



Supplementary Environmental Impact Assessment Report

Reconstruction of the P-80 motor road
Sloboda-Papernya km 0.000 – km 14.770

Final Report

August 2017

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European Bank for Reconstruction and Development

Supplementary Environmental Impact Assessment Report

**Reconstruction of the P-80 motor road Sloboda-
Papernya km 0.000 – km 14.770**

**Minsk and Smolevichi districts,
Minsk region, Republic of Belarus**

Final Report

August 2017

Project manager

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ERM Eurasia Limited confirms that this Report has been prepared with all reasonable skill, care and diligence and in conformity with the professional standards as may be expected from a competent and qualified consultant acting as Environmental and Social Lender's Consultant having experience in providing services for projects with similar scope of work, complexity, issues and scales.

This Report has been prepared in accordance with the terms of the Contract concluded with the *EBRD* and the generally accepted environmental and social consulting practices and for intended purposes stated in the Contract. The conclusions and recommendations made in this Report are based upon information obtained directly by *ERM Eurasia Limited*, as well as information provided by third parties, which we believe to be accurate.

This Report has been prepared for the *EBRD* and we accept no responsibility for third parties whatsoever who may use all or portions of the information contained in this Report.

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1.1 THIS DOCUMENT AND ITS PURPOSE

This document was prepared in line with the Contract No C36543 dated 21 June 2017 between the European Bank for Reconstruction and Development (hereinafter “EBRD” or “the Bank”) and ERM Eurasia Limited (hereinafter “ERM” or “the Consultant”). This document is the Supplementary Environmental Impact Assessment Report for the proposed reconstruction of the P-80 motorway Sloboda - Papernya km 0.000 – km 14.770 (hereinafter “the Project”) aimed to assess the Project’s compliance with national and international health, safety, environment, social, and stakeholder engagement requirements (hereinafter “the Applicable Requirements”). The Applicable Requirements hereto are listed in *Section 5* of this report.

The P-80 motorway is a republican level facility, connecting the Belarus capital Minsk with the towns and cities in the capital region. The road is exposed to intensive intercity passenger and cargo traffic.

The proposed reconstruction of a section of the road will compete the ongoing construction of the 160 km long 2nd Ring Road encircling Minsk, which will have Category 1 parameters¹.

As part of the Project, a road’s section stretching for almost 15 km (the section of the P-80 road to be reconstructed) will be expanded from two to four lanes. Following the reconstruction, the road will continue to be used free of charge for motorists.

The Project is currently at the investment feasibility stage.

The customer for the Project is the Republican Unitary Enterprise (RUE) MinskAvtodor-Centre (hereinafter “the Customer” or “the Client”), which represents the state of Belarus. Engineering documentation is being developed by the State Enterprise (SE) Belgiprodor (hereinafter “the Designer”).

Key participants of the Project are listed in *Section 1.2*.

EBRD is contemplating financing of the Project. In accordance with the Bank’s categorisation, the Project is given Category A. As per EBRD’s Environmental and Social Policy (May 2014), the Project requires a comprehensive Environmental and Social Impact Assessment (ESIA) and thorough public disclosure in line with the Banks guidance documents.

Acting as Bank’s independent consultant, ERM have developed this Report based on the Applicable Requirements.

1.2 KEY PARTICIPANTS OF THE PROJECT

Table 1.2-1 below presents the key participants of the Project including their respective roles.

¹ Practice Code TKP TKП 45-3.03-19-2006. Motor roads. Design standards.

Table 1.2-1 Key participants of the Project and their roles

Role	Participant
Customer (Client)	<ul style="list-style-type: none"> The Belarus Ministry of Transport and Utilities RUE MinskAvtodor-Centre
Designer	<ul style="list-style-type: none"> SE Belgiprodor
Local executive bodies	<ul style="list-style-type: none"> Smolevichi district executive committee Minsk district executive committee
Lender	<ul style="list-style-type: none"> EBRD
Lender's consultant	<ul style="list-style-type: none"> ERM

1.3

SOURCE OF INFORMATION

The Consultant used various sources in preparation of this Report.

Firstly, a documentation package related to the Project was provided to the Consultant by the Bank for preliminary review.

Then, on 29-30 June 2017, an ERM team held a number of meetings with participants of the Project (see *Section 1.2*) and physically inspected the section of the P-80 road to be reconstructed. During the meetings, representatives of the Client and the Designer, jointly with the ERM team, disclosed project-related information with representatives of the Smolevichi and Minsk district executive committees.

The information obtained during the meetings and the site visit was also used in preparation of this Report.

The Consultant also filed additional requests for information to the participants of the Project in order to obtain a better understanding of the Project's current status and the baseline environmental and socio-economic situation within the Project Area. The requests were satisfied, and the responses were also used in preparation hereof.

List of the documents used as sources of information are listed in *Table 1.3-1* below.

Table 1.3-1 List of documents used by the Consultant in preparation of this Report

No	Document	Source
1	Environment, sanitary-epidemiological and community welfare activities for the substantiation of investments in the Project.	Provided by the Bank for preliminary review
2	Description of the public consultations procedure in Belarus.	Provided by the Bank for preliminary review
3	Layout plan of the Project.	Provided by the Bank for preliminary review
4	Proposals on the reconstruction of the P-80 motorway. Ministry of Transport and Utilities, Minsk, 2017.	Provided by the Bank for preliminary review
5	Reconstruction of the P-80 motorway. Report on environmental engineering surveys. Belgiprodor.	Provided by the Bank for preliminary review

No	Document	Source
6	Reconstruction of the P-80 motorway. Environmental impact assessment report. Belgiprodor, Minsk, 2017.	Provided by the Bank for preliminary review
7	Reconstruction of the P-80 motorway. Design proposals. Ministry of Transport and Utilities, Belgiprodor (date unknown).	Provided by the Designer during the meeting
8	Reconstruction of the P-80 motorway. Stage 1 (0.000-7.600 km). Preliminary land withdrawal plan.	Provided by the Designer during the meeting
9	Reconstruction of the P-80 motorway. Stage 2 (7.600-14.700 km). Preliminary land withdrawal plan.	Provided by the Designer during the meeting
10	Reconstruction of the P-80 motorway. Proposed location of bus stops, rest areas, subways, noise shields, and retaining walls.	Provided by the Designer during the meeting
11	Layout of the LDD-54 linear road department of the DEU-5 road maintenance area including a reagents storage facility.	Provided by the Designer during the meeting
12	The 0.000-7.600 km section of the P-80 road. Master Construction Plan.	Provided by the Designer during the meeting
13	Reconstruction of the P-80 motorway. Stage 1 (0.000-7.600 km). Road layout.	Provided by the Designer during the meeting
14	Reconstruction of the P-80 motorway. Stage 2 (7.600-14.700 km). Road layout.	Provided by the Designer during the meeting
15	Reconstruction of the P-80 motorway. Investment feasibility. Explanatory Notes. Belgiprodor, Minsk, 2017.	Provided by the Bank at the Consultant's request

2.1 SUBSTANTIATION OF PROJECT IMPLEMENTATION

The P-80 motorway was built in 1934 and reconstructed in 1975. The section of 0.000-14.770 km was last renovated in 1987-88.

Currently, the P-80 road section to be reconstructed is a Category 2 facility; it has two traffic lanes, an asphalt concrete topping, and a 7.5 m wide carriageway.

The road section crosses the Smolevichi and Minsk administrative districts of the Minsk region.

In particular, the road crosses the village of Okolitsa and also runs near the following villages and towns:

- Ostroshitsky Gorodok;
- Belye Luzhi;
- Okolitsa (the road crosses the settlement)
- Raubichi;
- Baguta (including the Tavołga private housing cooperative);
- Sosnovaya; and

The need for the construction of the 2nd Ring Motor Road is dictated by the following factors:

- The existing Minsk Ring Motor Road (MRMR) has almost reached its traffic capacity limit. As of now, the vehicle density at its certain sections is as much as 100,000 vehicles per day and it will increase later on with consideration for the outlook for city development;
- At present the urban area of the city of Minsk is being intensively expanded and it occupies the territory beyond the existing MRMR. MRMR location within the urban area adversely impacts both the city environment and comfort of dwelling in adjacent residential areas. Noise and air pollution levels together with other harmful factors exceed standard values in many route sections.

As soon as the Minsk Urban Development Plan is implemented by 2030 and the existing MRMR is taken up by the urban area, the 2nd Ring Motor Road will be the main transport corridor for transit traffic to bypass the city and for transport links with the developing suburban area with satellite towns such as industrial towns (Dzerzhinsk, Zhodino, and Fanipol), agro-industrial towns (Smolevichi, Stolbtsy, Uzda, and Rudensk), and tourist & recreational towns (Zaslavl and Logoyisk).

2.2 BASIC PROJECT DESIGN

The Project envisages expanding around 15 km of the existing two-lane road to four lanes and increasing the road class from Category 2 to Category 1¹ (Figure 2.2-1).

¹ Practice Code TKP TKP 45-3.03-19-2006. Motor roads. Design standards

The reconstruction will be done in phases:

- Stage 1: reconstruction of the 0.000-7.600 km section;
- Stage 2: reconstruction of the 7.600-14.770 km section.

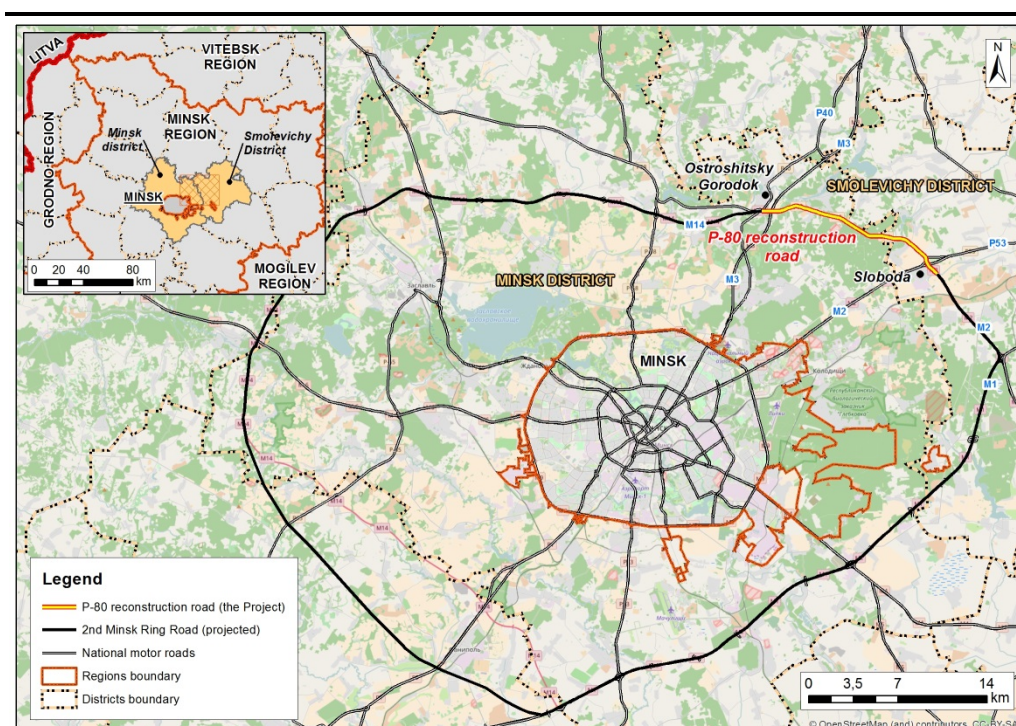


Figure 2.2-1 Layout of the P-80 road's section 0.000 – 14.770 km to be reconstructed

The Project's key technical data is presented in *Table 2.2-1* below.

