLMP	Safety Labour Management Plan
WMP	Waste Management Plan

INTRODUCTION

Road Rehabilitation and Safety Project (RRSP) is a project of support of international financing institutions (World Bank, European Investment Bank and European Bank for Reconstruction and Development) to the Government of the Republic of Serbia in implementation of the National State Road Network Rehabilitation Program. This Project represents the implementation of the first phase of the Government's Program for the period 2014-2022 and covers the following:

- improvement of condition on state road network by means of rehabilitation of the existing roads,
- increase of road safety condition through appliance of measures for improvement of road safety in all phases of the Project implementation, and
- strengthening capacity and development of institutional coordination in the field of road and traffic safety through implementation of a number of various services.

The subject section belongs to the Moravicki and Zlatiborski Administrative district, Municipalities of Ivajnica and Sjenica. The section in length of 61.336 km. belongs to the State Road of IB category no. 21 (old road mark R-117) („Official Gazette of RS“, No. 93/2015), and represents a part of the longitudinal traffic link through the Western part of Serbia. The subject section is a part of the RRSP planned for heavy maintenance during the fourth year of the Project implementation.

The purpose of the EMP is to present the negative environmental impacts and management problems during the construction works and the necessary mitigation measures the Contractor must apply to. Key components of the Environmental Management Plan are: Environmental Mitigation Plan and Environmental Monitoring Plan.

International financing institutions (IFI) have classified the project as environment category B, which requires an Environmental Management Plan to be carried out. Project Proponent is the Government of the Republic of Serbia, represented by the relevant Ministry, and the project is realized by JP “Putevi Srbije”.

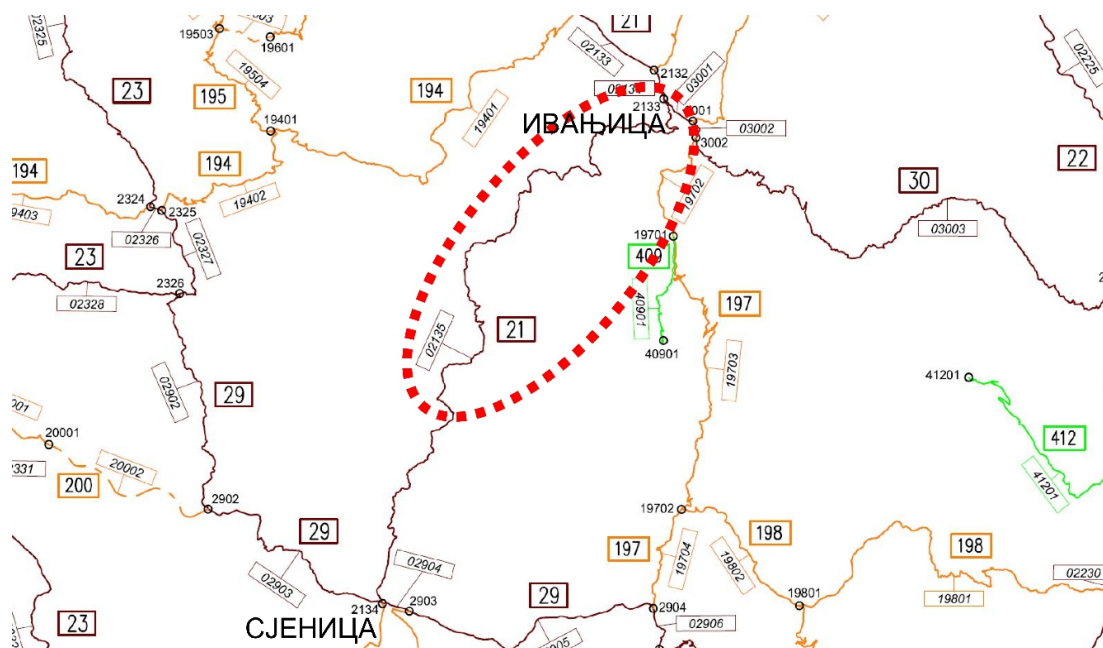
The design will be made in accordance with Serbian legislation and the conventions and safeguard guidelines issued by IFIs. The Environmental Management Plan was carried out using theoretical studies, on-site investigation, and consultation with representatives of local and regional authorities.

This EMP fulfills all the requirements defined by the Environmental Management Framework Document - EFD), with a special consideration for environment protection measures and defined monitoring program.

SUMMARY

Project description

The subject section belongs to the Moravicki and Zlatiborski Administrative district, Municipalities of Ivajnica and Sjenica. The section in length of 61.336 km. belongs to the State Road of IB category no. 21 (old road mark R-117) („Official Gazette of RS“, No. 93/2015), and represents a part of the longitudinal traffic link through the Western part of Serbia. The subject section is a part of the RRSP planned for heavy maintenance during the fourth year of the Project implementation. All chainages within the Terms of Reference are provided in accordance with the Reference System from November 2017. The excerpt from the Reference System is presented in the following table.



Picture 1. Extract from the state roads reference system map, November 2017

In accordance with the Reference System of State Road Network from 2009, the section Ivanjica – Sjenica 1 (Sjenicko Lake) is in length of 61.478 km. Upon acceptance and enforcement of the State Road Classification from 2015, new reference system was established and some names of nodes from the old reference system are changed. In addition, changes are made in length of the sections, as follows:

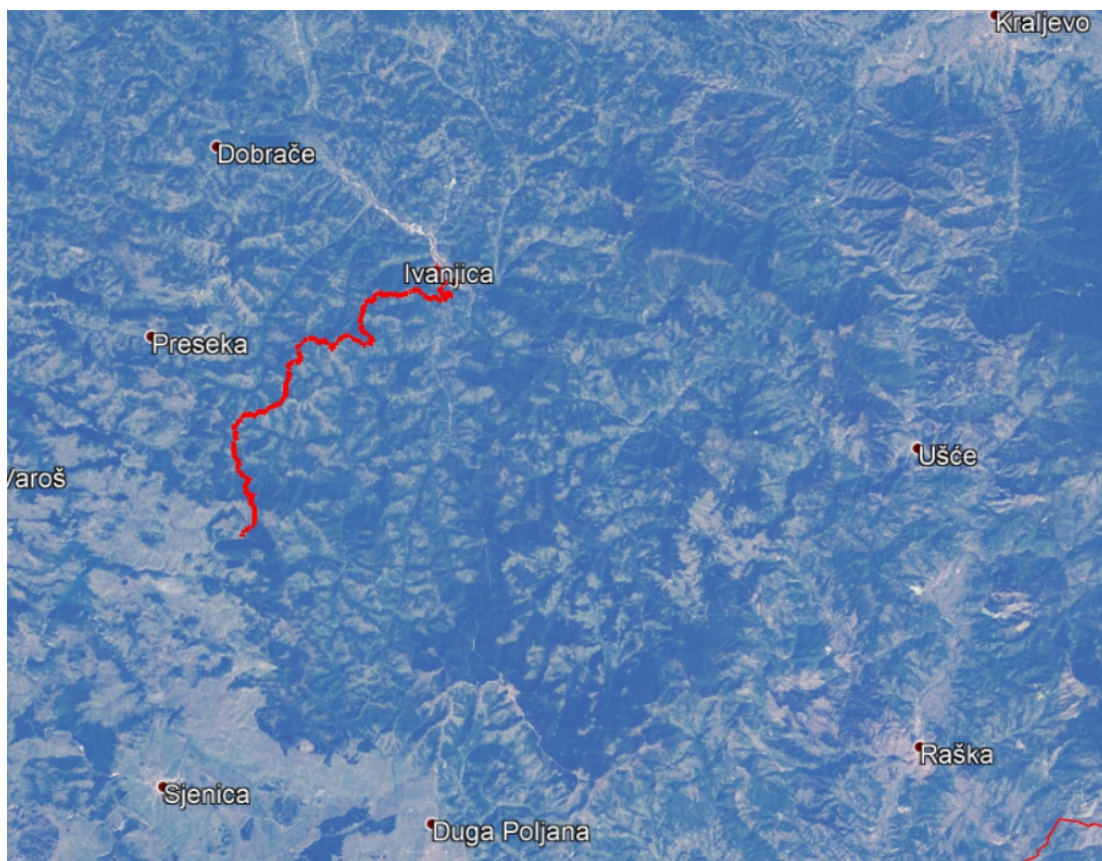
- instead of “Sjenica 1 (Sjenicko Lake)” new name of traffic node “Sjenica” is introduced;
- the total length of the subject section is 61.336 km.

Table 1.: Traffic sections and nodes according the reference system

No	Old section mark*	Section mark	Beginning node mark	Marking of the ending node	Name of the beginning node	Name of the ending node	Length of the section (km)
1	1047	02135	2133	2134	Ivanjica	Sjenica	61.336 (**38.300)
Total:							38.300

* Mark of the section according to the old referent system 2008/2009 (JV CPL- Nievelt)

** Length of the sub sections foreseen for designing



Picture 2. Macrolocation of the section



Picture 3. Start of the section in node 2133 Ivanjica

The beginning of the section is defined in node 2133 Ivanjica. The roundabout in the node 2133 Ivanjica is not the subject of the Main Project. The end of the section is border between the Municipalities Ivanjica and Sjenica (app. chainage km 288+251) i.e. traffic sign which marks the end of maintenance section in charge of local Operater "Putevi Ivanjica".



Picture 4. End of the section-border between Ivanjica and Sjenica municipalities (approx. chainage km 288+251)

Policy, legal and administrative framework

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

Legislation in the field of environmental protection that is currently in force in the Republic of Serbia is summarized in the Appendix 3.

In the Republic of Serbia the procedure for Environmental Impact Assessment (EIA) is governed by the Law on Environmental Impact Assessment, which is fully in accordance with the European Directive 85/337/EEC. The project of road maintenance and road rehabilitation does not represent a subject of EIA, and it is not listed in the Regulation on establishing the list of projects requiring a mandatory impact assessment and list of projects that may require an EIA, thus there is no obligation for submitting Request on the need for an environmental impact assessment.

JP "Putevi Srbije" submitted a request to the Institute for Nature Conservation of Serbia (INCS) in order to acquire the conditions under which the proposed design should be implemented. Acting on the request by JP "Putevi Srbije", the INCV issued a statement on conditions for nature protection 03 no. 020-1965/2 dated 17.08.2020. which states that the subject road section is not inside a protected natural area.

JP "Putevi Srbije" submitted a request to the Institute for Protection of Cultural Monuments Kraljevo (IPCMK) in order to acquire the conditions under which the proposed design

should be implemented. Acting on the request by JP "Putevi Srbije", IPCMK issued a statement on conditions for protection of cultural monuments no. 849/2 dated 29.09.2020. which states that there are no registered cultural goods on the subject section.

Upon receiving mentioned documentation (the conditions of the INCS and IPCMK), as well as based on the conditions set in the Environmental Management Plan, JP "Putevi Srbije" will ensure full implementation of environmental protection measures defined by the design and thus reduce the impact on local population and natural environment.

Lender requirements that are applied to this project of road rehabilitation include the following Policies:

- World Bank's Operational Policy for Environmental Impact Assessment (OP 4.01);
- Environmental and Social Policy, EBRD;
- European Investment Bank (EIB): Statement of Environmental and Social Principles and Standards (2008).

The World Bank and EIB require that the design complies with the Republic of Serbia national laws, EU standards and IFI's guidelines as noted above.

Baseline conditions assessed during route survey

The subject road section intended for rehabilitation is the part of the road that connects Ivanjica and Sjenica. The road section does not pass through any other settlement.

The section does not cross any larger water course. At the locations of intersections there are box and pipe culverts.

Based on the assessment of the existing state of the road drainage system, which is done by detailed visual inspection on the whole section it is concluded that culverts are in a good condition, except culverts that are part of supporting walls which have to be demolished and rebuilt. Only local interventions-sanations at the inlet-outlet parts are necessary. Their stability and load capacity are not in jeopardy. Most of the damages are characterized as surface, with coronation of the concrete due to weariness and aggressive acting of salt and frost.

Rehabilitation of existing and eventual construction of new objects of drainage system represents one of the most important measures, which would significantly improve drainage and consequently extend exploitation period of the road.

There are no significant noise sources, as well as air polluters.

There are no existing landfills or dumpsites in immediate vicinity of the road. Moreover, issued conditions from public institutions state that this road section is not inside a protected natural area, nor there are archaeological sites on the route.

Summary of Environmental Impacts

Due to the rehabilitation works involved, temporary negative impacts may occur at the location of the subject works, and may include interruption of traffic flow, decreased road safety, damages on access roads, dust and gas emissions and temporary disturbance of

residents of the neighboring areas (due to air pollution and increased noise pollution). Short-term biocenosis disturbance may occur, and potential pollution of soil and water. Works in the quarry, borrow-pits and asphalt plants are performed outside the site and may cause negative impact if not managed properly.

No relocation and resettlement issues are anticipated.

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 the 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 101/16). As for the potential pollution during operation, these are limited to accidents only, considering the very low concentration of pollutants in drainage water that may occur. In such a case, procedures for action in accidental situations, as defined by the Ministry of Interior and in the Water Law, will apply.

The road maintenance works will be performed entirely on public land, without any collision with private properties. Design does not require any land acquisition, resettlement or long-term disturbance of human activities.

If measures from the Mitigation Plan are properly applied, occurrence of cumulative effects will be prevented or reduced to minimum.

Environmental Management Plan

Possible environmental impacts will be mitigated during the design, heavy maintenance, and road operation phases (as shown in Appendix I, and within the EMP).

A basic assessment of the proposed road rehabilitation project concluded that the negative impacts will 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).

Before commencing the works, the Contractor will prepare a Contractor's Environmental Plan (CEP). During the rehabilitation, the Contractor will work according to the requirements of the 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 the JP "Putevi Srbije" for approval. 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 CEP 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 Republic of Serbia national laws, EU standards and Borrower requirements.

Stakeholder engagement - Information disclosure, consultations and public participation

The Performance Requirement 10 of the EBRD's Environmental and Social Policy identifies good international practice relating to ongoing stakeholder engagement as an on-going process which involves (i) public disclosure of appropriate information, (ii) meaningful consultation with stakeholders, and (iii) an effective procedure or mechanism by which people can make comments or raise grievances. The process of stakeholder engagement should begin at the earliest stage of project planning and continue throughout the life of the project. It is an integral part of the assessment, management and monitoring of environmental and social impacts and issues of the project.

This Performance Requirement is guided by the spirit, principles and ultimate goals on public disclosure and stakeholder engagement comprised in the United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters.

Participation of stakeholders is significant in order to understand the nature and intensity of social and environmental impacts, as well as proposed measures for their mitigation. Public consultation is one of the ways to get feedback from stakeholders and enhance involvement of the local community in design implementation. The stakeholders may use a complaint mechanism that is publicly available (see Appendix 4).

Summary of public disclosure process

Public discussion and presentation of the Environmental Management Plan shall be presented to stakeholders and comments will be addressed and conclusions presented in a Detailed Report on public consultation, which is part of this document (Appendix 4).

1. PROJECT DESCRIPTION

The purpose of preparing this technical documentation, in line with the Law on roads is securing the following:

- eliminate existing damages,
- eliminate the causes that led to damages,
- increase of value and durability of the road,
- improvement of road safety.

The technical documentation should envisage all the necessary works in order to provide efficient and safe traffic in the project period of 10 years.

Location Description

The subject section belongs to the Moravicki and Zlatiborski Administrative district, Municipalities of Ivajnica and Sjenica. The section in length of 61.336 km. belongs to the State Road of IB category no. 21 (old road mark R-117) („Official Gazette of RS“, No. 93/2015), and represents a part of the longitudinal traffic link through the Western part of Serbia.

