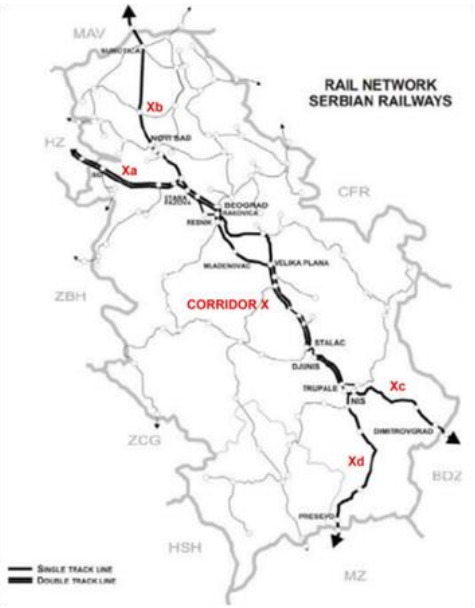
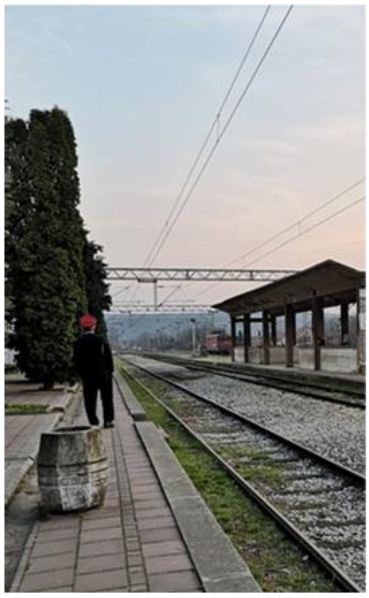
CONSULTANTS AND ENGINEERS
INSPIRED BY THE FUTURE





INCEPTION REPORT

Corridor Level Environmental and Social Assessment for the Belgrade-Nis High Speed Railway Corridor, Serbia

26 May 2022

Contents

List of Tables

List of Figures

List of Abbreviations

AA	Appropriate Assessment
BAP	Biodiversity Action Plan
BMP	Biodiversity Management Plan
CHA	Critical Habitat Assessment
EAAA	Ecologically Appropriate Areas of Analysis
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EIB	European Investment Bank
ERTMS	European Rail Traffic Management System
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
E&S	Environmental and Social
EU	European Union
IBA	Important Bird Area
KBA	Key Biodiversity Area
KPI	Key Performance Indicator
LC	Local Community
NGO	Non-Governmental Organisation
NTS	Non-technical Summary
OHS	Occupational Health and Safety
PA	Protected Area
PD	Preliminary Design
PFS	Pre-Feasibility Study
PIU	Project Implementation Unit
PPF9	Project Preparation Facility
RAP	Resettlement Action Plan
RoS	Republic of Serbia
SEA	Strategic Environmental Assessment
SEP	Stakeholder Engagement Plan
SRI	Serbian Railways Infrastructure
ToR	Terms of References
UIC	International Union of Railways
WBIF	Western Balkans Investment Framework

1 Summary Sheet

Project title	Corridor Level Environmental and Social Assessment for the Belgrade-Nis High Speed Railway Corridor, Serbia
Promoter	Republic of Serbia
Project implementation entity	Serbian Railways Infrastructure (SRI)
Financier	European Bank for Reconstruction and Development (EBRD)
Consultant	Enova d.o.o. Sarajevo
Assignment start date	15 March 2022
Assignment completion date	31 December 2022
Deliverables	> Inception Report (this document) > Corridor Environmental & Social Assessment Report > Corridor Environmental & Social Management Plan (ESMP) > Corridor Stakeholder Engagement Plan (SEP) – update > Corridor Resettlement Framework (RF) – update > Non-technical Summary (NTS) > Environmental and Social Action Plan (ESAP)

2 Introduction

2.1 Project Context

The European Bank for Reconstruction and Development (the "EBRD") is considering providing finance to the Republic of Serbia ("RoS") for the benefit of Serbian Railways Infrastructure ("SRI"). The loan will be used to finance the **rehabilitation and upgrade of the rail infrastructure of Rail Corridor X** ("Corridor X"), the railway line connecting Belgrade to Nis (the "Project").

Corridor X is the main north-south route running through Serbia, and is an integral part the extended Trans-European Railway Network ("TEN-T") connecting Western and Central Europe with Greece, Serbia and the Middle East. It is also an axis of national importance and represents 25% of the Serbian rail network, handles over 50% of the total traffic (freight and passenger), and connects the three largest cities of the country (Novi Sad, Belgrade and Nis) and a large number of settlements and industrial centres.

The Project involves a combination of upgrading the design speed to up to 160/180/200 km/h (depending on the sections) and doubling of the single tracks. The Belgrade-Nis rail route will be fully electrified. Thanks to the improved infrastructure, the travel time between Belgrade and Nis will be significantly reduced, safety will be improved, as well as the capacity and comfort of the passenger and freight services. This will increase competitiveness of rail transport, especially for international and transit freight traffic, allowing significant modal shift to rail as low carbon intensity sector. This modal shift from road-based transport will have a significant impact in terms of lowered carbon emissions.

The loan will be tranched based on a schedule of subsection rehabilitation, with the first tranche of c. EUR 33 million committed to finance the works of the Stalac-Djunis subsection (c. 17 km-length). Tranches to finance other subsections of Corridor X will be uncommitted.

The Project is expected to be co-financed by (i) EIB and (ii) the EU through the Western Balkans Investment Framework ("WBIF") or other EU mechanism. Total project cost is expected to be up to EUR 2.05 billion.

As this Project involves greenfield development and involves extensive linear infrastructure development (Belgrade-Nis), the EBRD has assigned it as a **Category A project**. This means that a comprehensive Environmental and Social Impact Assessment (ESIA) and review of associated documents must be carried out for each subsection, followed by their public disclosure for a minimum period of 120 days.

Since preliminary designs and ESIAs for each subsection will be developed at a later stage, the EBRD has now engaged the Consultant ENOVA to carry out a Corridor Environmental and Social (E&S) Assessment and review of associated documents in accordance with the Applicable E&S Requirements, followed by their public disclosure for a minimum period of 120 days (the "Assignment").

2.2 Available Project Documents

Available documentation includes:

1. Pre-Feasibility Study (2022) for the Corridor X, including a Stakeholder Engagement Plan, Scoping Report and Livelihood Restoration Framework
2. Conceptual Design of the Stalac-Djunis Railway Section (2021)
3. Draft Resettlement Action Plan for the Stalac-Djunis section (2022)
4. Location Conditions and opinions of relevant authorities for the Stalac-Djunis section
5. National EIA Study (2018) and ESIA Study (2016) for the Stalac-Djunis section

The Pre-Feasibility Study for the Corridor X has been prepared by the Project Preparation Facility (PPF9) Consultants which have also been engaged to prepare the preliminary designs and ESIA for each subsection. Development of ESIAs has not started yet.

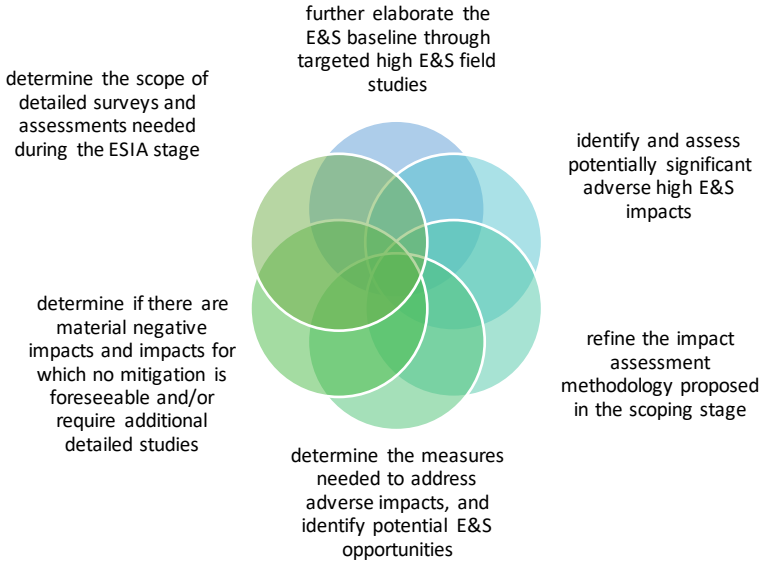
Only the Stalac-Djunis subsection has been subject to an E&S assessment to date – an ESIA was prepared under the WBIF by Mott McDonald in 2016 and a national EIA was prepared and approved in 2018. The approval was valid for 2 years. SRI plans to re-apply with the existing EIA and updated location conditions and opinions for a renewed approval. A gap analysis of the 2016 ESIA, the 2018 EIA and current design against the Applicable E&S Requirements is being conducted as part of a separate but parallel assignment.

2.3 Objectives of the Assignment

Since individual ESIAs will not be available for all sub-sections at the time of presenting the Project to the Board, the EBRD requires a high-level assessment of the overall Project, a Corridor E&S Assessment to provide confidence that the Project can be structured to meet EBRD's E&S Performance Requirements. This assessment will be further developed and superseded by the sub-section specific ESIAs, which will become the basis of EBRD's approval of further tranches of the loan. A Corridor ESAP will be developed for the Project, indicating actions which need to be completed for remaining sub-sections, including those to be addressed in the ESIAs.

The Corridor Assessment will demonstrate main impacts and proposed general mitigations associated with the Project and any section-specific E&S risks and potential mitigations measures which will ensure that such risks can be managed through further ESIA processes.

The objective of the Assignment is to:



2.4 Project Deliverables

The following table summarises the Project Deliverables as foreseen in the Terms of References (ToR).

Table 1: Project deliverables

Report	Time of submission per ToR
Draft Public Disclosure Package (Corridor E&S Assessment, ESMP, SEP, Resettlement Framework, NTS, ESAP)	Within 16 weeks from the start of the assignment (by the end of June 2022)

Report	Time of submission per ToR
Final Public Disclosure Package	Within 20 weeks from the start of the assignment (by the end of July 2022)
Disclosure and Consultation Summary	End of 120-day disclosure period + 2 weeks (by the end of the first week of December 2022)
Post Disclosure Final ESIA Package	Within 4 weeks of the end of 120 days disclosure period (by the end of the third week of December 2022)

The detailed work programme is presented in Chapter 9.

2.5 Purpose of this Inception Report

This report constitutes the Inception Report referred to in the Terms of Reference (ToR), Sections 3 and 5. The report serves the following purposes:

- It contributes to a common understanding of the scope of the project, its objectives, outputs and activities.
- It presents initial site visit findings and observations, main issues identified, as well as assignment work plan, scope of E&S Assessment, implementation methodology, communication method/procedure with the stakeholders.
- It forms the basis for project monitoring by EBRD, SRI and other stakeholders.

This report is based on the initial findings of the inception period as described in Chapter 4.

According to the ToR, in the Inception Report the Consultant is to also to give early recommendations related to the Project design. Given that the Project is at the level of conceptual design and is not technically detailed, the Consultant's opinion is that appropriate and adequate recommendations cannot be given at this early stage of the Assignment.

3 Project Description

3.1 Current Railway System

SRI. Serbian Railways Infrastructure ("SRI") is the national railway infrastructure asset management company of Republic of Serbia founded in 2015[1]. The only stockholder of SRI is the Republic of Serbia.

SRI manages the public railway infrastructure in terms of maintenance of public railway infrastructure, organisation and regulation of railway traffic, providing access and use of public railway infrastructure to all interested railway undertakings, and legal and natural persons performing transport for their own needs, as well as the protection of public railway infrastructure. Railway transport of passengers and goods is managed by separate companies "Serbia Cargo" and "Serbia Train", as well as a number of private operators.

Serbia's railway network. The railway network plays an important role in the economic development of the country. Serbia has a relatively dense network with a total length of 3,763 km, including both open line tracks, station transit tracks and industrial tracks. The main arterial routes of the Serbian railway network stretch along the Pan-European Corridor X (Figure 1).

Figure 1: Main arterial routes of the railway network in Serbia[2]

Corridor X is the main north-south route running through Serbia and is an integral part the extended Trans-European Railway Network ("TEN-T") connecting Western and Central Europe with Greece, Serbia and the Middle East. It is also an axis of national importance and represents 25% of the Serbian rail network, handles

[1] In 2015, the Government dissolved the existing "Railways of Serbia" into four new companies: SRI, "Railways of Serbia", "Serbia Train" and "Serbia Cargo".

[2] Source: Reconstruction and modernisation of the railway line Belgrade-Nis, Preliminary Feasibility Study, February 2022

over 50% of total traffic (freight and passenger), and connects the three largest cities of the country (Novi Sad, Belgrade and Nis) and a large number of settlements and industrial centres.

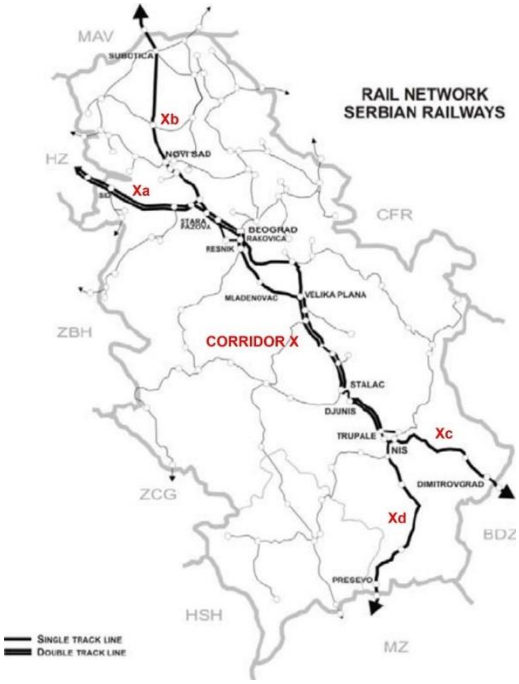


Figure 2: Corridor X as part of the Serbian railway network

Railway route Belgrade-Nis. The railway route Belgrade-Nis is part of the Main line 102: Belgrade Centre-Rasputnica (Junction) "G"-Rakovica-Mladenovac-Lapovo-Nis-Presevo-State Border-(Tabanovce). It is part of the Corridor X and is defined as a priority for the development of the Serbian railway network.

This railway route is fundamental for the development of the sustainable transport system in the country, as determined by the Spatial Plan of Serbia for the period 2010-2020. The largest and most dynamic urban centre, Belgrade, with the support of the urban centre of Nis, will be crucial for the development of the overall economy. Smaller regional centres such as Jagodina, Cuprija and Paracin will contribute to the development capacity on the Belgrade-Nis route. The importance and significance of the railway Belgrade-Nis has been confirmed on multiple occasions at both the European and national levels[3].

[3] The Agreement on the Establishment of High-Performance Railway Networks in Southeast Europe, signed in 2006 within the Southeast European Cooperation Process (SEECP); the EC Delegated Regulation on the adaptation of the indicative extension of the comprehensive TEN-T maps to Western Balkan countries (Commission Delegated Regulation (EU) 2016/758 amending Regulation (EU) No. 1315/2013); the Treaty establishing the Transport Community signed in 2017 and ratified by all partners (Council Decision (EU) 2019/392); the EC implementing decision on the compliance of the proposal to establish the Alpine-Western Balkan rail freight corridor (Commission Implementing Decision (EU) 2018/500); the Transport Master Plan for Serbia, prepared in 2009 within the EU Agenda for the Balkans; the Development Plan for Railway, Road, Inland Waterways, Air, and Intermodal Transport in Serbia 2015-2020, adopted by the Government of Serbia in 2015; the National Program for Public Railway Infrastructure 2017-2021, adopted by the National Assembly of Serbia in 2017; the Long and Medium-term Business Strategy and Development Plan for "Infrastructure of Serbian Railways" JSC 2017-2027, adopted by the Government of Serbia in 2017.

3.2 Corridor X Belgrade-Nis Railway Line – Overview

Current situation. The railway line Belgrade-Nis has a total length of approx. 228 km, and includes around 101 km (44%) of single-track and 127 km (56%) of two-track sections. It is classified as D4 category which, in accordance with the UIC Leaflet 700, expresses the permissible axle load of 22.5 t and the longitudinal load of 8 t/m. The railway line is electrified and equipped with relay interlocking devices included in the remote traffic management and control system.

The entire railway route Belgrade-Nis is with the normal track gauge (1,435 mm) and has continuously welded rails. The track is mostly made of UIC 49 rails, and partly of UIC 60 rails. Based on national standards, the official loading gauge is SZ I[4], while the loading gauge UIC-GB[5] has been reported for international traffic (in accordance with European standards).

A summary of the **main characteristics of the railway line Belgrade-Nis** are presented below:

Speed: The commercial speed of passenger trains is less than 50 km/h. Restricted-speed running has been introduced in multiple parts of the railway. The highest permissible speed of trains is 120 km/h between Jagodina and Paracin in the length of 17.4 km. The highest permissible speed on the rest of the railway line Belgrade Centre-Mladenovac-Nis is mainly 100 km/h, although on certain individual sections train speeds range from 50 to 80 km/h. The lowest permissible speed of trains is 30 km/h at the entrance to the station Nis.

Electrification: While the railway line Belgrade-Nis is completely electrified, the electrical and telecommunicating equipment are technologically obsolete.

Junctions: The section Belgrade Centre-Resnik is a part of the Belgrade railway junction, and the section Trupale-Medjurovo is a part of the Nis railway junction.

Tracks: From Belgrade to Velika Plana, there are two single-track railway lines, which are not in the same corridor, that are used as a two-track railway line for one part of the traffic, i.e. for the direction towards Nis via Mladenovac, and via Mala Krsna for the direction from Nis.

Structures: There is a total of 9 tunnels, 130 bridges and bridge structures, 449 culverts and other smaller-sized structures, as well as 126 level crossings.

Stations: There are 31 stations, 27 stops, 4 passing points, 5 junctions and 1 service point. 25 stations are mixed stations serving passengers and freight, whereas 6 are intended exclusively for passenger service (Belgrade Centre, Rakovica, Klenje, Ripanj tunel, Kovacevac and Mala Plana). Belgrade Centre is the central passenger station of the railway network in Serbia.

Specific sections:

- *Railway section Gilje-Cuprija-Paracin:* The section from Gilje to Cuprija was modernised by constructing a new double-track railway for speeds up to 160 km/h including the construction of a new double-track bridge over the Velika Morava (Great Morava) River.

[4] The loading gauge that applies to domestic traffic on railway lines is SZ I. SZ I gauge is slightly larger than the UIC GA loading gauge and slightly smaller than UIC GB. Loading gauge (train gauge) is a limited space viewed as a cross section vertical to the track axis that may not be exceeded by any part of the rail vehicle, whether loaded or empty.

[5] (UIC) GB is the international freight profile designation defined in the TSI Rolling Stock (2002/735 / EC), which specifies the maximum permissible "external" dimensions of rolling stock together with the load. The dimensions of the GB load profile are determined by the Rulebook on Technical Conditions and Maintenance fo the Upper Machine (Parts) of Railways ("Official Gazette of RS", No. 39/2016 and 74/2016).

- *Railway section Stalac-Djunis*: The section from Stalac to Djunis is currently a single-track one. Preliminary designs for the construction of the new double-track section for speeds up to 160 km/h have been completed, and a contractor has been selected for LOT 1 (construction of tunnel No. 4).

After years of under-investments, the current conditions of the railway infrastructure are far from satisfactory and are not in accordance with the EU standards, with significantly limited operational speed and technologically outdated electrical equipment. An important safety issue to both rail and road traffic is the large number of level crossings, very often without proper safety equipment.

Planned investments. The reconstruction and modernisation of the Belgrade-Nis line is a priority action for the future development of the Serbian railway network[6]. This railway line will be modernised, so that:

- the maximum speed will be increased from the current average of 50 km/h to the range of 160 to 200 km/h. Some smaller sections will have lower speeds, primarily in urban areas;
- the second track will be constructed where needed;
- the line will be equipped with modern ERTMS systems;
- the length of the main tracks in all stations and crossings will be at least 740 m;
- the clear cargo profile in the tunnels will be increased to UIC-GC;
- in official places where it is planned to stop passenger trains, platforms of 55 cm height will be constructed;
- the minimum length of passenger platforms will be at least 400 m.