Table 2.2-1 Key technical and financial data of the Project

Parameter	Stage 1 0.000-7.600 km section	Stage 2 7.600-14.770 km section	Total
Road category	1-v		
Length, km	8.46	7.17	15.63
Number of traffic lanes	4		
Carriageway width, m	2×7.0		
Shoulder width, m	2×3.0		
Roadbed width, m	22.7		
Road topping	cement concrete		
Grade-separated crossings with other motorways	2	2	4
At-grade crossings and junctions	3	6	9
Number of cross-overs	2	2	4
Number of subways	4	4	8
Number of crossings for hoofed animals	1	—	1
Total length of noise shields	2730.0 m	4210.0 m	6940.0 m
Number of land plots to be withdrawn	—	1	1

2.2.1 *Road layout*

The starting point of the road section to be reconstructed (PK 0+00) is also the starting point of the P-80 road, where the latter borders the four-lane M-2 motorway connecting Minsk with the Minsk-2 National Airport.

The end point of the road section to be reconstructed (PK 146+22.51) corresponds with the 14.770 km mark of the P-80 road. The existing at-grade traffic circle between the P-80 road and the R-40 Borovlyany-Logoyisk road will not be reconstructed.

The road section to be reconstructed is fully aligned with the existing road.

2.2.2 *Roadbed and drainage solutions*

During the reconstruction, the existing roadbed will be used to the highest possible degree.

The roadbed is designed in line with the national road design requirements¹ taking into account the road category, type of pavement, natural conditions of the Project area, stability of embankment slopes, road dependency on snow conditions and traffic safety.

Following the reconstruction, the roadbed will be 22.7 m wide.

- Carriageway width – 4x3,5 m;
- Shoulder width – 3,0 m, including parking lanes 2,5 m;
- Divisor width – 4,3 m.

Total earthworks are estimated at 1,880,658 m³, including:

- 887,955 m³ for Stage 1; and
- 992,703 m³ for Stage 2.

At waterlogged areas, peat will be removed completely, to the depth of the mineral bottom, and back-filled with sandy soil.

Three different types of roadbed and drainage solutions will be designed along the road section subject to reconstruction, depending on specific features of the route (see *Table 2.2-2*).

Table 2.2-2 *Roadbed profile and surface drainage methods*

Route features	Profile / drainage
Low embankments	Ditched profile. Slopes and bottom will be reinforced by planting of grass and topsoiling. The bottom of the ditches where slopes exceed 10‰ will be enforced with gravel or concrete.
While passing through cut-outs.	Ditchless profile. Drainage under the sand bed and retaining walls.
High (over 3 m) embankments, inverted curves, bus stops, approaches to waterway	Water chutes and runoff inlets.

¹ Practice Code TKP TKP 45-3.03-19-2006. Motor roads. Design standards.

Route features	Profile / drainage
bridges, exits from interchanges.	

The Project also provides for construction of water treatment facilities near the Domelka River and the village of Okolitsa.

2.2.3 *Road topping*

The road topping was designed in line with national requirements.

The traffic lanes along the reconstructed section will have a cement concrete topping, while the divisor and the shoulders will have an asphalt concrete topping.

2.2.4 *Interchanges and junctions*

The Project provides for reconstruction of two existing interchanges and construction of four new interchanges.

Where P-80 crosses the M-2 and M-3 roads, the existing cloverleaf intersection will keep its configuration, although two acceleration lanes under the overpasses will be added (*Figure 2.2-2*).

Also, four new interchanges will be built in the areas of entrances to the following objects: (*Figure 2.2-3* and *Figure 2.2-4*):

- To the village of Baguta;
- To the military base (The 7.71 km mark);
- To the residential areas of villages of Okolitsa, Raubichi and Gubichi; and
- To the Raubichi sports centre.

And nine at-grade junctions with acceleration-deceleration lanes will be constructed.

2.2.5 *Artificial facilities*

Culverts will be installed to divert water from the roadbed and enable through flow of small waterways. The main road will have 23 culverts 1.2 m in diameter, and interchanges will have 34 culverts 1.0 m in diameter.

The list of bridges, overpasses and crossings to be constructed and reconstruction as part of the Project is presented in *Table 2.2-3* below.

Table 2.2-3 *Bridge, overpasses and crossings envisaged by the Project*

No	Facility	Activity	Description
1	Overpass at interchange with M-2	Reconstruction	49.77 m long skew girder concrete overpass
2	Overpass at interchange with M-2	Reconstruction	57.8 m long skew girder concrete overpass
3	Overpass near the village of	Construction	21.76 m long simple-span

	Baguta		girder concrete overpass
4	Crossing for hoofed animals (5.9 km mark)	Construction	An underground crossing made of fabricated corrugated sheet metal
5	Overpass at 7.74 km mark	Construction	21.76 m long simple-span girder concrete overpass
6	Overpass near the village of Okolitsa	Construction	21.76 m long simple-span girder concrete overpass
7	Overpass near the Raubichi sports centre	Construction	21.76 m long simple-span girder concrete overpass
8	Grade-separated crossing near the village of Belye Luzhi	Construction	Pedestrian underpass made of fabricated concrete blocks(<i>Figure 2.2-5</i>)
9	Grade-separated crossing near the village of Sosnovaya (2.3 km mark)	Construction	Pedestrian underpass made of fabricated concrete blocks
10	Grade-separated crossing near the village of Baguta (3.7 km mark)	Construction	Pedestrian underpass made of fabricated concrete blocks
11	Grade-separated crossing near the village of Okolitsa (10.6 km mark)	Construction	Pedestrian underpass made of fabricated concrete blocks
12	Grade-separated crossing near the village of Raubichi sports centre (11.8 km mark)	Construction	Pedestrian underpass made of fabricated concrete blocks
13	Grade-separated crossing near the village of Ostroshitsky Gorodok (14.3 km mark)	Construction	Pedestrian underpass made of fabricated concrete blocks



Figure 2.2-2 Schematics of intersections reconstruction (A) at M-2 motor road crossing and (B) at M-3 motor road crossing



Figure 2.2-3 Schematics of new intersections (A) near the village of Baguta, (B) at 7.71 km mark (military base)

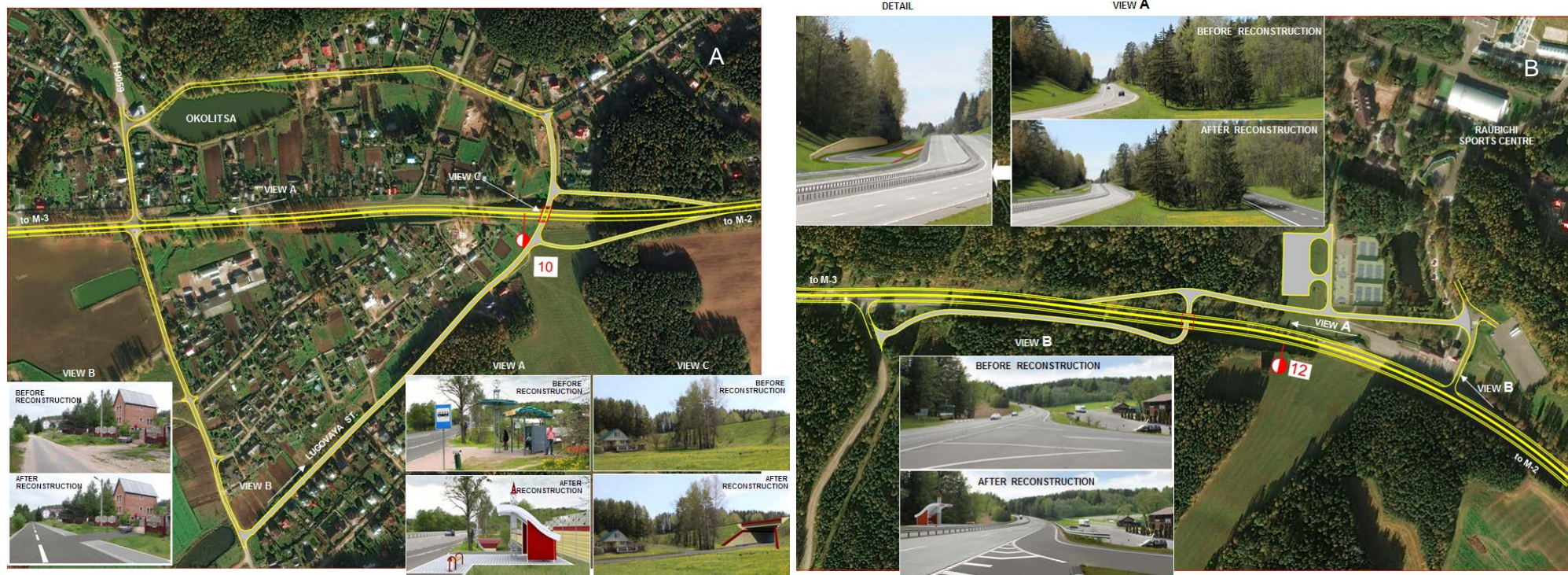


Figure 2.2-4 Schematics of new intersections (A) at the village of Okolitsa and (B) near Raubichi sports centre



Figure 2.2-5 The design of the entrances to the pedestrian underpasses

2.2.6 Amenity facilities

Within the section of the P-80 road to be reconstructed, 17 bus stops will be reconstructed and removed and two rest areas will be equipped:

- a new right-side area at the 5.35 km mark; and
- an existing left-side rest area at the 5.6 km mark.

Residential houses located close to the road will be protected with noise shields 6.2 m high. The total length of the noise shields will be around 7 km. (Figure 2.2-6).

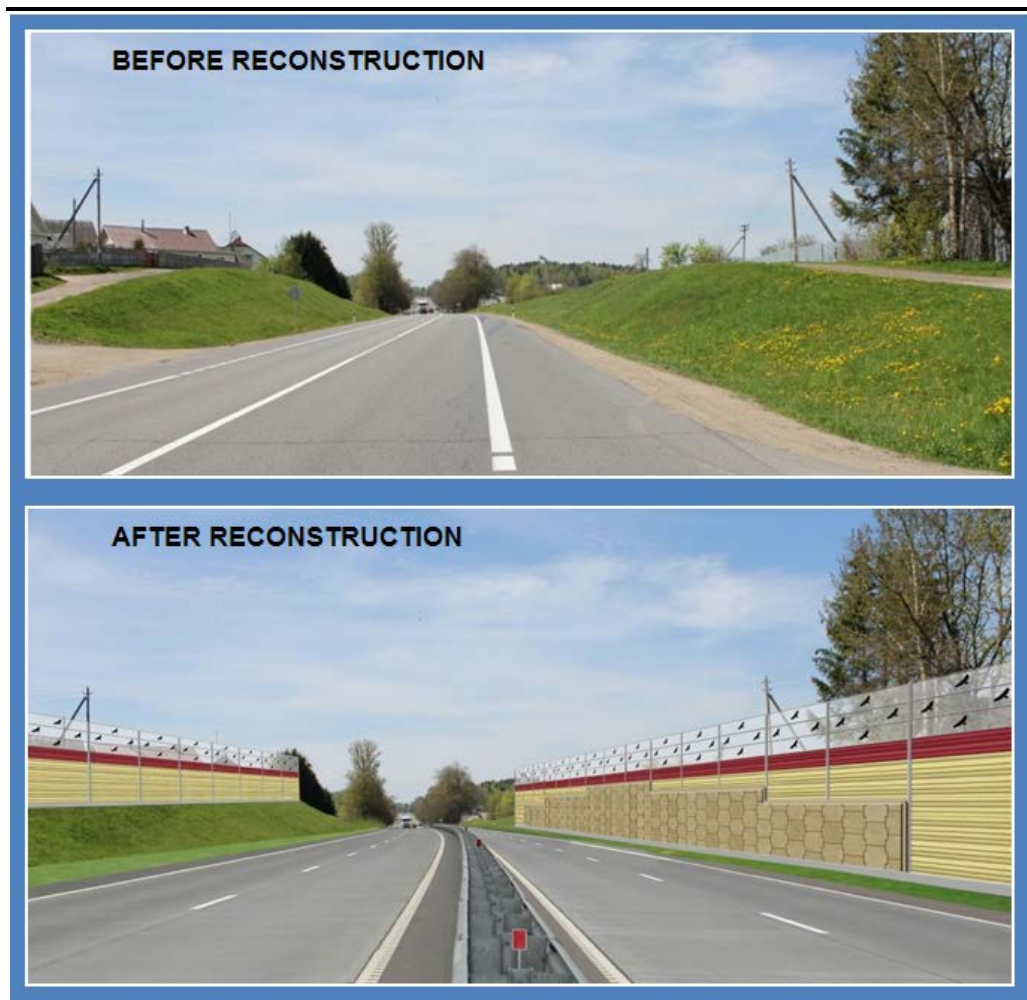


Figure 2.2-6 *View of the road section before and after the reconstruction and installation of noise shields*

A parking lot for visitors will also be constructed near the tennis grounds of the Raubichi sports centre (Figure 2.2-7).