The beginning of the section is defined in node 2133 Ivanjica. The roundabout in the node 2133 Ivanjica is not the subject of the Main Project. The end of the section is border between the Municipalities Ivanjica and Sjenica (app. chainage km 288+251) i.e. traffic sign which marks the end of maintenance section in charge of local Operater “Putevi Ivanjica”.

The subject part of the road (part of the section: Ivanjica-Sjenica) is 38,300 m long and belongs to the state road IB-21 (Novi Sad-irig-Ruma-Sabac-Koceljeva-Valjevo-Kosjeric-Pozega-Arilje-Ivanjica-Sjenica, total length of 311.287 km). The section 02135 Ivanjica-Sjenica, starting node 2133 Ivanjica and ending node 2134 Sjenica is 61.336 km long and the subject part belongs to the Moravicki district, i.e. Ivanjica municipality.

Rehabilitation works description

Based on performed analysis design solution for heavy maintenance of the existing flexible road construction of the state road IB-21, section: Ivanjica-Sjenica, km 249+951 - km 288+251

Existing road construction - design solution of reinforcement

Preparatory works on existing road

- Removal (scrapping) of existing asphalt layers d = 3-4 cm
- Cleaning of asphalt layer and spraying of surface with bituminous emulsion (400-500 g/m²)
- Installation of thermostable reinforcing net (tensile strength min

50kN/m)

Construction of new road layers

- layer BNS 22cA (BIT 50/70) d = 6 cm
- wearing layer made of RC 11c (BIT 50/70) d = 4 cm

Widening-new road construction

Preparatory works on existing road

- Removal of humus and unbound stone aggregate - sandy gravel from shoulders
- Cascade removal of layers of road construction (asphalt and unbound base) in full depth, width of min 0.7 m from the edge of the road.
- Preparation (compaction) of subgrade at the place of removed road construction ($E_{V2} \geq 50 \text{MPa}$)
- Installation of geocomposite (geonet+geotextile) tensile strength min 30kN/m

Construction of new layers of road

- Construction of layer of crushed stone aggregate 0/63mm, d=20 cm
($E_{V2} \geq 80 \text{MPa}$, $E_{V2}/E_{V1} \leq 2.4$)
- Construction of layer of crushed stone aggregate 0/31mm, d=15 cm
($E_{V2} \geq 100 \text{MPa}$, $E_{V2}/E_{V1} \leq 2.4$)
- Construction of leveling/bearing layer BNS 22C (BIT 50/70) d=5 cm
- Installation of thermostable reinforcing net (tensile strength min 50kN/m)
- Construction of bearing layer BNS 22C (BIT 50/70) d=6 cm
- Construction of wearing layer made of RC 11c (BIT 50/70) d=4 cm

Note 1: Design solution for the expansion envisages installation of geocomposite PVA geonet + PP non-woven geotextile) tensile strength 30kN/m, at the contact of subsoil (subgrade) and unbound lower layer of crushed stone aggregate 0/63 mm.

Note 2: Design solution envisages (before construction of reinforcement layers) installation of thermostable reinforcing net for reinforcement of asphalt in full profile (including eventual widening) in order to prevent unwanted impacts of existing damaged layer (cracks) to a new asphalt layer.

Note 3: Design solution on the part of widening the road construction is done by making a leveling/bearing layer of asphalt mixture BNS 22C, as a base for thermostable reinforcing net

Note 4: Design solution envisages making of wearing layer RC 11c and bearing layer BNS 22cA, in full profile, including eventual widening.

2. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

Relevant Institutions

The relevant Ministry of Environmental Protection of the Republic of Serbia is responsible for producing and implementing the environmental policy. Other relevant institutions are: JP "Putevi Srbije", Institute for Nature Conservation of Serbia (INCS) and Institute for Protection of Cultural Monuments Kraljevo (IPCMK).

At an early stage of the environmental and social assessment, the client will identify if any cultural heritage is likely to be adversely affected by the project, and assess the likelihood of any chance finds. In doing so, the client will consult with relevant authorities, experts, local communities and other stakeholders as appropriate.

Based on the outcomes of the screening process, location selection and design of the project should be done in such a manner to avoid significant impacts on cultural heritage. Where the screening process identifies potential adverse impacts at the early stages of project development, preference should be given to avoiding adverse impacts during the design and site selection phases.

JP "Putevi Srbije" have, in line with the IFI's policies, requested official opinions from all the relevant institutions.

JP "Putevi Srbije" submitted a request to the Institute for Protection of Cultural Monuments Kraljevo (IPCMK) in order to acquire the conditions under which the proposed design should be implemented. Acting on the request by JP "Putevi Srbije", IPCMK issued a statement on conditions for protection of cultural monuments no. 849/2 dated 29.09.2020. which states that there are no registered cultural goods on the subject section.

Next to the road Ivanjica-Sjenica there are several monuments raised in honor of fallen soldiers in World War I, as well as fountains built in honor of soldiers fallen in wars defending the country. Monuments and memorial sites are located on the following cadastral parcels: 2064 and 2065 CM Bedina Varos, 182/1, 234/2 and 4492 CM Rokci, 672 and 679 CM Opaljenik, 1658/1 CM Kusici. Monuments and memorial sites must not be endangered by construction works on the road section. They must not be a threat to neither their material state, nor static stability. If it is necessary to perform relocation of individual monuments in order to preserve them, a new request should be sent to the IPCMK with a suggestion of a new location, as well as a proof of resources needed for the relocation and conservation. The request also has to have permits and approvals of institutions in charge and interested public.

Along the road or its immediate surrounding there are areas where archaeological material has been found in the past. Archaeological legacy represents specific part of cultural legacy, and material remaining or structure is often underground and not visible during surface reconnaissance of the site. In order to avoid devastation of archaeological material and structures, it is necessary to provide archaeological supervision, if any works are performed on the following parcels. 1997, 1998 and 1999 CM Bedina Varos and 2842, 2843, 2844, 2845 and part of the parcel 2848/1 (which borders with above mentioned parcels), CM Ravna Gora.

If, during construction works, at the marked parcels, as well as on the remaining part of the route, Investor finds archaeological remainings from the past, he is obliged to abort the works and inform the IPCMK. If it is determined that the subject immovable or movable property is a cultural good, the expert supervision may temporarily stop the

works. In accordance with the type of the property IPCMK may define measure of continuous supervision and manual excavation or conducting protective archaeological excavations.

The investor of the construction works is due to secure the funds for research, protection, publication and display of the finding, until it is handed over to the authorized institution.

Existing Serbian legislation

The environmental laws and by-laws in force in the Republic of Serbia are summarized in Appendix 3.

EIA procedure in the Republic of Serbia

In the Republic of Serbia the procedure for Environmental Impact Assessment (EIA) is governed by the Law on Environmental Impact Assessment, which is fully in accordance with the European Directive 85/337/EEC. The project of road maintenance and road rehabilitation does not represent a subject of EIA, and it is not listed in the Regulation on establishing the list of projects requiring a mandatory impact assessment and list of projects that may require an EIA, thus there is no obligation for submitting Request on the need for an environmental impact assessment.

Relevant IFIs Policies and Statements

Lender requirements that are applied to this project of road rehabilitation include the following Policies:

- World Bank's Operational Policy for Environmental Impact Assessment (OP 4.01) which requires partial EIA to be made and a suitable Environmental Management Plan for Category B projects;
- Environmental and Social Policy, EBRD;
- European Investment Bank (EIB): Statement of Environmental and Social Principles and Standards (2008).

EBRD and EIB require that the project is conducted in line with the regulative of the Republic of Serbia and EU standards. However, according to the Serbian laws for this kind of investment there is no need for Environmental Management Plan and according to the World Bank guidelines, a partial EIA and EMP has to be done for every road section.

For Category B projects, where potential adverse future environmental and social impacts are typically site specific and/or readily identified and addressed through mitigation measures, the client will undertake an environmental and social assessment that is proportionate to the project's nature, size and location, as well as the characteristics of the potential impacts and risks. The assessment will characterise potential future adverse impacts associated with the project, identify potential improvement opportunities, and recommend any measures needed to avoid, or where avoidance is not possible, minimise and mitigate adverse impacts.

3. BASELINE CONDITIONS ASSESSED DURING ROUTE SURVEY

The subject section belongs to the Moravicki and Zlatiborski Administrative district, Municipalities of Ivajnica and Sjenica. The section in length of 61.336 km. belongs to the State Road of IB category no. 21 (old road mark R-117) („Official Gazette of RS“, No. 93/2015), and represents a part of the longitudinal traffic link through the Western part of Serbia. The subject section is a part of the RRSP planned for heavy maintenance during the fourth year of the Project implementation.



Picture 5. Part of the section outside of the settlement

Settlements

Municipality Ivanjica is located in mountain area, surrounded by Golija, Javor and Mucanj mountains. It is located at the southwestern part of Serbia and it covers Starovlaska-Raska highland, named “Moravicki kraj”. Ivanjica is the administrative, cultural and economic centre of the municipality, and together with the municipalities of Lučani, Čačak and Gornji Milanovac constitutes the Moravički Region.

The road leading to Arilje and Požega connects Ivanjica with the route leading to the Adriatic Sea and the Belgrade-Bar railroad. Taking the eastern direction from the same road, one reaches Guča and Čačak, and the road passing through Kaona leads further on to Kraljevo. On the other side, passing through Sjenica, the mountain road leads on to Novi Pazar and beyond, to the Ibarska magistrala regional road. Taking a different route from Sjenica, it is possible to reach Nova Varoš and Prijepolje and further south, all the way to Montenegro and the Adriatic Coast.

According to the 2011 census Ivanjica had 32,047 inhabitants (35,445 according to the 2002 census).

Municipality of Sjenica is located in Zlatiborski district. The center of the municipality is the city of Sjenica.

According to the 2011 census municipality Sjenica had 26,392 inhabitants in 101 settlements.

Watercourses and draining

Watercourses

The section does not cross any larger water course. At the locations of intersections there are box and pipe culverts.

Draining

Based on the assessment of the existing state of the road drainage system, which is done by detailed visual inspection on the whole section it is concluded that the existing poor condition of the road construction is a consequence of increased moisture in the subgrade and that the design solution of rehabilitation should include efficient water drainage measures.

Shoulders:

Shoulders are in most parts slightly denivelated, at some locations there are also evidences of water erosion (depth of channels larger than 5.0 cm) and therefore, no rehabilitation is necessary, but only routine maintenance.

Ditches (drainage canals).

At some locations both on left and right side of the road benefits of the routine maintenance should be checked. Ditches are covered in vegetation and filled with debris and they need a cleaning, while at some locations heavy maintenance or rehabilitation is necessary, in order to provide efficient drainage and removal of water from the road subgrade.

Gutters:

On the most part of the section there are notable structural damages on gutters, which may impact efficiency of drainage (water stands or overflows), therefore heavy maintenance of rehabilitation of gutters is necessary in order to provide efficient drainage of water.

Culverts:

Већина пропуста је обрасла високом вегетацијом, а на неким је дошло и до губитка материјала на крајевима, чиме је њихова функционалност у лошем стању, и у том смислу је неопходно појачано одржавање или рехабилитација пропуста ради обезбеђивања ефикаснијег отицања воде.

Most culverts are entrapped in high vegetation and at some parts there is loss of material at the ends, which worsens their functionality, therefore heavy maintenance or rehabilitation is necessary in order to provide efficient drainage of water.



Picture 6. Pipe culvert

Air

There are no significant additional sources of air pollution within the planned road section. No information on the measured air pollution values on the subject section was available.

On the basis of traffic counting performed in recent years (information available on JP "Putevi Srbije" website), no increase in the traffic volume is anticipated after heavy maintenance. In the road rehabilitation and operational phase, no increase in the air pollutants concentration is expected.

Noise

Based on the current and expected traffic loading during and after the works, no increase in the existing noise level is expected.

4. SUMMARY OF ENVIRONMENTAL IMPACTS

The next table lists in short the possible environmental impacts during the construction works.

Table 2. Impacts during construction works

INFLUENCE	SIGNIFICANCE	COMMENT
Impacts on land use and settlements	low	During the realization of the project, there will be no land expropriation
Ground and surface water	low	Due to low amount of water that can come to the recipient by drainage, the consequential impact is minimal to negligible. Technical documentation envisages no regulation of watercourses.
Air quality	low	Temporary impact during construction works
Flora and fauna (protected areas and species)	low	Technical documentation envisages no tree cutting. All the measures determined by the Institute for Nature Conservation of Serbia will be implemented during construction works. The INCV states that this project will have no negative effects on natural values of the area.
Monuments	low	Under the terms of the PIPCM
Noise	low	Temporary impact during construction works. The works are to be conducted only in daylight, in order to mitigate adverse effects on the population.
Access/crossing points of the main road and local roads	low	Without impact on existing crossing and access points
Soil 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
Workers health	Moderate	Danger from COVID-19
Cumulative impacts	Moderate/low	Temporary, rehabilitation works may cause a slight increase of noise levels and air pollutants concentrations during the works only

Most of the impacts on the environment are temporary and stops after the completion of works on heavy maintenance on the section Sombor (Ind.zone) - Kula. The project is classified as environmental category B, due to a small impact on the environment. After completion of the works, increase of road traffic is not anticipated, and potential increase of vehicle speed will be regulated through a safety design, by applying active and passive speed control measures.

Construction works are to be performed solely on public surfaces, without any interference with private property. In accordance with World Bank's Operational Policy of Involuntary

Resettlement (OP 4.12), this project does not require expropriation, resettlement or long-term impact on human activities.

EMP relates to the road rehabilitation phase and is part of the relevant agreement for implementation and future commitment of the Contractor. The following problems may occur during the rehabilitation works: disturbance in the traffic and movement of residents from local settlements, decreased road safety, damages on access roads, noise pollution, dust emission, inefficient waste disposal, air pollution, impact on the soil, water, flora and fauna. The works outside the site area, such as the works in a quarry, asphalt plant and borrow-pits may have local negative impact and must therefore be managed properly.

Overview of Key Impacts

EMP focuses more on the heavy maintenance phase, while activities on the regular maintenance will not be detailed in this EMP, but will only be presented in order to have an overall view of the situation.

Noise and Air Pollution in Residential Areas

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

Local air quality may experience some moderate and temporary deterioration due to dust from construction traffic and elevated levels of nitrogen oxide (NO_x) and sulphur oxide (SO_x) from construction equipment exhaust are the primary pollutants. The dust may settle on vegetation, crops, structures and buildings and can pose negative effects.

Noise caused by the rehabilitation works will be only a temporary impact. The construction works are to be conducted only in daylight, as defined by the Institute for Nature Conservation of Serbia. No increase of traffic density is expected after the rehabilitation, therefore no increase in the existing noise level is expected.

Possible ground and surface water pollution

During execution of works on construction of road and its subsequent operation, temporary or permanent pollution of ground and surface water may occur. This is particularly possible in cases of traffic accidents on highways when vehicles transporting oil derivatives and other hazardous substances are involved.

Impact during construction period

Pollution that occurs during the road construction period is not permanent. Upon completion of works, with implementation of adequate protective measures, these occurrences shall be reduced, and in time completely disperse. There is a certain number of activities which, during the construction period, may cause adverse impacts on water flow and quality:

- Construction works (deep excavations, removal of topsoil, and other). These may cause disturbance in natural course of replenishment, and at the same time, removal of topsoil and creation of new basins causes muddy or otherwise contaminated water to be quickly drained into ground and also surface waters.