Subsections. For the purpose of in-depth and concise analysis for the needs of this Inception Report, the Belgrade-Nis railway is divided into 7 subsections:

Subsection 1: Belgrade-Resnik
Subsection2: Resnik-Velika Plana
Subsection 3: Velika Plana-Gilje
Subsection 4: Gilje-Paracin
Subsection 5: Paracin-Stalac
Subsection 6: Stalac-Djunis
Subsection 7: Djunis-Medjurovo

The division was made taking into account: (i) population density (section Belgrade-Resnik is the most densely populated); (ii) single-track sections (Resnik-Velika Plana); (iii) sections that have already been reconstructed (Gilje-Paracin); (iv) sections whose reconstruction will start soon (Stalac-Djunis).

A comparative overview of the characteristics of these 7 subsections is given in the following chapters.

[6] As defined in the National Transport Strategy.

3.3 Description of Each Subsection

3.3.1 Subsection 1 (Belgrade-Resnik)

Characteristics		Existing Railway	Planned Railway
Railway surroundings		The railway line passes through highly developed and densely populated areas of Belgrade. The route crosses the following 4 streams or rivers[7]: Topciderska River, Kijevski stream, Kadinac stream and Sikljevac stream.	The railway line passes through highly developed areas and densely populated areas of Belgrade. The existing double-track railway line is retained from the Belgrade Centre to Resnik station. The route crosses the following 4 streams or rivers[8]: Topciderska River, Kijevski stream, Kadinac stream and Sikljevac stream.
Length		11.6 km	11.3 km
Number of tracks		2	2
Trains		*Number of trains in passenger services:* Belgrade Centre-Rakovica Fast – 4 Regional – 8 BG train – 6 Facultative – 2 Rakovica-Resnik Fast – 4 Regional – 8 Slow – 2 BG train – 6 Facultative – 2 *Number of planned train paths in freight services[9]:* 43 regular international trains 19 regular domestic trains	*Number of trains in passenger services:* High speed trains – 34 International trains – 12 Regional direct trains – 14 Local trains – 48 *Number of trains in freight services:* International trains – 20 Direct trains – 10 Local (manipulative) trains – 2
Design speed (maximum)		120 km/h	120 km/h
Max. permitted speed		70 km/h Belgrade Centre-Junction "G" 80 km/h Junction "G"-Rakovica 70 km/h Rakovica-Resnik	100 km/h
Stopping places		Belgrade Centre (Station) Rakovica (Station) Knezevac (Halt) Kijevo (Halt) Resnik (Station)	Same as existing
Level crossings		3	3
Ancillary[10] structures	Bridges	4	1
	Viaducts	--	--
	Galleries	2	1
	Tunnels	3	2
	Overpasses	6	6
	Underpasses	--	--
Fencing		No fencing	Fencing
Access roads		3x Street	3x Street
Municipalities		Savski Venac (City of Belgrade) Rakovica (City of Belgrade)	Same as existing

Figure 3 provides an overview of the existing and planned railway (subsection 1) with ancillary structures.

[7] Data taken from https://a3.geosrbija.rs/ (layer: larger watercourses)
[8] Data taken from https://a3.geosrbija.rs/ (layer: larger watercourses)
[9] Freight trains will operate on Belgrade Marshalling yard – Resnik route
[10] Data for the planned railway taken from Pre-Feasibility Study – Conceptual Design (Annex A)

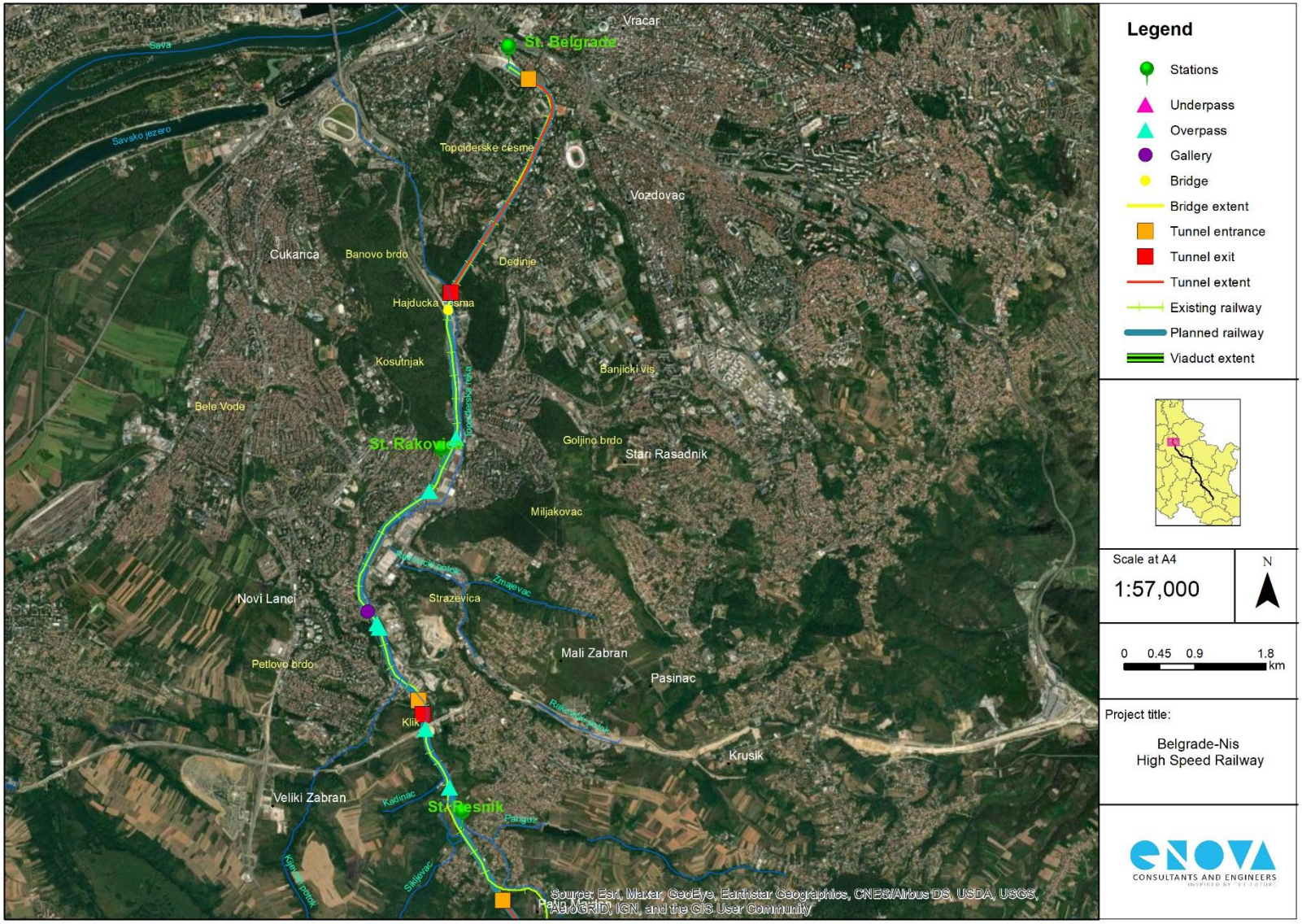


Figure 3: Existing and planned railway with ancillary structures (Belgrade-Resnik subsection)

3.3.2 Subsection 2 (Resnik-Velika Plana)

Characteristics	Existing Railway	Planned Railway
Railway surroundings	The existing railway route passes through and/or near the following 11 settlements: Resnik, Ripanj Kolonija, Ripanj, Ralja, Djurinci, Vlaska, Mladenovac, Kusadak, Glibovac, Smederevska Palanka and Velika Plana. The route crosses the following 21 streams or rivers[11]: Radusnje stream, No name stream, Bela River, Palanka River, Sardinia stream, Ralja River, Bulin stream, Kokorin stream, Radovanov stream, Serava stream, Batasev stream, Ladjevac stream, No name stream, Bojanac River, Mali Lug River, Drenovcic stream, Bulina voda stream, Ivak stream, Kudrecki stream, Jasenica River and Bukovacki stream.	The new railway route will avoid and/or will be moved away from 6 settlements: Resnik (partially), Ripanj Kolonija, Ralja, Vlaska, Mladenovac (partially), Kusadak (partially). The new railway route will be moved closer to 1 settlement: Ripanj. The new railway route crosses over the playground of primary school "Vojvoda Putnik" in Ripanj. The new route will avoid crossing: No name stream, Bela River, Smrdanski stream, Bulin stream, Bojanac stream. The new route will cross Sutlovacki stream, Duboki stream, Lugriver, Lunjevacki stream and Veliki Lug River.
Length	76.4 km	74.1 km
Number of tracks	1	2
Trains	*Number of trains in passenger services:* Resnik-Mladenovac Fast – 4 Regional – 8 Slow – 2 BG train – 6 Facultative – 2 Mladenovac-Velika Plana Fast – 6 Regional – 10 Slow – 2 Facultative – 2 *Number of planned train paths in freight services:* 43 regular international trains 19 regular domestic trains	*Number of trains in passenger services:* High speed trains – 34 International trains – 12 Regional direct trains – 14 Local trains – 48[12] *Number of trains in freight services:* International trains – 20 Direct trains – 10 Local (manipulative) trains – 2
Design speed (maximum)	120 km/h	160 km/h – 200 km/h
Max. permitted speed	30 km/h Resnik-Pinosava 50 km/h Pinosava-Sopot Kosmajski 100 km/h Sopot Kosmajski-Velika Plana	200 km/h Resnik-Pinosava 160 km/h Pinosava-Ripanj Kolonija 200 km/h Ripanj Kolonija-Ripanj Tunnel 160 km/h Ripanj Tunel-Ralja 200 km/h Ralja-Sopot Kosmajski 160 km/h Sopot Kosmajski-Mladenovac 200 km/h Mladenovac-Velika Plana
Stopping places	Resnik (Station) Pinosava (Passing point) Ripanj Kolonija (Halt) Ripanj (Station) Klenje (Station) Ripanj Tunel (Station) Ralja (Station) Sopot Kosmajski (Station) Vlasko Polje (Station) Mladenovac (Station) Kovacevac (Station) Rabrovac (Halt) Kusadak (Station)	Resnik (Station) Ripanj (Station) Ralja (Station) Sopot Kosmajski (Station) Mladenovac (Station) Kusadak (Station) Palanka (Station) Velika Plana (Station) *Note: On the Resnik-Mladenovac section, 3 railway stations are planned at new locations instead of the existing stations: Ripanj, Ralja and Sopot Kosmajski.

[11] Data are taken from https://a3.geosrbija.rs/ (layer: larger watercourses)

[12] 12 trains will operate on Belgrade - Mladenovac route

Characteristics		Existing Railway	Planned Railway
		Ratare (Halt) Glibovac (Passing point) Palanka (Station) Mala Plana (Station) Velika Plana (Station)	
Level crossings		34	1
Ancillary[13] structures	Bridges	18	33
	Viaducts	--	--
	Galleries	--	--
	Tunnels	3	9
	Overpasses	--	18
	Underpasses	--	--
Fencing		No fencing	Fencing
Access roads		State road IIA No. 147 State road IIA No. 150 State road IIA No. 156 State road IIB No. 346 State road IIB No. 349 13x Local road 2x Street 14x Agricultural road	State road IIA No. 150 State road IIB No. 349 5x Local road 2x Agricultural road
Municipalities		Rakovica (City of Belgrade) Vozdovac (City of Belgrade) Cukarica (City of Belgrade) Sopot (City of Belgrade) Mladenovac (City of Belgrade) Smederevska Palanka Velika Plana	Same as existing

Figure 4 provided an overview of the existing and planned railway (subsection 2) with ancillary structures.

Note: Considering the length of the Resnik-Velika Plana section and the number of ancillary structures, more detailed maps for the subsections Resnik-Sopot Kosmajski and Sopot Kosmajski-Velika Plana are given in Figure 5 and Figure 6.

[13] Data for planned railway are taken from Pre-Feasibility Study – Conceptual Design (Annex A)

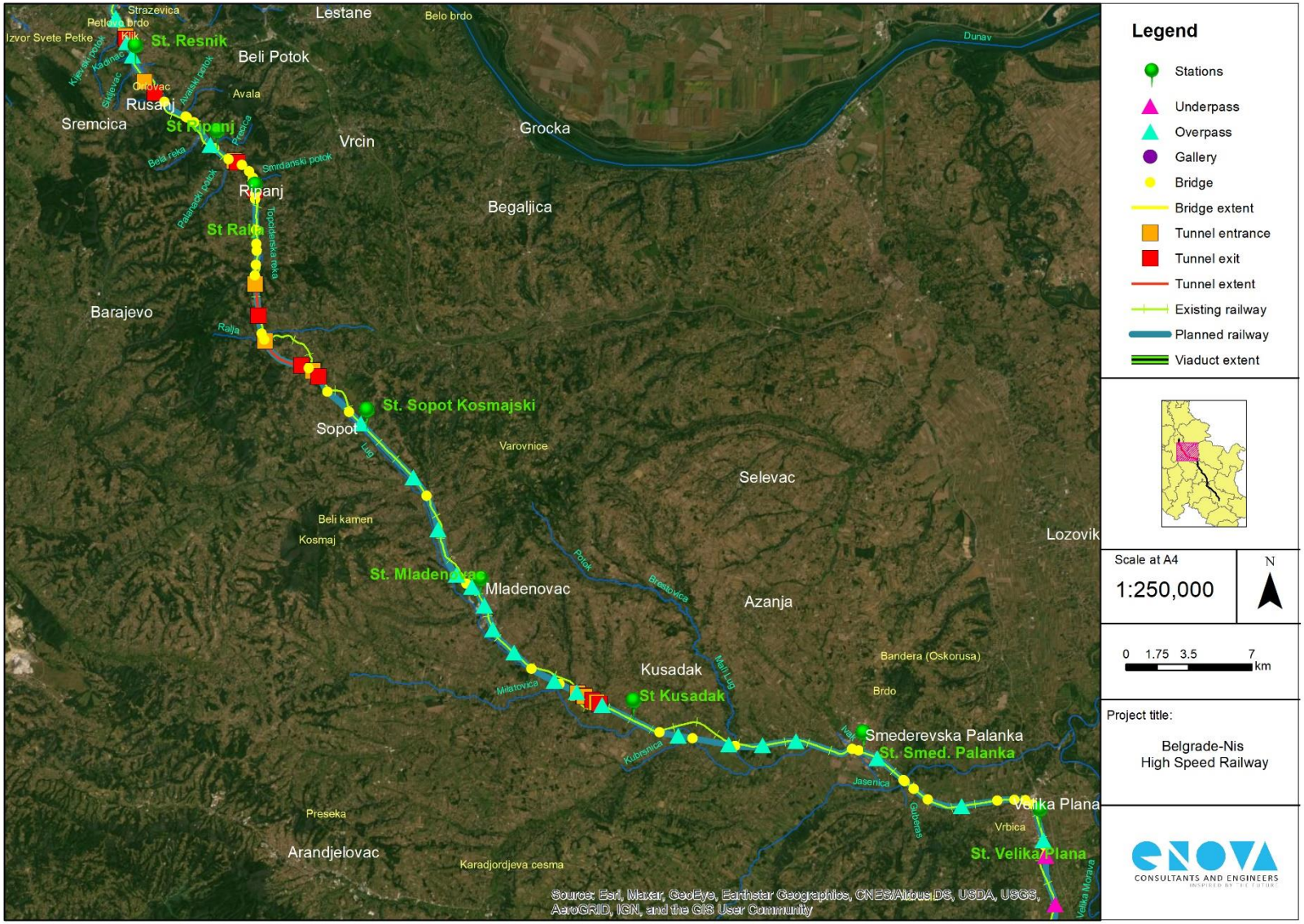


Figure 4: Existing and planned railway with ancillary structures (Resnik-Velika Plana subsection)

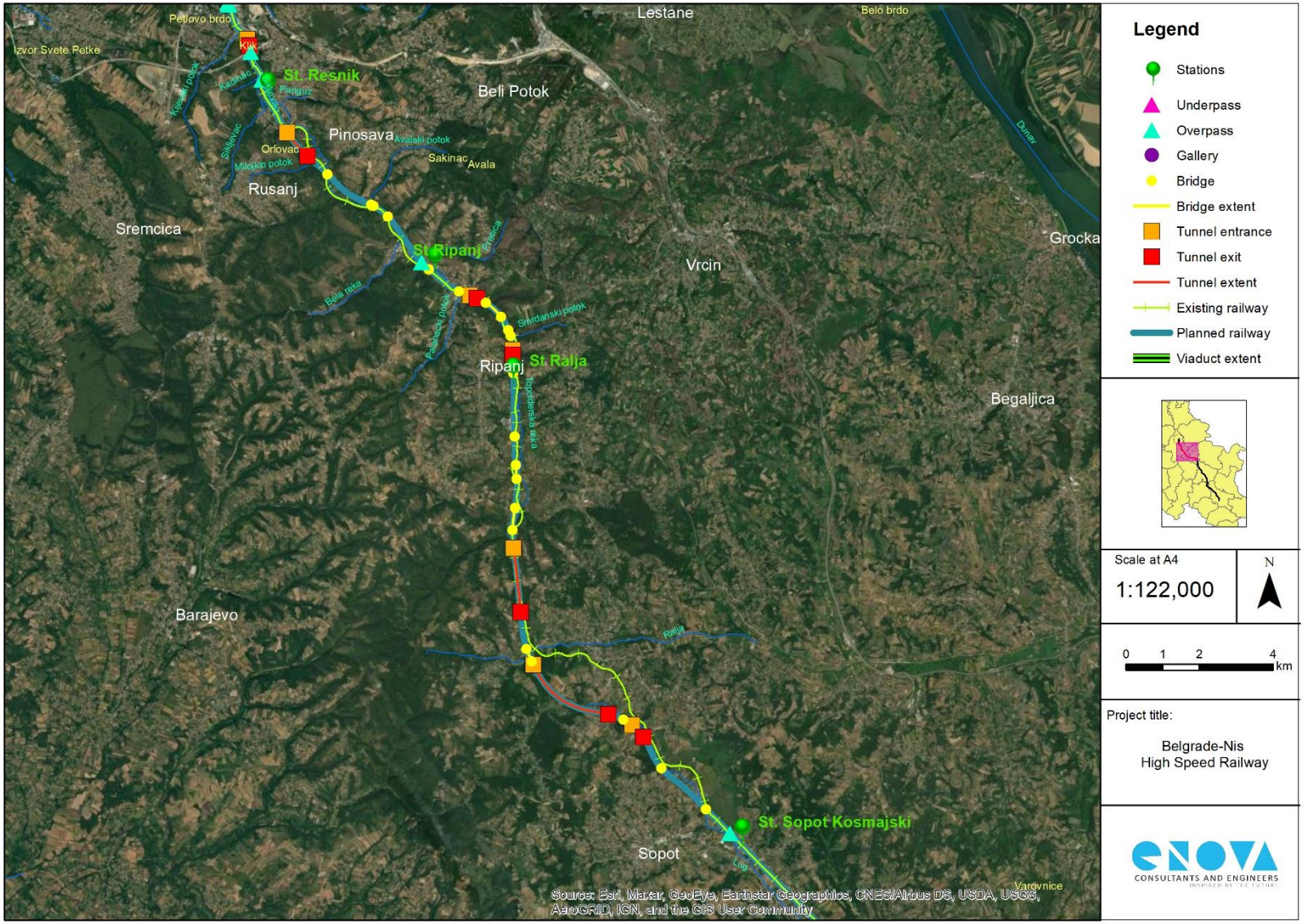


Figure 5: Existing and planned railway with ancillary structures (Resnik-Sopot Kosmajski subsection)