Figure 2.2-7 *Location of the parking lot for visitors in the Raubichi sports centre*

2.2.7 *De-icing reagents storage facility*

The Project also envisages construction of a covered storage for de-icing materials with the capacity of around 2,500 tonnes. This reagents storage facility will be constructed within the premises of the existing LDD-54 linear road department in the village of Ostroshitsky Gorodok (Figure 2.2-8).



Figure 2.2-8 *Location of the reagents storage facility the village of Ostroshitsky Gorodok*

2.3 *KEY CONSTRUCTION SOLUTIONS*

One half of the road will be closed for project-related activities. Traffic will be allowed on the other half of the road. A construction base will be erected at the 12 km mark on the right side of the road. The base will be used for temporary storage of construction materials and metalwork.

2.3.1 *Construction period*

Construction is to begin in January 2018 and is expected to last 22 months for each stage. Stages 1 and 2 of the Project will be implemented in parallel. Acceptance and commissioning time included, the total construction duration will be 23 months.

2.3.2 *Construction works*

The construction phase will include the following key activities:

- Preparatory activities (clearing of the road reservation; topsoil removal and stockpiling; re-installation of utility lines; construction of temporary facilities etc.);
- Construction of the roadbed;
- Installation of the road topping;
- Construction of road facilities and protective structures.

Construction activities will include rearrangement of services (utility lines):

- overhead and buried cable communication lines;
- Power Transmission Line (PTL) 0.4-10 KV;
- Power Transmission Line 35-330 KV; and
- gas pipelines.

The Client will obtain technical specifications for the reconstruction of services. The major and technically complex services will be reconstructed by specialised contractors responsible for operation and maintenance of these services. Changes to minor service/utility lines will be made using own resources of the Client.

2.3.3 *Project requirements in personnel and construction materials*

At the time of this report there were not accurate data on the needs of the construction workforce in project design documentation. According to the expert assessment of the Designer, the construction personnel headcount for each stage is estimated will not exceed 200 persons.

Construction works will be performed by contractors based in Minsk to be commissioned by RUE MinskAvtodor-Centre. The construction personnel will be residing in Minsk. Workers will be transported to the workplace by the transport of construction constructor.

The requirement in construction materials is presented in (*Table 2.3-1*) below.

Table 2.3-1 The Project's requirement in main construction materials

Construction material	Requirement		
	Stage 1 0.000-7.600 km section	Stage 2 7.600-14.770 km section	Stage 1
Sand-gravel mix; stone-sand mix	76,700 m ³	72,826 m ³	14,9526 m ³
Sand	32,201 m ³	30,708 m ³	62,909 m ³
Broken stone	36,147 m ³	35,451 m ³	41,598 m ³
Macadam mixtures	24,965 m ³	23,641 m ³	48,606 m ³
Asphalt concrete mixture	104,251 t	99,788 t	204,039 t
Heavy concrete	31,091 m ³	26,350 m ³	57,441 m ³
Lean concrete	11,597 m ³	9,829 m ³	21,426 m ³
Cement	549 t	797 t	1,346 t

2.3.4 Transportation of cargoes

The sources of the materials and transportation distances are presented in (Table 2.3-2) below. It is planned that cargoes will be transported by Beldortrans Company that is a part of the Belarus Ministry of Transport and Utilities. This is main cargo company at construction and reconstruction of highways of the Republic of Belarus. The company specializes in the bulk cargoes transportation by dump trucks (20-32 tons).

Table 2.3-2 Average transportation distances for construction materials and metalwork

Name	Supplier	Transportation distance	
		Stage 1 activities, km	Stage 2 activities, km
Materials to be brought to the road			
Asphalt concrete	Korolyov Stan asphalt and concrete plant	13	21
Concrete	The cement and concrete plant of the Korolyov Stan asphalt and concrete plant	13	21
Broken stone	RUPP Granit	53	46
Bitumen	Zaslavl asphalt and concrete plant	53	46
Culvert sections	Spetszhelezobeton plant	53	46
Small concrete articles, border stone	Minskzhelezobeton plant	36	44
Large concrete articles	Fanipol concrete and metalwork plant	65	73
Macadam mixtures	Base, right side, 12.0 km mark	8	2
Sand-stone mix	Base, right side, 12.0 km mark	8	2
Topsoil	From cutting	1	1

Name	Supplier	Transportation distance	
		Stage 1 activities, km	Stage 2 activities, km
Sand	Cherkassy sand quarry	60	60
Water	A water pond	2	3
Materials to be brought to the Korolyov Stan cement and concrete plant			
Cement	ОАО Красносельскстройматериалы	47	47
Granite macadam	RUPP Granit	47	47
Sand for cement concrete	Cherkassy sand quarry	53	53
Materials to be brought to the construction base (right side, 12.0 km mark)			
Broken stone	RUPP Granit	45	45
Crushing sievings	RUPP Granit	45	45
Granular asphalt	Stockpile on a pad	1	1
Topsoil	From cutting	1	1

Routes for transportation of building materials and constructions or estimated intensity of the goods traffic were not determined at the time of this Report. Proposed material transportation routes are indicated in *Figure 2.3-1*.

The location of the existing quarries/ borrow pits and asphalt concrete and cement concrete plants allows assumption that material and goods will be carried via following local roads and streets of the settlements:

- Cherkassy, Fanipol (H8395);
- streets of the City of Fanipol;
- Skuraty, Korolyov Stan (H9037); and
- streets of the City of Zaslavl.

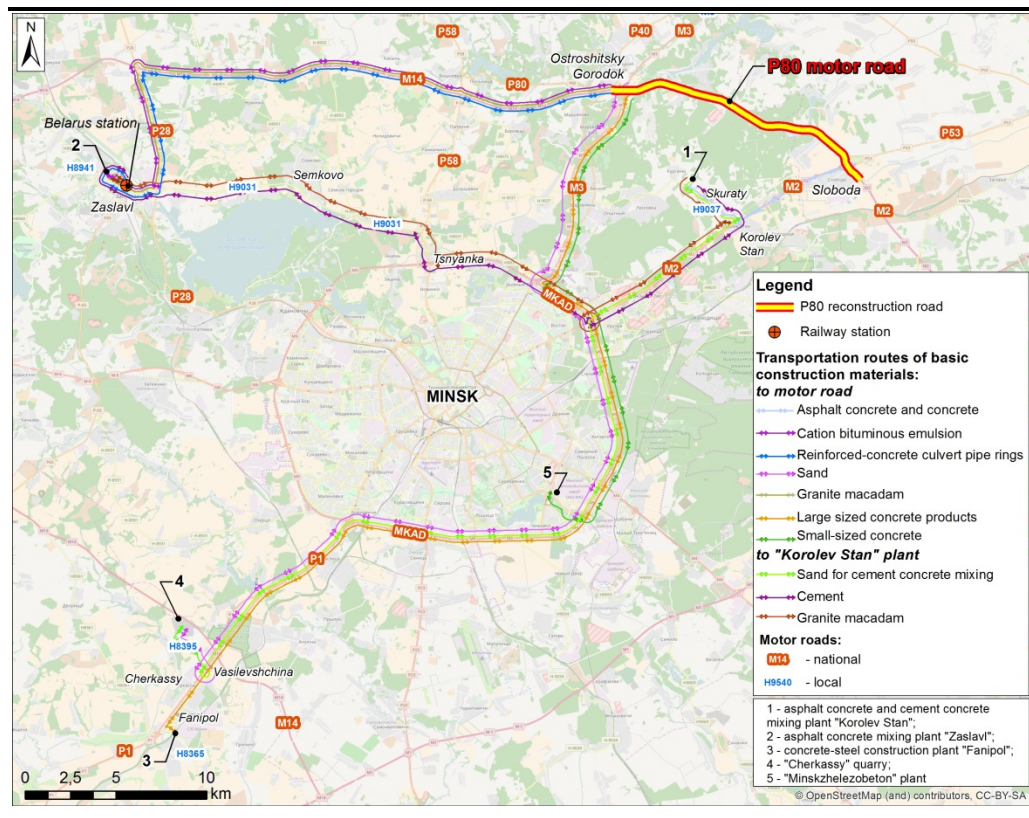


Figure 2.3-1 Predicted routes for transportation of primary building materials and constructions

Taking into account building material quantities, carrying capacity of OAO Beldortrans vehicles, duration of construction and potential routes of transportation, the Consultant suggested that the traffic intensity associated with building material transportation may be:

- 9 to 14 vehicles per day at the H8395 section from the Cherkassy quarry to P-1;
- 47 to 89 vehicles per day at the H9037 section from the asphalt concrete plant in Korolyov Stan to M-2.

Due to the absence of data on the building constructions requirements, it is not possible to estimate approximate traffic intensity for the streets of Fanipol and Zaslavl.

2.4 DESIGN ALTERNATIVES

The following alternatives were considered during the design process:

- Comparison of environmental and social implications between the Project and the zero alternative;
- Comparison of two carriageway expansion techniques regarding to the constructability perspective.

In addition to considering the above alternatives, the Client and the Designer made a number of changes to the Project according to the results of stakeholder engagement (see Section 2.7.2 and Section 2.7.4).

Alternatives and Project modifications that occurred prior to the time of writing of this report are discussed below.

2.4.1 *Zero alternative*

The environmental and social impacts of the Project in comparison with the zero alternative have already been reviewed in the preliminary EIA developed in line with the requirements of the Republic of Belarus.

It's EIA developers' opinion that main negative impacts of the Project will be associated with the construction stage. However, its duration will be short and will be determined by the duration of construction works (no longer than 24 months). At the same time, the positive impact of the Project will be long-term by nature throughout the lifetime of the road. The comparison results are presented in the *Table 2.4-1* below.

Table 2.4-1 Comparison of environmental impacts of the Project in the case of the implementation of the "zero alternative"

	Reconstruction of the P-80 motor road Sloboda-Papernya km 0.000 – km 14.770 (Project) ¹		Zero alternative	
	Positive factors	Adverse factors	Positive factors	Adverse factors
Natural environment: ambient air	An expected improvement of the road's performance properties and traffic conditions will reduce vehicle emissions.	Temporary air pollution by exhaust gases from construction machinery. Contamination associated with vehicle engines and wear of tyres and the road during traffic and transportation of construction materials.	The zero alternative will avoid adverse impacts if the Project is not implemented.	Significant air emissions during acceleration and deceleration of vehicles and slow moving traffic due to poor condition of the road and low throughput capacity of the existing road.
Acoustic impact	If the proposed noise protection measures are in place, the acoustic stress at residential areas will be normalised.			The existing noise level is excessive at the adjacent residential area and may increase even further.
Natural environment: soils, land resources, surface and ground water, vegetation	Adoption of the latest construction techniques will minimise the amount of chemical and mechanical contaminants migrating from the road to adjacent territories and into water bodies.	Withdrawal of lands. Significant stress on land and water resources during construction phase. Removal of vegetation within the road easement area.	The zero alternative will avoid adverse impacts if the Project is not implemented.	Continued significant contamination associated with vehicles.
Socio-economic environment	Reduced number of road accidents. Development of roadside services and entrepreneurship. Creation of new jobs related to road maintenance services. Improvement of the region's social and economic performance.			Lost profit if the Project is not implemented.
Transport conditions	Increased cargo traffic. Reduction of transport and maintenance costs (fuel, lubricants, spare parts, servicing, amortisation, driver salaries, overheads etc.).	Temporary deterioration of transport conditions during the construction phase.	The zero alternative will avoid adverse impacts if the Project is not implemented.	The expenses to repairing the existing road.