- Construction machinery - potential danger from leaking or accidental spilling of oil and oil derivatives, disposal of lubricants and similar waste.
- Unrestrained depositing of excavated material, accommodation of construction machines or asphalt production plant in the vicinity of surface waters.
- Usage of inappropriate construction materials.
- Unregulated drainage of waste water from worker accommodation sites, where pollution may also occur from food preparation process and toilets.

Impacts during operation

Primary sources of pollution during road operation are as follows: vehicles, precipitations and dust.

During operation phase, it may well be expected that pollution of water shall result primarily from the following:

- settling of exhaust fumes;
- tire wear;
- chassis destruction and leaking of loads;
- load spilling;
- discarding of organic and inorganic waste;
- atmospheric precipitation;
- pollution brought by wind;
- dispelling through passage of vehicles.

Pollution resulting from the aforementioned occurrences may be temporary, seasonal or accidental.

Permanent pollution is primarily related to scope, structure and characteristics of the traffic flow. Permanent sedimentation of dangerous substances on road surface and service elements of the cross sections results from traffic flow, and are washed away with precipitations. Primarily, those dangerous substances come from exhaust fumes, oil and lubricants, tire and road surface wear, chassis destruction etc.

Seasonal pollution is related to specific seasons. Typical example of this kind of pollution is usage of industrial salt during winter months. This type of pollution is characterized by large concentration of sodium and calcium salts which occur in a very short period of time (spreading of salt on road surface and consequences of melting).

Accidental pollution generally occurs during transportation of hazardous materials. Most often, it is oil and its derivatives, though also vehicles transporting some extremely dangerous chemical substances sometimes break down. The main problem in these cases is that usually they are in very high concentration, and cannot be predicted neither in time or location. This results in the fact that very wide belts have to be protected, mostly in water supply areas, but often cat. I and II surface water.

Types of pollution and form of presence

In water drained from road surfaces, there is a vast number of harmful substances present, and their concentration is often above limits determined for direct discharge into watercourses. Usually those are fuel components such as hydrocarbon, organic and

inorganic carbon, nitrogen compounds (nitrates, nitrites, ammonia and nitrogen oxides). Heavy metals that may be found here are: lead (as fuel additive), cadmium, copper, zinc, mercury, chromium and nickel.

Table 3. Sources of pollution and typical pollutants found in storm waste waters drained from the road surface.

Pollutants	Sources of pollution
Solid particles	Road surface wear, vehicles, atmosphere and road maintenance
Nitrogen and phosphorus	Atmosphere and fertilizers
Lead	Lead as tetramethyl lead from exhaust fumes, tire wear
Zinc	Tire wear, engine oil and lubricants
Iron	Rust from vehicles, metal structures on the road (bridges, bumpers), movable engine parts
Copper	Metal protective coatings, wear of engine bearings and brushes, movable engine parts, wear of brake linings, fungicides and insecticides
Cadmium	Tire wear and pesticides
Chrome	Metal protective coatings, movable engine parts, wear of brake linings
Nickel	Diesel fuel and petrol, lubricants, metal protective coating, wear of brake linings and asphalt surfaces
Vanadium	Fuel additives
Titanium	Paint for road surface marking
Manganese	Movable engine parts
Sodium - calciumchloride	Salts for defrosting
Sulfates	Roadbed, fuel and salts for defrosting
Oil and oil derivatives	Spraying and leaking of fuel, antifreeze, hydraulic oils, wetting of asphalt surface

Degree of vulnerability of surface and ground water quality in cases of accidents cannot be quantified, since they are individual cases separated in time and space. In line with assessments stated above an evaluation has been prepared on pollutant quantities which occur during operation of the road, for traffic loads in the project period, and the obtained results are shown in the form of a table. In the second column of the Table no.4 quantity of pollutant during one year for relevant traffic load (8700 vehicles per year) is given. Quantities of substances emitted by motor vehicles during one year, per one hectare of road surface for relevant traffic load (8700 vehicles per year) and for estimated traffic, as well as total quantity of pollutants on highway are also shown in Table no.4.

Near the subject traffic section 02135 there are three automatic traffic counters: 1048 "Bukovica", 1054 "Sjenica 1" and 1055 "Sjenica 2". Calibration, i.e. bringing the counted traffic to the PGDS value is conducted based on the comparison of traffic counting on the automatic counter 1055 "Sjenica 2", due to the closest scope and structure of the traffic. Values from the same week last year (24.08.2019.-31.08.2019.) are compared with PGDS for year 2019. PGDS for 2019 was 878 vehicles/day, while average weekly day traffic from 24.08.2019.-31.08.2019. was 1133 vehicles/day. Dividing this two values gives calibration factor of 0.7749. Multiplying counted PGDS of 1648 vehicles/day with calibration factor gives the relevant value of PGDS for 2020, which is 1277 vehicles/day. Share of vehicle categories for 2020 is different than in previous year, due to COVID-19 pandemic and the fact that in order to keep social distance, people have used cars more

than public transport. This is the reason why share of vehicle categories was taken from year 2019, when automatic counting was only occasionally conducted.

Table 4. Estimated quantity of pollutants in storm waste waters, draining from road surface, for traffic load in the designed period

Substance	Referent values (kg/ha/yr)	Emitted quantities per area unit on highway section (kg/ha/god)	Estimated concentration of pollutants in storm waste waters from 1 ha of road surface (mg/l)	MAC ¹⁾ (mg/l)
Suspended particles	145	30	0,003	30
BOD	6,5	1,35	$1,42 \times 10^{-4}$	4,0
COD	49	10	0,001	12,0
Nitrates	0,98	0,2	$2,14 \times 10^{-5}$	10
Total phosphorus	0,13	0,027	$2,85 \times 10^{-6}$	
Oil and grease	2,25	0,47	5×10^{-5}	0,05
Copper	0,01	0,002	$2,2 \times 10^{-7}$	0,1
Lead	0,082	0,017	$1,8 \times 10^{-6}$	0,05
Zinc	0,079	0,016	$1,73 \times 10^{-6}$	0,2

¹⁾MAC-Maximum Allowed Concentration of pollutant

On the basis of spatial, engineering-geological, hydro-geological characteristics and estimated concentration of pollutants in storm waste water (shown in Table no.4), it may be concluded that during operation of the planned road section pollution of surface and ground waters will not occur in case storm water is discharged without regulation and previous treatment.

Possible soil pollution

With regard to impact on soil, there are two important phases - road construction and operation phase.

Also, there are two aspects of degradation caused by road construction: soil pollution and soil degradation.

In this phase, soil pollution may occur due to improper handling of oil and oil derivatives used for construction machines and other plants during road construction, cleaning of vehicles and mechanization outside envisaged and equipped areas, poor site development and other activities not executed in accordance with recommendations for technical protection during construction.

During road construction, issues related to impacts on soil (degradation) is mainly reflected in need for transport of huge amounts of construction material, and for formation of borrow pits and dump sites. Another important factor in this phase is the inevitable requirement for topsoiling of large areas. The topsoiling process is characterized by significant mechanical stabilization in the roadbed and on locations where temporary access roads are constructed, which may have impact (at particularly sensitive locations) on a whole range of soil parameters, primarily on soil permeability, air content etc.

Considering the scope of planned works, assumption can be made that the Contractor will have no need for formation of special area for vehicle washing and base for workers, therefore no significant impact is expected during construction period.

During road operation pollution of soil shall mostly result from the following occurrences: pollution of storm water from road surface, exhaust fumes residue, organic and inorganic waste disposal, spilling of load, accumulation of particles brought by wind, dispersal due to vehicle movement.

Among other elements, pollution is mostly related to

- road drainage system;
- traffic load and structure of traffic flow;
- configuration of surrounding terrain and its forestation;
- pollution of soil from spraying from passing vehicles is restricted to a narrow belt along the road edge;
- spilling of material from carriageway during dry periods due to air current from passing vehicles is also restricted to a narrow belt along the road edge;
- accumulation from air is present at even few hundred meter distances; at the moment it cannot be defined, nor can any regularity be found in order to quantify this occurrence.

Based on foreseen traffic density for this road section, conclusion is made that there will not be significant increase of pollutants in soil during the road operation.

Potential impact on flora

This kind of projects may have adverse impact on local flora, during construction works. These impacts include breaking of branches, removal of tree bark with construction machines, damages to root system, etc. Technical documentation envisages no tree cutting. Activities include only cutting and removal of shrubbery located inside the road parcel and that impose a security threat. The road intendand is obliged to remove this kind of vegetation on a regular basis, in order to provide safe road trip.

COVID-19

As an answer to the global crises caused by epidemics caused by virus COVID-19, EIB has developed a guideline for project promoters, which should help them continue their projects with previously determined dynamic.

COVID-19 presents many challenges to public and private sector promoters alike. These include inter alia(i) providing safe working conditions for employees, (ii) addressing the risk of infection to the community when this is caused or exacerbated by the project, (iii) putting in place alternative mechanisms to facilitate stakeholder engagement, (iv) protecting jobs and supporting those who cannot work, (v) ensuring business continuity, (vi) being able to deal with rapidly changing national regulations and policies in response to COVID-19, and (vii) maintaining the development and construction schedule of the project, organization of the construction site and management of global supply chains.

In the context of the COVID-19 outbreak, promoters are required to undertake adequate measures (defined by WHO) in order to prevent and respond to the infection.

Potential Cumulative Impacts

The subject project will not result in any cumulative impacts. The proper implementation of the EMP would minimize any impact on local human and biotic environment that might be related with any long-term cumulative negative effects.

Other Impacts:

- Social impacts: in the construction phase, these include all social-economic conflicts, including health and safety. All temporary locations used for activities that have short-term impact are included, such as quarries and borrow-pits, locations for stockpiling surplus soil and asphalt plants are included in this. Impact of these types of activities is expected to cease when the Project is ended and the Contractor leaves the subject location;
- Solid waste: activities on the heavy road maintenance are expected to generate a certain amount of solid waste, which is collected on site and transported onto a landfill (determined by the local community in agreement with the contractors), outside the construction site.

5. ENVIRONMENTAL MANAGEMENT PLAN

Environmental impacts of the project for heavy maintenance on the state road IB-21, section Ivanjica-Sjenica will be insignificant and reversible. Mitigation measures provided in the EMP, relating to the design, construction and operational phase, must be carried out appropriately. EMP consists of the Mitigation Plan and Monitoring Plan and is based on the types of environmental impact, their scope and duration. JP "Putevi Srbije" manages the design, supervision and the Contractor in the implementation of EMP.

A. Mitigation plan

The Environmental Mitigation Plan defines the environmental impacts and measures to be implemented during the design, construction and operational phase (Appendix 1). The Plan conforms to the conditions received from the Institute for Nature Conservation of Vojvodina Province and Provincial Institute for the Protection of Cultural Monuments and valid laws. It states the locations, time frame, responsibility for its implementation and supervision. Costs of mitigation measures are included in the cost of the works. Contractor shall implement the environmental mitigation measures, include them in the total costs, and execute the works in accordance with national laws, EU standards and creditor's requests.

Protection measures – flora

Consider all the relevant measures during construction works regarding protection of trees along the road, in order to avoid any damages.

Protection measures – noise

In order to protect the local population, no construction work is to be done during night, as defined by the conditions issued by the Institute for Nature Conservation of Serbia

Site organization

Contractor shall carry out and follow the Site Organization Plan. Conditions issued by the INCV shall be included in the Site Organization Plan. Location of the facilities (warehouses, workshops, asphalt and concrete plant etc.) shall be approved by a Resident Engineer. The following conditions have to be met when selecting the location and organizing the site:

- Temporary locations for storing the construction and other material and equipment must be outside the area with high vegetation and river flood areas and limited only to the duration of the works;
- Temporary or permanent locations must be provided (the existing organized communal facilities/ landfills) for disposal and tipping of debris and other waste material in any form and communal waste produced during the works. Waste disposal/ dumping into watercourses shall be prohibited, as well as at the unorganized local waste dumps;
- After the completion of the works, all areas that have been degraded in any way by road rehabilitation works must be rehabilitated as soon as possible;
- During the works, the planned road sections and corridors around it must be followed, so that the earthworks and machinery do not affect the surrounding

areas. Also, the existing road network must be used, without building new roads, to prevent habitat fragmentation;

- During the road works directly along the watercourses, river bed, river bank and littoral vegetation must be preserved as much as possible;
- Vehicle and machinery servicing on the road section shall be prohibited. In the event of a road traffic accident resulting in oil or service fluids spillage, the road area must be cleaned and reinstated;
- On the parts where the section is located in a populated area the works must be performed only during the day, to minimize the impact of noise on local residents;
- Guardrails and pedestrian crossings must be placed where necessary;
- Locations for containers for temporary tipping of communal waste produced during the works must be determined;
- The area for Contractor's facilities must be of the smallest possible size, to avoid unnecessary removal of vegetation. All facilities must be fenced;
- Appropriate drainage of the site must be provided. Locations used for car parking, workshops and fuel storages must be drained toward the oil-water separator;
- Only trained workers, who can remove any consequences of accidental spillage, may handle the fuel;
- Waste oil, oil filters and fuel must be stored on safe locations.
- Sanitary wastewater and polluted water must be discharged into waterproof pits or treated before the water is discharged into the surface water flow system, in line with the Law on Water (RS Official Gazette of RS, No 30/10, 93/12, 101/16, 95/2018, 95/2018-other law);
- Contractor must provide safety measures to prevent soil erosion and use the methods to decrease the stormwater runoff that carries eroded material;
- Excavations and machinery works must be avoided when the soil is damp;
- Upon the completion of works, machinery, construction material, containers and all other equipment must be removed in due time;
- When the site is ready to be closed, all contaminated soil must be excavated and replaced with a new layer of soil;
- Upon the completion of works, the soil must be cultivated on all the critical locations, using suitable plants which are biologically adapted to the subject climatic conditions, resistant to air pollution and visually fitting for the surrounding area. Invasive species, such as the black locust, Indigo bush, ash leaf maple, ailanthus, American ash and species that cause allergic reactions, such as poplar, should be avoided.
- in case of an accident, notify Ministry of Environmental Protection and act according to instructions from the inspection in charge.

JP "Putevi Srbije" is responsible for checking, via its Supervision Consultant, if the Site Organization Plan includes the requirements from EMP and Safety Labor Management Plan (SLMP).

Protection measures – surface and ground water

Following water protection measures should be envisaged:

- During the road works directly along the watercourses, river bed, river bank and littoral vegetation must be preserved as much as possible;

- Appropriate drainage of the site must be provided. Locations used for car parking, workshops and fuel storages must be drained toward the oil-water separator;
- Sanitary wastewater and polluted water must be discharged into waterproof pits or treated before the water is discharged into the surface water flow system, in line with the Law on Water (RS Official Gazette of RS, No 30/10, 93/12 and 101/16);
- in case of an accident, notify Ministry of Environmental Protection and act according to instructions from the inspection in charge.

Technical documentation envisages no regulation of watercourses.

On the basis of spatial, engineering-geological, hydro-geological characteristics and estimated concentration of pollutants in storm waste water (shown in Table no.4), it may be concluded that during operation of the planned road section pollution of surface and ground waters will not occur in case storm water is discharged without regulation and previous treatment.

