The European Union's IPA 2011 Programme for Serbia

Modernization of Railways

Project documentation for the Railway line Novi Sad-Subotica-Hungarian Border,

Republic of Serbia

CRIS Contract no: 2013/318428

NOTIFICATION ON ENVIRONMENTAL IMPACT ASSESSMENT IN A TRANSBOUNDARY CONTEXT ACCORDING TO ESPOO CONVENTION

November 2014

This project is funded by
The European Union

The project is implemented by a consortium led by:

Louis Berger

and its partners:

GRE Gauff Rail Engineering SYSTRA LOUIS BERGER D.O.O.

NOTIFICATION ON ENVIRONMENTAL IMPACT ASSESSMENT IN A TRANSBOUNDARY CONTEXT ACCORDING TO ESPOO CONVENTION

November 2014

Quality Control

ORIGINAL REV 0	Prepared by:
	Consortium led by Louis Berger and its partners: Gauff Rail Engineering, GRE Belgrade – Gauff Rail Inzenjeri d.o.o., Systra, and Louis Berger d.o.o.
	Reviewed by:
	Bernard de SOUSA Team Leader Signature & Date:
	Approved by:
	Daniel SERAFIMOVSKI **Project Director** Signature & Date:

Revision Number and Description of Revision
Rev 0: Notification on Environmental Impact Assessment in a trans-boundary context according to ESPOO Convention-ENG-Rev 0

1. INFORMATION ON THE PROPOSED ACTIVITY

(I) Information on the nature of the proposed activity

Type of activity proposed:

The overall objective of the project of which this contract will be a part is as follows:

Completion, modernization and sustainable development of the Serbian railway transport system within the Pan-European Corridors X, in order to meet the required EU capacity levels and quality standards relevant to the TEN-T network (in terms off-track length and layouts, signaling and telecommunication systems), and to enhance and reinforce the Serbian capacities in the context of the EU pre accession process and the management of the IPA funds.

This Espoo Convention Form focuses only on the Serbian Sector of the railway line, which is hereinafter referred to as the "Project".

Is the proposed activity listed in appendix I to the Convention?

Yes. The Project of reconstruction and modernization of the railway line Novi Sad – Subotica – Hungarian Border is classified within the Espoo Convention under Appendix I, item 7 referenced as Construction of motorways, express roads and lines for long-distance railway traffic and of airports with a basic runway length of 2,100 meters or more.

Scope of proposed activity (e.g. main activity and any/all peripheral activities requiring assessment)

The Project comprises two phases:

The first phase of improving railway Corridor Xb is the modernization of the section between Stara Pazova and Novi Sad; it was decided to finance this with IPA Component III assistance from the Operational Programme Development (OPED 2012-2013).The necessary co-financing will be provided by IFIs. The IPA 2008 "Project Preparation Facility" is preparing the Feasibility Study and Environmental Impact assessment while JSC Serbian Railways has financed preparation of the Preliminary design from their own resources.

The second phase, the section from Novi Sad to the border with Hungary, is the object of the present tender. The length of the railway line Novi Sad - Subotica- Hungarian Border is around 100 km. Modernization of this part of railway corridor X has to be performed in accordance with the standards relevant for international corridors.

Therefore, the aim of this project is to prepare technical documentation for the modernization of the railway line Novi Sad - Subotica- Hungarian Border according to the European Agreement on Main International Railway Lines (AGC), the European Agreement on Important International Combined Transport Lines and Related Installations (AGTC) and the South East European Co-operation Process (SEECP) and the European Standards for Interoperability (STI). Preparation of such documentation requires practical knowledge on implementation of mentioned agreements.

Scale of proposed activity:

Project includes:

- Reconstruction of existing single track electrified railway, total length of 150 km;
- Construction of new second railway track, total length of 150 km;
- Reconstruction of existing auxiliary facilities
- Construction of new facilities on the railway route (railway stations with auxiliary installations, underpasses, overpasses, viaducts, galleries, tunnels, bridges);
- Relocation of installations crossing the railway line (gas, electrical power installations)
- Construction of electrical power facilities and
- Installation of new signalling and telecommunication devices

Section Novi Sad - Subotica – Hungarian Border

From Novi Sad, i.e. from km 84+000 of the existing railway, existing elements of the planned track line are designed for speed of V ≤ 120 km/h.

Exception is Vrbas railway station where existing elements of the planned track line are designed for speed of V ≤ 80 km/h as well as Subotica railway station where existing elements of the planned track line are designed for speed of V ≤ 120 km/h, while at the entrance and exit turnout points in Subotica station the turning speed limit is V ≤ 50 km/h.

The connected railway lines at the entrance of the Subotica Freight Railway Station are Subotica – Bolnica and Subotica - Horgoš. The connected railway lines at the exit of the Subotica Passenger Station are Subotica – Sombor, Subotica - Fabrika (Djala). Design speed from Subotica Railway Station to the Hungarian Border (Kelebija) is V ≤ 120 km/h, according to the existing elements of the planned track line.

The superstructure of the existing railway line is in extremely poor condition. On the entire length of the line the rails have constant deformation due to the poor state of ballast and sleepers. Due to the poor state of infrastructure it is necessary to define and to investigate the possibilities of reconstruction of the existing single track railway line and upgrading to double track line for speeds of up to 160 km/h with providing free profile UIC-C for electrified railway lines.

The load limit is 22.5 t/>cЬ and designed speed is 120 km/h. At the subject section from Novi Sad to Hungarian border, the existing railway is single tracked and includes 12 operational areas: 10 stations (Kisac, Stepanovicevo, Zmajevo, Vrbas, Lovcenac, BackaTopola, Zednik, Naumovicevo, Aleksandrovo, Subotica) and to 2 stopping points (Mali Idjos and Mali Idjos Polje).

The existing railway line has a large number of gradient changes between 0 - 60†but with small slopes and low embankments.

It is worth noting however that the Novi Sad – Subotica section has a very favourable geometry that allows adjustments to the required geometry line for enabling speeds up to 160 km/h, with no major realignment of the route. The existing curves on the line are mainly located directly behind or in front of the stations, locations where trains are most probably stopping/ accelerating, hence not travelling at 160 km/h.

From Novi Sad to the Hungarian border, the current track is single track, with 12 stations: 10 railway stations (Kisac, Stepanovicevo, Zmajevo, Vrbas, Lovcenac, BackaTopola, Zednik, Naumovicevo, Aleksandrovo, and Subotica) and 2 railway stops (Mali Idjos and Mali Idjos polje).

It is to be noted the distinction between:

- Stations where railway operations are possible (passing of two trains, overtaking, and temporary stabling) stops that are used only for passenger purpose.
- Passenger traffic on this section takes place between Novi Sad and Subotica, and on route Novi Sad - Sombor (via docking station Vrbas) and vice versa.
- Traffic connection with Sombor occurs by stopovers in station Vrbas. Along the railway line between Novi Sad – Subotica, express trains pass without stopping, fast trains stop in Vrbas and Backa Topola, while local passenger trains stop at all stations and stoops.
- Freight traffic along this line is mostly transit. Kisac and Stepanovicevo station are open to working only with wagon goods, and other stations are open to working with part-load goods.

Description of proposed activity (e.g. technology used):

Rail Track Infrastructure

Novi Sad – Subotica - Hungarian Border

From Novi Sad, i.e. km 84+000 of the existing railway according to the existing elements of the planned track line, the railway is designed for a speed of V≤120km/h. The exceptions are the train station Vrbas, where, according to the existing elements of the planned track line, the railway is designed for a speed of V≤80km/h and train station Subotica where, according to the existing elements of the planned track line, the designed speed is V≤120km/h, and the turning speed limit at Subotica Passenger Station entrance and exit turnout passages is V≤50km/h. At the entrance of the Subotica freight station the railway lines Subotica – Bolnica and Subotica – Horgos are connected. At the Subotica Passenger Station exit the railway lines Subotica – Sombor, Subotica – Fabrika (Djala) are connected. From the Subotica train station to the Hungarian Border (Kelebija), according to the existing elements of the designed track line the railway is designed for a speed of V≤120km/h.

Since its opening to date, this railway has been of great importance for railway traffic in Serbia, both domestic and international.