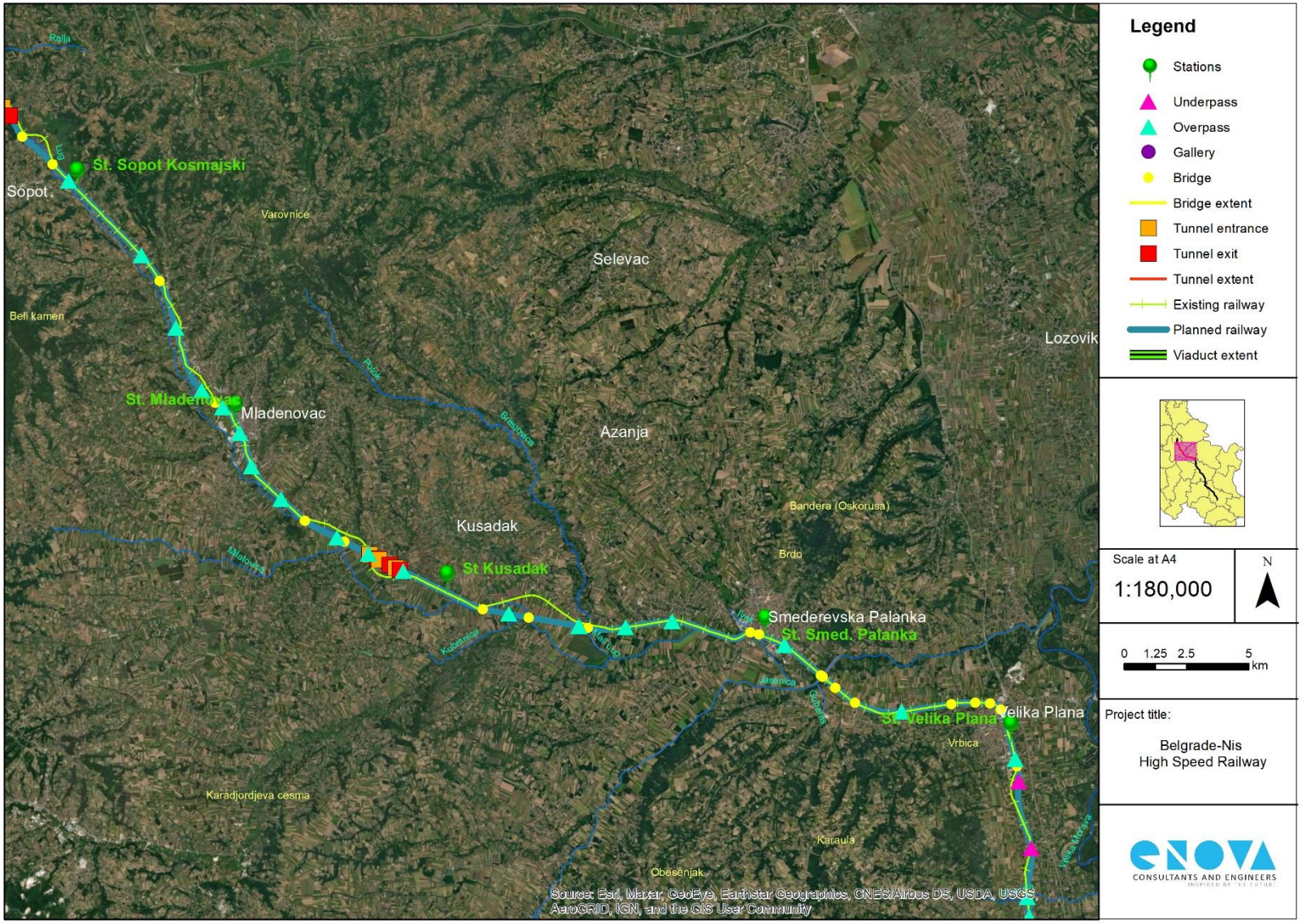


Figure 6: Existing and planned railway with ancillary structures (Sopot Kosmajski-Velika Plana subsection)

3.3.3 Subsection 3 (Velika Plana-Gilje)

Characteristics	Existing Railway	Planned Railway
Railway surroundings	The existing railway route passes through and/or near the following 11 settlements: Velika Plana, Staro Selo, Novo Selo, Markovac, Lapovo, Brzan, Milosevo, Bagrdan, Novo Laniste, Ribnik and Jagodina. The route crosses the following 16 streams or rivers[14]: Grabavacki stream, Recica River, Mlaka stream, Gibavica stream, Raca River, Kazanski stream, Lepenica River, Kijevski stream, Grabovik River, Kovanluk River, Ludi stream, Osaonica River, Kameniti stream, Suvi stream, Belica River and Lugomir River. After Velika Plana, in the settlement of Staro Selo, the railway passes near the Church "Vaznesenja Hristovog" and the cemetery. Additionally, in the close proximity of the railway is the primary school "Karadjordje". In the settlement of Novo selo, the railway passes near the Church of "Sveti Djordje". Before the settlement Novo Laniste, the railway line passes near the church "Sv.Velikomucenice Marine". After the settlement Novo Laniste, the railway line passes near the church „Uspenje Presvete Bogorodice ".	The new railway route will avoid and/or will be moved away from 4 settlements: Staro Selo (partially), Milosevo (partially), Novo Laniste and Ribnik. The route crosses the following 16 streams or rivers[15]: Grabavacki stream, Recica River, Mlaka stream, Gibavica stream, Raca River, Kazanski stream, Lepenica River, Kijevski stream, Grabovik River, Kovanluk River, Ludi stream, Osaonica River, Kameniti stream, Suvi stream, Belica River and Lugomir River. After Velika Plana, in the settlement of Staro Selo, the railway passes near the Church "Vaznesenja Hristovog" and the cemetery. Additionally, in the close proximity of the railway is the primary school "Karadjordje". In the settlement of Novo selo, the railway passes near the Church of "Sveti Djordje". Before the settlement Novo Laniste, the railway line passes near the church "Sv. Velikomucenice Marine". The new railway route will avoid the church "Uspenje Presvete Bogorodice".
Length	50.2 km	49.7 km
Number of tracks	2	2
Trains	*Number of trains in passenger services:* Velika Plana-Lapovo Fast – 6 Regional – 16 Slow – 2 Facultative – 2 Lapovo – Jagodina Fast – 4 Regional – 8 Slow – 2 Facultative – 2 Jagodina - Gilje Fast – 4 Regional – 12 Slow – 2 Facultative – 2 *Number of planned train paths in freight services:* 43 regular international trains 19 regular domestic trains	*Number of trains in passenger services:* High speed trains – 34 International trains – 12 Regional direct trains – 28[16] Local trains – 38[17] *Number of trains in freight services:* International trains – 20 Direct trains – 10 Local (manipulative) trains – 2

[14] Data are taken from https://a3.geosrbija.rs/ (layer: larger watercourses)

[15] Data are taken from https://a3.geosrbija.rs/ (layer: larger watercourses)

[16] 14 regional direct trains will operate on Jagodina - Nis route

[17] 18 local trains will operate on Jagodina - Nis route

Characteristics		Existing Railway	Planned Railway
Design speed (maximum)		120 km/h	160 km/h – 200 km/h
Max. permitted speed		70/50 km/h[18] Velika Plana-Markovac 100 km/h Markovac-Lapovo 50/70 km/h Lapovo-Bagrdan 50/100 km/h Bagrdan-Jagodina 120 km/h Jagodina-Gilje	200 km/h Velika Plana-Lapovo 160 km/h Lapovo-Bagrdan 200 km/h Bagrdan-Gilje
Stopping places		Velika Plana (Station) Staro Selo (Halt) Novo Selo (Halt) Markovac (Station) Lapovo Varos (Halt) Lapovo (Station) Brzan (Halt) Milosevo (Halt) Bagrdan (Station) Laniste (Halt) Bukovce (Halt) Jagodina (Station) Gilje (Halt)	Velika Plana (Station) Markovac (Station) Lapovo Varos (Halt) Lapovo (Station) Bagrdan (Station) Jagodina (Station)
Level crossings		23	--
Ancillary[19] structures	Bridges	32	16[20]
	Viaducts	--	--
	Galleries	--	--
	Tunnels	--	--
	Overpasses	--	23
	Underpasses	31	9
Fencing		No fencing	Fencing
Access roads		State road IB No. 27 State road IIA No. 185 18x Local road 3x Street	5x Local road
Municipalities		Velika Plana Lapovo Batocina Jagodina Cuprija	Same as existing

Figure 7 provides an overview of the existing and planned railway (subsection 3) with ancillary structures.

[18] Belgrade-Nis direction/ Nis-Belgrade direction

[19] Data for planned railway are taken from Pre-Feasibility Study – Conceptual Design (Annex A)

[20] In Pre-Feasibility Study – Conceptual Design, only the major bridges are shown.

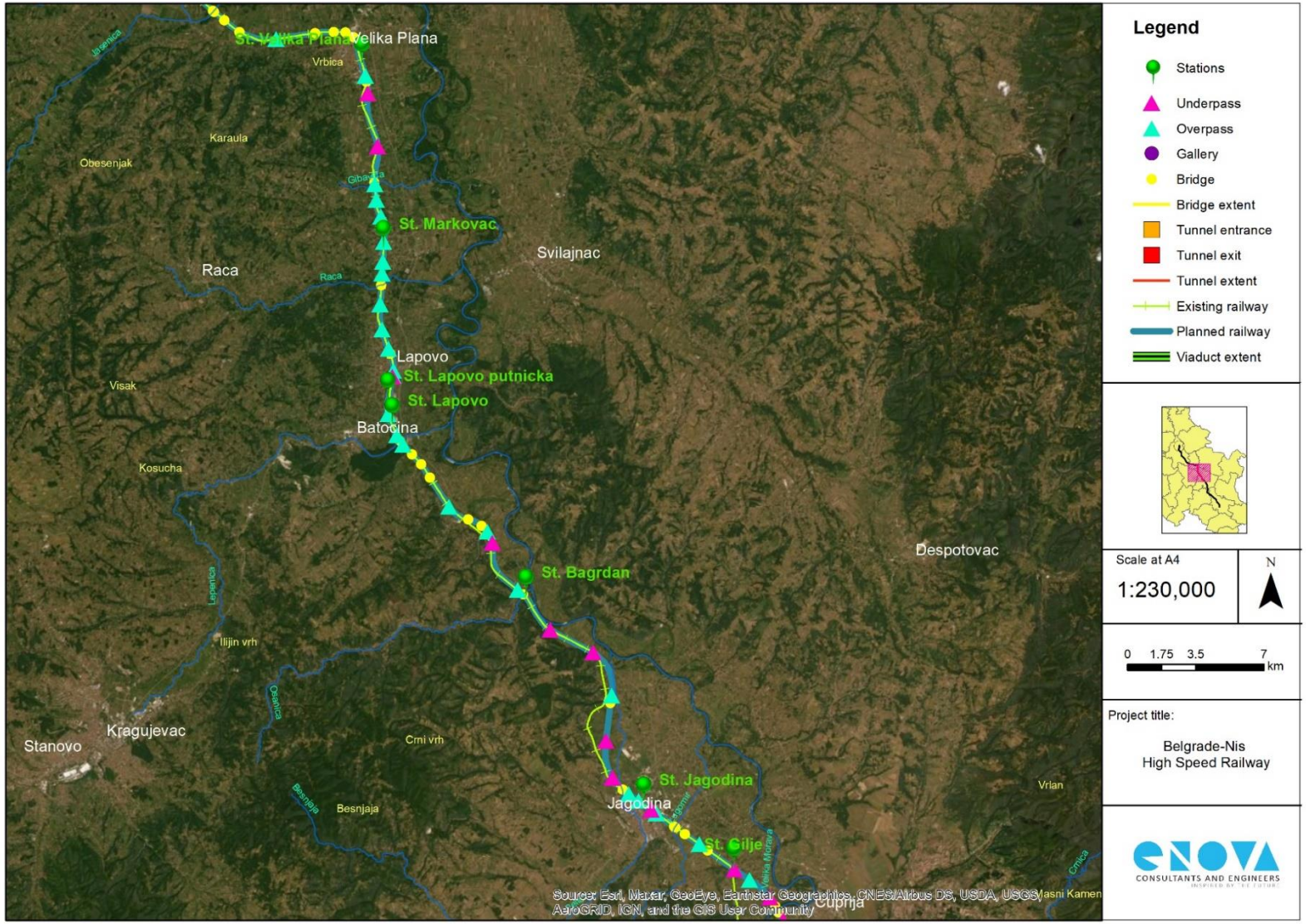


Figure 7: Existing and planned railway with ancillary structures (Velika Plana-Gilje subsection)

3.3.4 Subsection 4 (Gilje-Paracin)

Characteristics		Existing Railway	Planned Railway
Railway surroundings		The existing railway route passes through and/or near the following 3 settlements: Mijatovac, Cuprija and Paracin. The route crosses[21] Velika Morava River and Cuprijski stream.	The Gilje-Paracin section was reconstructed several years ago for the design speed of 160 km/h. *According to information obtained from PPF9, this section will not be the subject of new reconstruction, but small-scale additional construction works are possible.*
Length		12.0 km	12.0 km
Number of tracks		2	2
Trains		*Number of trains in passenger services:* Gilje-Paracin Fast – 4 Regional – 12 Slow – 2 Facultative – 2 *Number of planned train paths in freight services:* 43 regular international trains 19 regular domestic trains	*Number of trains in passenger services:* High speed trains – 34 International trains – 12 Regional direct trains – 28 Local trains – 38 *Number of trains in freight services:* International trains – 20 Direct trains – 10 Local (manipulative) trains – 2
Design speed (maximum)		160 km/h	160 km/h
Max. permitted speed		160 km/h	160 km/h
Stopping places		Gilje (Halt) Cuprija (Junction) Paracin (Station)	Gilje (Halt) Cuprija (Junction) Paracin (Station)
Level crossings		2	2
Ancillary structures	Bridges	1	1
	Viaducts	--	--
	Galleries	--	--
	Tunnels	--	--
	Overpasses	1	1
	Underpasses	5	5
Fencing		No fencing	Fencing
Access roads		1x Local road 1x Street	1x Local road 1x Street
Municipalities		Cuprija Paracin	Cuprija Paracin

Figure 8 provides an overview of the existing and planned railway (subsection 4) with ancillary structures.

[21] Data taken from https://a3.geosrbija.rs/ (layer: larger watercourses)

Figure 8: Existing and planned railway with ancillary structures (Gilje-Paracin subsection)

3.3.5 Subsection 5 (Paracin-Stalac)

Characteristics		Existing Railway	Planned Railway
Railway surroundings		The existing railway route passes through and/or near the following 8 settlements: Paracin, Striza, Ratare, Sikirica, Drenovac, Cicevac, Lucina and Stalac. The route crosses the following 6 streams or rivers[22]: Crnica river, Bacijski stream, Slatinski stream, Krezbinski stream, Jovanovacka river and Potok stream.	From Paracin to Stalac, the line remains in the same corridor with increased radii of curves for the speed up to 200 km/h.
Length		21.1 km	21.2 km
Number of tracks		2	2
Trains		*Number of trains in passenger services:* Paracin-Stalac Fast – 4 Regional – 12 Slow – 2 Facultative – 2 *Number of planned train paths in freight services:* 43 regular international trains 19 regular domestic trains	*Number of trains in passenger services:* High speed trains – 34 International trains – 12 Regional direct trains – 28 Local trains – 38 *Number of trains in freight services:* International trains – 20 Direct trains – 10 Local (manipulative) trains – 2
Design speed (maximum)		120 km/h	200 km/h
Max. permitted speed		Paracin-Cicevac 50/100[23] km/h Cicevac-Stalac 100/50 km/h	200 km/h
Stopping places		Paracin (Station) Sikirica/Ratari (Halt) Drenovac (Halt) Cicevac (Station) Lucina (Halt) Stalac (Station)	Paracin (Station) Cicevac (Station) Stalac (Station)
Level crossings		12	1
Ancillary[24] structures	Bridges	7	3[25]
	Viaducts	--	--
	Galleries	--	--
	Tunnels	--	--
	Overpasses	--	6
	Underpasses	4	4
Fencing		No fencing	Fencing
Access roads		State road IIA No. 220 5x Local road 5x Street 1x Agricultural road	--
Municipalities		Paracin Cicevac	Paracin Cicevac

Figure 9 provides an overview of the existing and planned railway (subsection 5) with ancillary structures.

[22] Data taken from https://a3.geosrbija.rs/ (layer: larger watercourses)
[23] Belgrade-Nis direction/ Nis-Belgrade direction
[24] Data for planned railway are taken from Pre-Feasibility Study – Conceptual Design (Annex A)
[25] In Pre-Feasibility Study – Conceptual Design, only the major bridges are shown.

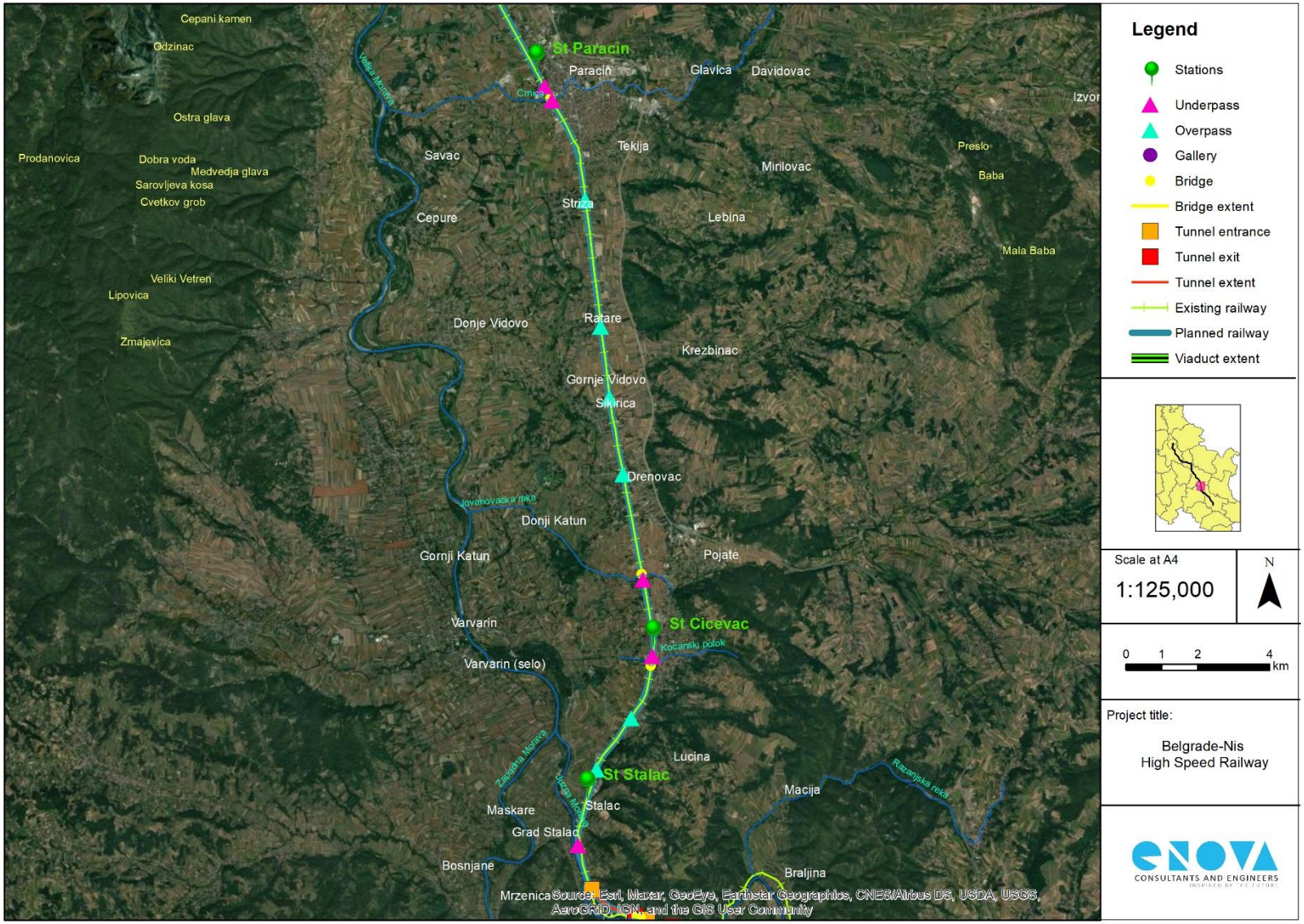


Figure 9: Existing and planned railway with ancillary structures (Paracin-Stalac subsection)

3.3.6 Subsection 6 (Stalac-Djunis)

Characteristics	Existing Railway	Planned Railway
Railway surroundings	The existing railway route passes through and/or nearby the following 7 settlements: Stalac, Stalac Town, Braljina, Mojsinje, Cerovo, Trubarevo and Djunis. The route is located within the ecologically important area "Mojsinje Mountain and Stalac Gorge of the Juzna Morava (South Morava) River"[26]. The route runs parallel to the Juzna Morava River (Stalac Gorge) at a greater or lesser distance, on the entire section. The river is designated as an ecological corridor of international importance[27]. The route crosses the following 10 streams or rivers: Vinogradski stream, Pajin stream, Razanska river, Krnji stream, Jabucki stream, Vetrenjski stream, Bucina stream, Juzna Morava River, Zmijarnik river, Ribarska river. The route passes nearby cultural heritage sites of importance: the Church of "Svetih Arhangela" (17th century), Church of "Duha Svetoga" (14th-15th century), Church of "Sveti Jovan" (14th century), Church of "Sveti Marko" and Church of "Sveti Nikola" (14th century); archaeological sites: Church of "Sveti Sava" (Middle Ages), Medieval fortress Trubarevo and remains of the medieval church; and cultural heritage under preliminary protection Church of "Svetog Pantelejmona" (cemetery church).	The new railway route will avoid and/or will be moved away from 3 settlements: Braljina, Mojsinje and Cerovo. The new route will go through the ecologically important area "Mojsinje Mountain and Stalac Gorge of the Juzna Morava River" almost entirely in tunnels, the only exception being the one 30 m-long gallery between tunnel 4 and tunnel 5, south of Mojsinje village. The route will leave the Juzna Morava River watercourse and the Stalac Gorge in the length of almost 10 km. The new route will avoid crossing the Pajin stream, Razanska river, Krnji stream, Jabucki stream, Vetrenjski stream and Bucina stream. The route will be moved away from the following cultural heritage/ archaeological sites: Church of "Sveti Nikola" (14th century), Church of "Sveti Sava" (Middle Ages), Medieval fortress Trubarevo and remains of the medieval church, as well as from Church of "Svetog Pantelejmona" (cemetery church).
Length	18.6 km (22.0 km including the sections before Stalac and after Djunis in order to fit into the existing railway line)	17.7 km (including the sections before Stalac and after Djunis in order to fit into the existing railway line)
Number of tracks	1	2
Trains	*Number of trains in passenger services*[28]*:* International trains – 4 Regional and local trains – 8 International agency trains – 4 *Number of trains in freight services*[29]*:* International trains – 11 Domestic trains – 4	*Number of trains in passenger services:* High speed trains – 34 International trains – 12 Regional direct trains – 14 Local trains – 18 *Number of trains in freight services:* International trains – 20 Direct trains – 10 Local (manipulative) trains – 2
Design speed (maximum)	120 km/h	160 km/h
Max. permitted speed	65 km/h Stalac-Braljina 85 km/h Braljina-Djunis	160 km/h
Stopping places	Stalac (station) Stevanac (passing loop) Braljina (station) Cerovo Razanj (halt)	Stalac (station) Djunis (station)

[26] The Decree on Ecological Network, "Official Gazette of RS", No. 102/2010

[27] Ibid.