Protection measures against COVID-19

The following basic infection prevention measures can help the containment of the spread of the disease and protect the workers and the public:

- promote regular and thorough hand-washing by employees, contractors and customers;
- discourage touching the mouth, nose and eyes;
- provide and enforce the use of Personal Protective Equipment (PPE), ensuring that there are adequate facilities to use and dispose safely of it and that staff have been properly trained on how to use and dispose of PPE. Ensure that PPE is suited to both male and female body types;
- promote social distancing;
- make sure workplaces are clean and hygienic, and regularly disinfect surfaces (such as doors, elevator buttons, floors and desks) and objects (such as telephones, keyboards and machinery);
- promote shift working where possible;
- require quarantine measures for incoming expatriate workers;

Specific prevention measures for construction sites:

Ensure physical distancing, by:

- staggering start times;
- staggering breaks;
- staggering lunches;
- restricting the number of people on-site and where they are assigned to work;
- controlling site movement (by limiting the potential for workers to gather, including personnel in material hoists and site trailers);
- holding meetings in an outside or large space to enable physical distancing;
- limiting unnecessary on-site contact between workers, and between workers and outside service providers, and encourage physical distancing in these areas (for example, by removing coffee trucks from site).

Focus attention on hygienic conditions of on-site sanitation:

- access to soap and water or alcohol-based hand sanitizer;
- washroom facilities;
- sanitizing commonly touched surfaces or areas (hoists, site trailers, door handles, machinery);
- avoiding the sharing of hand tools and power tools. If sharing is necessary, enable sanitation of shared equipment;
- posting signage on hygiene in local language as well as in the majority workplace language so everyone can understand how to do their part.

In case someone becomes ill with suspected COVID-19 at the workplace:

- put the ill person in a room or area where they are isolated from others in the workplace, limiting the number of people who have contact with the sick person
- contact the local health authorities
- identify the closest contacts with suspected COVID-19 person.

Contractor's Environmental Protection Plan

Based on the EMP, the Contractor shall prepare his Environmental Protection Plan and submit it to JP "Putevi Srbije" for approval, and by the financier. Contractor shall be obligated to follow and to implement the plan with continuous supervision of plan implementation by consultant for supervision of road rehabilitation works at the site.

The contractor is required to have a qualified and experienced person in the team, which will be responsible for coherence between the works, the environment and the EMP. JP "Putevi Srbije" will independently monitor the works, and if any irregularity is noticed, it will be transmitted to continuously present Supervision, and The Contractor will be requested to rectify such irregularities.

Contractor's Environmental Protection Plan consists of the following:

1. *Site Management Plan* – defines the procedures for setting up and functioning of a site with a view to preserving the local community and natural resources.
2. *Site Organization Plan* – description and arrangement of areas, with maintenance equipment and oil and lubricant storage facilities, including the distance from water areas;
3. *Oil and Fuel Storage Management Plan* – procedures for storing, transporting and using oil and fuel, refueling the facilities and machines, procedures for decreasing the risk of water and soil pollution. Vehicles used for refueling will have the suitable equipment used for cleaning fuel spills. All classes of spills will be reported in line with the Plan;
4. *Waste Management Plan* – contains details of temporary waste storage, waste transport and treatment before its final disposal or recycling. Licensed facilities must be used for storing solid and liquid waste and the waste leaving the site must be traceable, in accordance with the jurisdictions. As part of the Plan, Contractor shall provide chain-of-responsibility forms for the waste that leaves the site. Therefore, waste controller shall keep one copy of the form, and the driver shall

- have a copy, to make sure that all the listed waste is brought to the landfill. Contractor shall keep all records for audit purposes.
5. *Sewerage and Waste Water Management Plan*
 6. *Soil Management Plan* – steps to be taken to minimize the effect of erosion, measures to reduce topsoil depletion, transport roads and landfills;
 7. *Noise* – all the equipment must have a license and must be approved in accordance with the EU standards. This applies to all machinery, vehicles and sites where noise and vibrations affect the noise-sensitive receptors. In accordance with the Law on Protection against Environmental Noise ("Official Gazette of RS", no. 36/09, 88/10), Contractor is responsible for ensuring the noise and vibrations do not affect the local community. Contractor shall limit his works to a period from 07:00 am to 07:00 pm.
 8. *Dust Emission Reduction Plan* – during the works, when dust may form, Contractor shall monitor the conditions on site and application of measures to control dust emissions, which include reduced traffic during road rehabilitation works and spraying water on the exposed surfaces;
 9. *Material Excavation and Extraction Location Plan* – defines the reparation measures to be implemented for the areas of borrow-pits and access roads after the project is finished;
 10. *Management Plan for Works on the River* – includes plans and procedures for water habitat and fish preservation during the works.
 11. *Emergency Response Plan* – sets out the procedures for reacting in case of emergency or accidents of a bigger or smaller scale, to protect the people, property and natural resources. Equipment to be brought on site to minimize the effects of the spillage of polluting substances must be included in the Plan.
 12. *Recultivation Plan* – cleaning and recultivation of the site and removal of Contractor's facilities. Contractor is responsible for clearing the site. This includes the removal of all waste material, machinery and contaminated soil. In line with the Law on Waste Management ("Official Gazette of RS", no. 36/09, 88/10, 14/10), Contractor shall develop a plan for handover, selling or removal of all vehicles and machinery, to remove them from site. All site and work areas will be rehabilitated, in order to be reinstated as much as possible. This includes stabilization and landscaping of all sites. In line with the Law on Environmental Protection ("Official Gazette of RS", no. 135/04, 36/09, 72/09,43/11, 14/16), after the works are completed, waste must not remain on site. If waste is not removed by the Contractor, JP "Putevi Srbije" is entitled to withhold payment and organize the cleaning of the area. The costs of the cleaning and the administrative costs will be included in the final payment.
 13. *Plan of Environmental Complaints* – means used by the local residents and third parties affected by the project to call attention to environmental issues and file a complaint, defining how and to whom these should be addressed (Appendix 4, Grievance Mechanism);

Safety

Contractor should identify potential risks before the commencement of works. The emergency response provisions should include a Site Safety Plan, which includes a proposal for a contact person available in the event of an accident. Site Safety Plan is submitted to the Project Supervision Consultant for approval.

- Contractor shall ensure that drugs and alcohol are not used on site;
- Contractor is to include in his Site Safety Plan a provision for safe working environment and safety measures and personal protective equipment (PPE)

for all workers, including gloves, hard hats, goggles, ear protection and safety footwear;

- Site Safety Plan is to include a provision for first aid to be administered on site and a trained person must be engaged in line with the Law on Occupational Health and Safety ("Official Gazette of RS", no. 101/05, 91/15);
- Contractor shall provide to his workers potable water supply, toilets and water supply for washing;
- Safety Labour Management Plan is required to ensure health and safety provisions during the works on heavy maintenance;
- Contractor shall perform all project activities following the SLMP and all Serbian laws and by-laws regarding health and safety;

JP "Putevi Srbije" and the Contractor are jointly responsible for reporting on and investigating any incidents.

Due to the increased number of vehicles on the roads through populated places, safety of local residents must be considered. Contractor shall ensure that the traffic passing through populated places is managed safely. Contractor shall provide the following:

- Safe maintenance of all trucks and equipment;
- Appropriate training and responsible behaviour of all drivers and machine operators (prescribed in the Contractor's Site Safety Plan);
- Ensuring that all the truck load which may create dust emissions is covered and secured (e.g. excavated soil and sand);
- Safety and instant removal from site of the drivers who disregard any of the conditions regarding the safety of the local community;
- Obeying speed limits;

Before the works start, Contractor shall submit all the above listed plans to JP "Putevi Srbije" for their approval. After the works are completed Contractor shall reinstate the location into its original condition.

Operational Phase

In the road operational phase, special attention must be paid to safety of pedestrians, by using measures for traffic calming in the vicinity of schools and populated areas, improving road signs and markings, keeping a record of traffic accidents that are recurring on some locations, and marking them as black spots.

Regular road maintenance consists of the following: grass mowing, cleaning the drainage system, road patching and various repairs and regular checks and maintenance of drainage structures. Seasonal maintenance, regular maintenance of safety characteristics and road signs shall be performed as needed. Primary road maintenance, which includes asphaltting and major repairs, is usually planned for a period of a few years.

B. Monitoring plan

Basic components of the Monitoring Plan are:

- Environmental issue to be monitored and means of verification;
- Specific areas, locations and parameters to be monitored;
- Valid standards and criteria;

- Monitoring noise levels near populated areas;
- Monitoring material supply (verification of valid licenses);
- Duration, frequency and evaluation of monitoring costs;
- Institutional responsibility for monitoring and supervision.

A monitoring control list is prepared on the basis of EMP and Monitoring Plan (Appendix 2). The list is used by the supervision engineer on site. Signed control lists are submitted to JP "Putevi Srbije", which is responsible for compliance monitoring and reporting. JP "Putevi Srbije" will have a Database of grievances, listing the information on complaints received from local communities and other interested parties. This includes: type of grievance, place, time, actions to be taken to resolve the grievance and the final outcome.

C. Institutional implementation and reporting arrangements

Project Implementation

JP "Putevi Srbije" is the institution responsible for implementing the project in accordance with the EMP and Monitoring Plan. Day-to-day project implementation and monitoring its compliance is the responsibility of the Project Supervision Consultant.

Contractor will provide the results of "zero monitoring" prior to the start of the works, during the mobilization stage. Project Proponent shall do the following to ensure that the Contractor implements the proposed mitigation measures in the construction phase:

- Contractor shall prepare Contractor's Environmental Protection Plan and take all steps to mitigate ecological effects as stated in the Environmental Mitigation Plan (Appendix 1);
- Contractor should not be compensated for the costs of the required mitigation measures and monitoring activities in the form of a specific item in the total price, except for the analysis of the quality of water and noise measuring. Contractor will be deemed to have included these costs in the total price. The actual costs of the analysis of water quality and noise measuring will be paid to the Contractor as part of a specific item in the total price. Failure to follow the requested environmental mitigation measures on the Contractor's part will result in penalizing the Contractor in the form of negative points. Negative points have been established as a measure to stimulate the Contractor to perform his obligations in an organized and timely manner and perform his duty with a high degree of excellence. Negative points consist of two elements – numerical and financial. Each negative point is connected to a sum, representing a permanent reduction in payment for the determined non-conformances in contractual obligations. The number of negative points earned has a cumulative effect. Should the Contractor receive more than a certain number of negative points stated in the Contract, he will not be allowed to participate in JP "Putevi Srbije" tenders in the next two years. Also, if the Contractor is awarded a certain number of negative points, the employer has the right to break the contract. Monetary value of each negative point and the deadlines for other possible actions by the employer must be clearly stated in the contract. Explanation for the application of these two measures – fees for specific costs and penalties for non-compliance should provide the implementation of all the requested environmental mitigation measures and monitoring activities.

- Contractor must be explicitly requested to employ an environmental expert. Contractor will be responsible for implementing environmental mitigation measures during road rehabilitation works and should employ an environmental specialist who will supervise the implementation of Contractor's environmental responsibilities. This person will coordinate the work of the Contractor, JP "Putevi Srbije" and the relevant ministry and will deal with every complaint received during the project implementation. In the course of the project, JP "Putevi Srbije" will monitor if the Contractor complies with EMP provisions. Project Supervision Consultant is advised to employ an environmental expert (with knowledge of civil engineering and environmental management), to assist in environmental monitoring.

When the project is completed, PE "Roads of Serbia" will be responsible for the operation and maintenance of roads. Routine and random monitoring will be undertaken as scheduled in the Monitoring Plan.

JP "Putevi Srbije" shall also be responsible for the following:

- Implementation of the requests for environmental protection provided by: State environmental authorities, IFIs and other institutions, Law on Environmental Protection ("Official Gazette of RS", no. 135/04, 36/09, 72/09, 43/11, 14/16);
- Implementation of the requests for environmental protection through Contractor's specifications;
- Project supervision via consulting services for supervision and project implementation;
- Environmental monitoring supervision via consulting services for environmental monitoring;
- Preparation of final environmental reports.

Before the start of the road rehabilitation works, the Contractor will provide a proposal for environmental protection, including the safety of persons involved with the works, as part of the EMP. The proposal will be reviewed by JP "Putevi Srbije" for acceptance. With respect to that, particular emphasis must be placed on:

- Taking all reasonable steps to protect the environment during the commencement and completion of site works, so as to avoid damage of property or disturbance to the people, resulting from the existence of a site;
- Maintaining safe conditions for all persons entitled to be on site;
- Providing lighting, security guard, fences, warning signs and traffic controls, aiming to protect the works and other property, but also public safety and interest.

MoEP will have the authority to stop the works directly if the performance is not in line with the environmental standards and regulations. The inspection will then inform JP "Putevi Srbije" about the suspension. The Design will be amended subsequently with public disclosure feedback.

The Contractor Reporting Arrangements

1. Contractor to JP “Putevi Srbije”

Contractor will prepare his compliance reports in respect to EMP and Contractor’s Project Implementation Plan as quarterly progress reports and will submit them to JP “Putevi Srbije” in English and Serbian, both in hard copy and in electronic copy.

Contractor will provide quarterly reports to JP “Putevi Srbije” which document environmental mitigation measures, together with the prescribed monitoring activities performed in the reporting period. Contractor will take due care of the quality of the environment, in accordance with Mitigation Plan and Monitoring Plan, which form an integral part of the EMP and will provide quarterly reports to JP “Putevi Srbije”.

In the event of any accidents or environmental threats, there will be immediate reporting about these events. Contractor shall inform the project manager and local authorities immediately after the accident. If the project manager is not available, Contractor shall inform JP “Putevi Srbije” about the accident (phone number 0800 100 104 or by e-mail: info.centar@putevi-srbije.rs).

Contractor shall monitor the quality of the environment in line with the Monitoring Plan which is an integral part of the EMP and will report to JP “Putevi Srbije” on quarterly basis. These reports will include a list and details of all the activities performed on the location and the results of on-site investigation, in addition to the recommendations for future site activities and safeguard measures.

2. Project Supervisor Consultant to JP “Putevi Srbije”

Conclusions of regular monitoring activities, including the activities stated in the Monitoring Plan, performed by the Contractor, will be included in the quarterly progress report.

In the case of an accident or environmental threat, these events must be reported immediately.

3. JP “Putevi Srbije” – MoCTI – EBRD

Annual Health and Safety and Environmental Report, including the indicators for monitoring and reporting on the implementation of the conditions established in the EMP will be prepared by JP “Putevi Srbije” and submitted to EBRD for their consideration. EBRD will review the reports and verify their content in periodic site visits. JP “Putevi Srbije” will provide annual reports to the MoCTI and EBRD regarding the status of the Contractor’s implementation of mitigation measures, additional mitigation measures to be realized, cases of non-compliance, complaints received from the local residents, NGOs etc. and the manner in which they were addressed.

In the event of any lethal or major incidents on site, JP “Putevi Srbije” will immediately report those to the Bank that finances the section of the road.

6. STAKEHOLDER ENGAGEMENT - INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

As requested by EBRD's Environmental and Social Policy, public consultations were held in the EMP preparation. EMP and other project-related information were disclosed to the public and made available to the local community.

JP "Putevi Srbije" office	Kralja Aleksandra Blvd. 282, Belgrade tel: +381 11 30 40 700 fax: +381 11 30 40 699
Local community centers	www.sjenica.com www.ivanjica.gov.rs
Web site – JP "Putevi Srbije"	www.putevi-srbije.rs

A detailed report on the public consultation process is shown in Appendix 4 to this document and contains a list of participants identified, which will be updated accordingly.

Consultation with users will be made during the road rehabilitation stage, while all the records of environmental and social issues, complaints received during consultation, site visits, informal discussions, formal reports etc. will be monitored, recorded and kept in JP "Putevi Srbije" project office.