The 184.6 km long railway line Belgrade – Stara Pazova – Novi Sad - Subotica – Hungarian border was constructed and opened to traffic in 1882-83. The railway overhaul is executed in 1965-1966. The complete railway line is electrified. The load limit is 22.5 t/oc, and designed speed is 120 km/h. Due to an overall bad shape of the railway, the speed limit of 80 km/h is defined by the Railway Guide only on individual sections.

At the subject section from Novi Sad to Hungarian border, the existing railway is single tracked and includes 12 operational areas: 10 stations (Kisac, Stepanovicevo, Zmajevo, Vrbas, Lovcenac, Backa Topola, Zednik, Naumovicevo, Aleksandrovo, Subotica) and to 2 stopping points (Mali Idjos and Mali Idjos Polje).

Passenger transport runs between Novi Sad - Subotica and between Novi Sad - Sombor (via

connecting station Vrbas). The transport to Vrbas is provided via layover in Vrbas Station. There are no stops for express trains along the section Novi Sad – Subotica, fast trains stop in Vrbas and Backa Topola, while local passenger trains stop in all stations and stopping points.

Freight traffic at this section is mainly transit. While Kisac and Stepanovicevo stations work only with wagon goods, other stations include general cargo.

The subject railway section has very favorably geometry which enables adjusting to the necessary railway geometry that can provide speeds up 160 km/h, without larger relocation of the track line. Existing curves on the railway are mostly located immediately after or before stations.

The existing railway line has a large number of gradient changes between 0-6‰ but with small slopes and low embankments. Horizontal curves on the railway occur immediately before Kisac Station (CS at km 90+479, R=1500m), at the open track (CS at km 94+557, R=2500m), immediately before Zmajevo Station (CS at km 102+420, R=2500m), inside the Zmajevo Station (CS at km 104+156, R=7000m), immediately after Zmajevo Station (CS at km 104+508, R=3000m). In the area of Vrbas Station, immediately before the station (CS at km 115+698, R=3000m), inside the station (CS at km 116+000, R=1100m) and immediately after the station (CS at km 117+042, R=300m), three curves are located, and as the sharpest one has 300m radius and lies in the unfavorable section of the track line, therefore, the straightening is not possible without the track line relocation. From Vrbas station to Subotica station the railway has curves only at three locations, on the open track (CS at km 118+255, R=1200m), immediately after the Lovcenac Station (CS at km 128+787, R=1600m) and immediately before Backa Topola Station (CS at km 142+260, R=1500m). Next curve is located before Subotica freight station (CS at km 173+431, R=1300m), and the Subotica Station itself is placed in a curve R=700m (CS at km 174+902 and CS at km 175+482). Till the end of the subject section, between Subotica station and Hungarian border one more horizontal curve is located (CS at km 181+560 R=2000m).

Superstructure of the existing railway is in extremely bad condition. At the subject section the type 49E1 rails are placed at both wooden and concrete sleepers (IM1; IM-2). Fastening system is mainly K type, partly SKL type. Along the whole section rails have suffered from permanent deformations due to a bad shape of a ballast bed (large amount of mud and grass) and rotten sleepers. The tension forces inside the CWR rails are disturbed due to inadequate maintenance and overdue change of deteriorated epoxy-bounded joints.

Both wooden and concrete sleepers were installed at axis length of 63-65 cm.

About 40% of wooden sleepers are rotten, and the concrete sleepers are also in the bad shape because the wooden inserts for screws are rotten. Therefore, at the most part of the railway line it is not possible to implement mechanical track regulation because of the screws jumping from wooden inserts.

Turnouts are in bad shape due to corroded metal parts, deterioration of rails on joints and bad condition of a turnouts material. Most of the turnouts have exceeded tolerance limits stipulated by Regulations No. 314.

Description of design elements – the track line layout

Horizontal curve radius has been defined for the requested speed of 160 km/h and vary from R=1800 to 13000m. A cubic parabola with straight-lined transition ramp of the superelevation

which must contain vertical curves at the beginning and end is used as transition curve.

In Vrbas and Subotica station smaller radii have been applied where the slower train traffic was foreseen. Design of layout elements which could provide the traffic speed of 160 km/h in these stations would require relocation and significant costs of building new stations, similar as in Novi Sad Junction (where the radius of R=400 has been kept at the station entrance). Therefore, in these stations the existing radii of horizontal curves has been kept. Maximum gradient of 12.5‰ has been adopted. Existing gradients has been kept at all track line sections where the track line follows the existing track. At sections where the track line goes off the existing track the applied gradients were less than the maximum.

Designed railway elements are foreseen for axis load of 225kN and a mass of 80kN/per axis. Second track runs alternatively along the left or right side of the existing track along the whole section, depending on the position of overhead contact line poles of the existing track in order to keep the existing Overhead Contact Line network as much as possible.

From km 84+000 to km 90+439.24 the left track is straight along the existing single track, while the second track is foreseen to be placed right from the existing railway (overhead contact line poles are located left from the existing track) and distance between tracks is 4.20m. From km 90+439.24 to km 90+840.49 the curve of R=1804.20m is designed, with transitional curves with length equal L=145m (the existing track line is temporarily left). This curve is located immediately before the Kisac station, therefore, this curve provides extension of a distance between tracks from 4.20m to 4.75m in order to provide entering the station existing tracks No. 3 and No. 4 at the distance between tracks of 4.75m

Longitudinal profile of the track line

Gradient of the railway line has been designed with minimal deviation from the existing alignment; therefore, most of the new designed RHL elevations are the same as existing ones. Designed gradients are mostly between 0‰ and 6,0‰, with maximum longitudinal gradient of 8.5‰ located between km 174+197.00 and km 174+800.00. In accordance with regulations, vertical curves of R=15000m are foreseen at grade changes with $\Delta i>2‰$.

The gradient/RHL ratio of 0,72m has been defined on the basis of requirements by which the minimum thickness of track ballast under the lower edge of the concrete sleeper must be 0,30m below the lower rail. All stations are designed with 0‰ gradient or with 1.0‰ gradient maximum.

Substructure

Foreseen track bed dimensions are the following: width 10.8m, track gauge 4.20m and 3.3m on each side from the track axis to the end of the track bed. Extension in curves is foreseen to be completed before the transition curve starts.

Designed track line goes mostly through the stabile terrain; therefore one should not expect major problems during the execution of works.

At sections where the new track line uses the existing railway, reconstruction of the existing track will be executed prior to construction of the second track bed. At the location of excavated portion of the track bed, following the completion of works on the subgrade – forming of proper geometrical gradients and necessary soil compacting, at least 30cm thick protective base course made from gravel and sand will be placed over the leveled foundation soil (i.e. the surface of removed fill) . Prior to filling the prepared subgrade with the base

course a geogrid and geotextile should be installed. At locations of the second track construction the upper part of the track bed shall be constructed from transitional (40cm) and protective layer (30cm) with total thickness of 70cm. New ballast with tracks will be installed over the base course, in accordance with regulations. Subgrade gradient on open track is 5% on two symmetrical sides. Slope of the soil bed is 1:1,5, and on higher embankments (h>3m) the slope shall be lessen from 1,5 to 1,75, i.e. 1:2.

Cuttings, embankments and all man-made structures shall be constructed in accordance with technical requirements and standards. Existing operational structures shall be reconstructed if necessary and existing damaged spots shall be repaired. Drainage of the track bed would be provided by placing sufficient amount of structure in the track bed; protecting the waterways and drainage ditches.

Superstructure

The General Design provides installation of the 60E1 rail type on concrete sleepers and elastic fasteners welded in a continuous rail for open and main station tracks.

Foreseen superstructure for reconstruction of other station tracks (except siding tracks) is 49E1 rail type on concrete sleepers and elastic fastening system.

The ballast is crushed stone, quality of which is in accordance with valid manuals and regulations, and works will be executed in accordance with JSC “Railways of Serbia” standards. The minimal ballast thickness bellow the lower edge of the concrete sleeper is 0.30 m below the lower rail. UIC-C loading gauge is provided along the whole track line.

Foreseen turnout type for main station tracks is 60E1-300-6° (60E1-760-1:14 and 60E1-300-6° in Preliminary design), on concrete sleepers with elastic fastening system, and foreseen types for other tracks are 49E1-300-6° and 49E1-200-6°, as well on concrete sleepers with elastic fastening system. UIC-C loading gauge is provided along the whole track line.

Description of purpose of proposed activity:

Upgrade and modernization of the railway line from Novi Sad to Subotica to Hungarian Border.