¹ The wordings used in the table are taken from the preliminary EIA.

2.4.2

Comparison of road expansion options

The main design-induced criterion for the road widening technique was the need to maintain the possibility of transit traffic at the reconstructed section during construction operations. Hence, two road expansion options were developed (*Table 2.4-1*):

- Option 1: the road is expanded on both sides, and the existing road axis remains in place;
- Option 2: the road is expanded, and the new axis is moved 2.85 m to the side.

Table 2.4-1 *Comparison of construction technique options for motor road widening*

Stage	Option1 1: The road is expanded on both sides, and the existing road axis remains in place	Option 2: The road is expanded, and the new axis is moved 2.85 m to the side
Stage 1	Widening of the existing roadway to 4 meters with the construction of new two-course asphalt concrete pavement.	The existing pavement is used for temporary traffic. The existing earth roadbed is widened. A new cement concrete pavement is laid on the lean concrete base, and then drainage from the centre mall is constructed
Stage 2	Traffic on the widened half of the road. The construction of the road base equal in strength of the existing asphalt concrete partially used as the base with subsequent laying of cement concrete pavement. The existing pavement and the earth roadbed should be excavated in road curve areas to the depth a depth of 1.5 meters and within every 30 metres (up to one-third of the total motor road length). It is necessary for laying a storm water drainage system. Backfilling and compacting operations will be performed with the use of manual mechanisms.	The new road pavement is used for traffic. The second half of the road is paved with cement concrete with the use of the existing asphalt concrete as the road base.
Stage 3	The new road pavement is used for traffic. The second half of the road is paved with cement concrete with the use of previously laid asphalt concrete as the road base.	

Based on the characteristics given in the table above (*Table 2.4-1*), Option 2 has a higher constructability potential, it was chosen for further development.

2.4.3

Project design changes as a result of stakeholder engagement

Changes made after receiving feedback from the representatives of District Executive Committees (District Administrations)

During the meetings held on June 29 and June 30, 2017, representatives of the Company, the Design Team and the Bank Consultant informed representatives of the District Executive Committees of Minsk and Smolevichi districts on Project solutions; in addition, the concept of design solutions was presented concerning major traffic interchanges.

Mr. Mikhail Zagortsev, Chairman of the Smolevichi District Executive Committee expressed his concern in respect of the transport interchange at ramps to the villages of Boguta and Sosnovaya. In his opinion, the proposed design solution would adversely affect the PUE Ozeritsky-Agro which is the main land user in the district.

The solution proposed the absence of left-hand turns at the ramp from the motor road and the entry to the road only to the right side (both sides). No possibility for turning (*Table 2.4-2*). Thus, the nearest turning to the interchange will be turning at the junction of the P-80 motor road to the M-2 motor road. At that, the M-2 motor road is a toll road for trucks.

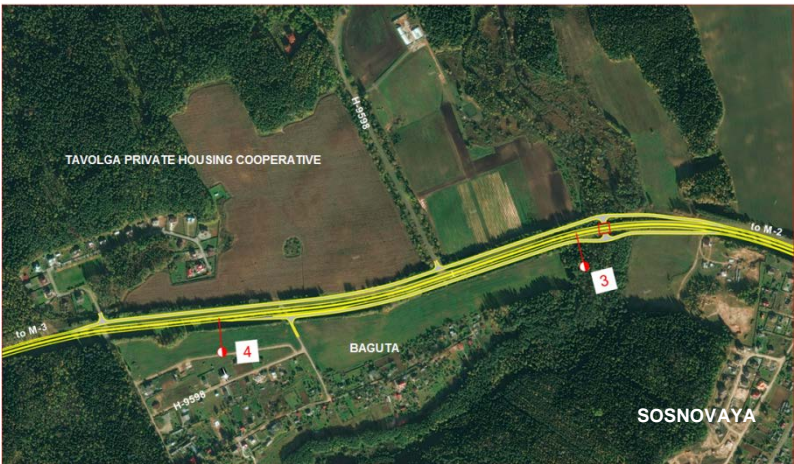

The PUE Ozeritsky-Agro lands and agricultural machinery/equipment of this company are located on both sides of the P-80 motor road. The reconstruction scheme described above would significantly increase transport costs of this company due to:

- a significant increase in travelling (7 km to 8 km for each unit of agricultural machinery and trucks for travelling from one side of the P-80 motor road to its another side);
- payment for travelling along the M-2 motor road is not high, but continuous year-round trips will result in quite significant costs.

After discussing the aspects described above, both the Client and Designer decided to propose alternative transport interchanges near Baguta and Sosnovaya villages. The alternative option provides for the construction of local roads for agricultural machines and vehicles (*Table 2.4-2*).

The alternative was worked out rather promptly in the course of consultations with stakeholders held on July 31, 2017. The Designer and the Client submitted a new option for discussion. By the time of this Report preparation, ERM had not got information on negative feedback regarding this option to the address of the Designer or the Company.

Table 2.4-2 *Changes in the interchange near the villages of Baguta and Sosnovaya*

	Original design	Modified design
Interchange schematics		
Reasons for change in the interchange schematics	<p>Prohibition of left turns and the location of the interchange will result in additional expenditures for the Ozeritsky-agro farming enterprise. To cross the reconstructed road P-80 near the Sosnovaya, transport will need to use the toll section of the M-2 highway at the interchange near the Burial Mound of Glory Memorial.</p>	<p>The road axis shifted to the North and additional local roads from Sosnovaya to the interchange in Baguta will allow for crossing the P-80 at that interchange, avoiding toll roads.</p>

Changes made after consultations with local residents

Extended consultations with stakeholders were held on July 31, 2017 with participation of representatives of the Company, the Designer and Bank Consultant (details see in Section 2.7.4).

Residents of the village of Okolitsa actively expressed their negative attitude to the proposed solutions regarding traffic on the P-80 motor road through the Lugovaya and Solnechnaya villages. Detailed description of the risks and concerns of local residents was given in the Minutes of consultations with stakeholders (*Annex 2*).

In relation to concerns of local residents, the Client (immediately during the consultations) made a decision to change the traffic interchange scheme in the village of Okolitsa.

The transport interchange scheme will be reviewed during the meeting of the Scientific and Technical Council (STC), which will be held on August 3, 2017 under supervision of the Ministry of Transport and Communications of the Republic of Belarus.

The new scheme and alternative design solutions will be presented to local residents for further discussion. At the time of writing this Report, a preliminary version of the updated design solutions was available on the "MinskAvtodor Center" website (*Figure 2.4-1*).

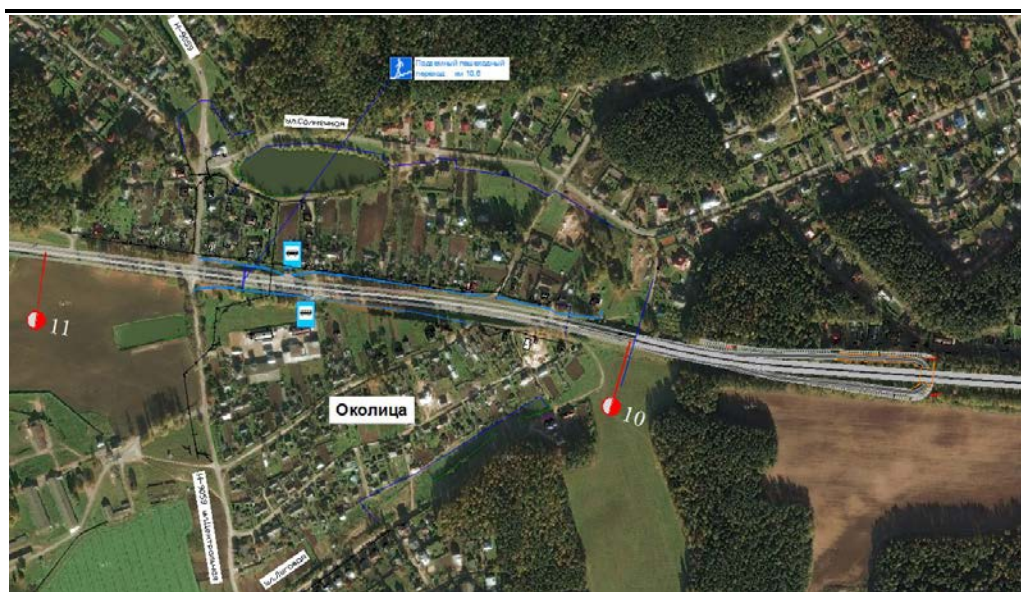


Figure 2.4-1 *Alternative version of the intersection proposed by the Designers after consultation with the residents of Okolitsa village (source: <http://www.maddor.by/news/n-pr?id=461>)*

The proposed alternative will require further studies in relation to the engineering aspects and land allocation issues. It is also apparent that this option affects the interests of other groups of local residents.

By the time of issuing this Report, no information had been made available about the current ownership of the alternative land plot to be affected by the Project. No information about opinions of local residents regarding the proposed solutions. In this regard, assessments described in Section 6 deal with the basic design solution given in the Project design documentation.

Alternative solutions will be assessed in the course of updating the Report on results of the second round of public consultations.

2.5

EMBEDDED MEASURES AIMED AT POTENTIAL ENVIRONMENTAL IMPACT PREVENTION AND/OR MITIGATION

A number of measures aimed at prevention and mitigation of any potential environmental impacts of the proposed activities were recommended based on the results of the preliminary EIA. Any details concerning execution of the recommended measures will be specified later during the final impact assessment.

Measures recommended for the construction and operation stages are listed in the tables below (*Table 2.5-1* and *Table 2.5-2*).

Table 2.5-1 Potential impact prevention and/or mitigation measures during construction

Environmental media	Measures
Ambient air	<ul style="list-style-type: none"> • Compliance of fuel, materials, products and equipment used for construction works with the requirements of the national legislation; • Compliance of construction techniques with the requirements of the national legislation;
Noise impacts	<ul style="list-style-type: none"> • Compliance of fuel, materials, products and equipment used for construction works with the requirements of the national legislation; • Compliance of construction processes with the requirements of the national legislation;
Surface and ground water	<ul style="list-style-type: none"> • Compliance of the proposed Project activities within riparian buffer strips and water protection zones of surface water bodies with the requirements of the national legislation; • Treatment of storm water run-off from the roadbed if no diversion outside riparian buffer strips is possible; • Ban on unauthorized parking of vehicles; • Storage of construction materials, products and structural units in designated areas; • Accumulation of domestic wastewater in concrete sumps with subsequent hauling to wastewater treatment facilities; • Surface water drainage and clarification on sites where water is regularly used for dust suppression; • Reuse of water for dust suppression after clarification; • Prohibition of storage and discharge of materials and substances generated during construction works to water bodies and ground surface depressions; • Monitoring of littering of watercourses located near construction sites; • Arrangement of collecting ditches with settling pits around construction sites; • Fuelling and servicing of road building equipment and vehicles in designated areas;
Land resources and soil	<ul style="list-style-type: none"> • Application of the right-of-way minimization criterion at the design stage and confining the work to the allocated boundaries during construction; • Reclamation of lands to be temporarily used for the Project activities followed by passing of land title to