Before the start of the works, JP "Putevi Srbije" will provide information using the following:

- Newspaper articles in one of the national and one of the local media,
- Posters on the main notice board in all local community offices of communities potentially at risk,
- Radio announcements on traffic diversions,
- Providing contact with the person responsible and nominated for working with the local communities.

A grievance mechanism will be implemented to ensure that the complaints from local communities are appropriately addressed, corrective measures taken and complainants informed about the outcome. This applies to the complaints of all interested parties. The complaint form is shown in the Appendix 4, while hard copies will be available in local community centers.

The Report on Public Consultation is presented in Appendix 4 to this EMP.

7. REFERENCES

- Environmental Assessment No 25, Environmental Management Plans, World Bank Environment Department, January 1999.
- Environmental and Social Policy, EBRD, 2014.
- The EIB Statement of Environmental and Social Principles and Standards, 2009.;
- Environmental and Social Standards, EIB, 2018.;
- Environmental Management Framework Document, PE “Roads of Serbia”, 2013.
- Technical Guidelines – Environmental Impact Assessment in road sector, PE “Roads of Serbia”, 2011.
- Environmental Impact Assessment within the road sector, PE “Roads of Serbia”, 2009.
- Guidance note to EIB promoters On environmental and social performance in EIB-financed operations in response to the COVID-19 outbreak crisis, May 2020.

APPENDICES

Appendix 1 MITIGATION PLAN

MITIGATION PLAN

Phase	Issue	Mitigation measure	Institutional responsibility	
			Implementation	Supervision
Pre-construction	Technical Documentation			
	Technical documentation in conflict with EMP	The Designer is obliged to make design documentation in line with EMP	Designer	Technical control / JP "Putevi Srbije"
	Following the environmental protection procedure	Conditions from the Institute for Nature Conservation of Vojvodina Province and Provincial Institute for the Protection of Cultural Monuments are obtained to avoid environmental risks	JP "Putevi Srbije" and Designer-Consultant	JP "Putevi Srbije"
	Site location and organisation will be approved by JP "Putevi Srbije" and selected so as to:	<ul style="list-style-type: none"> - be outside of the river banks of watercourses in the vicinity - have no impact on the environment and the local community (noise, dust, vibrations etc.) - be outside the high vegetation area - minimise the size of the facilities to minimise the unnecessary removal of vegetation - have the sanitary waste water discharged into waterproof tanks or treated before the water is discharged into the surface water system, in accordance with the Law on Water ("Official Gazette of RS", no. 30/2010, 93/2012, 101/2016, 95/2018 and 95/2018 - other law) - properly drain the locations. Paved areas, including parking areas, workshops and fuel storages must be drained toward an oil-water separator - whenever possible, limit the area to be cleared and avoid topsoil degradation - the material removed will be collected, disposed and/ or re-used as needed - prevent soil erosion on site - contractor is responsible for implementing the measures for erosion protection - contractor shall limit the scope of the excavations to mitigate soil 	JP "Putevi Srbije" Contractor	JP "Putevi Srbije"

Phase	Issue	Mitigation measure	Institutional responsibility	
			Implementation	Supervision
		erosion - contractor shall implement soil conservation method in sensitive areas to prevent or minimize the storm water runoff, which causes material erosion - contractor is to avoid excavation and machine operations in damp site conditions.		
	Selection of the location for temporary settlement construction, in the vicinity of or within an existing settlement Influence on public health and sociological circumstances	- minimum distance must be kept (buffer zone) between the site and the nearest populated area - influence of the local conditions must be accounted for (wind) to avoid or minimise harmful effects -contractor's EMP defines health and safety and environmental measures - independent water and electricity supply, in addition to a medical service station on site must be planned for. - apply the measures for prevention of infection spreading given in EMP	Contractor	JP "Putevi Srbije"
	Road safety issues associated with pedestrian crossing	Plan for safe and adequate pedestrian crossing facilities that can be in most cases over passages equipped with ramps and structures that allow the use of wheelchairs, pushcarts, bicycles and prams.	Designer-Consultant	Technical control / JP "Putevi Srbije"
	Stakeholder engagement	Details of the proposed road route, access points and safety features will be disclosed at the location of the planned works. Feedback from local stakeholders will be sought and recorded. Evidence of how feedback has been considered will be recorded in the technical documentation	JP "Putevi Srbije" and Designer-Consultant	Technical control / JP "Putevi Srbije"
Construction	Management plans			
	Contractor shall prepare the implementation of the Plans described in the EMP, to ensure that the legislation and Creditor's requirements have been met: - Site Organisation Plan - Sewerage and Wastewater Management Plan - Soil Management Plan - Dust Management Plan		Contractor	Supervision / JP "Putevi Srbije"

Phase	Issue	Mitigation measure	Institutional responsibility	
			Implementation	Supervision
	<ul style="list-style-type: none"> - A plan indicating the location of borrow-pits, and measures for recultivation of borrow-pits and access roads after the project is completed - Waste and Wastewater Management Plan, in line with the Law on Waste Management ("Official Gazette of RS", no. 36/09) - Oil and Fuel Storage Management Plan - In-river Works Management Plan - Emergency Response Plan - Complaints Procedure - Safety and Hazard Assessment - Safety and Labour Management Plan 			
Construction	Site Induction			
	All workers and visitors to the site shall be given a health and safety induction and instructed on the need to use PPE.	Contractor	Supervision / JP "Putevi Srbije"	
Construction	Material Supply			
	asphalt plant: dust, fumes, health and safety of workers, ecosystem disturbance	<ul style="list-style-type: none"> - use the existing asphalt plants; - requirement for official approval or valid operating license 	asphalt plant	asphalt plant
	quarry: dust, health and safety of workers, ecosystem disturbance	<ul style="list-style-type: none"> - use the existing quarries; - requirement for official approval or valid operating license 	quarry	quarry
	sand and gravel borrow-pits: river bed disturbance, quality of water, ecosystem disturbance	<ul style="list-style-type: none"> - use the existing borrow pits or buy material from licensed separation facilities; - requirement for official approval or valid operating license 	contractor or gravel and sand separation facility	contractor or gravel and sand separation facility

Phase	Issue	Mitigation measure	Institutional responsibility	
			Implementation	Supervision
Construction	Material Transport			
	asphalt: dust, fumes	- all trucks need to be covered - contractor's machinery to be carefully selected	truck operator	truck operator
	stone: dust	wet truck load	truck operator	truck operator
	sand and gravel: dust	wet truck load	truck operator	truck operator
	management of traffic noise, exhaust fumes and road congestion	- haul material at off-peak traffic hours (9-14h) - use alternative roads to avoid main roads - proper road signs and markings of the site, to minimise chances of a wrong turn	transport manager truck operator	transport manager truck operator
	Possibility of encountering an archaeological site	if an archaeological site is encountered, contractor shall immediately suspend the works and inform IPCM and JP "Putevi Srbije".	contractor	contractor's supervision
Construction	Construction Site			
	negative impact of noise on the workers and local community	- limit the activities to daylight working hours - use equipment with noise mufflers, licensed and approved in accordance with the EU standards - use noise barriers for the works that produce noise for more than one day on the same location. - locate noise-making equipment as far away as possible from residential buildings and other noise-sensitive receptors.	contractor	contractor's supervision
	dust	- spray the problematic areas on site with water - cover the material stored and limit vehicle speed - implement the Dust Management Plan: measures for avoiding dust emission, including hoarding, spraying the problematic areas, accesses, material and stockpiles during the loading and unloading	contractor	contractor's supervision

Phase	Issue	Mitigation measure	Institutional responsibility	
			Implementation	Supervision
		activities, covering the trucks that carry dusty material, washing the trucks etc.		
	vibrations	<ul style="list-style-type: none"> - limit activities to daylight working hours - if there is material damage to the local houses, buildings and infrastructure (access roads included) caused by the works, the damage will be compensated for and will have to be rectified - locate the equipment for earth works as far away as possible from vibration-sensitive receptors 	contractor	contractor's supervision
	traffic disruption during construction activities	<ul style="list-style-type: none"> - Traffic Management Plan with appropriate measures for traffic diversions that can be easily noted and followed, including traffic police assistance - Traffic Management Plan which will define a speed limit for the construction vehicles and organize traffic in such a way that populated areas are avoided as much as possible - during the works, maximum use of the existing road network. Avoid the construction of new temporary roads, which would increase the habitat fragmentation - inform the local community about the works planned 	contractor	contractor's supervision
	Potential impact on flora	Consider all the relevant measures during construction works regarding protection of trees along the road, in order to avoid any damages.	contractor	contractor's supervision
	Potential impact on water	<ul style="list-style-type: none"> •Appropriate drainage of the site must be provided. Locations used for car parking, workshops and fuel storages must be drained toward the oil-water separator; •Sanitary wastewater and polluted water must be discharged into waterproof pits or treated before the water is discharged into the surface water flow system, 	contractor	contractor's supervision

Phase	Issue	Mitigation measure	Institutional responsibility	
			Implementation	Supervision
	reduced access to roadside activities	provide an alternative access to roadside activities at all times	contractor	contractor's supervision
	safety of vehicles when / where there are no construction activities	lighting and well-defined safety signs and protection measures	contractor	contractor's supervision
	soil and water pollution from improper material storage, management and use	<ul style="list-style-type: none"> - organise and cover material storage areas - isolate the concrete, asphalt and other from the watercourse by using sealed formwork or covers - isolate the areas for washing the concrete or asphalt trucks and other equipment from the watercourse by choosing areas for washing which are not freely drained directly or indirectly into the watercourse - organize the site so as to minimize the risk of generating sediments and accumulating waste water, which could cause pollution of the surrounding soil and water - Soil Management Plan to provide controlled removal, storage and re-use of topsoil - use local controlled measures to prevent sediment flowing into surface water and drainage channels. Some of the measures include physical obstacles such as fences, mulch barriers, geotextile, rock groynes, sediment basins. - to prevent sediment flowing into surface water, slope of the soil and protection form wind erosion must also be considered, by installing fences, covers etc. - any deposits of excess soil, stone etc. may only be temporary, until the works have been completed. After that, excess soil, stone and other waste material must be removed and complete rehabilitation of all areas degraded by the works must be done. 	contractor	contractor's supervision
	soil and water pollution from improper waste material disposal	<ul style="list-style-type: none"> - dispose waste material at a location protected from washing out, on a marked location, if not on site, then on an authorised landfill (It is very important recommendation that the authorized landfill is sanitary and in accordance with the European standards and regulations of the Republic of Serbia) - dispose waste in accordance with best international practice (IFC, EHS – general guidelines). 	contractor	contractor's supervision

Phase	Issue	Mitigation measure	Institutional responsibility	
			Implementation	Supervision
		<ul style="list-style-type: none"> - apply additional measures for storing hazardous waste (secondary containment, limiting the access, providing PPE etc.) to prevent negative effects on the workers, local community or environment - nominate a person responsible for waste collection and storage (hazardous and non-hazardous) 		
	potential contamination of soil and water from improper maintenance and fuelling of equipment	apply the best engineering practice in handling and safe storage of lubricants, fuel and solvents, ensure proper loading of fuel and equipment maintenance, collect all waste and dispose it on authorised recycling locations	contractor	contractor's supervision
	soil and water pollution from improper waste material disposal	<ul style="list-style-type: none"> - transport the waste in marked vehicles designed for waste transport, to minimise the risk of releasing hazardous and non-hazardous substances - train the drivers in handling and disposal of the load they transport and transport documents describing the nature of the load (waste) and its degree of hazard 	contractor	contractor's supervision
	safety of workers	<ul style="list-style-type: none"> - provide workers with safety instructions and PPE - provide a safe alternative traffic flow 	contractor	contractor's supervision
	areas temporarily occupied	<ul style="list-style-type: none"> - undertake re-vegetation with native species and monitor the effects (avoid invasive species those that cause allergic reactions) -where initial plantings were not successful, carry out re-planting 	contractor	contractor's supervision
Operation	Maintenance			
	negative impact of noise on local residents and workers	<ul style="list-style-type: none"> - limit activities to daylight working hours, or as agreed with the authorities - use the equipment with noise mufflers installed 	maintenance contractor	maintenance contractor's supervision
	potential air, water and soil pollution: dust, exhaust fumes, spilt fuel, oil and lubricants	<ul style="list-style-type: none"> - apply the best engineering practice in handling and safe storage of lubricants, fuel and oil - ensure proper loading of fuel and maintenance of equipment - collect and dispose all waste in accordance with the Law on Waste 	maintenance contractor	maintenance contractor's supervision

Phase	Issue	Mitigation measure	Institutional responsibility	
			Implementation	Supervision
		Disposal - properly organise and cover the areas for material storage - isolate concrete and asphalt works from the watercourse by using sealed formwork - isolate the area for washing trucks for the transport of concrete and asphalt and all other equipment from the watercourse, by choosing the area for washing where the water is not freely drained directly or indirectly into the rivers - dispose the waste material to suitable locations protected from washing out		
	vibrations	limit activities to daylight working hours, or as agreed with the authorities	maintenance contractor	maintenance contractor's supervision
	safety of workers	- provide workers with safety instructions and PPE - organise safe traffic bypass	maintenance contractor	maintenance contractor's supervision
	increased vehicle speed	install speed limit signs	maintenance contractor	maintenance contractor's supervision
	erosion, rockfall, hazardous situation	install suitable warning signs (rockfall, landslide, wet or slippery conditions, dangerous curve, animal crossing, slow traffic zone), reflective markings indicating steep slopes or convex mirrors in curves where there is a lack of visibility, warning signs on locations considered appropriate in line with good engineering practice or as agreed with the authorities	maintenance contractor	maintenance contractor's supervision

Appendix 2 MONITORING PLAN

MONITORING PLAN

Phase	Parameter to be monitored	Location where the parameter is monitored	How the parameter is monitored	When the parameter is monitored (frequency or continuous)	Why the parameter is monitored	Institutional responsibility
						Implementation
Construction	Material supply					
<i>asphalt plant</i>	possession of an official approval or valid (operating) license	asphalt plant	inspection / supervision engineer	prior to the start of the works	ensure the compliance of the plant with the health and safety and environmental requirements	plant manager
<i>quarry</i>	possession of an official approval or valid (operating) license	quarry	inspection / supervision engineer	prior to the start of the works	ensure the compliance of the quarry with the health and safety and environmental requirements	quarry manager
<i>sand and gravel borrow-pit</i>	possession of an official approval or valid (operating) license	sand and gravel borrow-pit or separation facility	inspection / supervision engineer	prior to the start of the works	ensure the compliance of the borrow-pit with the health and safety and environmental requirements	borrow-pit or separation facility manager
Construction	Material transport					
<i>asphalt</i>	truck load covered	site	supervision	unannounced inspections during the works, at least once a week	ensure the compliance with the health and safety and environmental requirements	Contractor's supervision
<i>stone</i>	truckload covered or wetted	site	supervision	unannounced inspections during the works, at least once a week	ensure the compliance with the health and safety and environmental requirements	Contractor's supervision

Phase	Parameter to be monitored	Location where the parameter is monitored	How the parameter is monitored	When the parameter is monitored (frequency or continuous)	Why the parameter is monitored	Institutional responsibility
						Implementation
<i>sand and gravel</i>	truckload covered or wetted	site	supervision	unannounced inspections during the works, at least once a week	ensure the compliance with the health and safety and environmental requirements	Contractor's supervision
<i>traffic management</i>	hours and routes selected	site	supervision	unannounced inspections during the works, at least once a week	ensure the compliance with the health and safety and environmental requirements and minimal disruptions to traffic	Contractor's supervision
Construction	Construction site					
<i>negative effects of noise on the workers and local residents</i>	noise levels	site; nearest homes in the local settlement	sound meter with suitable software	-once at the beginning of the project and later quarterly -after receiving a complaint -if the monitoring results are not satisfactory, monitoring to be done on monthly basis	ensure the compliance with the health and safety and environmental requirements and minimal disruptions to traffic	contractor (monitoring)
<i>dust</i>	air pollution (suspended solids)	on and near the site	inspection and visual observation	unannounced inspections during material delivery and construction works	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	Contractor's supervision (monitoring)