The purpose of the modernization of the railway line Novi Sad - Subotica is to help make rail transport more competitive and to equalize and improve transit times by rail in comparison to road. The project will help divert international road traffic to the railways with the consequent benefits in environmental terms.

Railway line Stara Pazova - Novi Sad - Subotica - State border with Hungary, about 150 km in length, has great importance for the Serbian Railways, both in terms of domestic and international traffic as part of Corridor X in Serbia. The current line is single track electrified line and overall current condition of the line is poor. As a result, traffic speed is limited and significantly less than the potential values.

Rationale for proposed activity (e.g. socio-economic basis, physical geographic basis):

The main results that are planned to be achieved by realization of the proposed project will be:

- Preparation of project documentation (Preliminary Design) for modernization of the

railway line Novi Sad–Subotica-Hungarian Border in accordance with European Technical

- Specification for Interoperability (TSI), AGC, AGTC and the SEECP Agreement, including cost-benefit analysis and Environmental Impact Assessment Study;
- Preparation of tender documentation developed in accordance with EU PRAG or IFI requirements and Yellow Book FIDIC conditions of contract, ready for public procurement process.
- Preparation of financing application for major project (following EU requirements and/or IFI's requirements).
- Organization of study tours to visit similar projects in Western Europe, in order to transfer knowledge and experience of main objective for project, in particular the European Standards for interoperability (STI).

The achievement of these results for the realization of the Project of reconstruction and modernization of railway line Novi Sad - Subotica would provide the following wider benefits:

- Contribution to the economic growth of Serbia through better connections to European network, which will stimulate the development of the region;
- A significant contribution to environmental protection, which is reflected by reducing number of vehicles in road traffic and the use of environmentally favorable energy types;
- Reducing travel time and cost on both rail and road networks
- Reducing maintenance costs of infrastructure and rolling stock,
- Better and more efficient utilization of rolling stock and
- Cost savings due to the reduction of negative environmental impact, reducing the number of accidents and elimination of environmental pollution compared to road transport.

The results of railway construction and operation include significant and permanent improvement of public life conditions and quality due to:

- improved traffic links,
- traffic diversion from road to railway resulting to less road vehicles emissions,
- shorter time of passenger and goods transport,
- enhanced ambient and toilet facilities at stations;
- improved quality of services at stations;
- permanent resolving of current problems regarding population exposure to noise thanks to noise protection structures erected at critical locations (also on the existing route and on the future second track);
- permanent resolving of current problems related to water spillage, crossing or maintenance of canals and creeks;
- permanent resolving of population's current problems related to contamination of arable land, gardens and water supply source areas from wastewaters from road bed drainage

(thanks to the construction of road bed drainage ditches and drainage channels for the collection of seepage water from road beds, as well as for their connection to sewerage system in settlements);

- upgraded safety level from the standpoint of possible risk of floods and chemical accidents, and
- upgraded safety level and life protection of population in settlements on road crossings due to installment of new electronic signal-safety devices in all official places of the Section (starting from Indjija station ending to Petrovaradin station);
- reduced risk of possible chemical accidents owing to improved characteristics of the railway superstructure and substructure
- positive impact on social dimension due to increased level of population employment.

Positive impacts to water shall derive in the following:

- Resolved problem of ground water contamination from sanitary and fecal wastewater due to the reconstruction of the existing or construction of new sewerage at the locations of 4 railway stations;
- Resolved problem of road bed drainage and drawing off such waters via canals, along with designed protective measures against possible contamination of ground waters, water supply source areas and surface waters.

Positive ecological impact in the domain of protection of the environment and population in the area gravitating to railway route shall be manifested in the following:

- Substantial reduction in the emission of dust and exhaust gases from road vehicle motors as well as reduced level of contamination of soil and waters from run offs from roads due to diversion of a substantial part of passenger and goods transport from road to railway transport;
- Substantial improvement in the domain of the impact of road traffic noise owing to reduced volume of road vehicles and applied protective measures against noise from railway vehicles (which shall reduce the cumulative effect of interference levels of noise from the railway and parallel roads).
- Additionally, it should be underlined the substantial positive effects of the Project to population manifested through the social and economic development of the area through which the railway shall pass.

Implementation of the envisaged protective measures shall contribute as well to direct positive effects on flora, vegetation and fauna in this area. Animal safety level shall be particularly enhanced owing to culverts assisting animals to pass from one to other side of the railway route.

(II) INFORMATION ON THE SPATIAL AND TEMPORAL BOUNDARIES OF THE PROPOSED ACTIVITY

Location:

The project is located within the corridor of the existing railway line and it has been aligned with the intended purposes defined in plans of higher and lower priority plans of the area through which the project passes. There are several settlements along the line, and – in terms of traffic infrastructure – the line is intersected by the E-75 highway, as well as several local at-grade roads. Considering the fact that this is a reconstruction of an existing railway line, its reconstruction would not lead to any conflicts in use of space in comparison with the existing or intended purposes.

From Novi Sad to the Hungarian border, the current track is single track, with 12 official stops: 10 railway stations (Kisac, Stepanovicevo, Zmajevo, Vrbas, Lovcenac, Backa Topola, Zednik, Naumovicevo, Aleksandrovo, Subotica) and 2 railway stops (Mali Idjos i Mali Idjos polje). Passenger traffic on this section takes place between Novi Sad and Subotica, and on route Novi Sad - Sombor (via docking station Vrbas) and vice versa. Traffic with Sombor occurs by topovers in station Vrbas. Along the railway line between Novi Sad – Subotica, express trains pass without stopping, fast trains stop in Vrbas and Backa Topola, while local passenger trains stop at all stations and stops.

Description of the location:

The section under examination of the main railway line along the route Stara Pazova – Petrovaradin – Novi Sad (the survey area) lies almost completely within the region of northeast Srem. The railway, after crossing the Danube in the Petrovaradin region, extends into the territory of Backa.

Regarding the regional and geographic aspect, both of these regions (Srem and Backa) belong to the area of Pannonian Serbia. The railway, along the Stara Pazova – Beska section, mostly lies in regions typical of Srem (Pannonian) plains, thereafter passing through an area of a somehow more pronounced topography, between the eastern slopes of the Fruska Gora and the spacious alluvium of the Danube.

Likewise, the entire section is located in the area of the Pannonian bio-geographic region, crossing the territories of eight municipalities: Stara Pazova, Indjija, Sremski Karlovci, Novi Sad, Vrbas, Backa Topola, Mali Idjos and Subotica.

The railway route passes through the following areas of special importance regarding environmental protection, population protection and potential accidents:

- Special Nature Reserve "Koviljsko-petrovaradinski rit" ("Official Gazette of RS", No.27/98).
- Nature park “Jegrička” (“Official Gazette of Temerin Municipality”, No. 10/2005), (“Official Gazette of Žabalj Municipality”, No. 11/2005), (“Official Gazette of Vrbas Municipality”, No. 7/2006), (“Official Gazette of Bačka Palanka Municipality”, No. 13/2006)
- Landscape of outstanding qualities “Subotička Pescara” (“Official Gazette of RS”, No. 127/2003 and 113/2004)

- Krivaja River valley loess are natural recources in the procedure of conservation designation.
- Nature Park ''Palić'' (''Official Gazette of the city of Subotica'', No. 15/13 and 17/13-corrected);
- Special Natural Reserve ''Ludaškojezero'' (''Official Gazette of RS'', No. 56/94);
- Special Natural Reserve ''Selevanjskepustare'' (''Official Gazette of RS'', No.37/97);

The main natural resources are: the river Danube, Fruska Gora National Park, DTD Canal, agricultural land, favorable geostrategic position (Novi Sad is, for example, an extremely important transport hub where key routes of river, railway and road transport cross (Pan-European Corridor X)).

The main issues present in the surveyed area are:

- Small distance of residential facilities from the existing single-track railway line in large settlements (Indjija, Sremski Karlovci, Petrovaradin and Novi Sad);
- Small distance from the right bank of the Danube along the flood zone;
- High level of groundwater and swamped areas,
- Proximity of the water source "Petrovaradinska Ada", already endangered through illegal construction;
- High seismic ground activity (8° - eighth seismic degree) MCS, with a seismic coefficient Ks = 0.05;
- Constant processes at the Cortanovci landslide (1 millimetre annually).