Environmental media	Measures
	<ul style="list-style-type: none"> land users; Stripping and stockpiling of topsoil to be used for land reclamation and stabilization of roadbed embankments;
Plant life	<ul style="list-style-type: none"> Execution of the proposed works in the Prilepsky Protected Landscape Area in compliance with requirements to carrying out economic activities within the boundaries of natural reserves and interaction with the Minsk District Executive Committee, which manages this protected area, at the design and construction stage; Compensatory reforestation or reimbursement of the loss of tree vegetation on forest lands and in settlements; Confining the work to the right-of-way boundaries during construction; Ban on hot works and burning of debris in high fire hazard areas; Storage of construction materials, products and structural units in designated areas; Stockpiling of felling debris in designated areas, removal of felling debris; Measures aimed at prevention of mechanical damage of trees by working road building equipment and filling of root collars of trees;
Wildlife	<ul style="list-style-type: none"> Ban on filling of natural depressions, artificial water bodies and artificial depressions with signs of water stagnation in spring; Ban on burning of felling debris; Ban on ingress of the road building equipment into the adjacent areas; Ban on cutting of trees and shrubs in riparian areas of water bodies used by amphibians for reproduction; Execution of additional field surveys in spring to identify migration corridors of amphibians; Removal of tree vegetation in autumn and winter as far as possible;

Table 2.5-2 *Potential impact prevention and/or mitigation measures during operation*

Environmental media	Measures
Ambient air	<ul style="list-style-type: none"> Reduction of deceleration/acceleration lanes and increasing the traffic speed due to motorway expansion;
Noise impacts	<ul style="list-style-type: none"> Landscaping and infrastructure development; Installation of noise barriers;
Surface and ground water	<ul style="list-style-type: none"> Diversion of storm water run-off from the roadbed outside riparian buffer strips; Treatment of storm water run-off from the roadbed if no diversion outside riparian buffer strips is possible; Construction of the de-icing reagents storage facility to prevent any potential pollution of water in the Ostroshitskoye Water Reservoir;
Land resources and soil	<ul style="list-style-type: none"> Construction of culverts and ditches in the roadbed

Environmental media	Measures
	embankment; <ul style="list-style-type: none"> Stabilization of roadbed embankment slopes and bottoms of ditches;
Flora	—
Fauna	<ul style="list-style-type: none"> Construction of culverts and ditches in the roadbed embankment; Temporary imposing of speed limits in areas of migration routes of amphibians and posting of the corresponding warning signs if migration corridors of amphibians are discovered; Arrangement of a 30 m wide right-of-way where cutting of shrubs and mowing will take place; Use of closed (covered) waste containers in rest areas and regular waste removal; Arrangement of a special crossing for ungulates at road segment km 5.9; Arrangement of mesh wire fencings on both sides of the road; Posting of signs warning of wild animals; Ban on mowing motorway verges during the breeding season of coleopterous insects (last ten days of May, first ten days of June, first ten days of July).

2.6

LAND ACQUISITION AND STAKEHOLDER ENGAGEMENT

Land acquisition of private land for the purpose of the Project is limited to one land plot required for the construction of the underpass under the highway P-80 in Okolitsa settlement (*given the design solutions outlined currently in the Project Documentation. This solution is subject to revision – see Section 2.4.2*). At the moment the plot is not built up and is for sale, as evidenced by the ad on the fence.

Land acquisition from legal entities is also limited to only land plot – agricultural enterprise PUE «Ozeritskiy-Agro».

At the time of reporting, a the private property owners potentially affected by the Project are preliminary identified.

Formal negotiations with landowners and/or land users will be conducted in the later stages of the Project, after final approval of design solutions.

Questions of compensation to affected landowners will be considered within the frames of the legislation of the Republic of Belarus:

- loss of production of agricultural enterprises affected by land acquisition is compensated in material terms;
- the private land plot, can be purchased at a cost not below cadastral cost adjusted for inflation from the time the assessment or it can be exchanged for an equivalent area.

2.7.1 *Information gathering*

During Feasibility Stage and National Impact Assessment the representatives of the Client and the Designer consulted with the local authorities. Official requests of information were sent in March – May 2017 to the following organizations:

- Minsk district inspection of natural resources (the Minsk district Executive Committee),
- Smolevichi district inspection of natural resources (Smolevichi district Executive Committee),
- State forestry management unit «Borovlyansky leskhoz»,
- Republican state and public Association « Belarusian society of hunters and fishermen» (Minsk and Smolevichi units),
- State scientific institution «Institute of history of NAS of Belarus»,
- Department of Geology of the Ministry of natural resources and environmental protection,
- State Enterprise «Republican center for hydrometeorology and control of radioactive contamination and environmental monitoring».

The responses received were taken into account in the National EIA and described in the Annexes to the report on the results of the National EIA

2.7.2 *Meeting with representatives of District Executive Committees*

In July 2017 during Gap analysis exercise and preparation of documents for disclosure of Project information by Bank Consultant the primary consultations in Minsk and Smolevichi district executive committees were conducted by representatives of Client and Designer.

During the meeting in Minsk district executive Committee the representative of the Bank identified the expected implementation period of the Project.

At the meetings in Minsk and Smolevichi district Executive committees, representatives of the Designer and the Client presented the main design decisions on reconstruction of the highway P-80.

The consultant collected information on the socio-economic conditions of the Project implementation, as well as the concerns and expectations of the representatives of the administration associated with the implementation of the Project.

During the meeting, in the Smolevichi district Executive Committee representatives of the Committee raised the issue of traffic management on existing transport interchange, near the Sosnovaya settlement for freight transport of PUE «Ozeritskiy-Agro». The prohibition of left turns and the location of the interchange will result in additional costs due to the need of using the paid section of the motorway M-2 at interchange at the Mound of Glory.

Following the discussion, the Client and Designer decided on considering alternative options on interchange location. The alternative was designed with the construction of the local passes for agricultural machines and vehicles (see Section 2.4.3).

2.7.3 *Public discussion of National EIA report*

The official procedure¹ for public discussion of the National EIA report in Smolevichi and Minsk districts started in July 2017 (Table 2.7-1). EIA report in electronic form posted on the Client website for review by all interested parties within the frames of procedure for public discussions:
<http://www.smolevichi.minsk-region.by/dfiles/14-07-2017-1.pdf>.

Table 2.7-1 *Public consultation on the ESIA Report*

District	Disclosed information	Consultation start date	Consultation finish date
Smolevichi district	Information about discussions on the website of Smolevichi Executive Committee Report for Preliminary EIA in electronic format on the website of the Executive Committee http://smolevichi.minsk-region.by/ru/aktualnaya-informatsiya/item/1591-uvedomlenie-o-provedenii-obshchestvennogo-obsuzhdeniya.html	July 15, 2017	August 15, 2017
Minsk District	Notice of public hearings http://www.maddor.by/news/n-d-m?id=457 Publication of the report in electronic form on the website "Minskavtodor Center"	July 15, 2017	August 15, 2017
	Information about discussions on the Internet site of the Minsk Executive Committee Report for Preliminary EIA in paper format in Ostrochitsky Gorodok settlement http://mrik.gov.by/ru/obsuzhdenia/viev/uvedomlenie-o-provedenii-obshchestvennogo-obsuzhdenija-otcheta-ob-otsenke-vozhdejstviya-na-okruzhajushchuju-9827/	July 29, 2017	August 28, 2017

In accordance with the procedure prescribed in the Republic of Belarus, the discussion of the results of the EIA in the form of a meeting of Project developers and stakeholders only takes place if the Customer receives the written request, but not earlier than 25 days after disclosure.

It is obvious that the parties affected by the Project (in particular, residents on the outskirts) are interested in such discussions and a formal application was received at the Client's site.

¹ In accordance with the requirements of the legislation of the Republic of Belarus

At the time of issue of this report the Consultant has no information on dates for discussions in the form of a meeting.

2.7.4 Consultations with stakeholders

Consultations with stakeholders for Project discussion were conducted on July 31st 2017 (Table 2.7-2).

The main design decisions concerning the reconstruction of the road section R-80 Sloboda – Papernya km 0,0 – km 14,7 were presented during the meetings. Representatives of the Client, Designer and Consultant attended the presentation.

Table 2.7-2 Time and venue, number of participants of stakeholder consultations

District	Meeting location	Date and time	Number of stakeholders
Smolevichi district	Sloboda agro settlement, school building	31.01.2017 11:00	32 persons: <ul style="list-style-type: none"> • Citizens of Sosnovaya village; • Citizens of Okolitsa village; • Representative of Sport Center “Raubichi”.
Minsk district	Bolshevik agro settlement, building of village council	31.01.2017 16:00	15 persons: <ul style="list-style-type: none"> • Citizens of Okolitsa village, • Citizens of Belie Luzhi village; • Citizens of Ostroshitsky Gorodok settlement.

Stakeholders were informed about the ESIA and the peculiarities of procedure in accordance with national legislation and the requirements of the Bank. In particular, stakeholders were notified of the contact information for sending complaints, observations, comments and suggestions.

Meeting participants took an active discussion on design decisions. Part of the concerns and suggestions were formulated in written form and handed over to representatives of Client during meetings answers on the outcome of these appeals will be sent to Client at the addresses listed in addresses.

The list of questions, concerns and suggestions from stakeholders received during the meetings and the responses by representatives of the Client and the Designer are presented in *Annex 3*.

During discussions the following decisions were taken:

- Presentation of the Project, including layout of reconstruction of the highway and the main project decisions, will be posted on the website of the Client for consultation of the population within five days of discussions (posted August 2nd 2017 on the web site in the section “news” <http://www.maddor.by/news/n-pr?id=460>).
- To raise the issue of revising design decisions on transport interchange in Okolitsa settlement in connection with the concerns of local residents. The issue is to raised on the scientific and technical Council (STC), which will be held on 3 August 2017 in the Ministry of transport and communications of the Republic of Belarus. Transport interchange

scheme will be revised, alternative design solutions will be presented to the citizens.

Additional meetings will be held with citizens of Okolitsa settlement to harmonize the updated design solutions. If necessary, few meetings will hold, to reach a compromise solution.

In addition, Bank developed a Communication with Stakeholders Plan for a Project Consultant. Activities under the SEP will also be implemented by the Company.

2.8 *EMBEDDED MEASURES AIMED AT POTENTIAL SOCIAL IMPACT PREVENTION AND/OR MITIGATION*

Project provides for a number of measures aimed at prevention and mitigation of any potential social impacts.

Any details concerning execution of the recommended measures will be specified later during the final impact assessment.

Measures recommended for the construction and operation stages are listed in the tables below (*Table 2.8-1* and *Table 2.8-2*).

Table 2.8-1 *Potential impact prevention and/or mitigation measures during construction*

Social component	Measures
Transport infrastructure	<ul style="list-style-type: none"> Selection of building materials quarries, among other factors, was based on minimizing the haul distance;
Cultural heritage	<ul style="list-style-type: none"> Design of the P-80 road, its passages and viaducts considers minimum land acquisition. The road after the reconstruction will be fully in line with the existing road axis. In this regard, potential impacts on cultural heritage are minimized.

Table 2.8-2 *Potential impact prevention and/or mitigation measures during operation*

Social component	Measures
Public health	<ul style="list-style-type: none"> Reduction of air emissions of vehicles moving along the road P-80; Reduction of noise of vehicles moving along the road P-80;
Road safety	<ul style="list-style-type: none"> Prohibition of left turns and intersections in one level;
Land use	<ul style="list-style-type: none"> Design of the P-80 road, its passages and viaducts considers minimum land acquisition. The road after the reconstruction will be fully in line with the existing road axis. Land acquisition will be required only for the road extension and passages.

This Section provides a description of the environmental and social baseline based on the documents and information available at the time of the Report preparation.

Section 1.3 provides the list of documents used for the Report preparation.

The documents available at the time of the Report preparation included the results of the engineering and environmental surveys carried out in 2017 and the environmental basement assessment results as part of the preliminary EIA.

3.1

CLIMATE

The Project implementation area, as well as the entire territory of the Republic of Belarus, is located in the temperate continental climate zone with freakish humid climate.

In accordance with the applicable regulations¹, the subject area is associated with the second (central, temperate humid) road climatic region of the Republic of Belarus.

The key climate characteristics of the Project implementation area are described below (*Table 3.1-1* and *Figure 3.1-1*).