Phase	Parameter to be monitored	Location where the parameter is monitored	How the parameter is monitored	When the parameter is monitored (frequency or continuous)	Why the parameter is monitored	Institutional responsibility
						Implementation
<i>vibrations</i>	limited time of activities	site	supervision	unannounced inspections during construction works and after a complaint is received	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	Contractor's supervision
<i>disruptions to traffic during construction works</i>	existence of a Traffic Management Plan and traffic pattern	on and near the site	inspection and visual observation	prior to the start of the works; once a week in peak and non-peak hours	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	Contractor's supervision
<i>reduced access to roadside activities</i>	alternative access provided	site	supervision	random checks at least once a week during the construction works	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	Contractor's supervision
<i>safety of vehicles where there are no construction activities</i>	visibility and suitability	on and near the site	observation	random checks at least once a week in the evening	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	Contractor's supervision

Phase	Parameter to be monitored	Location where the parameter is monitored	How the parameter is monitored	When the parameter is monitored (frequency or continuous)	Why the parameter is monitored	Institutional responsibility
						Implementation
<i>water and soil pollution resulting from improper material storage, management and use</i>	soil and water quality (suspended solids, oils, ph values, conductivity)	At the water stream	unannounced sampling, analysis in a certified laboratory possessing the required equipment	at least three times for the entire Project duration, monitoring to be done before the construction (or at a reference point upstream of the site) during and after the rehabilitation works	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	Contractor (monitoring)
<i>safety of workers</i>	PPE; bypass traffic organisation	site	inspection	unannounced inspections during the works	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	supervision contractor
Operation	Maintenance					
<i>negative effect of noise on the workers and local residents</i>	noise levels	site; nearest homes	sound meter with suitable software	unannounced inspections during the maintenance activities and after receiving a complaint	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	PERS
<i>vibrations</i>	limited time of activities	site	supervision	unannounced inspections during the maintenance activities and after receiving a complaint	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	PERS

Phase	Parameter to be monitored	Location where the parameter is monitored	How the parameter is monitored	When the parameter is monitored (frequency or continuous)	Why the parameter is monitored	Institutional responsibility
						Implementation
<i>safety of workers</i>	PPE; bypass traffic organisation	site	inspection	unannounced inspections during the maintenance activities and after receiving a complaint	ensure the compliance of works with the health and safety and environmental requirements and minimal disruptions to traffic	PERS
Operation	Road safety					
<i>increased vehicle speed</i>	condition of traffic signs; vehicle speed	road section included in the design	visual observation; radar speed detectors	during the maintenance activities; unannounced	ensure a safe and economical traffic flow	maintenance contractor; traffic police
<i>erosion, rockfall and hazardous situations</i>	condition of traffic signs	road section included in the design	visual observation	during the maintenance activities	ensure a safe and economical traffic flow	maintenance contractor, monitoring

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

1. General		
Is the project materially compliant with all relevant EBRD Performance Requirements (taking account of agreed action plans, exemptions or derogations)?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If No, please provide details of any material non-compliances:
Is the project materially compliant with all applicable environmental and social laws and regulations?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If No, please provide details of any material non-compliances:
Have there been any accidents or incidents that have caused damage to the environment, brought about injuries or fatalities, affected project labour or local communities, affected cultural property, or created liabilities for the company?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe, including details of actions to repair and prevent reoccurrence:
Have there been any changes to environment, social, labour or health and safety laws or regulations that have materially affected the company?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe:
How many inspections did you receive from the environmental authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found
How many inspections did you receive from the health and safety authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found
How many inspections did you receive from the labour authorities during the reporting period?	Number:	Please provide details of these visits, including number and nature of any violations found:
Have these visits resulted in any penalties, fines and/or corrective action plans?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe, including status of implementing corrective actions to address any violations found:
Has the Company engaged any contractors for project-related work in the reporting period?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please state for which types of work, and how the company has monitored the compliance of contractors with EBRD Performance Requirements and the Environmental and Social Action Plan:
Were any of the violations stated above the responsibility of contractors?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please provide details, including how the Company is ensuring that corrective actions are implemented by the Contractor?
Have any operations been reduced, temporarily suspended or closed down due to environmental, health, safety or labour reasons?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, please describe:

Please describe any environment or social programs, initiatives or sub-projects undertaken during the reporting period to improve the company's environmental or social performance and/or management systems:

Please indicate the level of associated expenditure (capital expenditure and operating expenditure), and whether this relates to the requirements of the Environmental and Social Action Plan, or to any other initiative:

2. Status of the Environmental and Social Action Plan

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

3. Environmental Monitoring Data¹

Please provide the name and contact details for your environmental manager:

Parameter ²	Value ³	Unit	Compliance Status ⁴	Comments ⁵
Waste Water				
Total waste water generated				
BOD				
COD				

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

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

³ Please ensure that the units of measurement are clearly stated

⁴ Please report on compliance against the standards agreed with EBRD for this project (typically local, EU and/or World Bank Group)

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

Please provide the name and contact details for your environmental manager:				
Parameter ²	Value ³	Unit	Compliance Status ⁴	Comments ⁵
Suspended Solids				
Phosphorus				
Nitrates				
Heavy metals				
[Other]				
Air Emissions				
SO ₂				
NO _x				
Particulates				
CO ₂				
CH ₄				
N ₂ O				
HFCs				
PFCs				
SF ₆				
[Other]				
Other Parameters				
Noise				
[Other]				
Solid Waste				
Please provide details of the types and amounts of solid wastes generated by the project. Indicate where wastes are classified as hazardous. Indicate the final re-use, recycle or disposal method for each waste type.				

Please provide the name and contact details for your environmental manager:				
Parameter²	Value³	Unit	Compliance Status⁴	Comments⁵

4. Resource Usage and Product Output			
Parameter	Value	Measurement Unit	Comments⁶
Fuels used			
Oil			
Gas			
Coal			
Lignite			
Grid Electricity			
Heat Purchased			
Feedstocks and raw materials consumed			
Name 1			
Name 2			
Product output			
Product 1			
Product 2			

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

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

<p>Have there been any court cases related to labour issues during the reporting period?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please summarise the issues contested and outcome:</p>
<p>Have there been any changes to the following policies or terms and conditions during the reporting period in any of the following areas:</p> <ul style="list-style-type: none"> • Union recognition • Collective Agreement • Non-discrimination and equal opportunity • Equal pay for equal work • Gender Equality • Bullying and harassment, including sexual harassment • Employment of young persons under age 18 • Wages (wage level, normal and overtime) • Overtime • Working hours • Flexible working / work-life balance • Grievance mechanism for workers • Health & safety 	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>If yes, please give details, including of any new initiatives:</p>

6. Occupational Health and Safety Data

<p>Please provide the name and contact details for your Health and Safety manager:</p>					
	<p>Direct employees</p>	<p>Contracted workers</p>		<p>Direct employees</p>	<p>Contracted workers</p>
<p>Number of man-hours worked this reporting period:</p>			<p>Number of Fatalities⁷:</p>		
<p>Budget spent on OHS in this period (total amount and currency):</p>			<p>Number of disabling injuries:</p>		

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

OHS training provided in this period in person-days:			Number of Lost Time Incidents (including vehicular) ⁸ :		
Number of lost workdays ⁹ 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 EBRD, including total compensation paid due to occupational injury or illness (amount and currency):					
Please summarise any emergency prevention and response training that has been provided for company personnel during the report period:					
Please summarise any emergency response exercises or drills that have been carried out during the report period:					
7. Stakeholder Engagement					
Please provide the name and contact details for your external relations or community engagement manager:					
Please provide information on the implementation of the stakeholder engagement plan agreed with EBRD and summarise interaction with stakeholders during the reporting period, including:					
<ul style="list-style-type: none"> - Meeting or other initiatives to engage with members of the public or public organisations during the report period, - information provided to members of the public and other stakeholders during the report period relating to environmental, social or safety issues - coverage in media, - and interaction with any environmental or other community groups. 					
Please describe any changes to the Stakeholder Engagement Plan agreed with EBRD:					

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

⁹ 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.

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

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

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

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

If applicable, have all transit allowances been paid?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no, specify how many payments are still outstanding (in terms of number and percentage of recipients and payment amounts) and state when these payments will be made.
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.
<p>New Land Acquisitions If the company acquired any new land for the project during the reporting year, please provide documents to show closure of land acquisition transactions. Please attach new/revised RAP covering the new land acquisition and describe mitigation measures, compensation, agreements reached, etc., and provide in tabular form a list of affected people and status of compensation.</p>		
Have any persons been physically displaced?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, how many?
Have any persons been economically displaced?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If yes, how many?

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 3 LEGISLATION

RELEVANT SERBIAN ENVIRONMENTAL LEGISLATION:

The main laws and regulations currently in force in Republic of Serbia which are relevant to the environmental protection are listed below:

- ❖ Law on planning and construction ("Official Gazette of RS", no. 72/2009, 81/2009, 64/2010, 24/2011, 121/2012, 42/2013, 50/2013, 98/2013, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019 - other law and 9/2020);
- ❖ Law on nature protection ("Official Gazette of RS", no. 36/09, 88/10, 91/10, 14/16 and 95/2018-other law);
- ❖ Law on environmental protection ("Official Gazette of RS", no. 135/04, 36/09, 72/09, 43/11, 14/16, 76/18 and 95/2018 - other law);
- ❖ Law on EIA ("Official Gazette of RS", no. 135/2004, 36/2009,);
- ❖ Law on Strategic EIA ("Official Gazette of RS", no. 135/2004, 88/10);
- ❖ Law on waste management ("Official Gazette of RS", no. 36/09, 88/10, 14/16 and 95/2018 - other law);
- ❖ Law on noise protection ("Official Gazette of RS", no. 36/09, 88/10);
- ❖ Law on water ("Official Gazette of RS", no. 30/10, 93/12, 101/16, 95/2018 and 95/2018 - other law);
- ❖ Law on forests ("Official Gazette of RS", no. 30/10, 93/12, 89/15 and 95/2018 - other law);
- ❖ Law on air protection ("Official Gazette of RS", no. 36/09, 10/13 and 26/2021 - other law);
- ❖ Law on safety and health at work ("Official Gazette of RS", no. 101/05, 91/15, 113/17).

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

- ❖ Decree on establishing the List of Projects for which the Impact Assessment is mandatory and the List of projects for which the EIA can be requested ("Official Gazette of RS", no. 114/08);
- ❖ Rulebook on the contents of requests for the necessity of Impact Assessment and on the contents of requests for specification of scope and contents of the EIA Study ("Official Gazette of RS", no. 69/05);
- ❖ Rulebook on the contents of the EIA Study ("Official Gazette of RS", no. 69/05);
- ❖ Rulebook on the procedure of public inspection, presentation and public consultation about the EIA Study ("Official Gazette of RS", no. 69/05);
- ❖ Rulebook on the work of the Technical Committee for the EIA Study ("Official Gazette of RS", no. 69/05);
- ❖ Regulations on permitted noise level in the environment ("Official Gazette of RS", no. 72/10);
- ❖ Decree on establishing class of water bodies ("Official Gazette of RS", no. 5/68);
- ❖ Decree on limit values of pollutants in surface and groundwater and sediment and deadlines for their reach ("Official Gazette of RS", No. 50/12)
- ❖ Regulations on dangers pollutants in waters ("Official Gazette of RS", no. 31/82).

Other relevant Serbian legislation

- ❖ Law on confirmation of convention on information disclosure, public involvement in process of decision making and legal protection in the environmental area ("Official Gazette of RS", no. 38/09);
- ❖ Law on Roads ("Official Gazette of RS", no. 41/18 and 95/2018 - other law).
- ❖ Regulation on prevention and containment of infectious disease COVID-19 ("Official Gazette of RS", no. 151/2020, 152/2020, 153/2020, 156/2020, 158/2020, 1/2021, 17/2021, 19/2021, 22/2021, 29/2021 и 34/2021).

Appendix 4 STAKEHOLDER ENGAGEMENT

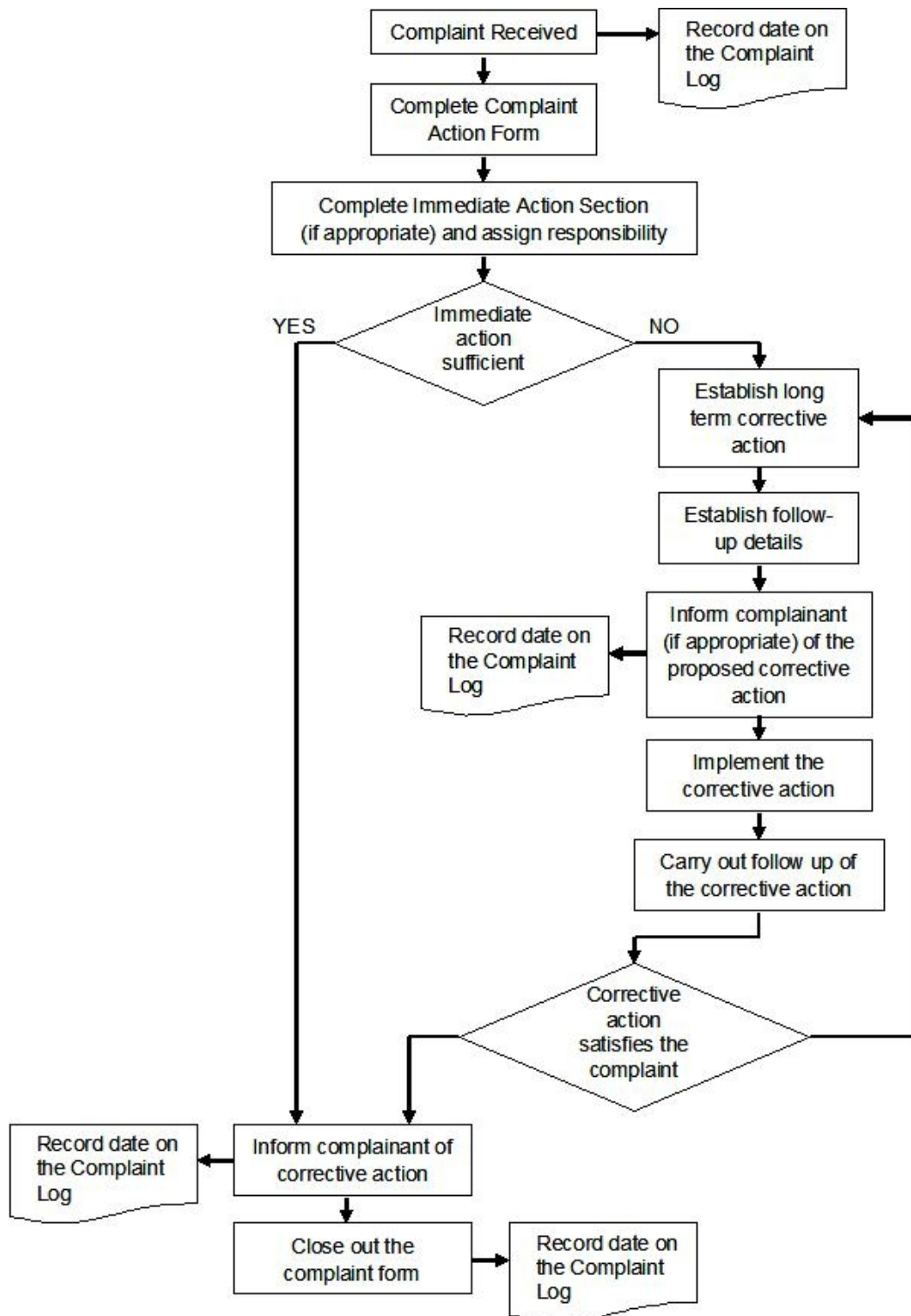
Identification of stakeholders

The stakeholders are people and organisations which may affect, be affected by, or believe to have been affected by a decision or activity. The stakeholders on this Project may be classified as follows:

1. Potentially affected parties:
 - ❖ JP "Putevi Srbije" employees and Contractors;
 - ❖ Representatives of companies directly bordering the Project;
 - ❖ Residents of areas in the Project Influence zone;
 - ❖ Local or regional authorities within the legal framework, such as: local land-owners and tenants and potentially affected industry and businesses.
2. Other interested parties:
 - ❖ Public;
 - ❖ Other companies operating in the National Network;
 - ❖ NGOs.