Important existing issues regarding environmental protection, population protection, and potential accidents along the area of the existing railway line (that will be followed mostly by the future route of the second track of the railway) are:

- Threat of noise for the population and fauna,
- Threat of wastewaters against water sources,
- Threat of vibration and erosion processes against residential buildings and facilities of cultural and archaeological heritage;
- Exposure of natural treasures (protected natural heritage, environmental corridor – Danube, habitats of strictly protected and protected wild species of plants, animals and fungi) to human activity;
- Exposure of the population and environment to the impact of floods and landslide processes.

The railway line Stara Pazova-Novi Sad-Subotica-State border is one track, length of about 150 km, and has allowed separation of the traffic at speeds of 20 to 100 km / h, depending on the geometry and state top and bottom of the machine. The current railway line is mainly laid to the mound, less in cuts or smaller objects. Based on the funded data as a significant basis for the selection of optimal conditions for the modernization of existing lines, General project will analyze the all important geological and geotechnical characteristics, conditions and limitations. On the basis of such analysis, data for the development program of geotechnical

studies and tests for the level of the Preliminary Design will be obtained.

The railway corridor was accepted in the State Revision Committee's Report on the General Design for the railway: (Belgrade) – Stara Pazova

Rationale for location of proposed activity:

The railway line (Belgrade)-Stara Pazova-Novi Sad-Subotica-State Border, with a length of approximately 150 km, is of great importance for transport in the Republic of Serbia, both regarding interior, as well as international transport. The existing railway is single-track and electrified. This railway line is part of the Xb branch of the pan-European Corridor X.

According to the General Master Plan for the Transport Infrastructure of the Republic of Serbia (2009), the plan for the rehabilitation of the existing track, the construction and furnishing of a second track of the railway line along Corridor X (E 85): Stara Pazova-Novi Sad-Subotica was designed with the aim of increasing maximum train speeds to 160 km/h. This project is first in line regarding implementation priority, as part of the planned modernization and construction of railway infrastructure, bearing the designation RLC 13. The implementation of this project will contribute to creating the preconditions for compliance with the basic requirements of the European integration processes and achieving an increased level of transport throughput relative to the current capacities of the existing road and railway network of the Republic of Serbia. One of the phases for the implementation of this project includes the revitalization of the existing track (length of 43 km) and the construction of a second track (length 40.44 km) of the railway line along the Stara Pazova – Novi Sad section.

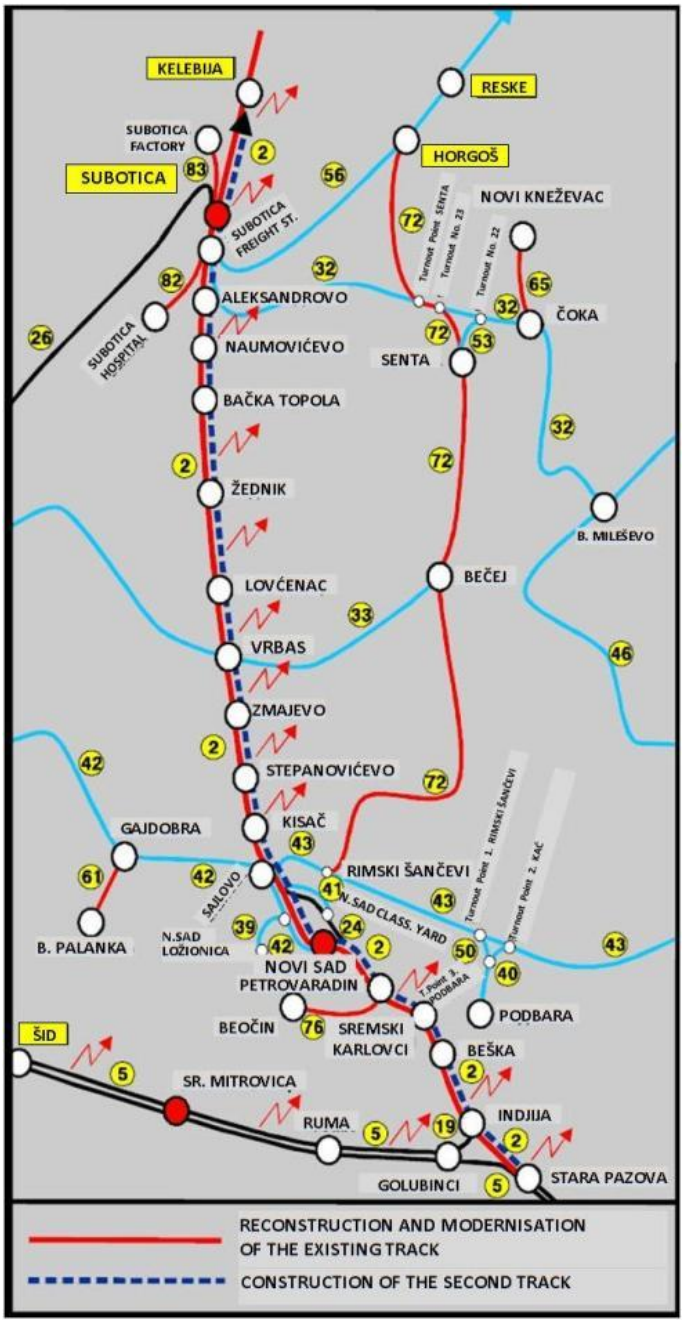
"JSC Railways of Serbia", as the implementing party for this project, initiated the required activities for the modernization and reconstruction of the existing railway (Belgrade) – Stara Pazova – Novi Sad – Subotica – State Border for axial loads of 225 kN and transport at speeds of up to 160 km/h, as well as equipment consisting of modern signalling-safety, telecommunication and stable electric traction facilities, pursuant to the requirements of the planning and legislative regulations.

Time frame for proposed activity:

Design project: June 2013 until September 2015

Construction: approximately four years

Maps and other pictorial documents connected with the information on the proposed activity:



Railway line Stara Pazova - Novi Sad - Hungarian border

(III) INFORMATION ON EXPECTED ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Scope of assessment (e.g. consideration of: cumulative impacts, evaluation of alternatives, sustainable development issues, impact of peripheral activities):

The ESIA process considers possible impacts and risks of the Project on the different components of the physical, biological and human environment. Impacts, including any residual impacts, will be assessed in terms of their direction (positive or negative), magnitude or significance, likelihood, duration and reversibility. A simple matrix will present the significance of the impacts depend on the alternative. The terms used for describing the significance (not significant, minor, medium, moderate, major) of an impact will be defined separately for each factor (e.g. soil, water, fauna, etc.).

Where possible, a quantitative assessment of impacts will be made based on available information and experience. The assessment of significance, in all cases, will take into account the impact's deviation from established baseline conditions and the sensitivity of the environment. The aim of socioeconomic impacts assessment is to evaluate the temporary and permanent impact of the Project on the socioeconomic environment in the target area.

The Consultant will undertake identification, analysis and evaluation of potential impacts during preparation, construction and operation of the railway line by means of:

- Field visits and detailed studies along the proposed railway route, the existing railway section, on the impacts on air, soil, flora and fauna, surface and ground water, nature protected areas, cultural goods, impacts of noise and vibration, waste, etc., as well as social impacts, land acquisition, resettlement;
- Analysis of threats, encompassing the identification of all sensitive resources around the complex, i.e. people, material and natural goods;
- Review of existing information and data;
- Modeling for prediction of noise levels (a noise model will predict the magnitude and extent of noise produced during operation of the railway);
- Expert judgment;
- Consultations with beneficiaries and stakeholders.
- Social and economic impact assessment will include the processes of analyzing the intended and unintended social consequences, both positive and negative, of planned project and any social change processes invoked by it. It will cover in addition:
- The social impacts, focusing on community well-being, include public health and safety, the living environment, landscape aesthetics, land acquisition, resettlement.
- Occupational health and safety of workers and contractors, giving special attention to accidents.
- For those impacts that are considered to be significant, a number of mitigation measures will be proposed.

The steps of the Serbian EIA process include:

- Screening
- Scoping
- Detailed Project description
- Analysis of Project alternatives, including the zero alternative
- Baseline surveys
- Impact assessment and mitigation measures
- Cumulative and transboundary impacts
- Unplanned events and accidents
- Environmental and Social Management Plan

Expected environmental impacts of proposed activity (e.g. types, locations, magnitudes):

Temporary impacts occur during the manufacturing process of materials, construction works and temporary waste disposal. The main feature of the temporary impact is that they only last as the works carried out in order to build the railway.