[28] Data from Draft Environmental and Social Impact Assessment Reconstruction and modernization of the Existing Railway Track and Construction of a Second Track on the Line Belgrade – Nis, Section Stalac – Djunis, IPA 2011-WBIF-Infrastructure Project -Serbia Transport WB8-SER-TRA-14, EuropeAid/131160/C/SER/MULTI/3C, February 2016.

[29] Ibid.

Characteristics		Existing Railway	Planned Railway
		Staro Trubarevo (passing loop) Djunis (station)	
Level crossings		8	--
Ancillary structures	Bridges	15	6
	Viaducts	--	1
	Galleries	--	1
	Tunnels	1	5
	Overpasses	--	--
	Underpasses	3	2
Fencing		No fencing	Fencing
Access roads		Dr Ilije Nagulica street (Stalac Station) Zeleznicka street (Braljina station) Zeleznicka street (Cerovo Razanj halt) Kralja Petra Prvog street (Staro Trubarevo passing loop) State road No. 215 (Djunis station)	Dr Ilije Nagulica street (Stalac Station) State road No. 215 (Djunis station)
Municipalities		Cicevac Krusevac	Cicevac Krusevac

Figure 10 provides an overview of the existing and planned railway (subsection 6) with ancillary structures.

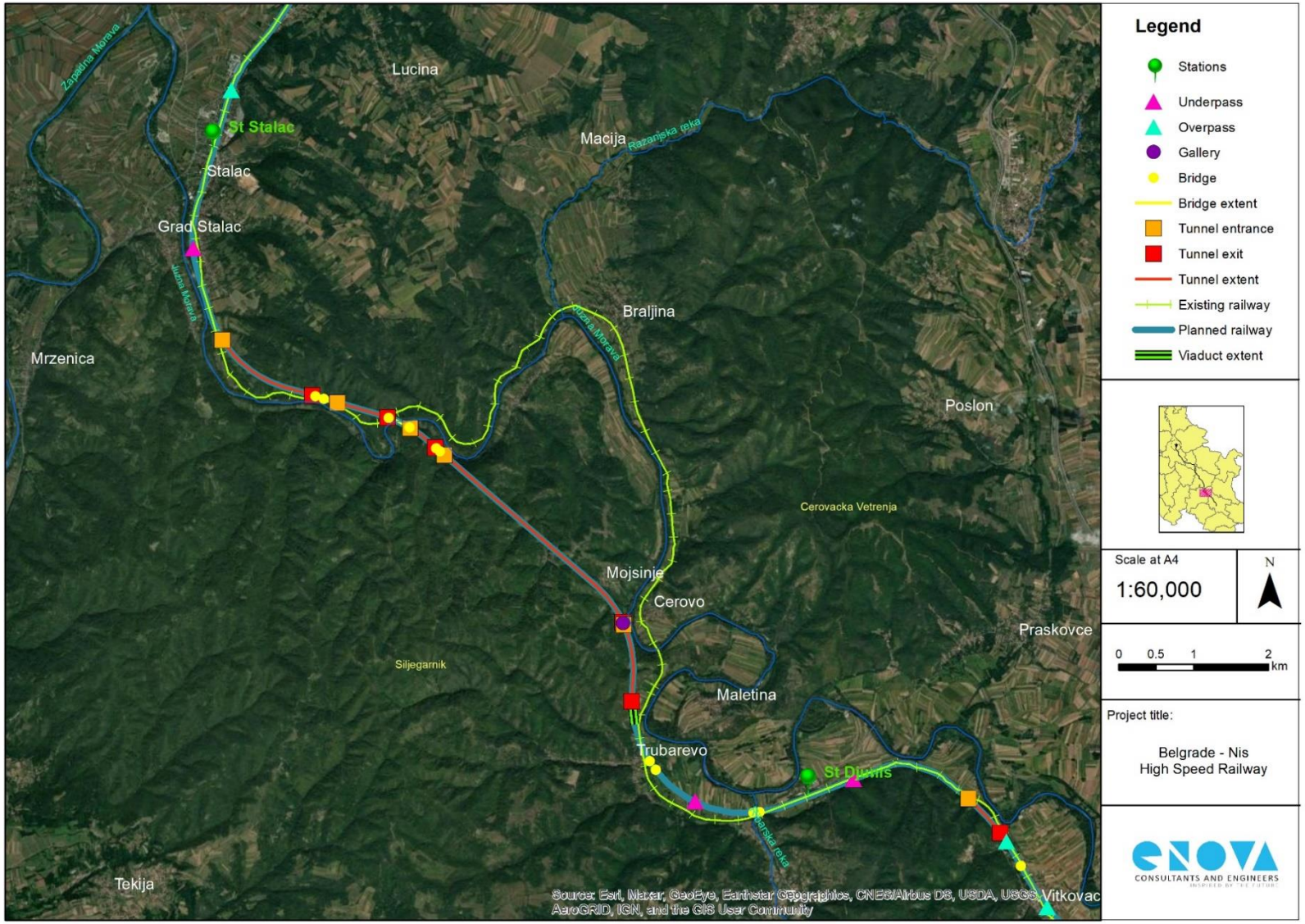


Figure 10: Existing and planned railway with ancillary structures (Stalac-Djunis subsection)

3.3.7 Subsection 7 (Djunis-Medjurovo)

Characteristics	Existing Railway	Planned Railway
Railway surroundings	The existing railway route passes through and/or near the following 19 settlements: Djunis, Vitkovac, Donji Ljubes, Srezovac, Gornji Ljubes, Korman, Trnjane, Donji Adrovac, Zitkovac, Moravac, Luzane, Tesica, Grejac, Veliki Drenovac, Supovac, Mezgraja, Vrtiste, Trupale and Nis. The route crosses the following 6 streams or rivers[30]: Simin stream, Jankov stream, Srezovacka River, Radevacka River, Suvi stream, Suhotnicki stream, Turija River, Dasnicka River, Juzna Morava River and Nisava River. The route crosses in the vicinity of the primary school "Stojan Zivkovic Stole" in Trnjane. The existing railway passes in the vicinity of the church "Saint Arhangel Gavrilo" in Zitkovce.	The new railway route will avoid and/or will be moved away from 4 settlements: Zitkovac (partially), Moravac (partially), Veliki Drenovac (partially) and Supovac. The route crosses the following 6 streams or rivers[31]: Simin stream, Jankov stream, Srezovacka River, Radevacka River, Suvi stream, Suhotnicki stream, Turija River, Dasnicka River, Juzna Morava River and Nisava River. From Trupale station to Medjurovo station, railway route is in existing corridor, due to the fact that this section is part of the Nis railway node. The route crosses in the vicinity of the primary school "Stojan Zivkovic Stole" in Trnjane. The new railway route will be moved away of the church "Saint Arhangel Gavrilo" in Zitkovce.
Length	39.9 km[32]	39.0 km[32]
Number of tracks	2	2
Trains	*Number of trains in passenger services:* Djunis-Aleksinac Fast – 4 Regional – 8 Slow – 2 Facultative – 2 Djunis-Nis Fast – 4 Regional – 10 Slow – 2 Facultative – 2 *Number of planned train paths in freight services:* 43 regular international trains 19 regular domestic trains	*Number of trains in passenger services:* High speed trains – 34 International trains – 12 Regional direct trains – 14 Local trains – 52[33] *Number of trains in freight services:* International trains – 20 Direct trains – 10 Local (manipulative) trains – 2
Design speed (maximum)	120 km/h	100 km/h – 200 km/h
Max. permitted speed	100 km/h Djunis-Trupale 70 km/h Trupale-Crveni Krst 30 km/h Crveni Krst-Nis	160 km/h Djunis-Gornji Ljubes 200 km/h Gornji Ljubes-Adrovac 120 km/h Adrovac-Aleksinac 160 km/h Aleksinac-Luzane 200 km/h Luzane-Trupale 100 km/h Trupale-Nis
Stopping places	Djunis (Station) Vitkovac (Halt) Donji Ljubes (Halt) Gornji Ljubes (Halt) Korman (Station) Trnjani (Halt)	Djunis (Station) Korman (Station) Adrovac (Station) Aleksinac (Station) Luzane (Halt) Grejac (Station)

[30] Data are taken from https://a3.geosrbija.rs/ (layer: larger watercourses)
[31] Data are taken from https://a3.geosrbija.rs/ (layer: larger watercourses)
[32] Djunis – Trupale section
[33] 18 local trains will operate on Jagodina-Aleksinac route and 34 local trains will operate on Aleksinac-Nis route

Characteristics		Existing Railway	Planned Railway
		Adrovac (Station) Aleksinac (Station) Nozrina (Halt) Luzane (Halt) Tesica (Halt) Grejac (Station) Supovacki Most (Halt) Mezgraja (Halt) Vrtiste (Halt) Trupale (Station) Crveni Krst (Station) Nis (Station)	Mezgraja (Halt) Trupale (Station) Crveni Krst (Station) Nis (Station)
Level crossings		32[34]	1
Ancillary[35] structures	Bridges	30	14[36]
	Viaducts	--	--
	Galleries	--	--
	Tunnels	--	2
	Overpasses	--	16
	Underpasses	13	7
Fencing		No fencing	Fencing[37]
Access roads		15x Local road 8x Street 1x Agricultural road	Milana Jovanovica Street
Municipalities		Krusevac Aleksinac Crveni Krst (City of Nis) Palilula (City of Nis)	Same as existing

Figure 11 provides an overview of the existing and planned railway (subsection 7) with ancillary structures.

[34] Djunis-Trupale section

[35] Data for planned railway are taken from Pre-Feasibility Study – Conceptual Design (Annex A)

[36] In Pre-Feasibility Study – Conceptual Design, only the major bridges are shown.

[37] No data for Trupale-Medjurovo section

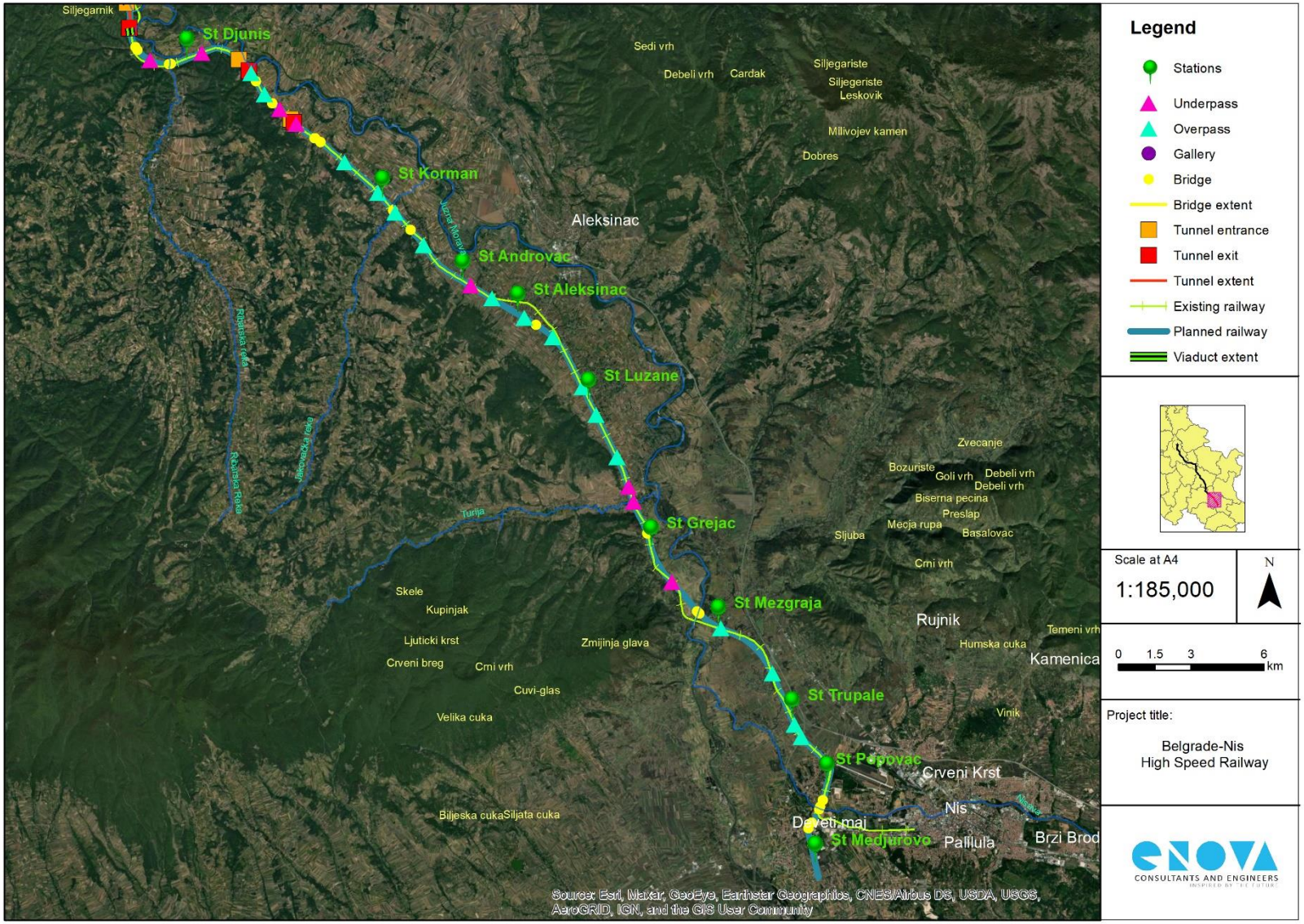


Figure 11: Existing and planned railway with ancillary structures (Djunis-Medjurovo subsection)

4 Initial Findings

This chapter describes the activities carried out by the Consultant and the initial findings based on the results of meetings held during preparation for the assignment and the results of observations from site visits to the Project area.

4.1 Activities Undertaken by the Consultant to Date

The tasks carried out by the time of submission of this Inception Report are summarised in the table below.

Table 1: Activities undertaken by the Consultant

Activity	Description
Data collection and review	The Consultant collected, reviewed, and established a database of the available Project documents. The full list of documents reviewed is available under Appendix A.
Meetings and discussions	The kick-off meeting was organised on March 04, 2022 with representatives of the SRI, for the purpose of the official commencement of Project activities, obtaining a preliminary understanding of the E&S conditions and augmenting the understanding as provided in the background data and collected documentation so far. In March 2022, the Consultant held a series of online and in-person meetings with: > EBRD representatives > SRI representatives > PPF9 consultant SAFEGE and its technical engineers and environmental consultants > Link 011 representatives – Resettlement Action Plan (RAP) consultants for Stalac-Djunis section Key information from the held meetings is presented in Chapter 4.2. The list of persons met/contacted is given in Appendix B.
Visits to Project area	Visits to the Project area were organised in March 2022 for obtaining an understanding of the site settings in terms of E&S issues. The Consultant visited the entire Belgrade-Nis corridor by train, and then observed potentially sensitive areas by car. Site visit observations are presented in Chapter 4.3. During the site visits, the Consultant had brief discussions with some residents in Stalac, as well as with SRI rail staff (conductors and a driver) on the section between Beograd-Nis. The Consultant also had a brief interview with a crossing keeper at level crossings in Bagrdan. Results of these discussions are presented in Chapter 4.4.

4.2 Key Information Obtained Through Meetings and Discussions

1. Project-related information

Entire Corridor

- The Project has been declared to be of **public interest** by the Government of Serbia.
- Only the **Conceptual Design** is available for the entire Corridor. The available maps showing the future alignment are of scale 1:25.000. This level of detail and precision may make it difficult to address some design related aspects which are important for the E&S assessment.
- The next step will be the development of the **Preliminary Design** (PD) for the Corridor by the PPF9 team (with the exception of the Stalac-Djunis section for which a PD has already been prepared). The PD will contain a feasibility study. Estimated completion deadline is July 2023. The selected contractors will then be responsible for the **Main and Detailed Design** (design and build contract), as well as for obtaining **construction permits**.
- A new **Spatial Plan** (and accompanying SEA) is being prepared for the Beograd-Velika Plana section, while existing Spatial Plan for the section Velika Plana-Nis is being updated. The Spatial Plan for Stalac-Djunis will not be amended.
- The final **decision on station closure** has not yet been made. Expansion of the space within the current railway stations will probably not be needed, except in cases when an existing station is insufficient to accommodate new equipment (e.g., ticket machines). Each station will have sanitary facilities and access for people with disabilities.
- It is not yet known whether some of the station buildings on the Corridor are **protected station buildings** – local authorities will need to be contacted to obtain this information.
- **Alternative transport options** during construction of one-track parts of the railway will be considered during the development of the PD. It is currently planned to organise bus lines wherever needed.

Stalac-Djunis section

- The Stalac-Djunis section is divided into two lots. **LOT 1** is only for **Tunnel 4** for which SRI has already signed a contract with China Railway 21. Bureau Group – Belgrade Branch, a joint venturer with a number of companies. It is a **design-build contract** in line with EIB's Guide to Procurement from 2018. Works will include: tunnelling works for single bored double-track Tunnel no. 4 (tunnel tube L=3275m), evacuation tunnels (L=310m+255m+815m) and access roads "P3" (L=286m) and "P4" (L=1445m).
- **LOT 2 is all other civil works and track superstructure** for the section (in preparation for tendering, intended to be procured mid 2022).
- For this section, "**Location Conditions**" were issued by the Ministry of Construction, Transport and Infrastructure in December 2021, based on the opinions and instructions of a wide range of relevant authorities.
- Development of the **RAP** for Lot 2 of this section began in September 2021 by an independent consultant (Link 011) and is in its final stages. It is being developed in line with EBRD and EIB requirements. For RAP purposes, a socio-economic survey among affected people was carried out, and consultations with Municipality of Ćićevac, City of Kruševac and Local Community Offices organised with a focus on resettlement issues.

2. Technical capacities of SRI

- SRI is a large company with 5,678 employees and a complex organisational structure consisting of several sectors further divided into multiple departments and centres.
- A **Project Implementation Unit** (PIU) that will be responsible for project management and monitoring during the construction phase has not been established yet. SRI has a team consisting of representatives of relevant organisational sectors (environment, expropriation, public relations, etc.) that have experience with EBRD financed projects. However, SRI has asked for technical assistance due to the complexity of this Project and lack of internal resources.
- SRI does not hold an **ISO 14001** certificate or any other certified management system. It also does not have a company level **ESMS or E&S Policy**.
- For **construction works**, SRI will contract external contractors and independent supervisory authorities. Once construction is completed, SRI itself will mostly be responsible for **operation and maintenance**. Within its organisational structure, SRI has a Railway Infrastructure Maintenance Sector, responsible for maintenance of railway infrastructure. Third parties will be engaged for activities that cannot be performed internally. Local authorities are responsible for removing shrubs, plants, and weeds (as well as waste) outside the open railway.
- Within the HR Sector, it has a dedicated **Department of Environmental Protection**, which is responsible for developing the legally required planning documents (Waste Management Plans, Strategic Noise Maps) and submission of annual monitoring reports to the Serbian Agency for Environmental Protection (noise measurement, soil quality report, waste generation report, etc.). Within the same HR Sector, there is also a separate **OHS Department**.
- Obtaining permits and communicating with the Ministry of Environmental Protection is the responsibility of the **Sector for Development**.
- Station buildings are under the responsibility of the **Sector for Traffic Affairs**.
- Communication with the public is under the responsibility of the **PR Department**.