As the Project develops, more stakeholders may appear. Once it is identified, each stakeholder will be characterised as regards its interests, problems and requests and included in the list accordingly.

Grievance mechanism and form



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 a box	by post	by phone	by e - mail
Name and personal information (JMBG from identity card).			
Details of your grievance. Please describe the problems, whom they occurred to, when, where and how many times, as relevant			
What is your proposal for resolving the grievance?			
How to submit this form to the authorised persons	by post:		
	by hand: please drop this form at:		
	by e - mail: Please e-mail your grievance, proposed resolution and contact details to the following e – mail address:		
Signature		Date	

REPORT ON PUBLIC CONSULTATION

The report will be made after the public presentation is conducted.

Appendix 5 CONDITIONS FROM RELEVANT PUBLIC INSTITUTIONS



ЗАВОД ЗА ЗАШТИТУ ПРИРОДЕ СРБИЈЕ

Текући рачун: 840-518664-16, отворен код Управе за трезор ♦ ПИБ 106844260 ♦ Матични број 17798561 ♦ Шифра делатности 9104

СЕДИШТЕ
11070 Нови Београд
Др Ивана Рибара 91
тел: 011 20 93 800
011 20 93 801
факс: 011 20 93 867
beograd@zzps.rs

РАДНА
ЈЕДИНИЦА У НИШУ
18000 Ниш
Божде Карађорђа 14
тел/факс: 018 523 448
018 523 449
nis@zzps.rs

ПРИШТИНСКА
РАДНА ЈЕДИНИЦА
11070 Нови Београд
Др Ивана Рибара 91
тел: 011 20 93 800
011 20 93 801
факс: 011 20 93 867
beograd@zzps.rs

03 број 020-1965/2

датум 17.08.2020.

"PROJECT BIRO UTIBER" DOO
број DO 558/20-426
18.8.20.
NOVI SAD

PROJECT BIRO UTIBER
d.o.o. Novi Sad

21000 Нови Сад
ул. Темеринска 76

Предмет: Обавештење

Заводу за заштиту природе Србије доставили сте Захтев бр. DO 299/20-365 од 29.07.2020. године, за издавање услова заштите природе за продужетак важења услова за израду Главног пројекта појачаног одржавања државних путева IB 15 и IB 21, LOT 2: IB21, Ивањица-Сјеница.

У складу са вашим Захтевом, обавештавамо Вас да смо за предметне активности издали решење о условима заштите природе 03 број 020-3555/3 од 31.01.2019. године, које је и даље на снази и доставља се у прилогу уз ово обавештење. Према члану 9. Закона о заштити природе („Службени гласник Републике Србије“, бр. 36/2009, 88/2010, 91/2010-исправка, 14/2016 и 95/2018-други закон), у тачки 4. издатог решења стоји да уколико подносилац захтева у року од две године од дана достављања решења не отпочне радове и активности за које је ово решење издато, дужан је да поднесе захтев за издавање новог решења.

С поштовањем,

ДИРЕКТОР

Александар Драгишић



Прилог: Решење о условима заштите природе бр. 020-3555/3 од 31.01.2019. године, за издавање услова заштите природе за израду техничке документације пројекта Појачаног одржавања деонице државног пута IB реда бр. 21 (стара ознака: магистрални пут М-21), деоница Ивањица – Сјеница.

Достављено:

- Подносиоцу захтева
- Архиви х 2

РЕПУБЛИКА СРБИЈА
ЗАВОД ЗА ЗАШТИТУ ПРИРОДЕ СРБИЈЕ
НОВИ БЕОГРАД, Др Ивана Рибара бр. 91
Тел: +381 11/2093-802; 2093-803;
Факс: + 381 11/2093-867

Завод за заштиту природе Србије, Београд, Др Ивана Рибара бр. 91, на основу члана 9. Закона о заштити природе („Службени гласник РС“, бр. 36/2009, 88/2010, 91/2010-исправка, 14/2016 и 95/2018-други закон) и члана 136. Закона о општем управном поступку („Службени гласник РС“, бр. 18/2016), поступајући по Захтеву II бр. 953-27213 од 24.12.2018. године ЈП „Путеви Србије“, Булевар краља Александра бр. 282, Београд, за издавање услова заштите природе за израду техничке документације пројекта Појачаног одржавања деонице државног пута 1Б реда бр. 21 (стара ознака: магистрални пут М-21), деоница Ивањица – Сјеница, дана 31.01. 2019. године под 03 бр. 020-3555/3, доноси:

РЕШЕЊЕ

- I. Траса пута за који се ради техничка документација се не налази унутар заштићеног подручја за које је сprovedен или покренут поступак заштите, не налази се у просторном обухвату еколошке мреже нити у простору евидентираних природних добара. Сходно томе, издају се следећи услови заштите природе:
- 1) Дефинисати да се одводњавање саобраћајнице врши гравитационим отицањем површинских вода и по потреби изградњом отворених канала за прихват површинских вода.
 - 2) За воде које настају спирањем са коловоза и оптерећене су уљима и другим нафтним дериватима предвидети изградњу таложника и сепаратора масти и уља, уколико се Планом управљања животном средином и уредбама којима су дефинисане и регулисане граничне вредности емисије загађујућих материја у води утврди/процени да ће просечни годишњи дневни саобраћај негативно утицати на квалитет воде реципијента.
 - 3) За воде које настају спирањем са коловоза и оптерећене су уљима и другим нафтним дериватима мора се предвидети изградња таложника и сепаратора масти и уља. Пре упуштања у реципијент или канализацију, обавезна је контрола њиховог квалитета.
 - 4) Као коловозни застор користити материјале који могу, са аспекта заштите, обезбедити смањење нивоа буке и вибрација и омогућити ефикасно дренарање воде са површине коловоза.
 - 5) Дефинисати ужу и ширу зону утицаја саобраћајнице на животну средину (посебно са аспекта очувања пољопривредног земљишта и производње хране одговарајућег квалитета), на основу тога утврдити мере и препоруке за коришћење земљишта.
 - 6) Прибавити сагласност надлежних институција за извођење радова који изискују евентуалну сечу одраслих, вредних примерака дендрофлоре, како би се уклањање вегетације svelo на најмању меру.
 - 7) Утврдити обавезу санације или рекултивације свих деградираних површина. Уз сагласност надлежне комуналне службе, предвидети локације на којима ће се трајно депоновати неискоришћени геолошки грађевински и остали материјал настао предметним радовима.

- 8) Предвидети постављање специјалних судова за сакупљање отпада на одговарајућим бетонским површинама.
 - 9) Предвидети све мере заштите природе у акцидентним ситуацијама уз обавезу обавештавања надлежних инспекцијских служби и установа.
 - 10) Уколико се током радова наиђе на геолошко-палеонтолошке или минералогско-петролошке објекте, за које се претпоставља да имају својство природног добра, извођач радова је дужан да у року од осам дана обавести Министарство заштите животне средине, односно предузме све мере како се природно добро не би оштетило до доласка овлашћеног лица.
2. Ово решење не ослобађа подносиоца захтева да прибави и друге услове, дозволе и сагласности предвиђене позитивним прописима.
 3. За све друге радове/активности на предметном подручју или промене пројектне документације, потребно је поднети нови захтев.
 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 20.000,00 динара је одређена у складу са чл. 2. став 4. Тачка 7 Правилника о висини и начину обрачуна и наплате таксе за издавање акта о условима заштите природе („Службени гласник РС“, бр. 73/2011 и 106/2013).

Образложење

Завод за заштиту природе Србије примио је дана 25.12.2018. године Захтев заведен под 03 бр. 020-3555/1 ЈП „Путеви Србије“ из Београда за израду техничке документације пројекта Појачаног одржавања деонице државног пута 1Б реда бр. 21 (стара ознака: магистрални пут М-21), деоница Ивањица - Сјеница.

На основу достављеног захтева и документације подносиоца захтева утврђено је да је техничка документација пројекта Појачаног одржавања предметног пута саставни део Пројекта рехабилитације путева и унапређења безбедности саобраћаја на мрежи државних путева, који је подршка међународних финансијских институција Националном програму рехабилитације државних путева Републике Србије. Почетак деонице је кружна раскрсница на изласку из Ивањице у правцу Сјенице – крај деонице је у пресечној тачки државног пута 1Б 21 и границе између општина Ивањице и Сјенице, приближн стационажа км 288-251. Планирани радови обухватају радове на постојећој саобраћајници у постојећим габаритима коловозне конструкције и у потпуности су регулисани одредбама чл. 116 Закона о путевима („Службени гласник РС“, бр. 41/2018) и Закона о јавним путевима, чл. 59 („Службени гласник РС“, бр. 101/2005).

Увидом у Централни регистар заштићених природних добара, документацију Завода, а у складу са прописима који регулишу област заштите природе, утврђено је да се подручје за које се ради техничка документација пројекта Појачаног одржавања деонице државног пута 1Б реда бр. 21 (стара ознака: магистрални пут М-21), деоница Ивањица - Сјеница не налази унутар заштићеног подручја за које је спроведен или покренут поступак заштите, не налази се у просторном обухвату еколошке мреже нити у простору евидентираних природних добара.

Законски основ за доношење решења је Закон о заштити природе („Службени гласник РС“, бр. 36/2009, 88/2010, 91/2010, 14/2016 и 95/2018-други закон).

Планиране активности могу се реализовати под условима дефинисаним овим Решењем, јер је процењено да неће утицати на природне вредности подручја.

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

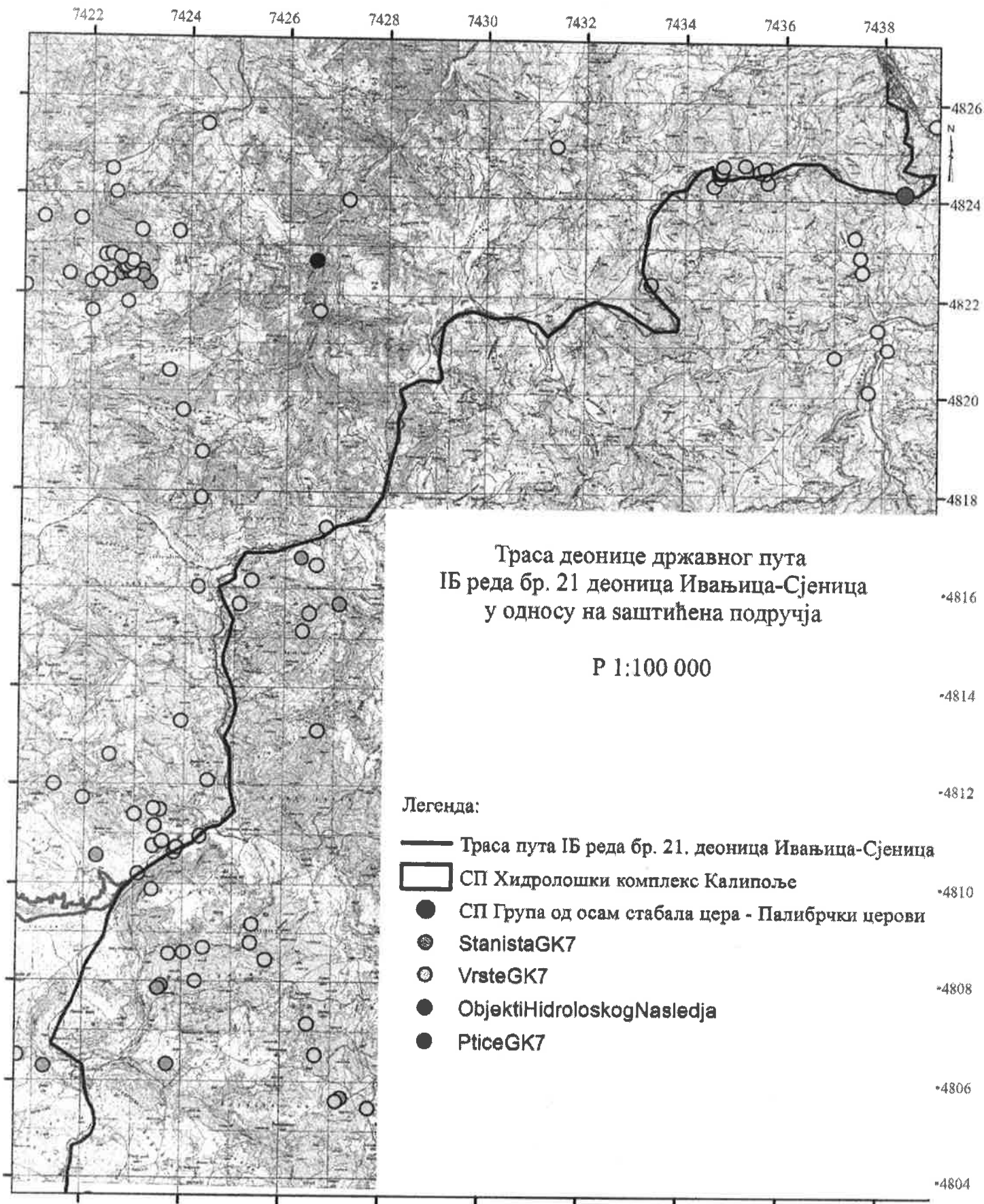
Такса на захтев и такса за решење, по Тар. бр. 1. и Тар. бр. 9. су наплаћене у складу са Законом о републичким административним таксама („Службени гласник РС”, бр. 43/2003, 51/2003, 61/2005, 5/2009, 54/2009, 50/2011, 93/2012, 83/2015, 112/2015, 50/2016, 61/2017, 113/2017 и 3/2018-испр. и 95/2018).

Упутство о правном средству: Против овог решења може се изјавити жалба Министарству заштите животне средине у року од 15 дана од дана пријема решења. Жалба се предаје писмено или изјављује усмено на записник Заводу за заштиту природе Србије, уз доказ о уплати Републичке административне таксе у износу од 170,00 динара на текући рачун бр. 840-742221843-57, позив на број 59013 по моделу 97.