Reconstruction and modernization of railway line (Belgrade), Stara Pazova – Novi Sad-Subotica-State border includes a range of construction and engineering activities that may affect the environment. To what extent will the impact be expressed, depends on two key factors: the type of activity and sensitivity of the surrounding environment.

Another factor that is likely to affect the environment and the result is construction work is sensitive environments. This will largely depend on the presence of habitat and land use and natural areas through which the railway.
The amount of emitted pollutants does not feel right next to the railway line but also in the wider area, as windblown particles of harmful substances. As for the emission of harmful substances into the liquid, it may cause problems in the river system downstream from occurrence.

During construction, reconstruction and modernization of the railway there will be some amount of waste. The waste may be removed in several ways, including its reuse within the railway system, sold to other companies, removal of the decorated underground landfill or incineration. Waste stream (place of origin, transport from the place of origin, storage and processing for reuse, recycling and removal) may affect the environment, whether it is controlled by the one who is produced or not, the impact in some cases can be permanent and harmful to the health.

Railway traffic and infrastructure maintaining can lead to contamination of soil, surface water and groundwater.

Impact on air

The main regulatory document pertaining to the area of air quality is the *Law on Air Protection* (*Official Gazette RS*, No. 36/09, 88/10), which is aligned with the appropriate EU regulations. The limit values for emissions of pollutants into the air are regulated in Serbia similarly to the limit values that are in force in the EU. *Regulation on limit values for emissions of pollutants into the air* (*Official Gazette of RS*, No. 71/10) defines the maximum allowed concentrations of

pollutants in the air and the methods of measuring and monitoring air quality.

The railway Novi Sad -Subotica - Hungarian border is electrified, and therefore it has a minimal impact on air quality. Air pollution may occur by evaporation of agents which are used for turnout maintenance. Periodic short-term exceeding of limits occurs during winter and are caused by emissions due to combustion of fuel from local small heating plants. Based on the data of the National Statistics Institute, the measured values of the pollutants (SO2, NO2, black smoke particles) are generally below the allowable emission limit values.

Impact on water

Existing hydrographical network in the railway corridor is quite developed, including natural water flows, which flow in the West-East direction (descending from Fruska Gora Mountain) as well as melioration canals under the authority of PUC "Vode Vojvodine".

Surface water potential in the analysed railway corridor Novi Sad – Subotica – Hungarian Border includes the following: Danube River, DTD canal, Veliki (Big) Canal, Mali (Small) Canal, river Krivaja, Čiker and a number of streams and canals. The mentioned water flows belong to the Danube River Basin and canal network of the hydro system Dunav-Tisa-Dunav. Danube River (from Hungarian border to Bulgarian border) belongs into the Class II of water flows. The canal network of the hydro system Dunav-Tisa-Dunav belongs to the Class II of water flows. The Class II implies waters suitable for swimming, recreational uses and water sports, cyprinids breeding, as well as waters which can be used, after usual processing methods (coagulation, filtration and disinfection) for water supply of settlements with water suitable for drinking, bathing and processing of food products.

Danube River

By testing the water quality of the Danube River in 2008, within the profile Novi Sad, Class III of the water quality was established. This profile is characterized by the appearance of oxygen supersaturation (class IV), as well as the occasional occurrence of elevated values of BPK-5 (III). The values of suspended solids are frequently ranged from the Class III of the water quality status.

Krivaja River

The water quality of the profiles (after each profile determined class of water quality is given) Karadjordjevo (III / IV), Mali Lošinj (-) and Srbobran (VK). Measured values of dissolved O2 and O2 percent saturation of water in some test series, belonged to the III and IV class and the VK condition. The values of BPK-5 occasionally corresponded III and IV Class and VK condition, while values of chemical oxygen demand COD belong to the class III. The values of suspended solids in some batches corresponded to the class III.

Dunav - Tisa - Dunav

For channels is characteristic that they have been formed as a slow-flow streams with very low aeration, which explains the varying levels of dissolved O2 from the appearance of supersaturation to small concentrations, i.e. the deficit. These phenomena cause formation of macrophytes, that later, in the process of degradation, increase the burden of biodegradable organic substances on water. Increased organic load (HPK and BPK-5 were exceeded required class II)was registeredon some profiles.

Impact on soil

Soil, in the vicinity of the railway corridor, is mainly agricultural and mainly represents arable

crops, such as corn and wheat, while a smaller area is under various vegetable crops. Trees and shrub vegetation forma green belt along the railway section. Unfortunately, it is narrow and under constant anthropogenic impact because it is surrounded by arable land. The area of research of soil contamination level can be distinguished in two zones:

1. Urbanized and industrial zone; soil contamination, and consequently contamination of ground waterare caused by the following:

- Uncontrolled urbanization;
- Discharge of untreated wastewater (industrial and municipal wastewater);
- Lack of waste evacuation control (industrial and municipal waste);
- Motorways, main roads and regional roads in operation.

2. The existing railroad bed. The railroad, as a line object, in the normal operational mode represents the type of traffic infrastructure that has the minimum effects on soil pollution in comparison to the other modes of transport. The railroad impact is represented mainly in change of characteristics of the rock masspresent, namely by transforming part of the natural environment into "artificial".

Soil contamination on the investigated section is caused by the following:

- friction of rails, wheels, brake linings (Fe, Cr, Ni, Cu, Si, Mn, and V), the remains of drip(oils, fuels, and lubricants, cleaning agents), corrosion(metal and paint) and faeces from toilets,
- ballast maintenance (herbicides for pest control)

Noise and Vibration impact

Protection against noise and vibrations could be realized by setting up protective barriers (which should be determined in the course of environmental impact assessment). *Law on Noise Protection (Official Gazette RS, No.* 36/09) is the main regulation in the area of environmental noise. *Regulation on noise indicators, limits, methods for assessing indicators of noise, disturbance and harmful effects of environmental noise* (*Official Gazette of RS*, No. 75/10) prescribes the highest permitted level values for residential areas – 55 dB (A) during the day, and 45 dB (A) during the night.

By analyzing the map it was found that section of the Project partly runs through the following urban areas: Novi Sad, Kisač, Stepanovićevo, Žednik, Vrbas, Mali Lošinj, Lovćenac, Bačka Topola, Žednik, Naumovićevo, Aleksandrovo and Subotica. It is expected that noise level will be above permissible for residential and rural settlements, areas for recreation, hospital zones, school zones, and cultural and historical sites, which are located a short distance from the railroad. Sensitive receptors of the noise emitted from the existing railway line are households located in ten settlements in the railway route vicinity. On certain sections, individual houses are located 10 m to 50m from the existing railway.

After completion of works, noise emission caused by the rolling of wheels on the rails will be reduced in general, due to construction of new rails and superstructure, with respect to original condition. However, due to increased velocity and the number of trains on the railway line, there will be an increased noise level in the adjacent settlements.

As a criterion for noise exposure, the night noise level was observed – 50 dB (A). Calculations show that the track passes at such a distance from some of the settlements that – without

noise protection installed – noise level would exceed the permitted values. These structures require a noise protection project design.

Impact on Flora and Fauna

The composition and structure of ecosystems within the line section are determined by the presence of river streams and the adjacent terrain.

Due to constant antrophogenic influence the composition of herbaceous vegetation is in constant change. Vegetation between Novi Sad and Subotica alternates forest-steppe vegetation complex Festuca rupicola Aceri tatarici - Quercetum and pedunculate oak- tatar maple woodlands complex Aceri tatarici - Quercetum. In addition to Fruška Gora, which has specific flora, it is necessary to identify phytocenological and ecological characteristics and classification of stands of indiviudal vegetation units that can be observed on other sections of the analysed area:

- Pedunculate oak-hornbeam woodlands - *Carpino-Quercetum roboris*
- Pedunculate oak-tatar maple woodlands- *Aceritatarici–Quercetum*
- Forest-steppe – *Festucion rupicol; Aceritatarici-Quercetum*.

Habitats that Novi Sad-Subotica-Hungarian Border line passes through are exposed to high anthropogenic pressure and therefore significantly altered, providing living conditions only to those in the Vertebrata group that have a broad ecological valence. Members of the *Pisces* fauna are present in the rivers, namely in shallow parts directly under or near the bridges.