Table 3.1-1 *Key climate characteristics of the Project implementation area*

Climatic parameter	Value
Average annual temperature	+6,2°C
The coldest month of the year	January (-5,9°C)
The warmest month of the year	July (+17,8°C)
Duration of period with a temperature over +5°C	185 to 190 days
Average number of days with transition of temperature through 0°C within 24 hours	70
Number of days with thawing weather in December through February	36
Annual precipitation	650 - 700 mm
Annual evaporation	635 mm
Mean annual relative air humidity	79%
Mean maximum decadic snow cover height in winter season	27 cm
Maximum decadic snow cover height	62 cm
Number of days with stable snow cover	101 (from December 10 - 15 to March 15 - 25)

¹ Technical Code of Common Practice TKP 45-3.03-19-2006

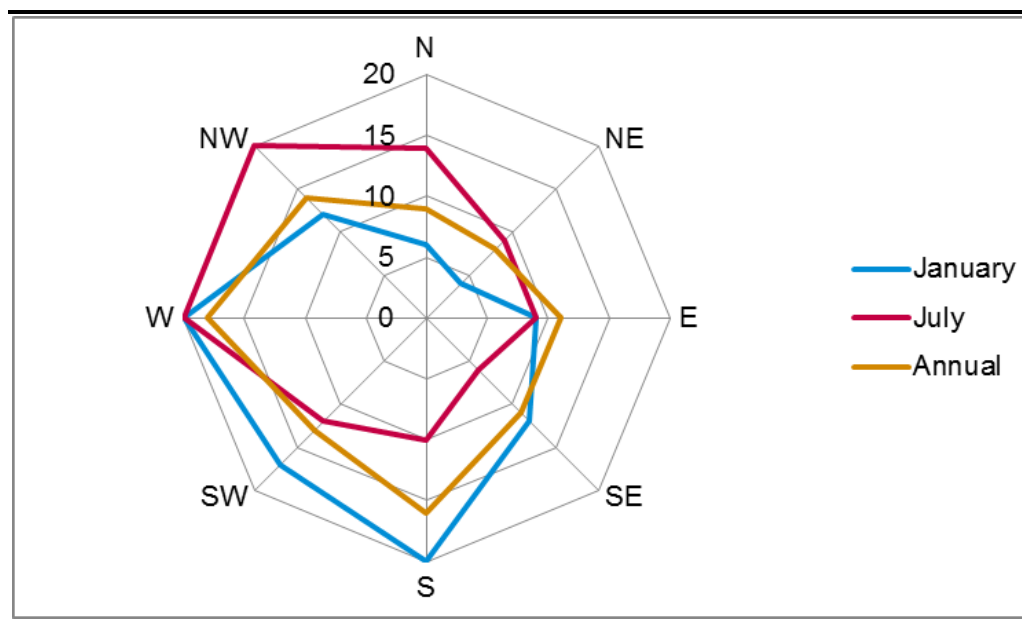


Figure 3.1-1 Wind rose in the Project implementation area

Adverse weather conditions that may be expected in the Project implementation area are listed below (Table 3.1-2).

Table 3.1-2 Mean and maximum annual number of days with adverse weather conditions in the Project implementation area

Adverse weather conditions	Mean and maximum annual number of days
Fog	30 to 50
Thunderstorm	>30
Glaze	>25
Strong wind and squalls	2*
Thaw	30 to 35
Snowstorm	20 to 25
Hail	7*

*maximum annual number of days

3.2 AMBIENT AIR QUALITY

The listed below background concentrations of pollutants in the atmospheric air within the Project implementation area are based on the information provided by the National Centre of Hydrometeorology, Radioactive Pollution and Environmental Monitoring (Table 3.2-1).

Table 3.2-1 *Background concentrations of pollutants in the atmospheric air within the Project implementation area*

Pollutants	Ambient air quality standards, µg/m ³			Background concentration, µg/m ³
	Maximum one-time concentration	Average daily concentration	Average annual concentration	
Solid particles*	300,0	150,0	100,0	69
Solid particles up to 10 µ	150,0	50,0	40,0	26
Sulphur dioxide	500,0	200,0	50,0	37
Carbon oxide	5000,0	3000,0	500,0	616
Nitrogen dioxide	250,0	100,0	40,0	30
Ammonia	200,0	—	—	49
Formaldehyde	30,0	12,0	3,0	18
Phenol	10,0	7,0	3,0	3,1
Benzene	100,0	40,0	10,0	0,9
Benzo(a)pyrene	—	5,0 нг/м ³	1,0 нг/м ³	0,78 нг/м ³

* undifferentiated solid particles of dust / aerosol

** during heating period

Background concentrations of pollutants in the atmospheric air within the Project implementation area do not exceed the maximum one-time concentrations of pollutants allowable in the Republic of Belarus for settlements and recreational areas, whereas the background concentrations of carbon oxide, formaldehyde and phenol exceed the respective allowable average annual concentrations.

3.3 SURFACE WATER

According to the hydrologic zoning of the Republic of Belarus, the Project implementation area is located in the Berezina River basin and associated with the third (Vileysky) hydrologic region. The river density index of the subject area is 0.35 km/km².

The P-80 section proposed for reconstruction crosses the Domelka River and a non-operational canal, which once used to be the source of the Volma River (Figure 3.3-1). There are also soil-reclamation canals in the subject area flowing into the nearest natural streams (the rivers Volma, Usyazha and Domelka).



Figure 3.3-1 Surface water bodies that located close to the road to be reconstructed

Key characteristics of the natural streams crossed by the P-80 motorway and located near the road section proposed for reconstruction are listed in Table 3.3-1 below.

Table 3.3-1 Key characteristics of the crossed natural streams

Parameters	Domelka	Volma	Usyazha
River source	South-east of Baguta settlement	South of Dubrovka settlement and 10 km south of the subject road section. A former soil-reclamation canal near the north-eastern boundary of Korolyov Stan settlement of Minsk District (5 km south-west of the motorway).	Eastern extremity of the Ostroshitskoye Water Reservoir in Ostroshitsky Gorodok (the Vesnyanka River was considered the headwaters of the subject river until 1978)
Length	11 km	103 km	45 km
Catchment area	51 km ²	1150 km ²	437 km ²
Mean water surface slope	2.1‰	0.5‰	1.1‰
Estuary	The Usyazha River	The Svisloch River (the Dnieper River basin)	The Gaina River (the Dnieper River basin)
Annual mean discharge in the estuary	No information available	6.7 m ³ /day	3.2 m ³ /day

The rivers Volma, Usyazha and Domelka are not used for recreational purposes and are void of any recreational areas.

No natural lakes are located in the Project implementation area. The water bodies near the subject road section are of artificial origin. The closest body of water is located about 70 m away from the existing motorway (left of Okolitsa settlement).

There are two reservoirs in the area of Project implementation: Dubrovskoe and Ostroshitsky. Dubrovsky reservoir is located at a distance of about 500 m to the north of the motorway, the section of the P-80 road to be reconstructed is located beyond its water protection zone.

Ostroshitsky reservoir is located at a distance about 1 km north-west of the road. The de-icing reagents storage facility is located in the water protection zone of the Ostroshitskoye Water Reservoir. No information on this water body is available in the accessible documents.

No information on concentrations of pollutants in streams and their bottom sediments is provided in the available documents. The engineering and environmental survey reports contain information on the surface water quality in the Dnieper River basin.

According to the available information, the major pollutants discharged in the effluents to the surface water of streams in the Dnieper River basin are ammonium ions, phosphate ions, nitrite ions, organic substances (by BOD₅) and iron compounds.

3.4

GEOMORPHOLOGY, TOPOGRAPHY AND GEOLOGY

According to the geomorphologic zoning of the Republic of Belarus, the Project implementation area is located in the West-Byelorussian subregion of the Central Byelorussian elevations and ridges.

The subject road section is associated with one geomorphological region: the Minsk peripheral glacier elevation. No description of the subject area's geomorphology is provided in the available documents.

The subject area has a mostly rolling topography with ridges and hills intersected by hollows, lakelike spreadings of streams and flat waterlogged lowlands. The ruggedness increases on river valley slopes, in old run-off gullies and dry valleys.

The intensity of technogenic load on the relief of the study area is 30-40 thousand m³/km². The stability of the relief to technogenic the load is 99-100%.

The degree of of extreme geomorphological processes is medium all over the studied area.

3.5

GEOLOGY

End-moraine deposits of the Middle Pleistocene consisting of morainic loam and sandy loam (of the Sozh glaciation) are most widely occurring deposits within the entire area of the subject road section. Boggy deposits of the Holocene occur in local and closed depressions. Perennial streams are associated with minor occurrence of alluvial deposits.

Figure 3.5-1 below is a map of Quaternary deposits within the Project implementation area.

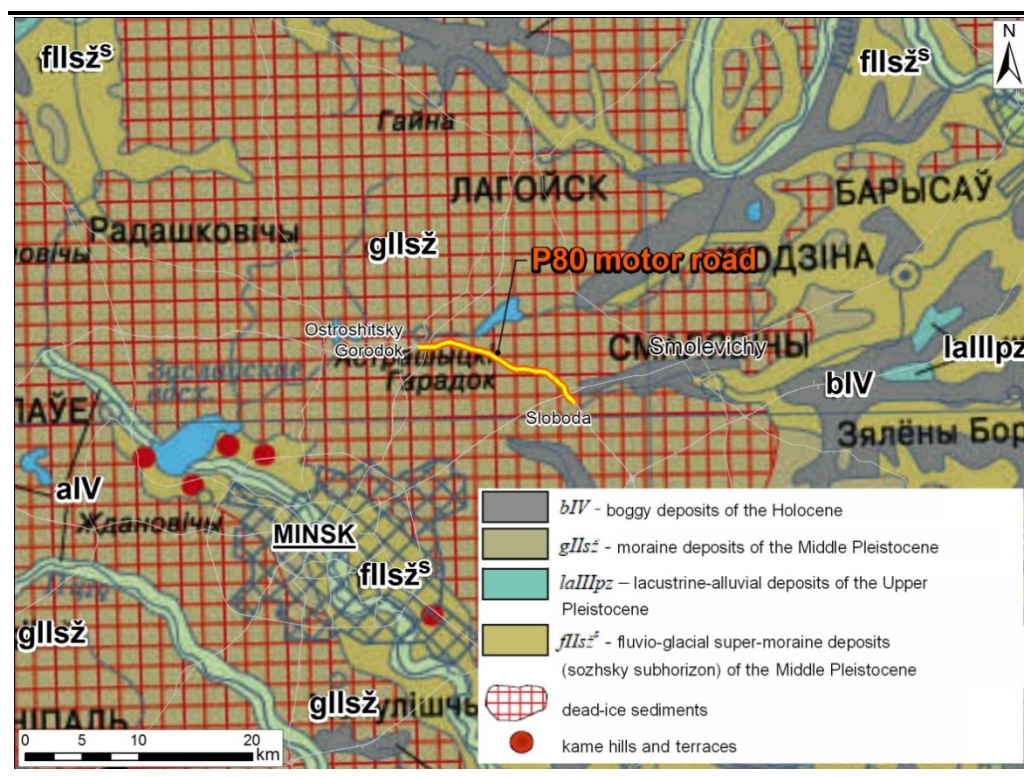


Figure 3.5-1 Map of Quaternary deposits in the Project implementation area

3.6 HYDROLOGY

The Project implementation area is associated with the Byelorussian hydrogeological massif encompassing the central and north-western parts of Belarus.

The hydrogeological profile of the above massif reveals up to 20 aquifers and aquifer systems associated with Quaternary, Cretaceous, Jurassic, Devonian, Silurian, Ordovician, Cambrian and Upper Proterozoic deposits.

The absence of continuous aquitards between aquifers results in good hydraulic interconnection of stratigraphical horizons. Aquifers are fed by water infiltrating from the upper into the lower horizons. Given the significant hydraulic connectivity of the aquifers on the territory of Project implementation proper collection and treatment of surface runoff from road is of great importance.

Groundwater is discharged in river valleys.