3. Project related E&S issues

Waste management

- In the construction phase, **responsibility for waste management** is transferred to Contractors. During the operation and maintenance phase, waste management is the responsibility of SRI.
- Different **types of waste** are generated in construction and operation/maintenance phase including both non-hazardous and hazardous waste. Key waste categories of concern are: tracks, wooden sleepers, used ballast and track accessories (ties, screws, washers, mostly steel parts that are very similar to the composition of the rails).
- **Wooden sleepers** are categorised as hazardous waste due to the chemical coating that prevents the disassembling of the wood splitter, but also because they are periodically sprayed with herbicides for control of vegetation growth around the tracks. The management of wooden slippers is still an area of concern since their sale on the waste market is forbidden. Currently they are stored at designated locations along the railway line. Appropriate solutions are sought in cooperation with the Ministry of Environmental Protection.
- Some waste categories are **reused or recycled**. Railway tracks and electrical cables are either reused on the secondary railway network or sold on the waste market for further recycling. Ballast is washed and reused or disposed at nearby local landfills.
- The **spoil generated during construction** is disposed at locations determined jointly by SRI and the Contractor (usually it is land owned by SRI). No permits are required for construction waste landfill(s).
- If waste is to be disposed, **testing** is performed to determine (non)hazardous properties based on which the disposal method is decided upon. The disposal of special waste categories is done in cooperation with authorised companies.
- SRI has a **Waste Management Plan** in which management of all waste categories is explained in detail, including construction waste. The Plan is currently being updated (an update is done every three years).
- SRI submits **annual reports** on types and quantities of generated waste to the Environmental Protection Agency. Reporting on waste is mandatory.

Right-of-Way Maintenance

- Regular **maintenance of vegetation** within the railroad right-of-way is performed using both chemical (herbicides) and mechanical (cutting, mowing, hand pruning etc.) methods.
- **Chemical weed treatment** is performed using certified environmentally friendly chemicals which are purchased through the annual procurement plan.
- SRI possesses the appropriate **mechanisation and staff** for maintenance works.
- Due to the length of the railway network, SRI also hires **subcontractors** for maintenance works that SRI cannot perform with its own staff and resources.

Water management

- There is no **wastewater collection and sewage system** along the alignment. The stations have their own internal separated system for surface run-off and sanitary wastewater and both discharge into the nearby watercourse without pre-treatment.
- Regarding the alignment design, wastewater will be collected by a **drainage system** via separators along the entire railway line. Due to the chemical treatment of gravel, waterproof membranes will be used in the embankment. Regarding station design, surface run-off from uncontaminated areas will be collected by internal stormwater sewer systems and discharged to the surface water recipient. Where necessary, the drainage system in stations will also incorporate pollution control devices such as oil and silt traps.

Noise

- As required by the *Law on Environmental Noise Protection*[38], SRI prepares **Strategic Noise Maps** for agglomerations based on the annual flow (frequency) of railway traffic.
- In 2017, SRI prepared such maps (day and night) for the section Batajnica-Beograd-Ovca (i.e. Belgrade junction) which has a traffic frequency of more than 100,000 trains per year. The maps will be updated this year. Based on these maps, **Noise Action Plans** at local level are prepared.
- SRI also prepares **annual noise reports** for the Belgrade junction and submits them to the Environmental Protection Agency.

Climate Change

- At the level of the Government, there are no **documents related to climate change** and traffic infrastructure that cover the operation of SRI.
- The **valley of Morava River** is recognised as a flood prone area. During the 2014 floods, water overflow was recorded in the region of Novo Laniste, Jagodina and Paracin but without any damage to railway infrastructure. Flood protection measures will be considered in the PD.
- According to available information, there is no record of **landslides** and unstable and erosion prone areas on this railway. More details will be available in the PD phase.

Working conditions and OHS within SRI

- No **collective dismissals** are planned by SRI as the company has a staff shortage. Current employees working at, e.g., stations which are planned to be closed, will be prequalified and reallocated to other jobs.
- Working conditions and OHS are regulated in accordance with the national *Law on Labour* and the *Law on OHS*. SRI has adopted a very detailed internal **Risk Assessment Act** as required by law, which specifies the level of job risks for each job and the measures for eliminating risks. An integral part of the Act is the Instructions for Safe Work. SRI keeps records of on injuries at the workplace, causes and sources of workplace injuries, etc.

Previous communication with stakeholders

- **Previous communication between the PPF9 consultants and stakeholders** (during the development of the PFS and Scoping Report) has not been documented and therefore could not be provided to ENOVA.
- PPF9 consultants also previously communicated with two **NGOs**: WWF Adria and the Hunting Association of Serbia. No written minutes of meetings are available.

[38] Official Gazette of RS, no. 96/2021

4.3 Site Visit Observations

The following two tables summarise the E&S situation observed during the site visit.

Table 2: Summary of the environmental situation observed

<table>
<tr><th colspan="2">ENVIRONMENTAL ASPECTS</th></tr>
<tr><td colspan="2">The Corridor stretches through either hilly terrain or plain terrain of the valleys of the Velika Morava River and Juzna Morava River, which are also the most important watercourses in the Project area. The hydrographic network is quite dense and is characterised by a large number of surface watercourses (rivers and streams). Due to the significant hydrographic potential, the Project area is characterised by a significant amount of arable land. The railway passes through a narrower area of several cities/settlements, which are consequently exposed to noise and vibrations. Significant amounts of construction waste are illegally disposed along the railway line, with smaller amounts of municipal waste.

<u>The identified key environmental aspects are presented below:</u></td></tr>
<tr><td>Landscape</td><td>Photo reference</td></tr>
<tr><td>The Project area is characterised by the valleys of the Velika Morava River and Juzna Morava River and hills. Most of the areas are occupied by arable land, especially in the part of the railway line from Velika Plana to Nis.</td><td>Figure 12</td></tr>
<tr><td>Water</td><td>Photo reference</td></tr>
<tr><td>Surface waters. The railway line follows or intersects a significant number of rivers or streams. A comparative overview of watercourses crossed by the existing railway line, and which will be crossed by the planned railway line.

Larger watercourses that the railway crosses or runs parallel to include:
> Subsection 1: The railway runs parallel to Topcidarska River.
> Subsection 2: Immediately before the settlement of Smederevska Palanka, the railway runs parallel to the Kubrisnica River, and after leaving the settlement it crosses the Jasenica River.
> Subsection 3: Before entering the settlement of Lapovo, the railway crosses the Raca River, and after leaving the settlement it crosses the Lepenica River. In the part of the settlement of Bagrdan, the railway line follows the Velika Morava River.
> Subsection 4: Immediately after the settlement of Mijatovac, the railway crosses the Velika Morava River.
> Subsection 6: The railway runs close to the Juzna Morava River and crosses it in one place.
> Subsection 7: The railway approaches the Juzna Morava River again in the settlement of Veliki Drenovac, and crosses it just before the Mezgraja station. In the Popovac settlement, the railway crosses the Nisava River.

Floods. Due to the flat terrain and the proximity of large watercourses, parts of the railway are at risk of flooding. Potentially exposed settlements to floods include:
> Smederevska Palanka
> Bagrdan
> Jagodina
> Paracin
> Cicevac
> Stalac
> Djunis
> Mezgraja</td><td>Figure 13</td></tr>
</table>

Noise and vibration	*Photo reference*
Noise and vibration sources in the Project area are: highway, local roads and railway. Since the existing railway is in poor condition, the effects of noise and vibration are even more pronounced. The cities/settlements that are most exposed to noise due to the proximity of the highway: > Velika Plana > Milosevo > Mijatovac > Markovac > Staro Laniste > Cuprija > Lapovo > Jagodina > Paracin The cities/settlements that are most exposed to noise due to the proximity of the railway: > Mala Plana > Lapovo > Smederevska Palanka > Jagodina > Mladenovac > Paracin	*Figure 15* *Figure 16*
Waste	*Photo reference*
Improperly disposed large amounts of construction waste and smaller amounts of municipal waste were observed along the entire route of the Corridor, especially near railway stations and stops. With regard to railway construction waste, old wooden sleepers was noticed as inadequately disposed along the railway line (not on concrete surfaces, not covered). Municipal waste was mostly observed between railroads at locations of stations and stops. Also, illegal construction waste dumpsites were noticed next to the railway line in Belgrade and Gilje, and illegal municipal waste dumpsites near Mladenovac and Trubarevo.	*Figure 14*

Table 3: Summary of the social situation observed

SOCIAL ASPECTS	
The Corridor substantially crosses through densely populated areas (except section Stalac-Djunis which is sparsely populated). The first part of the Corridor (section Beograd-Resnik) is highly populated with smaller scale farming. The rest of the Corridor area is characterised by agricultural activities mainly for private needs and small-scale livestock farming. Most households along the railway line own small land plots that comprise of a residential structure and agricultural land. Along the railway line, residential and auxiliary structures are mostly made of brick and old. In densely populated settlements (such as Mala Plana and Smederevska Palanka), houses are relatively close to the railway without railway fencing on either side. No industrial zones were noticed during the site visit although commercial structures along the railway line were spotted. No Roma settlements were spotted during site visit. The identified key social aspects are presented below:	
Settlements close to railway line	*Photo reference*
Within the sections Resnik-Velika Plana and Velika Plana-Gilje, some settlements are in close proximity to railway line. Some parts of the corridor have no appropriate railway fence or other barriers that would prevent access to the railway tracks. The identified settlements close to railway line are (the same as those listed above under *cities/settlements that are most exposed to noise due to the proximity of the railway*):	*Figure 15* *Figure 16*

> Mala Plana > Lapovo > Smederevska Palanka > Jagodina > Mladenovac > Paracin	
Residential structures	*Photo reference*
Majority of residential structures are made of brick while a significant number of private houses has wooden skeleton walls filled with mud (traditional building techniques). Structures are to a large extent old, poorly maintained and unfinished (without façades). Greater housing density is present in all major settlements/cities along the railway line.	*Figure 17*
Land plots	*Photo reference*
Small family agricultural holdings prevail in the significant part of the Corridor, with fragmented land plots. These holdings comprise houses with cultivated land (crops and garden).	*Figure 18*
Agricultural activities	*Photo reference*
Agricultural activities are present along the railway Corridor but agrarian density is more pronounced from Resnik to Stalac. Animal husbandry was noticed at a smaller scale except poultry which existed along the entire Corridor. Beehives were spotted in the vicinity of railway line but the highest number (approx. 30 beehives) was in the settlement Grejac (Djunis-Medjurovo section). A variety of agricultural activities were spotted: > *Wheat and corn crops* > *Orchards* > *Beehives* > *Vineyards* > *Raspberry farms* > *Vegetable gardening* > *Poultry (chickens, geese, etc.)* > *Greenhouses* > *Sheep breeding*	*Figure 19*
Public facilities	*Photo reference*
Within the Project area, public facilities close to the railway line such as schools, health centre, post offices etc. were noticed. These include: > *Primary school "Vojvoda Putnik" in Ripanj (Resnik-Velika Plana section)* > *Primary school "Karadjordje" in Staro Selo (Velika Plana-Gilje section)* > *Primary school "Stojan Zivkovic Stole" in Trnjane (Djunis-Medjurovo section)* > *Health centre in Stalac (close to Stalac station)* > *Post office within Stalac station*	*Figure 20*
Businesses	*Photo reference*
No industrial zone was noticed; however, various types of commercial and business activities are present in the vicinity of the Corridor. Some have access to the industrial railway track. The businesses include: > *Production of agricultural machinery* > *Commercial warehouse* > *Recycling factory* > *Silos* > *Trading companies*	*Figure 21*

4.4 Results of Discussions with Local Population and SRI Rail Staff

During the site visit the Consultant conducted brief interviews with SRI rail staff and several residents in Stalac. A summary of these interviews is given in the table below.

Table 4: Summary of information obtained through interviews on site

Brief interviews with SRI rail conductors, driver and crossing keeper conducted on March 28th and 29th 2022	> There are no informal Roma settlements along the railway. Rome people mostly live on section Lapovo-Nis, and they are engaged in street begging activities. Roma women and children often use the railway. > People in the Project area are mainly involved in agricultural activities, and crops are mostly used for personal purposes. However, residents in Aleksinac sell their crops. Animal breeding is rare in the Project area. > The Aleksinac-Nis section of the railway is most often used by students and workers. > Both women and men equally use the railway in both directions (Belgrade and Nis). > People use the railway to reach a monastery in Djunis, especially because of the Feast Day in October. > There have been issues with cable theft which causes constant delays of trains. In the last year cable theft has significantly increased.
Brief interviews with local residents in Stalac conducted on March 28th 2022	> Since gas prices increased, the number of railway users seems to have increased. > Residents from Stalac are not opposed to the railway as it has been an important part of their life for a long time. > People with disabilities rarely use railway because they rather use taxi as mode of transportation. > All train dispatchers in Stalac are local people. > There are no Roma settlements in the vicinity of the railway. > In Braljina settlement, in which the railway stop will most likely be closed, residents are mostly elderly people. For them, the railway is the only mode of transportation.

12a) Settlement Mezgraja (Djunis-Aleksinac section)

12b) Settlement Smederevska Palanka (Resnik-Velika Plana section)

Figure 12: Project area landscape

13a) Jasenica River near Smederevska Palanka settlement (Resnik-Velika Plana section)

13b) Velika Morava River near Gilje settlement (Gilje-Paracin section)

13c) Location where the existing railway line crosses the Juzna Morava in the settlement of Mezgraja (Djunis-Medjurovo section)

13d) Location where the future railway line will cross the Juzna Morava in the settlement of Mezgraja (Djunis-Medjurovo section)

Figure 13: Watercourses that the railway crosses

14a) Illegal construction waste dumpsite in Belgrade

14b) Illegal construction waste dumpsite in Gilje

14c) Wooden sleepers disposed along the railway line

14d) Municipal waste along the railway line

Figure 14: Waste along the railway line


Figure 15: Settlement close to the railway


Figure 16: Structures close to the railway


Figure 17: Old and unfinished houses (left) and traditional rural house (right)


Figure 18: Small-scale land plots


Figure 19: Sheep breeding (left) and greenhouses (right)


Figure 20: Primary school "Karadjordjevo" in Staro Selo (left) and primary school "Stojan Zivkovic Stole" in Trnjane (right)

Figure 21: Businesses along the railway line

5 Scope of the E&S Assessment

5.1 Main Issues to be Addressed in the E&S Assessment Report

The Corridor E&S Assessment will be guided by the EBRD E&S Policy and the ToR, where the focus will be on the key issues identified both in the Scoping Report and in the inception phase through desktop review and site visits. The main issues to be addressed in the E&S Assessment include:

1. **Identification of the appropriate area of influence** for all aspects (environmental, social, biodiversity). Since the E&S Assessment will be based on the Conceptual Design, the Consultant will determine the study area based on a wider corridor within which the alignment may vary to accommodate future design development. This is anticipated to allow for micro-minor changes to the current alignment, where feasible.
2. **Analysis of the key regulations applicable to this Project and how they will affect the Project**, with a focus on:
   - Serbia's obligations under the EU acquis
   - National Law on Railway (2018), national Law on Safety in Railway Operations (2018), national Law on Interoperability of the Railway System (2018 and 2022), national Law on Special Procedures for the Implementation of Construction and Reconstruction Projects of Linear Infrastructure of Particular Importance for the Republic of Serbia (2020)
   - EU rules: the Recast Interoperability Directive, the Recast Safety Directive, and the Agency for Railways Regulation
   - Lenders' requirements: EBRD E&S Performance Requirements (PRs) and EIB E&S Standards
3. **Sensitive habitats, flora and fauna,** especially in protected areas, through:
   - Biodiversity surveys along the corridor and literature overview targeting habitats, flora, invertebrates, fish, amphibians, reptiles, birds and mammals
   - Collection of data on established, planned and/or potential protected areas (PAs), areas in ecological network of Serbia (to be proclaimed Natura 2000 areas upon Serbia's accession to the EU), important bird areas (IBAs), candidate Emerald sites, Ramsar areas, Key Biodiversity Areas (KBAs) and other areas important for preservation of species and ecosystems
   - Identification of ecologically appropriate areas of analysis (EAAAs) informed by field surveys and desktop research to facilitate further preliminary assessment of potential critical habitats and priority biodiversity features
   - Establishing the need for: further surveys, development of no net loss/net gain strategies through full Critical Habitat Assessments (CHAs), development of Biodiversity Management Plans (BMPs) and/or Biodiversity Action Plan(s) (BAPs), and conducting Appropriate Assessments (AAs) as a part of section-specific ESIAs
   - Identification of migratory corridors intersected by the planned railway in order to plan for fauna passages
   - Identification of key ecosystem services
4. **Noise and vibration** through:
   - Consideration of noise, low-frequency noise and vibration impacts for both the construction and operational phases
   - Desktop baseline noise and vibration survey to identify existing noise and vibration sources
   - Assessment of noise and vibration levels in accordance with the methods defined in Directive 2002/49/EC and its amandments
   - Preliminary acoustic calculations, including both noise and vibration

- Development of preliminary noise and vibration model to predict operational noise, low-frequency noise and vibration levels
- Identification of key areas of concern

5. **Waste management** with a focus on identification of waste categories in the construction and operation phase and method of their management depending on the waste classification (non-hazardous / hazardous). If possible, a preliminary estimate of construction waste quantities will be made. This will also include an assessment of planned management of hazardous waste (wooden sleepers) to be generated during decommissioning of the existing railway and any decontamination activities which may be needed.
6. **Climate change** impacts in the narrower project area through:
   - Analysis of baseline climate conditions as well as historical and predicted climate change
   - Identification of key areas exposed to the climate changes factors
   - Identification of applicable measures for mitigation and adaptation to climate change
7. Identification of **community profiles**, including identification of vulnerable people:
   - Patterns of use of the railway in each community including use of stations and stops/halts, use of level crossings
   - Existing community infrastructure (water supply, access roads…)
   - Land use and natural resources used by the communities
   - Vulnerable communities along the railway
   - Economic activities (agricultural activities, industrial activities…)
   - Specificities and needs based on gender, socio-economic status, age, disability, ethnicity
8. **Understanding cultural heritage impacts**:
   - Protection status of station buildings along the route and procedures to be followed in case of reconstruction or closure of protected buildings
   - Cultural heritage sites near the alignment including cemeteries
   - Traditional community events
9. **Resettlement issues**

5.2 Limitations and Assumptions

Based on the review of available documentation, site visits and information provided by the PPF9 Consultants and SRI, the Consultant has identified the limitations as well as the assumptions that may affect the assessment of E&S impacts. These include:

Project documentation and status

- There is no Preliminary Design for the Corridor, and it will not be developed until the completion of the Assessment. The PFS has been prepared at the level of Conceptual Design and contains maps showing the future railway alignment on a scale of 1:25,000. This scale implies that in reality the alignment can differ up to 50 m on site so this may not allow precise identification of all structures and land that may be impacted by the Project and thus may lead to inaccuracies in the social assessment (impact on structures, expropriation, community safety, etc.).
- The Belgrade-Nis Corridor is not included in the spatial plan: a new spatial plan is being prepared for the Belgrade-Velika Plana section, and the existing spatial plan is being updated for the Velika Plana-Nis section. This means that the SEA will be prepared at the later stage and that inconsistencies in the level of mitigation between E&S Assessment and SEA may be possible.

- The number and/or position of railway structures is not well defined in the PFS and inconsistencies are spotted throughout the document. The Consultant took as relevant the structures identified on the maps presented in *Annex 1 Conceptual Design Drawings* of the PFS.