Railway line Novi Sad-Subotica-Hungarian Border, envisaged for construction of the second track and modernisation and reconstruction of the existing track, passes trough the following hunting grounds: "Gornji Srem" (Novi Sad and Sremski Karlovci), "Neoplanta" (NoviSad), "Koviljak" (Vrbas), "Krivaja" (MaliIdjoš), "Panonija" (Bačka Topola), "Subotička peščara" (Subotica) and "Kapetanskirit" (Kanjiža).In addition, the following important natrural resources are located in the project area:

- Habitats of strictly protected species of international importance (IPA and IBA areas,
- Habitats of both strictly protected and protected wild species of plants, animals and fungi,
- Ecological corridors as part of ecological network.

East and South Banat, as well as west part of Vojvodina (Bačka and Srem) are in the zone with centres of high diversity for mammals. Therefore, there is 31 species of small mammals living (Micro mammalia) in Vojvodina, and 16 of them are protected by law as strictly protected wild species. In some cases, complete taxonomy groups are threatened, e.g.allthreefamilies of insectivores (Insectivora): hedgehogs (Erinaceidae), shrews (Soricidae) and moles(Talpidae) are protected by law as strictly protected wild species, moreover, they are listed in the international IUCN Red List of Threatened Species.

The habitats and vegetation on this section provide optimal living conditions for almostnone of Vertebrata species, which results in reduced numbers of most species. There are 21 registered culverts for migratory species on the Novi Sad-Subotica-Hungarian Border line section. Some culverts are covered in weeds and passage is impossible. Reconstruction and refurbishment of existing culverts are of great importance in terms of enabling an uninterrupted and safe passage for all terrestrial species.

The impact of the reconstruction of the existing track of the railway line (Beograd)-Stara Pazova-Novi Sad-Subotica-Hungarian border and construction of the second track on fauna in the affected area primarily implies the impact on serenity of the hunting area, accidents on the open track involving wild animals (animals hit by train) and occupation of new areas for the construction of the second track. Impacts caused during the execution of works are temporary. It is realistic to expect that larger animals (birds and mammals), despite their ability to adapt to increased noise levels, will leave the corridor during the execution of works on modernisation of railway line due to noise pollution.

One of the basic prerequisites for reproduction and survival of wildlife in hunting grounds is serenity. In hunting grounds through which the railway is passing, serenity is disturbed because it is an urban area with a number of cottage villages, developed road network and intensive agriculture production.

In terms of landscape ecology, transport infrastructure acts as barrier causing fragmentation of natural habitats.

A railroad represents impervious barrier for large number of small animal species, among which the most important are amphibians. For larger and/or more mobile species, a railway represents semi pervious barrier, which carries a risk of individual animals being killed by a train. In case of small mammals and smaller reptiles of wetland habitats, crossing the railway during seasonal migrations increases the population mortality due to accidents and increased predation.

Due to proximity of protected natural areas and other important natural resources, preparation of further technical documents (Preliminary Design) shall comply with requirements issued by the authority responsible for nature protection, namely, the Institute for Nature Conservation of Serbia (Novi Sad Department) (Appendix No).

Impact on Protected Natural Areas

In the Railway Design is foreseen that the second track line shall run across the newly constructed embankment, which, if constructed in inadequate and inappropriate way, will cause loss of basic values as well as cutting of basic life functions in the affected area.

In the landscape of outstanding features „Subotička peščara“, the railway divides this protected amenity into two subunits, i.e. causing the landscape fragmentation.

Railways are one of the main sources of foreign species arriving in our country with foreign goods, and some of them under certain circumstances may become invasive. Increased risk of fire near the railway most threatens the remnants of sand-steppe vegetation.

The Danube River, small rivers, canals (e.g. DTD canal) and canalized waterways are ecological corridors, which provide seasonal migrations and genetic exchange between remote habitats. The Danube River is corridor of international importance; small rivers Čik and Krivaja are corridors of regional importance, while other canals and waterways represent local corridors.

Preservation of permeability of ecological corridors is of priority importance for long-term survival of biodiversity in the area.

Impact on Protected Cultural Heritage

Law on Cultural Heritage (*Official Gazette RS*, No. 71/94) determines what is to be considered as cultural heritage and defines cultural heritage classes depending on their cultural significance. Numerous regulations and rulebooks govern the manner of keeping records of cultural heritage in more detail, as well as the manner of their valorisation and protection.

The analysis of the area and data of the studied railway track corridor (Belgrade)-Stara Pazova-Novi Sad-Subotica-Hungarian border has recorded total number of 23 archeological sites. This cultural heritage can be exposed to adverse impact during construction and operation of railway because it is within the area of possible impact.

Impact on landscape

Construction of one part of the structure (in all alternatives) should not have any negative impact on the landscape. Railway alignment follows the lines of natural elements; all works shall stay within already existing corridor, therefore, there will be significantly less activities affecting the nature after the completion of railway construction.

Impact on population

Assessment of demand for transport services is based on estimation of economic growth and socio-economic indicators, i.e. on population growth, employment, and level of motorization, national income, production and consumption. Negative population growth (0,2%) is forecasted in Republic of Serbia.

Construction of the new track and reconstruction of the existing track on the railway line shall enable high train speeds providing shorter travelling time of goods and passenger transport on this section, which has, from the sociological point of view positive impact on population in the analysed area.

To preserve environmental quality at locations during the exploitation, as well as to keep necessary level of transport, passenger and personnel safety, the following protective measures have been envisaged in regard to regular exploitation of the railway and stationed facilities:

- regular maintenance of canals for storm water drainage in the sanitary protection zone of the ″Petrovaradinska Ada″ water source area and in associated devices for such water treatment;
- weed reduction on railway tracks using substances in compliance with appropriate environmental protection standards;
- monitor quality of the above referred storm water before and after treatment (BPK5, HPK, suspended particles, pH, organic substances);
- strict implementation of the procedures in case of emergencies arisen during the receipt or transport of hazardous materials: competent railway employee shall undertake measures prescribed the Instructions on special safety measures for the transport of hazardous materials. Instructions no. 171 regarding transport of hazardous materials of the Public Railway company specifies in more detail hazardous materials transport and manipulations , recording irregularities and compliance control in the transport of hazardous substances. Referred Instructions define as well the obligations and duties of railway employees participating in the transport of hazardous materials;
- maintenance of constructed structures (facilities) for noise protection and monitoring

noise level, in accordance with law regulations;

- maintenance of electric-power, water control and thermo-technical installations, as well as of signalization-safety devices at road crossings;
- waste treatment in accordance with the Waste management program;
- maintaining protective green belts at certain railway sections;
- maintaining designed green areas at railway station complexes.

All the activities should be carried out in accordance with developed Waste and wastewater management plans, Accident Reaction Plan and Program for the monitoring of railway exploitation impact on the environment.

Inputs (e.g. raw material, power sources):

The following materials will be used during the railway line reconstruction:

- Material for embankment
- Sub-ballast
- Rails
- Sleepers
- Turnouts
- Asphalt
- Welding materials
- Concrete ditch
- Drainage pipe, filter material
- Control command signaling (Per turnout and signal unit)
- Fibre optic cable
- Type of construction and additional materials
- Noise protection walls
- The already excavated soil and rocks will be re-used as construction material.

The Contractors will be obliged to prepare Design for work management where will be defined quality, sources for supplying of raw material.

Outputs (e.g. amounts and types of: emissions into the atmosphere, discharges into the water system, solid waste):

The forecast of the expected harmful impact on the environment will be considered during the development of the EIA.

No point sources of emissions into the atmosphere are foreseen. There is expected air pollution from unorganized sources, such as construction mechanization and transportation vehicles, during the period of construction.

The waste waters will be emitted into surface waters after their purification. Solid wastes

during the periods of construction and exploitation: mixed construction wastes, wastes from lubricants and fuels, mixed domestic wastes, and scrap will be collected and transported outside the project site, in regulated for such purpose places.

Transboundary impacts (e.g. types, locations, magnitudes):

No transboundary impacts are expected during construction and exploitation of the investment project.

Proposed mitigation measures (e.g. if known, mitigation measures to prevent, eliminate, minimize, and compensate for environmental effects):

The following methods will be used for elaborating mitigation measures which include:

- Review of the pertinent information;
- Expert judgment;
- Modeling (where feasible);
- Consultations with beneficiaries and stakeholders.

Mitigation measures will be undertaken by means of determining reduction, i.e. protection measures based on the results of the assessment of the impact degree, for all environmental factors (air, water, soil etc.), including preventive, technical technological and organizational protection measures.