Key characteristics of aquifers and aquifer systems of the Byelorussian hydrogeological massif are detailed in the table below (Table 3.6-1). Characteristics of aquifers is given according to the literature data. Field studies on the territory of the Project implementation was not carried out.

Table 3.6-1 Key characteristics of aquifers and aquifer systems of the Byelorussian hydrogeological massif

Characteristics	Aquifer systems of the Quaternary deposits			Active water exchange zone	Slowed water exchange zone
Occurrence	Groundwater	Intramorainic and supramorainic Sozh aquifers (IIsz)	Dnieper-Sozh (IId-sz) and Lower Pleistocene Dnieper (I-IId) aquifer systems	Topmost part of the hydrogeological section down to the deposits of the Narev horizon of the Middle Devonian (Inr), blue clay horizon of the Lower Cambrian (Є), the Kotlin suite of the Upper Proterozoic (Vkt)	Aquifers of the Ordovician (O), Silurian (S), Lower Cambrian (Є), Upper Proterozoic (PR2) and the fissured horizon of the crystalline basement of the Archaean-Palaeoproterozoic Age (AR-PR1)
Depth of occurrence	Down to 5 m, less commonly down to 10 m	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>
Thickness	Depends on the depth of occurrence of morainic deposits of the Sozh (gQ ₂ ^{sz}) and Dnieper (gQ ₂ ^{dn}) morains	<i>No data available</i>	Down to 180 m	from 100 m to 200 – 4,500 m	<i>No data available</i>
Groundwater properties	<i>No data available</i>	<i>No data available</i>	<i>No data available</i>	Fresh mineralized hydrocarbonate magnesian-calcic water with good organoleptic properties.	Mineral waters of predominantly chloride and sulphate-chloride-sodium composition, less commonly of calcium-sodium composition sometimes containing increased concentrations of brome and fluorine.
Groundwater use	<i>No data available</i>	Major source of water supply for small-scale consumers and rural settlements.	Centralized water supply of cities and large settlements.	Major source of potable and utility water supply of cities and large settlements.	Used for balneological purposes in numerous recreational and healthcare institutions and bottled as medicinal table water.

3.7

SOIL

According to geographical classification of soils of the Republic of Belarus, the Project implementation area is associated with the Central (Byelorussian) soil province, the Central edaphoclimatic region and the Oshmyany-Minsk agropedological district. Characteristics of sod-podzolic soils of the Oshmyany-Minsk district is given according to the literature data. Field studies on the territory of the Project implementation was not carried out.

According to this description, the highest parts of elevations are covered mostly by strongly and averagely podzolized severely eroded sod-podzolic soils on light bouldery moraine loams and gravelly gritty sandy loams underlain by moraine loams.

The dominant soil types in depressions are strongly and averagely podzolized sod-podzolic soils with averagely and severely eroded patches on light loess-like loams underlain by moraine loams or, sometimes, sands.

Aqueoglacial depressions are covered by averagely podzolized slightly eroded sod-podzolic soils on light slightly bouldery aqueoglacial loams and, sometimes, on sandy loams..

The degree of soil erosion and deflation in the subject area varies from slight to severe.

3.8

RADIOLOGICAL ENVIRONMENT

The engineering and environmental survey reports contain the results of measurements performed by agencies of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus.

According to this data, gamma radiation dose rate in Minsk Oblast does not exceed the natural gamma background radiation (up to 0.20 mcSv/h). The annual average gamma radiation dose rate in cities of district subordination varies between 0.10 mcSv/h and 0.12 mcSv/h.

3.9

NOISE AND VIBRATION

No information on background noise levels is available in accessible documents.

The engineering and environmental survey reports contain recommendations to make calculations of expected noise levels in reference points at the boundaries of residential areas. The results of such calculations are included in the preliminary EIA and showed excess noise level in some points. In this regard, the project involves the installation of noise screens.

3.10

LANDSCAPES

According to the classification of landscapes in the Republic of Belarus, the Project implementation area is located in the subzone of boreal landscapes of the Byelorussian elevated province of hilly morainic erosional and secondary

morainic landscapes with broad-leaved/spruce forests and pine forests on sod-podzolic soils.

The subject road section is located within one landscape district: Minsk averagely and strongly undulating ridged hilly morainic erosional landscape district with broad-leaved/spruce and pine forests.

The following landscapes are crossed by the subject road section: hilly morainic erosional landscape, kame morainic erosional landscape and undissected river valley complexes (*Figure 3.10-1*).

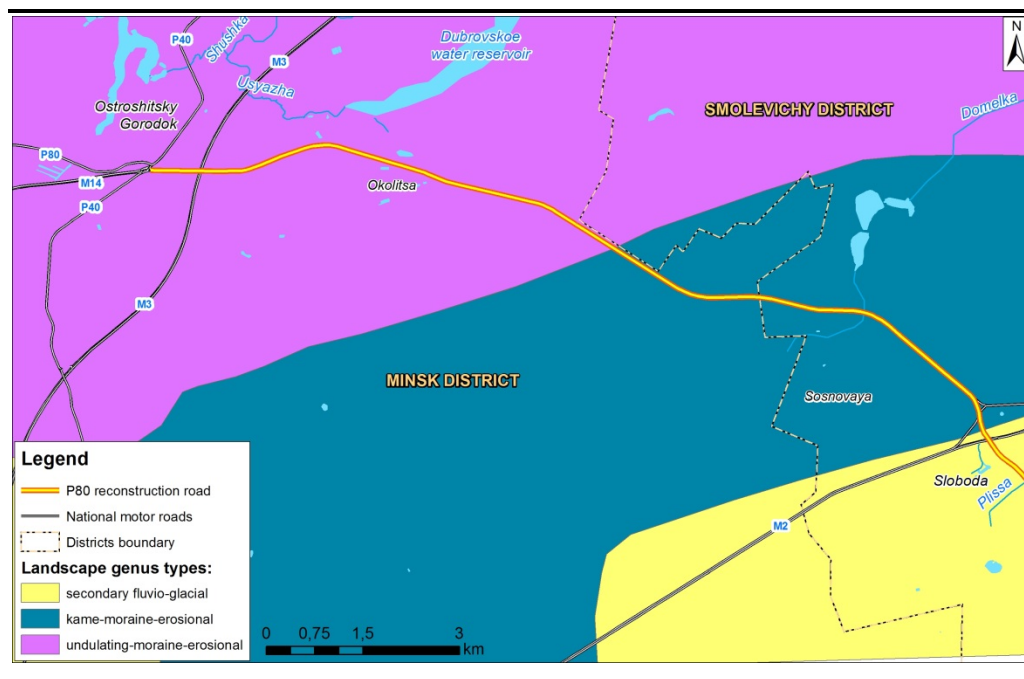


Figure 3.10-1 Landscapes crossed by the P-80 section proposed for reconstruction

The above-mentioned landscapes are represented by a number of areas of environmental significance (*Table 3.10-1*).

Table 3.10-1 Areas of environmental significance

Areas of environmental significance	Occurrence and geomorphology	Constituent geologic materials	Soils	Vegetation cover
Landscape areas of stand-alone kame and moraine hills	Occur on the highest landforms rising above the general rolling terrain by 5 to 7 m	Kame hills are comprised by graded aqueoglacial sands. Moraine hills are composed of primarily boulder sandy loams and less commonly by gravelly gritty materials. Moraine rocks can have a thin blanket of aqueoglacial deposits.	Sod-podzolic sandy and sandy loam soils	Pine forests Mossy spruce forests
Landscape areas of rolling aqueoglacial topography	Constitute the general landscape background of the Prilepsky Protected Landscape Area occupying gentle and very gentle slopes	Composed of moraine loams and sandy loams with a blanket of aqueoglacial deposits (loams, sandy loams and, sometimes, sands) of varying thickness and, to a lesser degree, with a blanket of loess-like loams	Sod-podzolic soils Sod-podzolic waterlogged soils Sod-podzolic yellowish soils	Pine forests Spruce forests Birch forests Aspen forests
Landscape areas of rolling aqueoglacial topography	Occupy gentle and very gentle slopes	Comprised of moraine rocks with a very thin blanket of aqueoglacial deposits formed by denudation	Sod-podzolic sandy loam soils	Pine forests with forest floor overgrown by moss and bracken Birch forests Dry grasslands
Landscape areas of shallow hollows and gullies	Occupy shallow hollows and gullies dividing ridge-like flattened elevations	Filled with aqueoglacial rocks, denudation and erosion materials	<i>No information available</i>	Spruce forests Pine forests Oak, maple, linden Patches of lowland meadows and, less commonly, dry meadows
Landscape areas of deep valleys with lowland meadows	Occupy deeper valleys intersecting aqueoglacial and morainic deposits and cause groundwater discharge	<i>No information available</i>	Peat-boggy soils of lowland bogs	Lowland meadows
Landscape areas of closed depressions	Occupy depressions (with a diameter varying between 100 m and 1,500 m) and a depth sometimes reaching 3 - 5 m	<i>No information available</i>	Peat-boggy soils of raised bogs Transitional peat-boggy soils	Pine forests with forest floor overgrown by ledum and cotton grass/sphagnum

Vegetation in the Project implementation area is associated with the Minsk-Borisov district of the Oshmyany-Minsk geobotanical region of the subzone of oak and dark coniferous forests.

Forests of natural origin occupying about 82% of the total area are the dominant type of vegetation, whereas cultivated forests cover only 14% of the territory. The species composition is dominated by native coniferous forest stands, whereas secondary birch forests and, less commonly, aspen forests take up only 9% of the subject area.

The Prilepsky Protected Landscape Area of national significance is located in close proximity to the subject road section (*Figure 3.11-1*). The Area's boundary passes along the right-of-way of the P-80 motorway on the southern side at sections km 12.1 – km 13.4, km 11.6 – km 11.9 and from km 7.9 to the administrative boundary of Minsk District (km 4.4). The Prilepsky Protected Landscape Area occupies 3,252 ha of lands and is entirely forested.

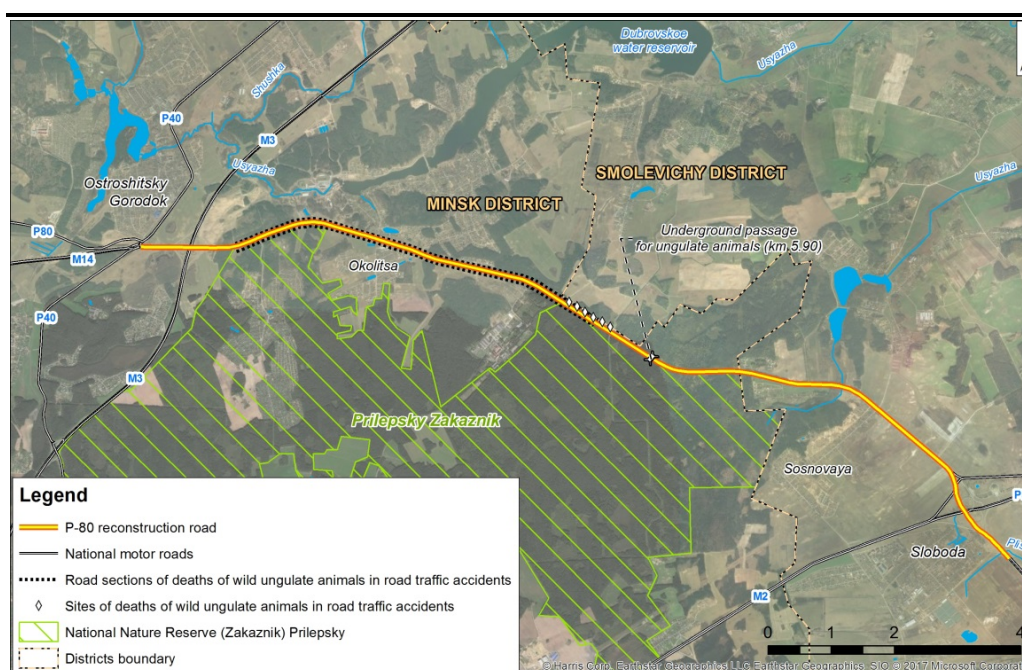


Figure 3.11-1 Location of the Prilepsky Protected Landscape Area

The Prilepsky Protected Landscape Area of national significance was established by the Decree of the Council of Ministers of the Republic of Belarus No. 1451 of 20 September 2000 'On Establishment of the Prilepsky Protected Landscape Area of National Significance to Secure Conservation of the Unique Landscape Complex Characterized by Mature Coniferous Forests as well as Rare and Endangered Plant and Animal Species listed in the Red Book of the Republic of Belarus'.