Project related E&S issues

- There is a risk that up-to-date and relevant baseline data regarding noise, water quality, soil quality and air emissions will not be available for the environmental assessment. Therefore, it is expected that the assumptions will have to be made based on the information that is available.
- Strategic Noise Maps have been developed only for the Belgrade junction and not for the entire Corridor. The Consultant will have to carry out preliminary rough acoustic calculations and to provide estimate of the expected impacts based on the obtained results. Input data for preliminary rough acoustic calculations is not final and may change during the preparation of the next stages of documentation. Accordingly, there may be a change in the position of noise protection structures at the later stages of the project.
- Biodiversity assessment is limited by the lack of up-to-date and precisely georeferenced literature data. This poses a potential risk for the assessment, and subsequently mitigation and monitoring due to unreliable and scarce baseline. The gap in available information on biodiversity of the Project's area of influence shall be bridged by biodiversity surveys. Due to the timing and temporal limitations of the assignment, biodiversity surveys will cover only the spring season of 2022. Unfavourable weather conditions, especially in early spring, can affect blossoming and growing of plants and animal activity, as well as prevent expert ecologists to conduct surveys. The surveys shall be planned accordingly and in a timely manner to maximise the output during sunny and favourable periods.
- The decision about the stations/halts that will be closed has still not been made (and will not be made until the completion of the Assessment). Therefore, the E&S Assessment will not be able to precisely identify impacts of station/halt closure on local communities.
- For needs of the E&S Assessment, the Consultant will carry out discussions with the local population at 14 selected representative locations along the railway route to analyse community H&S issues (as elaborated in section 6.4 Social Survey Plan) with the assumption assume that the findings will be applicable to the remaining sections.

6 E&S Baseline Survey Plan

6.1 Introduction

Based on the information gathered during the inception phase and the scope determined under Chapter 5.1, at a minimum the following baseline surveys that involve on-site work will be required:

- Biodiversity survey
- Social surveys and stakeholder engagement.

In addition to the baseline surveys, the Consultant has also identified that preliminary acoustic calculations (including both noise and vibrations) appropriate to the level of the study documentation need to be done in order to be able to provide an estimate of the expected impacts of noise and vibrations.

The detailed methodology and timeframe for required baseline surveys and acoustic calculations is presented in the following chapters.

6.2 Biodiversity Survey Plan

Objective		
The objectives of the task is to complete a biodiversity assessment to assist the Bank and SRI in ensuring that the Project is structured to comply with the applicable national laws, EBRD's and EIB's requirements and good international biodiversity conservation and management practices. The results of this preliminary high-level assessment will aim to identify material gaps against EBRD Performance Requirement 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources (PR6) and EIB's Standard 4 on Biodiversity and Ecosystems in existing documentation, as well as identify key areas of concern, provide guidance on how to fill the gaps and ensure full compliance with relevant legislation in the upcoming stages of Belgrade-Nis railway reconstruction. The Assessment will include a detailed desktop review of the existing baseline biodiversity data. Following the detailed desk search review, supplementary biodiversity surveys will be undertaken. Due to the nature of the assignment and proposed timeline, surveys will be targeted to where there could be potential impacts to habitats and/or species of conservation importance (e.g., potential critical habitats/priority biodiversity features) due to lack of time and a substantial size of the Project area. Recommendations for further survey work or monitoring will be captured in ESMP and ESAP. The supplementary biodiversity assessment will be commensurate with, and proportional to, the potential biodiversity risks, aspects, and impacts of the Project. Where possible, it will take into consideration all relevant direct and indirect impacts of the Project. The relevant stages of the project cycle (e.g. pre-construction, construction, operation) will also be taken into account.		
Activities	**Description of tasks**	**Timing**
1.	**Review of all available data:** > Review of the relevant biodiversity sections in the Pre-feasibility Study, ESIA Scoping Report, related studies and/or other relevant existing documents regarding the Project. > Conducting desktop survey for other published data on biodiversity of the Project area. > Completing of a preliminary critical habitat/priority biodiversity features screening against the criteria listed in paragraphs 12 and 14 of PR6. The criteria to be used to identify the key biodiversity features (habitats and species) that are to be prioritised in the surveying and the biodiversity assessment are, briefly: habitats listed in the Annex I of the Habitats Directive or Resolution 4 of the Bern Convention, habitats of species listed in Annexes II and/or IV of Habitats Directive, birds listed in Annex I of Birds	March - first week of April 2022

	Directive, IUCN Red List VU, EN, CR species, nationally or regionally listed EN or CR species, range-restricted species, migratory species and protected, threatened and/or unique ecosystems (e.g. Key Biodiversity Areas, Important Bird Areas). The CHA should assess features against aforementioned criteria using ecologically appropriate areas of analysis (EAAAs). EAAAs must be appropriately designed for each biodiversity feature, due to their different biology and conservation needs. > Development of biodiversity survey plan and programme that will take into consideration identified data gaps, findings of documentation and literature review for determination of areas that will be targeted during the surveys. > Consistent with requirements of the EU Habitats Directive and Birds Directive and relying on information provided in the Scoping Study, the assessment will also identify any nature protection areas that could be affected by the Project. This will include protected areas in the Natura 2000 network as well as Ramsar sites, Emerald sites, Key Biodiversity Areas, Important Bird Areas, Important Plant Areas, Prime Butterfly Areas.	
2.	**Biodiversity surveys:** The Consultant will undertake targeted biodiversity surveys to supplement existing scarce data, provide a base for future surveys and aim to establish whether potential habitats and/or species that could be considered as "critical habitat" and/or "priority biodiversity features" are present in areas of interest. The survey program and scope are expected to be developed in consideration of desktop findings and identification of target areas. Key target areas will be determined based on Activity 1: railway points closest to protected areas/other areas of conservation importance, parts in which planned railway deviates from the existing tracks, natural habitats, localities potentially rich in biodiversity as indicated by literature data as well as expert opinion of biodiversity experts that will assess each group individually. Buffer of 500 m on each side of the planned railway will be taken as an initial surveying area as an Area of Impact; however, the area shall be further refined based on findings and initial identification of ecologically appropriate areas of analysis (EAAAs) of species and their habitats. Biodiversity surveys will focus on the following species groups: 1. Habitats and plants (including invasive species) – Desktop habitat survey will be conducted prior to field research to facilitate efficient workflow and selection of localities to be targeted during surveys. Coordinates will be noted for surveyed localities. Standard identification keys and publications will be used, and a full list of references will be provided in the E&S Assessment Report. Identification of vulnerability and conservation status of habitats will be determined with respect to Habitat Directive Annex I and European Red List of Habitats. Identification of vulnerability and conservation status of flora species will be determined with respect to Habitat Directive Annex II, IV, IUCN, Red Book of Flora of Serbia and national Regulation on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi [39]. The data will be digitalized using Microsoft Office and Geographic Information System (GIS) to develop maps and table forms of species. Targeted areas for habitat and flora surveys are shown in following figures. Areas marked in red are areas in ecological network of Serbia, while filled polygons mark protected areas. There are no Important Plant Areas in Project's area of influence.	April - mid-June 2022

[39] Official Gazette of No. 98/16

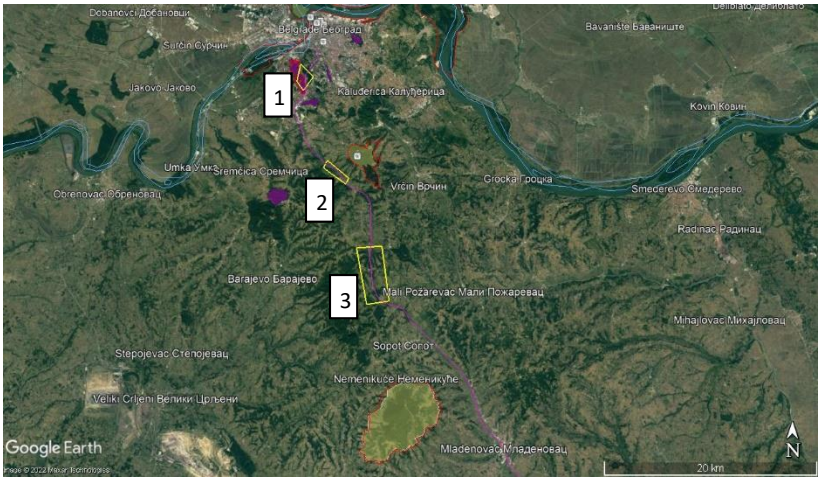


Figure 22: Target areas for habitat and flora surveys: 1. Urban forest habitats, 2. Bela Reka - Pinosava, 3. Foot of Mt. Kosmaj (protected area, PA)

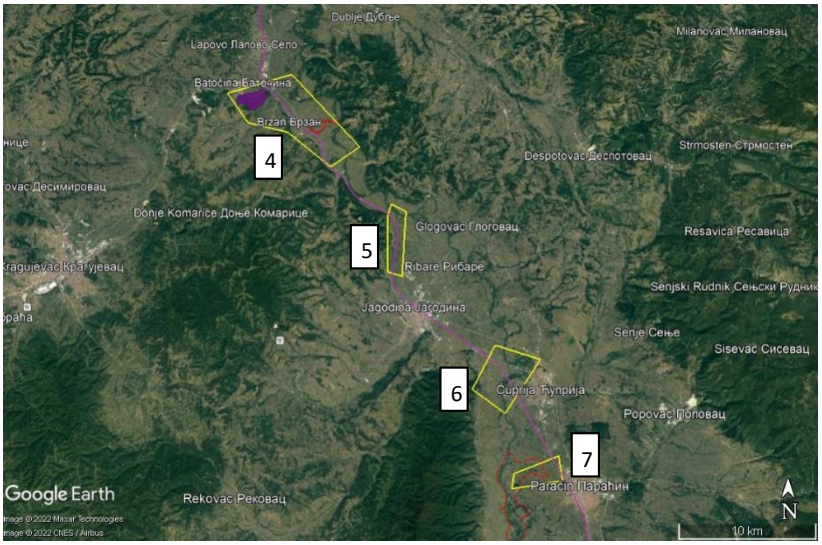


Figure 23: Target areas on section from Batocina to Paracin: 4. Rogot and Brzansko Moraviste (PAs, forest and wetland habitats), 5. Railway deviates from existing line, river Bukovca, 6. Great Pomoravlje (area around river Velika Morava), 7. Complex Buljanka (water accumulation)

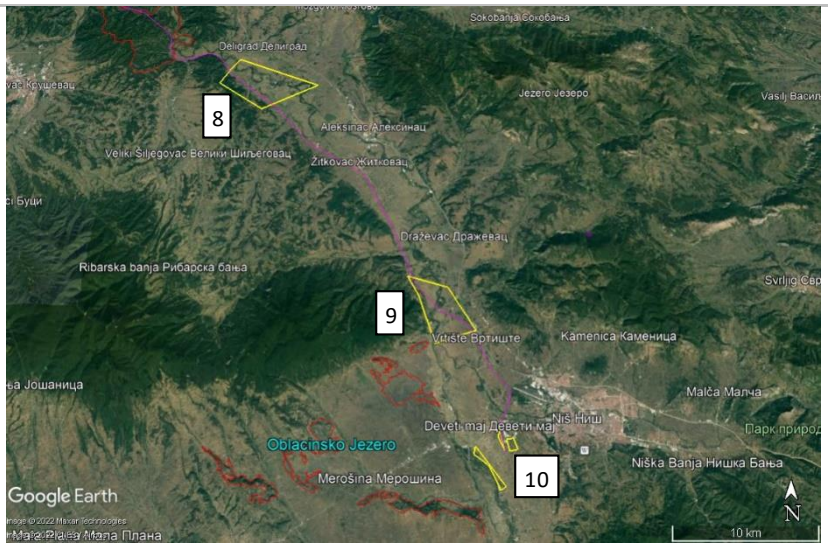


Figure 24: Target areas from Djunis to Nis: 8. Ljubes (riparian vegetation and spontaneous associations in edges of agricultural fields), 9. Juzna Morava (sandy habitats, occasional floodings, 10. Wetland habitats (occasionally flooded halophytes communities, Bubanj wetlands)

2. Invertebrates - Invertebrate surveys will include only invertebrate species of conservation concern in line with *Good Practices for the Collection of Biodiversity Baseline Data Guideline*[40]. Invertebrates will be surveyed using methods of linear transect, active searching of species and "mowing" of species on 35+ localities along the planned railway as given in Figure 25 below. Prime Butterfly Areas of interent are Avala (point 4) and Mt. Kosmaj (points 5-7).

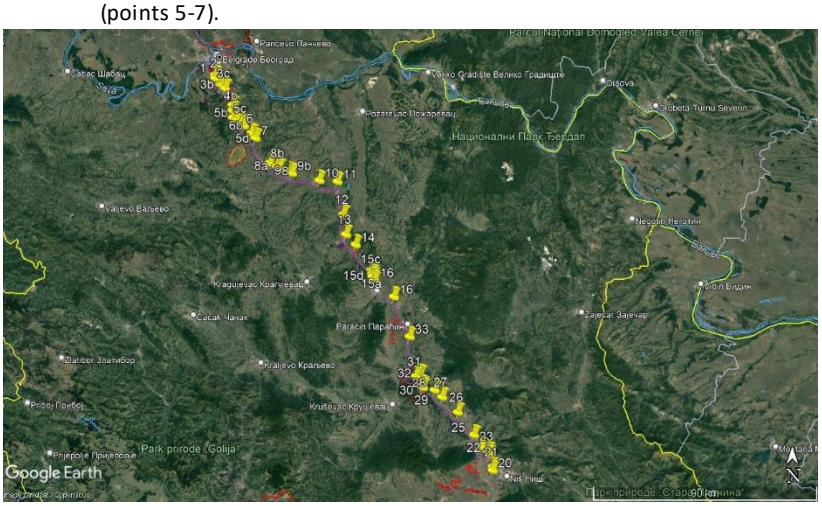


Figure 25: Target areas for invertebrate surveys determined by the expert

GPS coordinates shall be recorded for all species. The data will be digitalized by using Microsoft Office and suitable GIS software to develop maps and table forms of species. Binocular magnifying glass and handbooks and manuals will be used for determination of species that are hard for in-situ determination. Small bins and ethanol (96%) will be used to preserve the samples. The list of the species of international conservation concern will be based on relevant documents such as the Habitats Directive (Annexes II and IV), IUCN Red List, available Red Books of Serbia (available for only some butterfly families and Orthoptera) and national Regulation on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi [39].

3. Fish - Field observations of the Study area will be undertaken and the likelihood that sensitive habitats or spawning grounds may be found in the area will be identified, particularly near the (planned) bridges. Sixteen potential localities have been selected initially; however, four were selected based on situational circumstances (e.g. position of bridges to be built) known ecological status of the rivers and expert opinion. Areas to be surveyed are shown in figures below. High water levels and bad weather conditions may affect the spring surveys. Standard scientific surveying methods that cause no long-term negative effect to the fish population will be implemented. Method of sampling, identification, and quantification of ichthyofauna to be used is based of European standards and normatives: EN 14011:2003 (Water quality - Sampling of fish with electricity), EN 14962:2006 (Water quality - Guidance on the scope and selection of fish sampling methods), EN 14757:2005 (Water quality - Sampling of fish with multi-mesh gillnets). For the identification of protected/threatened species in the study area, the IUCN Red List will be used along with Habitats Directive Annexes II and IV and national Regulation on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi[39].

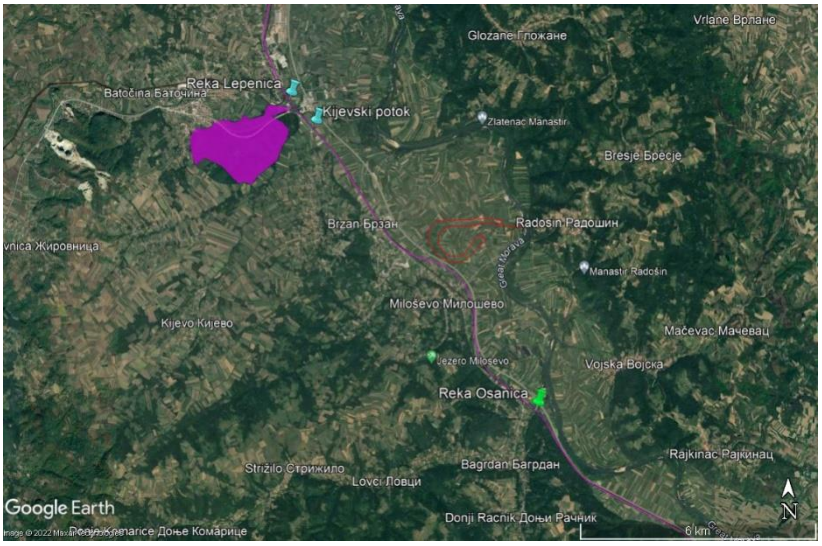


Figure 26: River Lepenica along with Kijevski stream near Rogot (purple) and Brzansko Moraviste (in red), River Osanica

[40] Gullison, R.E., J. Hardner, S. Anstee, M. Meyer. 2015. Good Practices for the Collection of Biodiversity Baseline Data. Multilateral Financing Institutions Biodiversity Working Group & Cross Sector Biodiversity Initiative, July 2015

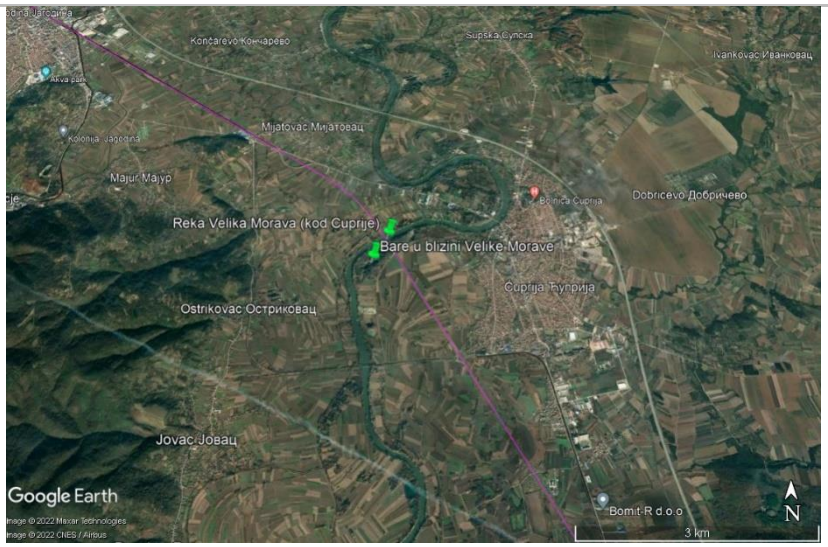


Figure 27: Localities near Cuprija (Velika Morava River and ponds near Velika Morava)

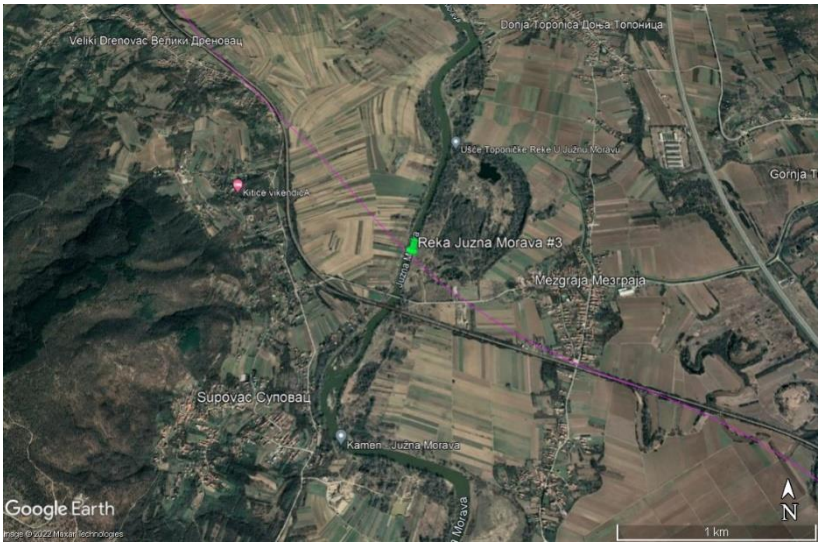


Figure 28: Location for fish surveys near Mezgraja, north of Nis (new bridge to be built)

4. Amphibians and reptiles (Herpetofauna) - Individuals will be actively searched for in both aquatic and terrestrial systems in localities selected by the expert based on opinion and experience as well as upon initial field walkover. Sampling points have been determined for the Belgrade area and are shown in figure below. Other precise localities will be determined as soon as weather conditions permit initial walkover of herpetology expert.