Mitigation options will be elaborated taking into consideration the hierarchy of mitigation, their actual feasibility and cost, to ensure that the effects of mitigation were proportional to the effort. Wherever possible, measures will be incorporated in the Project design.

During the preparation of technical documentation (designs), as well as during preparation of the ESIA study, the consultations with the relevant institutions will be organized. Conditions opinions and protection measures prescribed by the relevant institutions will be implemented in all chapters of the ESIA study, like conditions from the Institute for Nature Protection and from the Institute for Cultural Heritage Protection.

Additional information/comments:

In comparison with other forms of transport, the volume and harmfulness of the railway line's impact on the environment is significantly lesser. Compared with road and air transport, railways have higher energy efficiency, much less land occupation per passenger or freight unit, and less CO2 emissions. Electrified lines, such as the line under review, have no direct impact on air pollution.

The railway line modernisation entails the introduction of construction works that will mostly be executed within the present lineside strip. The project will include overhaul of the superstructure and replacement and cleaning of the drainage facilities. Some changes will be made for the purpose of speed increase. The works scope will include improvement of station structures along the route.

The influences on air quality, environmental noise, watercourses, and habitats fragmentation that could arise in the course of works on the railway line modernisation could be successfully controlled by implementing protective technical and organisational measures (specified also in this document). Special attention should be directed to the management of scrap wooden sleepers that can be characterised as hazardous waste by competent institutions. As the

scope of works will entail major overhaul, this will enable the improvement of conditions for environmental protection along the route. The overhaul of the substructure and the replacement and cleaning of the drainage will enable improved track and station structures dewatering conditions, as well as controlled discharge of wastewaters into natural recipients.

(IV) Proponent/developer

Name, address, telephone and fax numbers:

JOIN STOCK COMPANY ″SERBIAN RAILWAYS″

6 Nemanjina st., 11000 Belgrade, Serbia

Headquarters: + 381 11 3614 811; + 381 11 3616 722

Basic activity: carriage of passengers and goods, hauling the trains and maintenance of traction units, trains and rolling stock, track maintenance and inspection, inspection of other permanent way and station structures and installations, maintenance and assembling of devices, plants and installations, etc.

(V) EIA DOCUMENTATION

Is the EIA documentation (e.g. EIA report or EIS) included in the notification?

No.

If the answer to the above is no or partially, description of additional documentation to be forwarded and (approximate) date(s) when documentation will be available:

The time frame of the duration of consultations and exchange of additional documentation between the parties is defined on a case-by-case basis. The prepared EIA will be provided to affected parties and will be subject matter of public discussions with participation of affected parties. The EIA decision will be also provided to affected parties.

Additional information/comments:

2. POINTS OF CONTACT

(I) Points of contact for the possible affected Party or Parties

Authority responsible for coordinating activities relating to the EIA (refer to decision I/3, appendix) - Name, address, telephone and fax numbers

Ministry of Rural Development

Head office: 1055 Budapest, Kossuth Lajos tér 11.
Postal address: 1860 Budapest
Phone: +36-1-795-2000
Fax: +36-1-795-0200
E-mail: info@vm.gov.hu, press@vm.gov.hu

List of affected Parties to which notification is being sent

On the basis of the preliminary assessment of potential transboundary environmental impacts contained in the Espoo Notification Document, it is not expected that any significant adverse transboundary environmental impacts will occur as a result of the construction, pre-commissioning, operation and decommissioning of the Project.

Within the project related to the railway line Stara Pazova - Novi Sad, there is no potential environmental cross-border impacts, but following section of the railway line, Stara Pazova – Novi Sad – Subotica – Hungarian border do due to the Espoo (EIA) Convention which sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries..

The Notification for the proposed investment proposal has to be applied. In addition, Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (*Aarhus, 1998*) which Serbia ratified should be taken into account during the public participation process.

The main mechanisms of the Convention intended to achieve its objectives are summarized below:

- Obligation to carry out an EIA procedure: EIA should be undertaken before decision making is done and it is applied to the project level;
- Consultations among countries: Consultations should occur along the whole EIA procedure (i.e. notification, preparation of the EIA documentation, consultations on the basis of the EIA documentation, final decision and post-project analysis);
- Public participation: Public participation in both the affected party and the party of origin should be facilitated during the whole Espoo process;
- Bilateral and Multilateral agreements; and
- Settlement of disputes.

In case when there is no potential cross border impact of the project, responsible national institution, in this case, the Ministry of Energy, Development and Environmental protection assume the full responsibility for all consultation actions involved.

If cross-border impacts are likely, i.e. if the project is on the list in the Appendix I of the Espoo Convention, the affected EU Member State – Hungary, will be informed and the relevant documents will be submitted to the Hungarian Ministry in charge for Environment for them to indicate if they intend or not, to participate in the EIA procedure. In the early stage of project development, JSC Railways of Serbia in cooperation with the Ministry of Energy, Development and Environmental protection should decide how to approach competent authority in the Hungary concerning EIA preparation.

Concerning the Stara Pazova - Novi Sad section, procedure for EIA scoping was initiated within in the Secretariat for Urbanism, Construction and Environmental protection of the Autonomous Province of Vojvodina. Decision about the scope and the content was not issued due to the fact that at time detailed regulation plans related to the municipalities affected by the project were not adopted by all municipalities.

(II) Points of contact for the Party of origin

Authority responsible for coordinating activities relating to the EIA (refer to decision I/3, appendix) - Name, address, telephone and fax numbers

Ministry of Agriculture and Environmental Protection

Snežana Bogosavljević Bošković

Telephone:

+381 11 2691 747

Category:

Environmental protection department

Address:

Omladinskih brigada 1 str.

Decision-making authority if different than authority responsible for coordinating activities relating to the EIA

Same as responsible authority for activities relating to the EIA.

3. INFORMATION ON THE EIA PROCESS IN THE COUNTRY WHERE THE PROPOSED ACTIVITY IS LOCATED

(I) Information on the EIA process that will be applied to the proposed activity

Time schedule:

Environmental and Social Impact Assessment - ESIA.

The ESIA study will be prepared in compliance with the EU Directives and Serbian legislation, with the content prescribed by the Regulation on EIA content (″Official Gazette of RS″, No. 69/05). ESIA study will meet requirements or recommendations of applicable national and international regulations and standards, and will be guided by policies, guidelines and procedures of the relevant international treaties and agreements. ESIA will take into account state of the environment and objectives for environmental policy and possible policy measures set by the National Environmental Strategy (″Official Gazette of RS″, No. 88/10) and by the Sustainable Strategy of Republic of Serbia (″Official Gazette of RS″, No. 57/08).

The ESIA Report will cover methods and key issues, the legislative framework, the consultant process, the social and environmental baseline, consideration of alternatives, prediction and evaluation of significant social and environmental impact, mitigation or offset measures, and environmental and social management and monitoring plans.

The ESIA study will be submitted to the Competent Authority for approval – EIA study statement.

Duration: 42 weeks

Opportunities for the affected Party or Parties to be involved in the EIA process:

Yes.

Opportunities for the affected Party or Parties to review and comment on the notification and the EIA documentation:

Yes, such opportunities are available.

The potentially affected Parties will have the opportunity to review the following documentation:

- Notification Stage – Espoo Notification Form and Espoo Notification Document;
- Scoping Stage – Terms of Reference/Scoping Report
- EIA Report Disclosure and Public Hearing Stage – Draft EIA Report

Nature and timing of the possible decision:

In accordance with Serbian legislation (Law on Environmental Impact Assessment), the Decision on the EIA Report is expected be taken by the competent authority, the Ministry of Energy, Development and Environmental Protection within 45 days after conducting the last public hearing on the Report and considering the results of the public discussions.

Process for approval of the proposed activity:

An environmental impact assessment is a document analysing and assessing the quality of environmental factors, their vulnerability in a certain area, the reciprocal impact of existing and planned activities, forecasting the direct and indirect harmful effects of a development (wind farm) on environmental factors, as well as the measures and requirements for the prevention, mitigation and remediation of harmful effects on the environment and human health.

The environmental impact assessment is a preventive environmental protection measure which is based on the development of a study, consultations with the participation of the public and analysis of alternative measures, for the purpose of collecting data and foreseeing any adverse effects of specific projects on the life and health of humans, on the flora and fauna, on land, water, air, climate and landscape, on material and cultural goods and the interaction of these factors, as well as for the purpose of establishing and proposing measures for the prevention, mitigation or remediation of harmful effects, taking into consideration the feasibility of these projects.