ДИРЕКТОР
Александар Драгишић

Достављено:

- Подносиоцу захтева
- Архива x 2



Траса деонице државног пута
 IБ реда бр. 21 деоница Ивањица-Сјеница
 у односу на заштићена подручја

Р 1:100 000

Легенда:

- Траса пута IБ реда бр. 21. деоница Ивањица-Сјеница
- СП Хидролошки комплекс Калипоље
- СП Група од осам стабала цера - Палибрчки церови
- ⊗ StanistaGK7
- ⊙ VrsteGK7
- Објекти Hidrološkog Nasledja
- PticeGK7

РЕПУБЛИКА СРБИЈА
ЗАВОД ЗА ЗАШТИТУ ПРИРОДЕ СРБИЈЕ
03 бр. 020-3555/5
Датум: 01.03.2021.
НОВИ БЕОГРАД, Ул. др Ивана Рибара бр. 91
Тел. 011/209-3802; 209-3803; факс. 209-3867

ПРОЈЕКТ BIRO "UTIBER" D.O.O.

21138 НОВИ САД
ул. Темеринска 76

Предмет: Обавештење

Заводу за заштиту природе Србије доставили сте Захтев бр. ДО53/21-53 од 02.02.2021. године, за продужење важења услова заштите природе за потребе израде Главног пројекта појачаног одржавања деонице државног пута IB реда бр. 21 (стара ознака: магистрални пут М-21), деоница Ивањица – Сјеница, будући да је пројекат у поодмаклој фази израде, односно пред самим крајем.

Увидом у документацију Завода утврђено је да су 31.01.2019. године издати услови заштите природе за потребе израде техничке документације Пројекта појачаног одржавања деонице државног пута IB реда бр. 21 (стара ознака: магистрални пут М-21), деоница Ивањица – Сјеница под 03 бр. 020-3555/3, а на захтев II бр. 953-2/213 од 24.12.2018. године, ЈП „Путеви Србије“, Булевар краља Александра бр. 282, Београд.

С тим у вези, обавештавамо вас да је Решење Завода 03 бр. 020-3555/3 од 31.01.2019. године и даље на снази, имајући у виду да су активности на изради пројектне документације започети у року, а што је у складу са тачком 4. издатог Решења.


ДИРЕКТОР
Александар Драгишић

Достављено:

- Подносиоцу захтева
- Архиви х 2

Број: D053/21-53
Датум: 2.02.2021.

ЗАВОД ЗА ЗАШТИТУ ПРИРОДЕ СРБИЈЕ

Др Ивана Рибара 91

11070 Нови Београд

Предмет: Захтев за продужетак важења Техничких услова за израду Главног пројекта појачаног одржавања државних путева IB 15 и IB 21, LOT 2: IB21, Ивањица-Сјеница, L=38.300km

Поштовани,

Дана 31.01.2019. године сте нам издали Техничке услове за израду Главног пројекта појачаног одржавања државних путева IB 15 и IB 21, LOT 2: IB21, деоница Ивањица-Сјеница, L=38.300km под бројем: 020-3555/3.

Будући да је рок важења Техничких услова две године, молимо Вас да за потребе израде Пројекта издате обнову услова, тј. да се продужи рок важења издатих услова.

Ми Вам се обраћамо према овлашћењу које је достављено у прилогу дописа, док трошкове издавања услова, према Уговору са ЈП Путеви Србије сноси: Project Biro Utiber d.o.o. Нови Сад.

Уколико су Вам потребне додатне информације или имате било каква питања, молимо Вас да нам се обратите на следећи телефон или e-mail:

Борис Раковић, дипл.инж.грађ., тел: (069) 4400451, e-mail: b.rakovic@utiber.rs

Са поштовањем,



Миодраг Јовић дипл.инж.грађ.
Овлашћени представник консултанта

Достављено:

- Наслову
- Архиви

Прилози:

- Овлашћење ЈП „Путева Србије“
- CD са Прегледном картом



Републички завод за заштиту споменика културе - Београд
Institute for the Protection of Cultural Monuments of Serbia - Belgrade

Радослава Грујића 11 Radoslava Grujića 11
11118 Београд 11118 Belgrade
Србија Serbia
Тел. (011) 24 54 786 Phone +381 11 24 54 786
Факс (011) 34 41 430 Fax +381 11 34 41 430
e-mail: office@yuheritage.com

Датум / Date:
Број / Ref.

18 AUG 2020

1-1222/2020-1

"PROJECT BIRO UTIBER" DOO
Proj. DO 373/20-443
24.8.2020 god.
NOVI SAD

PROJEKT BIRO UTIBER doo
Миодраг Јовић, дипл.инж.грађ., овлашћени представник

21.000 НОВИ САД
Темеринска 76

Предмет: *Захтев за издавање услова за израду техничке документације Главног пројекта појачаног одржавања деонице државног пута IB 15 и IB 21, LOT 2: IB 21, Ивањица – Сјеница L=38,300km(Беза бр. ДО 293/20-359 од 29.07.2020.г.)*

Уважени,

Обавештавамо Вас да на подручју деонице државног пута *IB 15 и IB 21, LOT 2: IB 21, Ивањица – Сјеница L=38,300km* нема утврђених културних добара од изузетног значаја која су у надлежности Републичког завода за заштиту споменика културе Београд.

Како је предметно подручје у надлежности Завода за заштиту споменика културе у Краљеву, Ваш захтев за издавање услова за израду техничке документације *Главног пројекта појачаног одржавања деонице државног пута IB 15 и IB 21, LOT 2: IB 21, Ивањица – Сјеница L=38,300km* проследили смо надлежном Заводу на даљу обраду.

С поштовањем,

Обрадили:

М. Благојевић
Мирјана Благојевић, археолог
Б. Михаљевић
Бојана Михаљевић, архитекта

Директор
Мирјана Андрић
Мирјана Андрић



Завод за заштиту споменика културе Краљево

36000 Краљево, Цара Лазара 24, ПИБ 100239951, матични број 07101104
тел. 036 331 866, тел/факс 036 321 025, e-mail: zzzskv@gmail.com
жирос рачун: 840-69664-74, 840-69668-62

"PROJECT BIRO UTIBER" DOO

Broj

20460/20-543

30.09.2020 год.
NOVI SAD

ЗАВОД ЗА ЗАШТИТУ СПОМЕНИКА КУЛТУРЕ

Број 849/2

29.09.2020 год.

КРАЉЕВО

Project Biro Utiber d.o.o.

Темеринска 76
21000 Нови Сад

ПРЕДМЕТ: Достава услова за потребе израде *Главног пројекта појачаног одржавања државног пута IV 21, Ивањица-Сјеница*

Завод за заштиту споменика културе Краљево, на основу чланова 65 и 75. Закона о културним добрима (*Сл. гласник РС* 71/94, 52/2011-др. закон, 99/2011-др. закон), поступајући по вашем захтеву за издавање услова чувања, одржавања и коришћења културних добара и добара која уживају претходну заштиту и мера заштите за потребе израде *Главног пројекта појачаног одржавања државног пута IV 21, Ивањица-Сјеница*, L = 38.300 км, заведеног у овом Заводу под бројем 849/1 од 19.08.2020, обавештава вас следеће:

Прегледом диспозиције предметног подручја утврђено је да се у обухвату Пројекта не налази ни једно утврђено добро у складу са Законом о културним добрима (*Сл. гласник РС* 71/94, 52/2011-др. закон, 99/2011-др. закон).

✦ Непосредно уз трасу пута Ивањица-Сјеница налазе се појединачни споменици – крајпуташи подигнути у спомен борцима који су погинули у Првом светском рату, као и чесме подигнуте у част борцима палим у ратовима за ослобођење земље. Споменици и спомен обележја налазе се на следећим кат. парцелама: 2064 и 2065 КО Бедина Варош, 182/1, 234/2 и 4492 КО Рокци, 672 и 679 КО Опаљеник, 1658/1 КО Кушићи.

- Споменици или обележја не смеју бити угрожени извођењем радова на реконструкцији путне трасе. Радови не смеју угрозити ни један облик њихове материјалности, као ни њихову статичку стабилност.

- Уколико је неопходно спровести измештање појединачних споменика у циљу њиховог очувања потребно је обратити се Заводу посебним захтевом. Захтев треба да саржи предлог нове локације, као и доказ о средствима обезбеђеним за његово измештање и конзервацију. Захтев такође треба да садржи дозволе и сагласности надлежних институција и заинтересованих грађанских удружења.

- Уз трасу пута или њену непосредну околину налазе се простори на којима је у прошлости дошло до појаве археолошког материјала. Археолошко наслеђе представља специфичан део културног наслеђа, па се често материјални остаци и структуре налазе под земљом и нису видљиви приликом површинске проспекције терена. Како не би дошло до девастације археолошког материјала или структура неопходно је да се обезбеди археолошки надзор уколико се било какви радови буду изводили на следећим кат. парцелама: 1997, 1998 и 1999 КО Бедина Варош и 2842, 2843, 2844, 2845 и део парцеле 2848/1 (који се граници са напред наведеним парцелама) КО Равна Гора.



Завод за заштиту споменика културе Краљево

36000 Краљево, Цара Лазара 24, ПИБ 100239951, матични број 07101104

тел. 036 331 866, тел/факс 036 321 025, e-mail: zzzskv@gmail.com

жиро рачун: 840-69664-74, 840-69668-62

- Археолошки надзор на територији Србије могу изводити установе заштите (за територију општине Ивањица Народни музеј у Чачку или Завод у Краљево), као и научне установе (институти или Филозофски факултет у Београду).
- Уколико надзор води друга институција, а не Завод у Краљево, Инвеститор је дужан да о томе обавести Завод пре почетка радова и достави Заводу доказ о уговореној сарадњи.
- Институција која води надзор дужна је да након завршетка радова на надзору, а најкасније у року од 7 дана Заводу достави извештај.
- Уколико се приликом радова, на назначеним парцелама, као и на остатку трасе, наиђе на археолошке остатке из прошлости Инвеститор/Извођач у обавези су да прекину радове и обавесте Завод. Уколико се утврди да наведена непокретност или покретни материјал има својство културног добра стручни надзор може привремено обуставити радове. У складу са природом добра Завод може прописати меру континуираног надзора уз ручни ископ или извођење заштитних археолошких ископавања.
- Трошкове надзора, заштитних археолошких истраживања, конзервације покретног и непокретног материјала сноси Инвеститор.
- Уколико се приликом радова наиђе на грађевинске остатке од интереса за Републику Србију, надлежни Завод ће у договору са Републичким заводом и надлежним Министарством културе и информисања изградити мере техничке заштите откривених остатака.
- У току својих редовних активности Завод у Краљево може извршити евидентирање нових добара која уживају претходну заштиту о чему ће обавестити надлежно Одељење за урбанизам и остале заинтересоване стране (чл. 29 Закона о културним добрима. *Службени гласник РС* бр. 71/94).
- Надзор над спровођењем издатих мера заштите спроводи Завод за заштиту споменика културе у Краљево као територијална надлежна установа заштите.
- Инвеститор је у обавези да о почетку и завршетку радова благовремено обавести Завод за заштиту споменика културе Краљево, како би се увидом на лицу места извршила провера да ли се радови изводе у складу са овим Условима.



в.д. директора Завода

мр Катарица Грујовић Брковић



"PROJECT BIRO UTIBER" DOO
Broj: DO 337/21-337
05.05.2021.god.
NOVI SAD

Јавно предузеће за газдовање шумама „Србијашуме“ Београд, Булевар Михајла Пупина 113.
тел: 011/711-34-10, 711-27-70
факс: 011/711-85-13
Број: 5904
Датум: 27.04.2021.

Project biro utiber doo
Темеринска 76
21138 Нови Сад

Предмет: Одговор на предмет „Захтев за израду Главног пројекта појачаног одржавања државних путева ИБ 15 и ИБ 21, ЛОТ2: ИБ21, Ивањица – Сјеница, Л=38.300 km“

Сагласно Вашем захтеву број 259/21-259, који се односи на захтев за издавање услова, из надлежности ЈП „Србијашуме“, за израду Главног пројекта појачаног одржавања државних путева ИБ 15 и ИБ 21, ЛОТ2: ИБ21, Ивањица – Сјеница, Л=38.300 km (у даљем тексту: Пројекат), обавештавамо Вас да смо увидом у достављене графичке податке у електронском облику и њиховим преклапањем са основним картама газдинских јединица којима газдује ЈП „Србијашуме“, установили да:

- Пројекат обухвата део Газдинске јединице: „Оштри врх – Лучка река“, „Јадарево – Црвена гора“ и „Јавор – Коравчина“ којима газдује Шумско газдинство „Голија“ Ивањица.
- Основна намена шума је производња техничког дрвета и заштита земљишта од ерозије.
- На обухваћеним површинама се налазе састојине: букве и вештачки подигнуте састојине осталих лишћара, смрче и црног бора. Степен угрожености шума од пожара обухвата I, II и V степен угрожености, у зависности од састојине.
- Обухвата шуме високе заштитне вредности НCVF – 4 (основне намене, заштите земљишта од ерозије), представљају подручја која пружају основне природне користи у критичним ситуацијама.

При изради Пројекта морају се узети у обзир и поштовати одредбе:

- **Закон о шумама** („Сл. гласник РС“, бр. 30/10, 93/12, 89/15 и 95/18 – др. закон), односно при извођењу радова треба водити рачуна да се очувају шуме и шумско земљиште као добро од општег интереса. Ради очувања шума забрањена је сеча стабала заштићених и строго заштићених врста дрвећа; самоволно заузимање шума; уништавање или оштећење шумских засада, ознака и граничних знакова, као и изградња објеката који нису у функцији газдовања

шумама; одлагање смећа, отровних супстанци и осталог опасног отпада у шуми, на шумском земљишту на удаљености мањој од 200 m од руба шуме, као и изградња објеката за складиштење, прераду или уништавање смећа; предузимање других радњи којима се слаби приносна снага шуме или угрожавају функције шуме; одводњавање и извођење других радова којима се водни режим у шуми мења тако да се угрожава опстанак или виталност шуме. Уколико радови захтевају промену намене површина дефинисаних планским документом у шумарству, неопходно је, према члану 22. Закона о шумама, извршити измене и допуне овог планског документа (Основа газдовања шумама за одговарајућу газдинску јединицу). Трошкове измена и допуна сноси подносилац захтева на чију иницијативу се оне врше. Промена намене шума и шумског земљишта одређена је чланом 10. Закона о шумама. Накнада за промену намене шума и шумског земљишта дефинисана је чланом 50., а висина накнаде је уређена чланом 52. Закона о накнадама за коришћење јавних добара („Сл. гласник РС“, бр. 95/2018, 49/2019 и 86/2019 – усклађени дин.изн.).

- **Закона о заштити природе („Сл.гласник РС“ бр. 36/2009, 88/2010, 91/2010 - испр., 14/2016 и 95/2018 - др. закон),**
- **Правилника о специјалним техничко-технолошким решењима која омогућавају несметану и сигурну комуникацију дивљих животиња („Сл. гласник РС“, бр. 72/2010).**

Потребно је поштовати сву законску и подзаконску регулативу из области заштите животне средине и заштите природе тако да пројектна решења имају што мањи утицај на животну средину и амбијентални простор.

Сходно Правилнику о шумском реду („Сл. гласник РС“, бр. 38/11 и 75/2016) сеча стабала, израда, извоз, изношење и привлачење дрвета и други начин померања дрвета са места сече, врше се у време и на начин којим се обезбеђује најмање оштећење околних стабала, подмлатка, земљишног покривача, остале флоре, фауне и објеката, као и спречавање загађивања земљишта органским горивима и моторним уљем. За било какву активност у шуми и на шумском земљишту потребно је прибавити сагласност ЈП „Србијашуме“.

Особа за контакт: Милена Денић, дипл. про. план. тел.: 064/815 55 89.

Прилог:

- Тематска карта основне намене;
- Тематска карта састојинске припадности.



Appendix 6 FINAL ENVIRONMENTAL APPROVAL