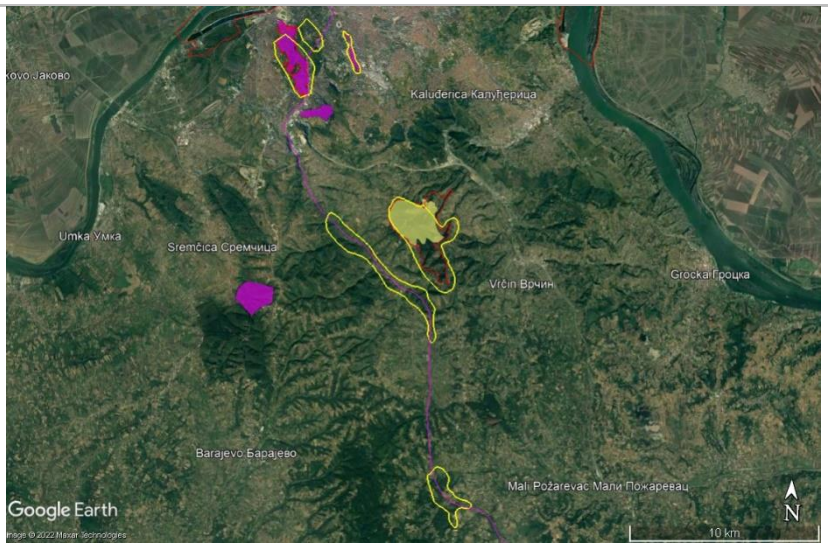


Figure 29: Target areas for herpetology surveys in the wider area of Belgrade

Sampling requires searching in specified habitats (under the logs and stones, digging through litter and soil, searching short bushes and tree hollows, and under fallen barks and water-catchments), covering at least 500 m on each side of the road using the methods of linear transects and catch-and-release. Identification of vulnerability and conservation status of fauna species will be determined with respect to Habitat Directive Annex II, IV, IUCN, Red Book of Amphibians and Red Book of Reptiles of Serbia, and national Regulation on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi [39].

5. Birds - Identification of potentially suitable habitats for any species of conservation concern, whether at nation or EU level, was undertaken. Areas to be surveyed are shown as yellow polygons the following figures.

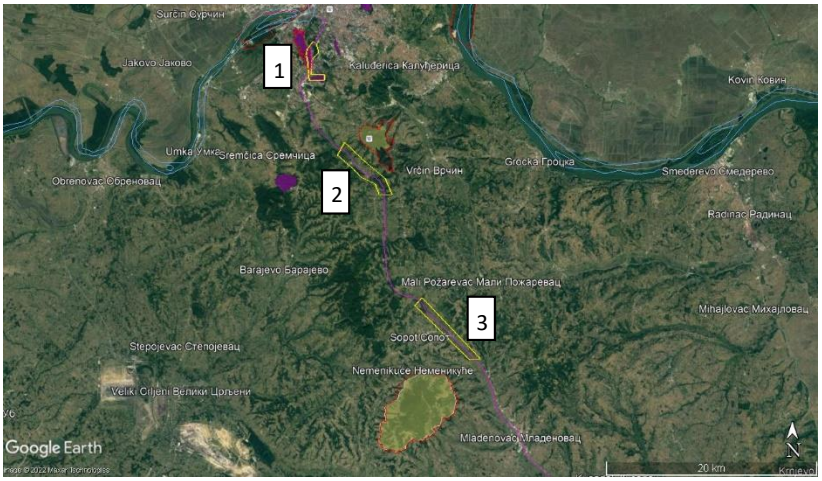


Figure 30: Target areas on railway section from Belgrade to Mladenovac: 1. Forests in the Belgrade area (Kosutnjak, protected area, PA), 2. Foot of the Avala Mt. (PA), 3. Foot of Kosmaj Mt. (PA)

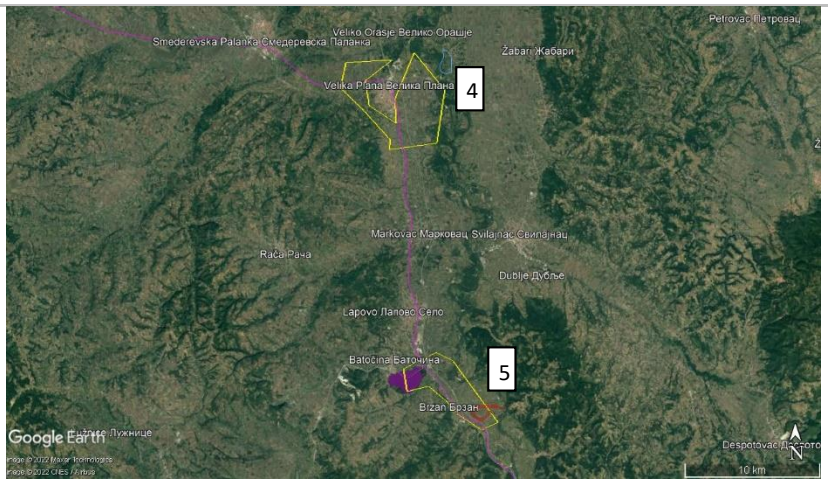


Figure 31: Target areas on railway section from Velika Plana to Brzan: 1. IBA Donje Pomoravlje, 5. PAs Rogot (in purple) and Brzansko Moraviste (in red)

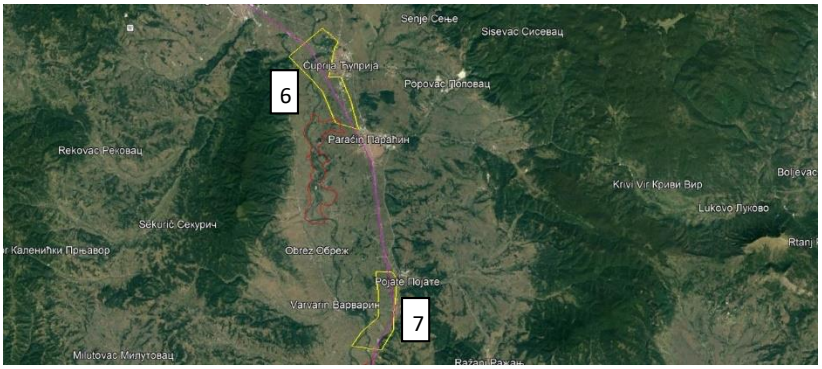


Figure 32: Target areas on railway section from Cuprija to Varvarin: 6. and 7. agricultural areas in the vicinity of IBA Gornje Pomoravlje (in red)

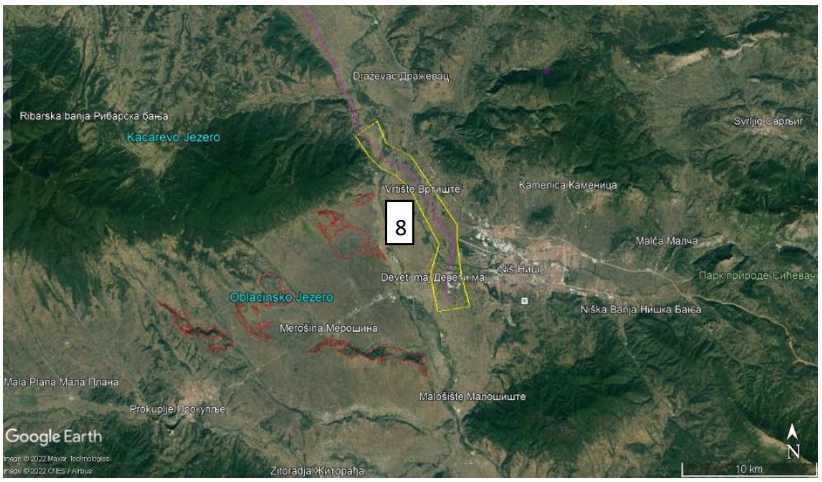


Figure 33: Target area for bird surveys around Nis: Vicinity of IBA Dobric-Nisava, important for bird migration, new species for Serbian fauna discovered here last year

Upon selection of target areas (e.g. Important Birds Areas, known breeding sites etc.), methods of linear transects, sample counts, passive listening to male songs, observing of species from the census point using binoculars and searching for nests will be used. Identification of vulnerability and conservation status of bird species will be determined with respect to Birds Directive (Focus on Annex I species), IUCN and national Regulation on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi[41]. The

	data will be digitalized upon returning to the office by using Microsoft Office and GIS computer programme to develop maps and table forms of species. 6. Mammals - Desk research for mammals will be undertaken together with consultations with the local population and hunting societies. Ecologically appropriate area of analysis will be determined for mammals, considering the size of the species and appropriate habitats of the species. Opportunistic sightings/evidence of mammals (e.g. bear, wolf, boar…) in the study area will also be recorded (e.g. scat, prints, rubbings etc.) along with observation and search for migration routes and shelters. Areas where potential habitat fragmentation may occur for these species due to the project will also be noted in the E&S Assessment Report. Identification of potentially suitable habitats for any species of conservation concern, whether at national or EU level, will be undertaken. Identification of vulnerability and conservation status of fauna species will be determined with respect to e.g. Habitat Directive Annex II, IV, IUCN and Regulation on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi[42].	
3.	**Drafting of deliverables:** The biodiversity surveys will be conducted for 10-15 field days for each group over a period of 2,5 months, and an additional 2-3 weeks will be required to complete the draft report for EBRD. The need for further studies/monitoring will be included in the final report as recommendations, which can be captured by the EBRD in the Environmental and Social Section Plan (ESAP) and Environmental and Social Management Plan (ESMP).	June 2022

6.3 Noise and Vibration Assessment

Objective
The primary objective of the environmental noise and vibration assessment is to identify the potential impacts that the proposed Belgrade-Nis railway line may have upon the existing environment and how this can be avoided or mitigated. The noise and vibration analysis will be conducted in accordance with national and international laws and standards[43], as well as EBRD and EIB noise and vibration assessment regulations and guidelines. The proposed methodology will ensure that all noise and vibration impacts associated with development of railway line are identified, described and assessed. The assessment will consider noise, low-frequency noise, and vibration for both the construction and operational phases of railway line. Construction and operational impacts will be considered separately. The results of this high-level assessment will aim to identify key areas of concern, provide guidance on how to fill the gaps and ensure full compliance with the EBRD and EIB E&S requirements, and relevant national legislation.

Activities	Description of tasks	Timing
1.	**Desktop review:**	April 2022

[41] Official Gazette of No. 98/16

[42] Ibid.

[43] Law on environmental noise protection ("Official Gazette of RS", no. 96/21), Regulation on noise indicators, limit values, assessment methods for indicators of noise, disturbance and harmful effects of noise in the environment ("Official Gazette of RS ", no. 75/2010), Rulebook on noise measurement methods, contents and scope of noise measurement reports ("Official Gazette of RS ", no. 72/2010), Rulebook on methodology for determination of acoustic areas ("Official Gazette of RS ", no. 72/2010), SRPS ISO 1996-1 Acoustics — Description, measurement and assessment of environmental noise — Part 1: Basic quantities and assessment procedures, SRPS ISO 1996-2 Acoustics — Description, measurement and assessment of environmental noise — Part 2: Determination of sound pressure levels, DIN 4150-1 Structural vibration - Part 1: Prediction of vibration parameters, DIN 4150-2 Structural vibration - Human exposure to vibration in buildings, DIN 4150-3 Vibrations in buildings - Part 3: Effects on structures

	> Review of the relevant noise and vibration sections in the Pre-Feasibility Study and other relevant existing documents regarding the Project. > Review of relevant national and international legislation, standards and other documentation (including available measurements). > Review of EBRD E&S Policy and EIB Standards.	
2.	**Noise and vibration assessment:** **Noise** > The Consultant will perform preliminary acoustic analysis during construction phase based on typical noise levels produced by construction equipment anticipated to be used on site. Construction noise at the sensitive receivers will be calculated based on distance loss from the source to the receiver. The calculations will not take into consideration the mitigating or enhancing effects of terrain, screening or meteorological conditions, therefore providing a measure of conservatism. > The Consultant will perform preliminary acoustic calculation during operational phase using the CNOSOSS-EU:2015 (Common NOise aSSessment methOdS) method in accordance with the EU Directive 2015/996[44]. The calculation will be performed using the available software[45], and based on the following key parameters: speed, number of trains, train type and train characteristic. Using CNOSOSS-EU:2015 method, noise levels from the vehicles (trains) and railway infrastructure, as main sources, will be calculated. Vehicles. Firstly, the number of vehicles for each type will be determined on each of the track sections for each of the time periods, which will be expressed as an average number of vehicles per hour. The next step is to determine the type of track elements influencing the railway noise emissions (railhead roughness, rail pad stiffness, track base, rail joints and radius of curvature of the track). After collecting input data, the noise emission of traffic flow on each track will be represented by a set of 2 sources lines characterised by its directional sound power per metre per frequency band, which corresponds to the sum of the sound emissions due to individual vehicles passing by in the traffic flow and taking into account the time spent by the vehicles in the railway section. In case of a stationary source (e.g., idling) the noise emissions will be determined based on idle time and track section length. Railway infrastructure. Railway infrastructure noise levels will be divided into: rolling noise, curve squeal and structural radiation. Rolling noise. The main sources of rolling noise are wheel and vehicle roughness. The total rolling noise level will be determined based on roughness of the running surface of a rail or a wheel and contact filtering effect of the contact patch between the rail and the wheel, which depends on the rail and wheel type and the load. Within this noise source calculation, effects of noise caused by crossings, switches and rail joints are included. Curve squeal. Curve squeal is a noise source relevant only for curves, and will be determined based on characteristic of railway infrastructure – curvature, friction conditions, train speed, track-wheel geometry and dynamics. Structural radiation. Structural radiation will be calculated for the places where the track section is on a bridge or viaduct, when it is necessary to consider the additional noise generated by the vibration of the bridge as a result of the excitation caused by the presence of the train. It will be determined based on bridge type, vehicle and track properties. **Vibration**	May - mid-June 2022

[44] Annex II of Directive 2002/49/EC

[45] The noise levels will be calculated using the 3D software package „Predictor-LimA Software Suite - Type 7810".

	> The Consultant will perform preliminary vibration analysis during construction phase based on typical vibration levels produced by construction equipment anticipated to be used on site. Construction vibration at the sensitive receivers will be calculated based on distance loss from the source to the receiver. The calculations will not take into consideration the mitigating or enhancing effects of terrain, therefore providing a measure of conservatism. > The Consultant will perform preliminary vibration calculation during operational phase using a empirical regression model and the available software[46]. The vibration and ground borne noise will be calculated using a regression model. Vibrations created by passing trains are propagated through the soil to the building foundation. From there they travel through the walls up to the floors and ceilings in the entire building. The vibration level will be determined based on the most important influencing parameters: train type, train velocity, track type, switches, distance between track and building, type of building and type of floor. The calculation of structure borne sound will be carried out in an analogous fashion as the calculation of vibration. The structure borne depends on the "frequency limited" vibration of the floor and the transfer factor between vibration and structure borne sound, for each train. Based on the results for the individual trains the total impact will be calculated by summation according to DIN 4150-2.	
3.	**Noise and vibration assessment deliverables:** > Based on the obtained results, appropriate noise and vibration maps (indicating potentially sensitive areas) for the construction and operation phases will be developed. > The possible need for further studies/monitoring will be included in the final report as recommendations (in the ESAP and ESMP).	June 2022

6.4 Social Survey Plan

Objective		
To elaborate a comprehensive socio-economic baseline along the Corridor to: > better establish a reliable profile of communities along the route > gather additional information on cultural heritage > provide early recommendations for Project design with a view to avoid community impacts to the extent possible.		
Activities	**Description of tasks**	**Timing**
1.	Hold semi-structured discussions with **each affected municipality along the Corridor and local community offices** based on the list of questions given in Table 5. The objective will be to discuss the Project and local circumstances in order to understand the community profile and the community needs and demands.	May 2022
2.	Hold a series of discussions with local residents at 14 selected critical parts of the route to understand overall Project impacts. The detailed list of critical points identified by the Consultant, and reasons for their selection is given in Table 6 below.	May 2022

Table 5: List of questions for Municipalities and Local Community Offices

[46] The vibration levels will be calculated using the software package VIBRA-1 (Ziegler Consultants and Swiss Rail).

General information about the municipality/local community (LC)	
1. What is the population of the municipality/LC according to the latest data? What is the gender structure? 2. What are the general characteristics of the community (rural/urban, built/agricultural area, ...)? 3. Are there any minorities in the municipality/LC (which minorities, how many)? 4. How is water supply organised in the municipality/LC (city network, private network or private wells)? 5. What is the usual method of communication with local residents? How do local residents usually make their remarks? 6. Are there local means of public information (e.g., municipal newsletters, local radio stations, municipal website, etc.) through which regular information is provided to the local population about activities in the municipality/LC? 7. Are there specific vulnerable categories of population in the municipality/LC (e.g., persons with disabilities, socially disadvantaged categories, blind and visually impaired persons, deaf people)? If so, is there a municipal/LC-level plan or strategy to help such categories? 8. Are there any CSOs in the municipality/LC that deal with environmental protection, Roma population, minorities, protection of women's rights, etc.?	
Attitudes toward the Project	
1. Has the municipality/LC already been informed about the Project and how? 2. What is the general attitude of the municipality/LC on the Project (positive, negative, neutral)? 3. What benefits of the Project does the municipality/LC see? In addition, are there any gender benefits of the Project? 4. What are the main concerns of the municipality/LC about the Project? In addition, what are the main concerns regarding gender issues? 5. What potential impacts (negative and positive) do you anticipate during railway construction? 6. What potential impacts (negative and positive) do you anticipate during railway operation?	
Specific questions about the use of the railway by the residents of the municipality/LC	
Use of the railway	> How significant is the railway to this municipality/LC (Does the local population work for the railway? Which groups (e.g., students, Roma population, etc.) use the railway the most? To what extent? For what purposes it is mostly used, e.g. going to work or school? Is there a difference in use by women and men?) > What are alternative forms of transport when there is no train?
Activities/infrastructure near the railway	> What are other ongoing or planned projects in the area of the municipality/LC near the railway (which could lead to cumulative impacts)? > Are there illegal landfills along the railway? > Where are the public institutions of the municipality/LC in relation to the railway – schools, health homes, hospitals, administrative buildings, post offices, children's playgrounds, parks? To what extent can the Project disrupt access to these institutions? > Is there infrastructure such as electricity infrastructure, telephone lines, pipelines, etc. along the railway in the municipality/LC, which could be damaged during railway construction? > Does the municipality have an updated cadastre of underground installations? > What is the state of access roads to existing stations/halts in the municipality/LC?
Natural resources	> Is there a forest, stream, river, lake or other publicly owned natural resource near the railway that serves the local population for household purposes? > Are there concessions for exploitation of natural goods by private legal persons in the municipality/LC immediately along the existing railway (e.g. exploitation of gravel from rivers, ores, forests, etc.)?
Vulnerable categories	> What are the most vulnerable social communities along the railway (illiterate people, informal land users whose rights are not recognised by local legislation, poor households, women-headed households, members of minorities)? How do you think the Project could affect them?

Agriculture	> What economic activities prevail in the local community? > How much agricultural land is located along the railway? Will the railway (and to what extent) separate land plots (e.g., households who might have a house and agricultural machines on one side and agricultural land on the other side)? > Do people actively engage in beekeeping along the railway? > Do people actively engage in livestock breeding along the railroad? > Do local agricultural producers use the railway as a way of transport to larger cities where they sell their products? If so, is there a plan at municipality/LC level to provide them with alternative transport during the construction of the railway?
Businesses	> Are there industrial zones near the railway? > Are there any companies near the railway (if yes, what are the key activities, how many are there)?
Cultural and historical heritage	> Are there religious/cultural and historical sites on the territory of the municipality/LC that the Project could affect? > Are existing railway stations on the territory of the municipality/LC under protection in terms of cultural and historical heritage? If so, since when, and has this been already discussed with SRI? If the station is protected, what is the procedure for station reconstruction? > Are any traditional cultural, historical or sports events held in the municipality/LC which could be affected during the construction of the railway?
Level crossings	> How many level crossings are there in the municipality/LC? For what purpose are they mostly used? How would their closure affect local residents?
Cemetery	> Are there any cemeteries near the railway?