The Law on Environmental Impact Assessment ("Official Gazette of the Republic of Serbia", No. 135/2004) governs the impact assessment procedure for projects that can have significant impact on the environment, the contents of the environmental impact assessment, the participation of stakeholder bodies and organizations and the public, transboundary information-sharing for projects that can have a significant impact on the environment of another state, supervision and other issues relevant for the environmental impact assessment.

Impact assessment is required for projects in the planning or implementation stage, changes in technology, reconstruction, expansion of capacities, decommissioning and removal of projects that can have a significant impact on the environment, as well as for projects that

have been realised with no prior environmental impact assessment, which do not have a building permit or are being used without a use permit.

Impact assessment is carried out, among other, for railway projects, as well as for projects that are planned on a protected natural property and in the protected surroundings of real cultural assets.

The Decree determines that environmental impact assessment is a mandatory requirement for construction of lines for railway traffic.(List I).

The procedure for the assessment of the impact of wind farms on the environment consists of the following stages:

- Making a decision on the need for impact assessment
- Determining the scope and contents of the impact assessment study
- Making a decision on approving the impact assessment study.

A public presentation and public consultation on the Study. The public consultation is held in the premises of the local self-government body in charge of environmental affairs. At the same time, public access to the development project is ensured in the premises of competent authority and the local self-government authority on whose territory the development is to be built. The competent authority, Ministry of Energy, Development and Environmental Protection, informs the developer, stakeholder bodies and organizations and the public about the time and venue where public access will be provided and of the public presentation and public debate on the Environmental Impact Assessment. The public consultation may be held no earlier than 20 days from the date on when the public was informed. The developer participates to the public presentation and public consultation on the Environmental Impact Assessment.

Upon completion of the public consultation, based on the opinion of stakeholder bodies and organizations and interested public, the authority in charge delivers an overview of the opinion to the developer, with proposals for amendments to the Environmental and Social Impact Assessment.

For the evaluation of the Environmental Impact Assessment, the authority in charge sets up a technical committee to analyse and evaluate the Impact Assessment Study. Following consultations and public review, the authority in charge delivers the Environmental Impact Assessment to the Technical Committee, with a systematized overview of the opinions of stakeholder bodies and organizations and interested public and a report on the finalized procedure of impact assessment. The Technical Committee examines the Environmental Impact Assessment, along with the systematised overview of the opinions of stakeholder bodies/organisations and interested public, prepares a report on the finalized impact assessment procedure and evaluates the suitability of the measures envisaged for the prevention, mitigation and remediation of potential harmful effects of the project on the environment , on the site and its surroundings, during construction works, operation of the development, accidents and decommissioning of the facility. The Technical Committee may require the developer to make amendments to the Environmental Impact Assessment. The Technical Committee is obliged to submit a report with an evaluation of the Environmental Impact Assessment and a decision proposal to the authority in charge.

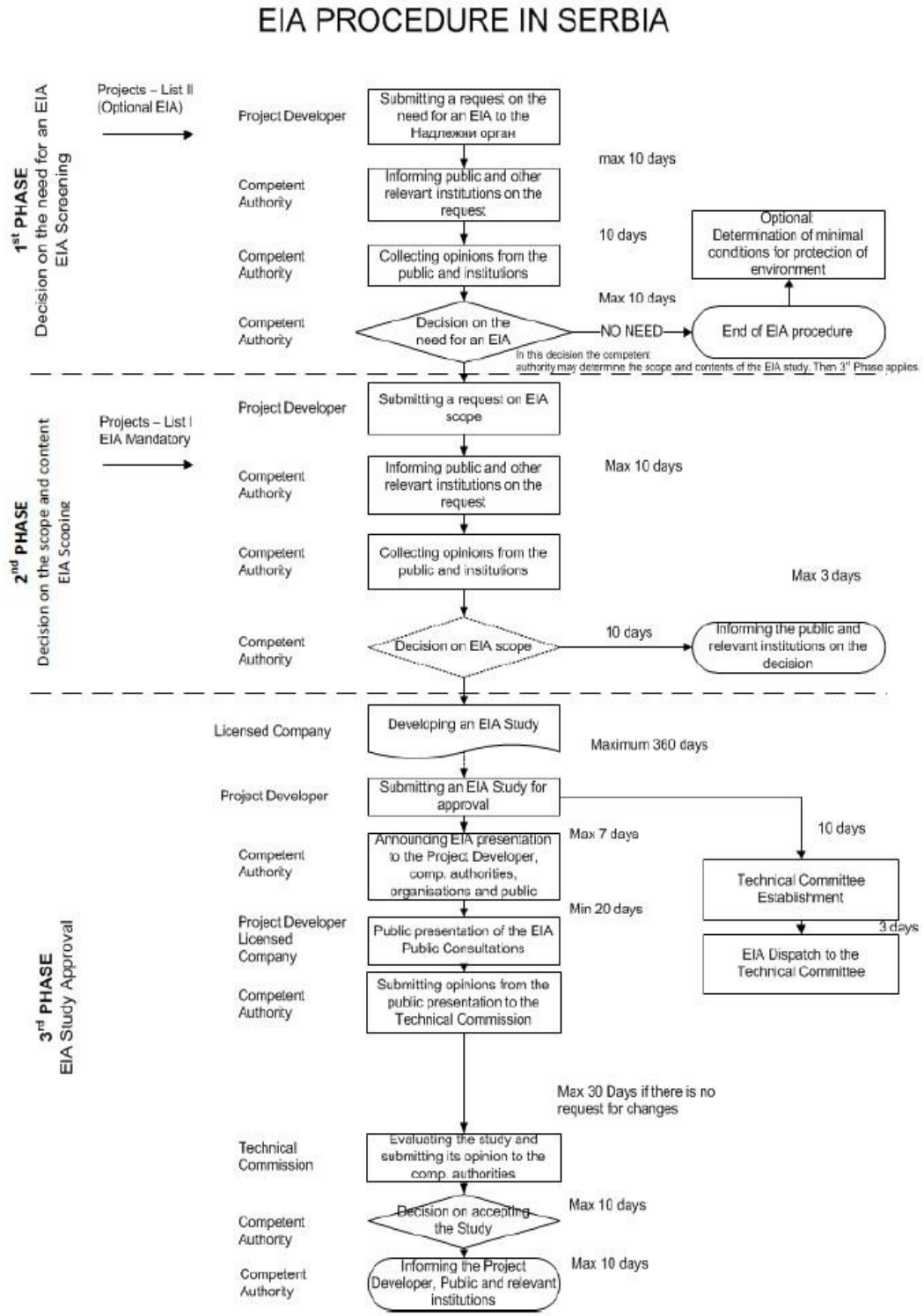
The competent authority is obliged to inform the stakeholder bodies and organisations and the

public about the decision on granting/rejecting approval of the Environmental Impact Assessment, on:

- contents of the decision;
- main reasons on which the decision is based;
- key measures that the developer is required to undertake for the purpose of preventing, mitigating or remediating harmful impacts.

The developer and the interested public may appeal this decision by means of a contentious-administrative procedure.

Additional information/comments:



4. INFORMATION ON THE PUBLIC PARTICIPATION PROCESS IN THE COUNTRY OF ORIGIN
Public participation procedures: Upon disclosure of the Terms of Reference/Scoping Report for the EIA/ESIA, engagement with stakeholders in Serbia will provide further information about the Project. Stakeholder engagement meetings will be held with representatives of: ▪ Municipal and local authorities; ▪ Potentially project-affected communities (PACs); ▪ Local and national non-government organizations (NGOs). The public will participate in discussing the proposed activity in accordance with the Plan of consultation actions that will be made available to the public before the start of consultations. This Plan will be also provided to the authorities responsible for coordinating the EIA-related activities as well as to potentially affected Parties.
Expected start and duration of public consultation The start and duration of the public consultations will be agreed later on.
5. DEADLINE FOR RESPONSE
Date: 30 days after the receipt of Notification
ATTACHMENTS TO ESPOO NOTIFICATION
1. Layout plan of the Railway line Novi Sad-Subotica-Hungarian Border

- End of document -

This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of consortium led by Louis Berger and can in no way be taken to reflect the views of the European Union.