Table 6: Critical points along the Corridor route proposed for additional analysis

No	Identified critical point	Reason for further analysis (discussions with local residents)
Potential closure of stations and halts – *the purpose of discussions will be to understand use of the current stations/halts and specific impacts of station/halt closure*		
1.	Mala Plana station	Mala Plana station might be closed and transferred to Velika Plana (about 4.9 km away from the Mala Plana station).
2.	Staro Selo halt	The halt might be closed and transferred to Velika Plana which is 3.5 km away from Staro Selo. Based on the satellite images, in the vicinity of the halt there is a primary school and monastery.
3.	Sikirice-Ratare halt	According to the Scoping Report, this halt will be closed and the next halt for residents of this area is 10 km away from Sikirice-Ratare.
4.	Braljina halt	Braljina halt might be closed and the railway for residents (mostly elderly people) of this settlement might be the only means of transport.
Densely populated settlements/cities – *the purpose of discussion will be to understand direct impacts of railway construction on the population living in these settlements*		
5.	Mala Plana	Very densely populated area. Railway passes through the Mala Plana settlement.
6.	Lapovo	Densely populated area.
Roma people – *the purpose of discussions will be to understand the impacts of the Project on Roma people*		
7.	Aleksinac	Based on the conversations the ENOVA team had with conductors during the field visit, there are Roma people living in Aleksinac.
8.	Mladenovac	Based on the conversations the ENOVA team had with conductors during the field visit, there are Roma people living in Mladenovac.
Planned closure of level crossings and construction of overpasses/underpasses – *the purpose of discussion will be to understand current use of level crossings and impacts of their closure on local residents*		

9.	Mala Plana (85,099)	This level crossing will be closed, and the next crossing is 734 m away from Mala Plana crossing.
10.	Grejac (231,540)	This level crossing will be closed, and the next crossing is 1,095 m away from Grejac crossing.
11.	Lapovo	Project affected people living in the area where construction of underpass is planned due to level crossing closure. Coordinates are: Latitude: 44°10'50.22"N Longitude: 21° 6'7.94"E
Greenfield parts where the railway will be constructed – *the purpose of discussions will be to understand impacts on agricultural activities in areas where offline parts of the railway will be placed*		
12.	From tunnel exit no. 8 until Sopoto Kosmajski station	Based on the satellite images this area is characterised by mainly arable land and diverse agricultural activities.
13.	Area after Kusadak station	Based on the satellite images this area is characterised by mainly arable land and diverse agricultural activities. Coordinates are: Latitude: 44°22'22.60"N Longitude: 20°51'21.18"E Latitude: 44°21'43.28"N Longitude: 20°52'20.92"E
Population living near tunnels – *the purpose of discussions will be to understand the impacts of tunnel construction in terms of potential temporary impacts (noise, vibration, dust, etc.) and restrictions caused due to tunnel construction*		
14.	Tunnel exit no. 11	Settlement in the vicinity of the planned tunnel no. 11 Coordinates are Latitude: 44°23'14.28"N Longitude: 20°46'29.52"E Latitude: 44°23'12.06"N Longitude: 20°46'36.40"E

6.5 Information Disclosure and Consultations

Objective

To **inform affected stakeholders about potential impacts and give them an opportunity to raise their concerns** and receive responses; and to inform the assessment of impacts and identification of mitigation measures.

This activity will take place during 3 phases:

- Phase 1: During the E&S assessment, the purpose will be to actively involve the stakeholders in the identification, assessment and definition of mitigation strategies for impacts that concern them.
- Phase 2: Once the draft E&S Assessment is available, the purpose will be to discuss and encourage stakeholders to give feedback on the impact assessment; and the proposed E&S impact management measures.
- Phase 3: After the public consultation process is completed, this phase will involve preparation of a Public Consultation Report and updating the Public Disclosure Package as necessary.

Activities	Description of tasks	Timing
	Phase 1: During the E&S Assessment	
1.	Meetings with state-level government stakeholders: > the Ministry of Environmental Protection > the Ministry of Agriculture, Forestry and Water Management > the Ministry of Construction, Transport and Infrastructure * > the Ministry of Human and Minority Rights and Social Dialogue > the Ministry of Culture and Information > Directorate for Railways > Srbija Voz > Srbija Cargo ** Note: This Ministry established in 2015 a GIS database for sub-standard Roma settlements, by mapping 583 such settlements in the entire country. The Consultant plans to ask the Ministry to provide information from this database relevant to the planned railway route.*	April-May 2022
2.	Meetings with municipalities/LCs as specified under the social assessment methodology	May 2022
3.	For the purpose of initial stakeholder engagement, the Consultant will reach out in the early stage of the E&S assessment to interested or potentially interested NGOs in the Project region to better understand their views, interests and concerns. Based on an initial screening of information on existing and active NGOs, the Consultant has developed a list of NGOs to be contacted: > HabiProt Association > WWF > Roma Women's Association Osvit, Nis > Women Space Nis > Roma Community Development Center Amaro Drom, Smederevska Palanka > Association of Roma Women Nada, Aleksinac > Civic Movement Opre Roma Serbia > National Council of the Roma minority of the Republic of Serbia > Association of Roma in Mladenovac, Roma Center for Education and Economic Empowerment > Roma Association in Cuprija – Romi sa Morave > Any other NGOs that may be identified at a later stage	April-May 2022

	Initial contact will be established with the selected NGOs by sending an e-mail explaining that EBRD is conducting an E&S assessment of the Project and the NGOs will be asked whether they are interested in discussing their views, interests and concerns. For NGOs that respond to initial contact, further contact will be established by holding interviews with NGOs. All meetings will be documented in writing.	
4.	Development of a Project Information Leaflet with the following: > brief Project description with illustrations of the Project area > Project implementation arrangements > planned Project timeline > contact information for providing feedback/inquiries	April 2022 (to be sent to EBRD for prior approval and translated to Serbian thereafter)
5.	A. Assisting SRI with setting up a Project disclosure section on the SRI website, to contain: o the Project Information Leaflet o contact information for providing feedback/inquiries o a placeholder for the Project disclosure package (to be publicised after the E&S assessment is completed) B. Advertising the Project disclosure website section through SRI's social media accounts C. Delivering the Project Information Leaflet to affected municipalities/LCs to be visited during the social assessment	May 2022
Phase 2: After the Draft E&S Assessment Report is prepared		
6.	Assist the SRI in public disclosure of draft Public Disclosure Package to inform the public on the Project, its potential E&S impacts and proposed measures to manage these impacts: A. Updating the Project disclosure section on the SRI website, with the following: > Disclosure of the draft Public Disclosure Package for a minimum of 120 days > Project Information Leaflet (updated if needed) > Project feedback form/form to submit questions > contact information for providing feedback/inquiries > information on the grievance mechanism B. Ensuring that Public Disclosure Package is also posted online on other websites as specified in the SEP C. Advertising the disclosure of draft Public Disclosure Package as follows: > Notices sent to all affected municipality offices and LC offices (to be posted on notice boards) as specified in the SEP > Notices posted at all rail stations currently serving as official stops > SRI social media accounts > Local newspaper/radio adverts. D. Ensuring that printed copies are available at locations specified in the SEP.	August 2022
7.	Assist the SRI in organising public meetings to discuss the draft Public Disclosure Package. The Consultant will support the disclosure process including notification of stakeholders, preparation, translation and printing of all necessary disclosure materials, provision of facilities if required and will attend public meetings together with the client. The Consultant will also be responsible for printing the E&S package for disclosure at locations within the agreed SEP.	August 2022

	The Consultant will document all meetings and disclosure activities.	
Phase 3: Upon completion of the disclosure and consultation process		
8.	Prepare a stand-alone Public Consultation Report to summarise the disclosure and consultation activities and outcomes.	Within 4 weeks of the end of 120 days disclosure period
9.	Update the Public Disclosure Package as necessary to account for any comments and feedback received during the disclosure phase.	

7 Proposed Structure and Content of the E&S Assessment Report

No.	Chapter	Explanation
1.	**Executive Summary**	This chapter will include a concise summary of the Project, its rationale, the existing operations and overall setting, significant E&S impacts and recommended actions.
2.	**Introduction**	This chapter will provide a brief overview of the: > Project need > Project objectives > Financing arrangements > Project status > Project setting
3.	**Project Description**	This chapter will include a precise description of the Project within its geographical, environmental and socio-economic context, including a map of sufficient detail, showing the Project site and the area that may be affected by the Project. This chapter will include the following information: > Overview of the Project > Existing site > Structures (rail track, fencing, drainage, stations, ancillary structures) > Electrification > Signalling system > Control systems > Project land requirements > Overview of the construction phase > Commissioning and testing > Operation and maintenance > Other key projects in the surrounding area > Project area of influence
4.	**Alternatives**	This chapter will include a systematic comparison of feasible alternatives to the Project, in terms of location, Project technology or design in terms of potential E&S impacts. The *Analysis of Reasonable Alternatives* will include information on: > Requirement for consideration of alternatives > Do-nothing scenario > Alternative non-rail options > Alternative rail options > Alternatives to minimise resettlement > Micro routing of the Project
5.	**Legal and Policy Context**	This chapter will describe the legal, policy and administrative context within which the Project takes place and identify any laws and regulations that pertain to E&S matters relevant to the Project, including: > National strategies > National E&S requirements > EBRD requirements > EIB requirements > EU requirements > International conventions > Other national and international guidelines > Gap analysis between national E&S requirements and EBRD PRs / EIB Standards > Status of permitting requirements for the project, including permitting of auxiliary activities.

No.	Chapter	Explanation
6.	**Methodology of E&S Assessment**	> Objectives > Approach to the assessment of the Project > Integration of consultation results into the assessment process > Classification of effects
7.	**Stakeholder Engagement**	This chapter will describe: > Key stakeholder groups identified > Stakeholder engagement activities carried out during the E&S assessment and issues raised by stakeholders throughout the process of engagement > Stakeholder engagement activities planned during further Project stages
8.	**Baseline Conditions**	The main purpose of this chapter is to provide an understanding of current E&S conditions that form the baseline against which project impacts can be predicted. Therefore, this chapter will consider all aspects of the E&S context that may be altered by the proposed Project, including: > Biodiversity > Air quality > Noise and vibration > Surface waters > Geology and hydrogeology > Landscape and visual > Materials and waste > Climate change > Cultural heritage > Socio-economic baseline (comprehensive community profile with elaboration of patterns of use of the railway, existing community infrastructure, land use, use of natural resources, vulnerable communities, economic activities, etc.)
9.	**Assessment of Impacts**	This chapter will itemise and describe the identified impacts associated with the previously established E&S baseline, existing operations, and planned Project activities, including that of cumulative nature. This chapter will follow the same structure as the Baseline chapter and will include the assessment of potential E&S impacts and risks of the Project (including associated facilities) using methodology described in Chapter 7 also giving a significance rating for each residual impact and risk (without and with application of mitigation measures). The impact assessment will consider three phases of the development: (i) pre-construction, which includes all potential changes that may occur on site before starting of construction works, (ii) construction phase, which includes all potential changes that occur on site from the initial point of access and (iii) operation, which encompasses all phases of the site development once operational.
10.	**Commitments Register**	For each identified impact, appropriate mitigation and enhancement measures will be identified. Mitigation measures will be appropriate for the level of information on the Project and the accuracy of the E&S impact assessment. Where more detailed assessments are needed in the subsequent ESIAs, the measure will give flexibility to the ESIA to further assess the impact and/or accurately refine the mitigation measure. Mitigation measures will be summarised in the Project Commitments Register in tabular format, which will include: > E&S aspect to which the mitigation measure/commitment refers > description of mitigation measure/commitment > the phase of the Project in which it should be implemented > indication of whether it applies to the entire Project or specific sub-section(s)

No.	Chapter	Explanation
		> the responsible entity for implementation > reference to the section of the ESMP in which it is located. The commitments will be transferred into the ESMP. The proposed content of the ESMP is given below in Chapter 8.

8 Proposed Structure and Content of the Corridor ESMP

The Consultant will develop a *Corridor Environmental and Social Management Plan (ESMP)* to serve as a framework ESMP, with the following proposed contents:

	Chapter	Explanation
1.	**Introduction**	This chapter will provide a brief overview of the Project (rationale, objectives, status)
2.	**Purpose and Scope**	This chapter will describe: > the objectives of the ESMP > the stages of the Project lifecycle to which the ESMP applies > the applicable Project standards > the basis for ESMP development > the intended users of the ESMP.
3.	**Roles and Responsibilities**	The roles of each party involved in the Project (SRI/its PIU, the supervising authority and Contractors) will be identified in terms of the actions/mitigation measures contained in the ESMP as well as for regular update of the ESMP. Based on a review of SRI's capacities and resources to develop and implement the Project in line with the Applicable Requirements, this chapter will also include a description of any training or capacity-building required to ensure that personnel tasked with implementing the ESMP have the necessary awareness and skills to execute these functions effectively.
4.	**Management Plans**	This chapter will elaborate in detail the management plans and associated sub-plans to be developed based on the framework ESMP.
5.	**Management of Change Procedure**	A procedure for the management of change will be included with a view to managing any changes during preliminary design and section-ESIA production (if there are material changes from the corridor assessment) and later during detailed design and construction.
6.	**ESMP Table**	Monitoring and mitigation measures will be presented for each E&S aspect for all Project phases in tabular format. Specifically, the table will include: > mitigation measures and monitoring requirements identified in the Corridor E&S Assessment, that should be implemented to address the impacts during the design, construction and operation of the Project; > timing for planning and implementation for mitigation measures and monitoring requirements; > responsible parties for planning and implementing the mitigation measures and monitoring requirements; and > targets/indicators for evaluation.

9 E&S Assessment Work Programme

Report	March	April	May	June	July	Aug	Sep	October	November	December
Activity 1: Inception Phase										
Kick-off meeting										
Review of existing studies and background information										
Meetings with SRI and PPF9 Site visit										
Inception Report and proposed structure of the assessment report										
Activity 2: Corridor E&S Assessment Disclosure Package Development*										
Data collection										
Social surveys										
Biodiversity surveys										
Noise and Vibration Assessment										
Information disclosure and consultations										
Development of Draft Disclosure Package*										
Draft Public Disclosure Package*										

Report	March	April	May	June	July	Aug	Sep	October	November	December
Finalisation of Disclosure Package*										
Final Public Disclosure Package*										
Activity 3: Public Disclosure										
Disclosure period										
Information disclosure and consultations										
Activity 4: Updated E&S Assessment Package*										
Information disclosure and consultations										
Finalisation of E&S Assessment Package*										
Post Disclosure Final E&S Assessment Package*										

*Corridor E&S Assessment, ESMP, SEP, Resettlement Framework, NTS, ESAP

10 Appendices

A. List of Documents Reviewed

	Document	Date	Language
1.	Preliminary Feasibility Study: Reconstruction and Modernisation of the Railway Line Belgrade-Nis – Final Report	Feb 2022	English
2.	Reconstruction and Modernisation of the Existing Railway Track and Construction of a Second Track on the Line Belgrade-Nis, Section Stalac-Djunis, EIA	Jan 2018	Serbian
3.	Reconstruction and Modernisation of the Existing Railway Track and Construction of a Second Track on the Line Belgrade-Nis, Section Stalac-Djunis, Draft ESIA	Feb 2016	English
4.	Modernization of Railways – Project documentation for the railway bypass around Nis, ESIA	Jan 2016	Serbian
5.	Conceptual Design of the Stalac-Djunis Railway Section	Aug 2021	Serbian
6.	Conceptual Design of the Velika Plana-Nis Railway Section	Feb 2020	Serbian
7.	Annual E&S Report – Reconstruction of line section Junction G-Rakovica-Resnik	2021	English
8.	Spatial Plan of the Special Purpose Area of the Infrastructure Corridor of the Railway Stalac – Djunis and SEA Report	May 2017	Serbian
9.	Spatial Plan of the Republic of Serbia 2021-2035 (draft)	Mar 2021	Serbian
10.	Regional Spatial Plan of Belgrade	2011	Serbian
11.	Regional Spatial Plan for the Areas of Nisava, Toplica and Pirot Administrative Districts	Jan 2013	Serbian
12.	Regional Spatial Plan for the Area of the Danube and Branicevo Administrative Districts	Feb 2015	Serbian
13.	Regional Spatial Plan for the Area of Sumadija, Pomoravlje, Raska and Rasina Administrative Districts	Apr 2014	Serbian
14.	SRI's Risk Assessment Act with amendments	2016-2021	Serbian
15.	SRI's Disaster Risk Assessment	2021	Serbian
16.	Supervisory Audit (safety measures)	2021	Serbian
17.	Study after the May floods – temporary reconstruction of the railway section Sabac-Zvornik, between stations: Lesnica - Loznica	Jul 2014	Serbian
18.	Ministry of Construction, Traffic and Infrastructure – Program for the realization of flood damage repair on the railway network "Serbian Railways"	Jun 2015	Serbian
19.	SRI's Waste Management Plan	May 2018	Serbian
20.	SRI's Annual Waste Generation Report for 2021	2022	Serbian
21.	Report on Soil Quality	Jun 2021	Serbian
22.	Srbija Kargo – Agreement on Cooperation and Coordination of Activities Related to the Application of Prescribed Measures for Safety and Health of Employees	Jun 2019	Serbian
23.	Srbija Voz – Agreement on Cooperation and Coordination of Activities Related to the Application of Prescribed Measures for Safety and Health of Employees	Jun 2019	Serbian
24.	NLC NEO CARGO LOGISTICS – Agreement on Cooperation and Coordination of Activities Related to the Application of Prescribed Measures for Safety and Health of Employees	Jul 2019	Serbian
25.	A recording of the train ride from Nis main station to Belgrade made by the Optima Express Agency and disclosed on YouTube: https://www.youtube.com/watch?v=zdUUQX7b6uE.	Dec 2021	Serbian/ English
26.	A detailed simulation of the location of tunnel 4 made by Vozoljubitelji - Serbia and disclosed on YouTube: https://www.youtube.com/watch?v=cAQLaw47hWY.	Nov 2021	Serbian/ English
27.	A detailed simulation of the reconstruction of the Stalac-Djunis railway and disclosed on YouTube: https://www.youtube.com/watch?v=g2O_aGOncMA.	Aug 2021	Serbian/ English
28.	Draft RAP – Belgrade Nis railway section Stalac-Djunis	Apr 2022	English
29.	Location Conditions and Opinions for the Stalac-Djunis Railway Section	2021	Serbian
30.	Minutes of the Working Meeting – Selection of Stations and Other Official Places Along the Railway Line Belgrade-Nis	15 Oct 2021	Serbian/ English
31.	Tender Documentation for the LOT1 for the Stalac-Djunis Railway Section	2022	English

B. List of Persons Met/Contacted

	Name and family name	Company/Institution	Position	Contact
1.	Željko Tmušić	PPF9	Managing Director	zeljko.tmusic@suez.com
2.	Dušan Rakić	PPF9	Operations Director	dusan.rakic@suez.com
3.	Boško Coko	PPF9	General Manager Adviser	Bosko.COKO-int@egis.fr
4.	Darko Jakšić	PPF9	Team Leader	darko.jaksic@suezconsulting.rs
5.	Alexandre Quintin	PPF9	ESIA Expert	alexandre.quintin@suez.com
6.	Marko Ilić	PPF9/EGIS	Environmental Expert	marko.ilic-int@egis.fr
7.	Aristides Karlaftis	PPF9	Transport Project Manager	aristides.karlaftis@suez.com
8.	Ivana Bjedov	PPF9/EGIS	Biodiversity Expert	
9.	Aleksandra Mladenović	PPF9/EGIS	Biodiversity Expert	amladenovic71@gmail.com
10.	Željko Marković	SAFEGE	Civil Engineer	zeljko.markovic@suez.com
11.	Saša Zlatković	SRI	General Manager Adviser	sasa.zlatkovic@srbrail.rs
12.	Nebojša Šurlan	SRI	Director	
13.	Sonja Markov	SRI	Head of the Sector for Development	sonja.markov@srbrail.rs
14.	Darija Nedić	SRI	Coordinator	darija.nedic@srbrail.rs
15.	Velibor Samardžić	SRI	Manager	velibor.samardzic@srbrail.rs
16.	Zoran Jevtić	SRI	Manager	zoranj@gmail.com
17.	Nenad Stanisavljević	SRI	PR Manager	nenad.stanisavljevic@srbrail.rs
18.	Dejan Marković	SRI	Assistant Director	dejan.markovic@srbrails.rs
19.	Zlatko Draško	SRI	Head of the Environmental Protection Sector	zlatko.drasko@srbrails.rs
20.	Željko Moravčik	SRI	Main Coordinator for Waste Management	zeljko.moravcik@srbrails.ra
21.	Ivana Stanković	SRI	Main Coordinator for Environmental Protection	ivana.stankovic@srbrails.rs
22.	Radivoje Perivanović	SRI	Head of the Sector of Special Importance for Railways	radivoje.perivanovic@srbrails.rs
23.	Čedomir Ilić	SRI	Head of the Organization for Environmental Protection	cedomir.ilic@srbrails.rs
24.	Negoslav Simeunović	SRI		
25.	Jelena Oplanić	Link 011	Social Consultant	jelena@link011.org
26.	Branko Radovanović	Link 011	Social Consultant	branko@link011.org