The Prilepsky Protected Landscape Area is managed by the Minsk District Executive Committee.

Plant communities within the Project implementation area, including forest communities of the Prilepsky Protected Landscape Area, are listed in the table below (*Table 3.11-1*).

Maps and schemes of plant communities within the Project implementation area are not available in the accessible documents.

Table 3.11-1 Plant communities within the Project implementation area

Plant communities	Occurrence	Soils	Species composition
Mossy spruce forests	Most widely occurring plant communities of the Prilepsky Protected Landscape Area	Podzolic and sod-podzolic soils	<p>Forest stand: Norway (common) spruce (<i>Picea abies</i>) Silver birch (<i>Betula pendula</i>) Scots (common) pine (<i>Pinus sylvestris</i>)</p> <p>Undergrowth: Juniper (<i>Juniperus</i> sp.) Mountain ash (<i>Sorbus</i> sp.) Hazel (<i>Corylus</i> sp.)</p> <p>Herbaceous layer: Bilberry (<i>Vaccinium myrtillus</i>) Lingonberry (<i>Vaccinium vitis-idaea</i>) Kinnikinnick (<i>Arctostaphylos uva-ursi</i>) Common wood sorrel (<i>Oxalis acetosella</i>) May lily (<i>Maianthemum bifolium</i>)</p> <p>Moss layer: Red-stemmed feathermoss (<i>Pleurozium schreberi</i>) Dicranum moss (<i>Dicranum scoparium</i>) Undulate dicranum moss (<i>D. undulatum</i>) Splendid feather moss (<i>Hylocomium splendens</i>) and others.</p>
Spruce forests with herbaceous layer of bilberry (whortleberry)	Flat depressions of the Prilepsky Protected Landscape Area	Podzolic and sod-podzolic sandy loam and loamy greyed soils	<p>Forest stand: Norway (common) spruce (<i>Picea abies</i>) Silver birch (<i>Betula pendula</i>) Scots (common) pine (<i>Pinus sylvestris</i>) Aspen (<i>Populus tremula</i>)</p> <p>Undergrowth: Dwarf honeysuckle (<i>Lonicera xylosteum</i>) Juniper (<i>Juniperus</i> sp.) Mountain ash (<i>Sorbus</i> sp.) Buckthorn (<i>Frangula</i> sp.)</p> <p>Herbaceous layer: Bilberry (<i>Vaccinium myrtillus</i>) Lingonberry (<i>Vaccinium vitis-idaea</i>)</p>

Plant communities	Occurrence	Soils	Species composition
			Hairy woodrush (<i>Luzula pilosa</i>) Common wood sorrel (<i>Oxalis acetosella</i>) Wood stitchwort (<i>Stellaria nemorum</i>) May lily (<i>Maianthemum bifolium</i>) Common bracken (<i>Pteridium aquilinum</i>) Moss layer: No information available
Spruce forests with herbaceous layer of wood sorrel and bishop's weed	Prilepsky Protected Landscape Area	Sod-podzolic sandy and sandy loam soils	Forest stand: Norway (common) spruce (<i>Picea abies</i>) Pedunculate oak (<i>Quercus robur</i>) Small-leaved linden (<i>Tilia cordata</i>) Norway maple (<i>Acer platanoides</i>) Undergrowth: No information available Herbaceous layer: No information available
Spruce forests with herbaceous layer of bracken	Elevated parts of plateaus, slopes of ridges and hills of the Prilepsky Protected Landscape Area	Sod-podzolic sandy and sandy loam soils	Forest stand: Norway (common) spruce (<i>Picea abies</i>) Silver birch (<i>Betula pendula</i>) Pedunculate oak (<i>Quercus robur</i>) Aspen (<i>Populus tremula</i>) Small-leaved linden (<i>Tilia cordata</i>) Undergrowth: No information available Herbaceous layer: Common wood sorrel (<i>Oxalis acetosella</i>) Common bracken (<i>Pteridium aquilinum</i>) Male fern (<i>Dryopteris filix-mas</i>) Lady fern (<i>Athyrium filix-femina</i>) Narrow buckler-fern (<i>Dryopteris carthusiana</i>) Bishop's weed (<i>Aegopodium podagraria</i>) Stinging nettle (<i>Urtica dioica</i>) Yellow archangel (<i>Galeobdolon luteum</i>) European wild ginger (<i>Asarum europaeum</i>) Hepatica (<i>Hepatica nobilis</i>)

Plant communities	Occurrence	Soils	Species composition
			<p>Sweetscented bedstraw (<i>Asperula odorata</i>) Common bugle (<i>Ajuga reptans</i>) and others.</p> <p>Moss layer: Big shaggy-moss (<i>Rhytidiadelphus triquetrus</i>) Splendid feather moss (<i>Hylocomium splendens</i>) Toothed plagiomnium moss (<i>Mnium cuspidatum</i>) Tree climacium moss (<i>Climacium dendroides</i>) Dicranum moss (<i>Dicranum scoparium</i>)</p>
Mossy pine forests	Prilepsky Protected Landscape Area	Podzolic and sod-podzolic soils on consolidated sand substrate	<p>Forest stand: Scots (common) pine (<i>Pinus sylvestris</i>) Norway (common) spruce (<i>Picea abies</i>) Silver birch (<i>Betula pendula</i>) Aspen (<i>Populus tremula</i>) Pedunculate oak (<i>Quercus robur</i>) Norway maple (<i>Acer platanoides</i>)</p> <p>Undergrowth: Juniper (<i>Juniperus sp.</i>) Mountain ash (<i>Sorbus sp.</i>)</p> <p>Herbaceous layer: Bilberry (<i>Vaccinium myrtillus</i>) Lingonberry (<i>Vaccinium vitis-idaea</i>) Common heather (<i>Calluna vulgaris</i>) Small cow-wheat (<i>Melampyrum sylvaticum</i>) Pipsissewa (<i>Chimaphila umbellata</i>)</p> <p>Moss layer: Red-stemmed feathermoss (<i>Pleurozium schreberi</i>) Dicranum (<i>Dicranum sp.</i>) Splendid feather moss (<i>Hylocomium splendens</i>)</p>
Birch forests with herbaceous layer of gramineous plants	Single occurrences in the Prilepsky Protected Landscape Area	Sod-podzolic sandy and sandy loam soils	<p>Forest stand: Silver birch (<i>Betula pendula</i>) Downy birch (<i>Betula pubescens</i>)</p> <p>Undergrowth: No information available</p> <p>Herbaceous layer: Sheep's fescue (<i>Festuca ovina</i>)</p>

Plant communities	Occurrence	Soils	Species composition
			Giant fescue (<i>Festuca gigantea</i>) Wood small-reed (<i>Calamagrostis epigejos</i>) Smooth meadow-grass (<i>Poa pratensis</i>) Wood bluegrass (<i>P. nemoralis</i>) Rough bluegrass (<i>P. trivialis</i>) Flattened meadow-grass (<i>P. compressa</i>) Wood millet (<i>Milium effusum</i>) Cock's-foot grass (<i>Dactylis glomerata</i>) Matgrass (<i>Nardus stricta</i>) and others.
Birch forests with herbaceous layer of wood sorrel, bracken and bishop's weed	Patches mostly in waterlogged areas of the Prilepsky Protected Landscape Area	Sod-podzolic sandy and sandy loam soils	Forest stand: Silver birch (<i>Betula pendula</i>) Aspen (<i>Populus tremula</i>) Scots (common) pine (<i>Pinus sylvestris</i>) Norway (common) spruce (<i>Picea abies</i>) Pedunculate oak (<i>Quercus robur</i>) Undergrowth: Broad-leaved species
Willow formations	Prilepsky Protected Landscape Area Forest edges, cleared spaces on waterlogged soils and overgrowing abandoned meadows.	Sod-podzolic sandy and sandy loam soils	Grey willow (<i>Salix cinerea</i>) Eared willow (<i>S. aurita</i>) Goat willow (<i>S. caprea</i>)
Black alder forests	Limited occurrence in the Prilepsky Protected Landscape Area. Occur in several subcompartments of separate forest compartments and as small patches in local depressions. Usually occur in waterlogged depressions amidst spruce forests and as patchy belts lining the streams.	Sod-podzolic sandy and sandy loam soils	Forest stand: Black alder (<i>Alnus glutinosa</i>) Undergrowth: <i>No information available</i> Herbaceous layer: <i>No information available</i>
Grey alder forests	Limited occurrence in the Prilepsky Protected Landscape Area. Occur in several subcompartments of separate forest compartments and as small patches in local depressions.	Sod-podzolic sandy and sandy loam soils	Forest stand: Grey alder (<i>Alnus incana</i>) Undergrowth: <i>No information available</i> Herbaceous layer:

Plant communities	Occurrence	Soils	Species composition
	Small patches near watercourses, edges of farm fields, in cavities and as an admixture in small-leaved young growth.		<i>No information available</i>
Pine forests with admixture of spruce, birch and aspen	Prilepsky Protected Landscape Area	Sod-podzolic sandy loam and loam soils	Forest stand: Scots (common) pine (<i>Pinus sylvestris</i>) Norway (common) spruce (<i>Picea abies</i>) Silver birch (<i>Betula pendula</i>) Aspen (<i>Populus tremula</i>) Undergrowth: <i>No information available</i> Herbaceous layer: <i>No information available</i>
Aspen forests	Limited occurrence in the Prilepsky Protected Landscape Area. Occur in several subcompartments of separate forest compartments and as small patches in local depressions.	Sod-podzolic sandy and sandy loam soils	Forest stand: Aspen (<i>Populus tremula</i>) Undergrowth: <i>No information available</i> Herbaceous layer: <i>No information available</i>
Riparian vegetation	Floodplain of the Domelka River	Alluvial floodplain and meadow soils	<i>No information available</i>
Bog vegetation	Patches in river floodplains and depressions	Alluvial floodplain and meadow soils Peaty-swamp soils	Common reed (<i>Phragmites australis</i>) Purple smallreed (<i>Calamagrostis lanceolata</i>) Reed canary grass (<i>Phalaris arundinacea</i>) Marsh marigold (<i>Caltha palustris</i>) Sedges (<i>Carex sp.</i>) and others.
Forest shelterbelts	Lining the P-80 motorway	Anthropogenically transformed soils	Mixed plantations of Norway (common) spruce (<i>Picea abies</i>), Silver birch (<i>Betula pendula</i>), Scots (common) pine (<i>Pinus sylvestris</i>), linden (<i>Tilia sp.</i>) and aspen (<i>Populus tremula</i>).
Weed vegetation of agricultural lands	Ploughlands, pastures and areas along the P-80 motorway	Anthropogenically transformed soils	Couch grass (<i>Elytrigia repens</i>) Creeping thistle (<i>Cirsium arvense</i>) Field sowthistle (<i>Sonchus arvensis</i>) Horse sorrel (<i>Rumex confertus</i>) Shepherd's purse (<i>Capsella bursa-pastoris</i>)

Plant communities	Occurrence	Soils	Species composition
			Spear saltbrush (<i>Atriplex patula</i>) Bachelor's button (<i>Centaurea cyanus</i>) Wild oat (<i>Avena fatua</i>) and others.
Ruderal vegetation	Derelict lands, little used or unused areas and other habitats with disturbed natural vegetation due to human activity	Anthropogenically transformed soils	Absinthium (<i>Artemisia absinthium</i>) Field sagewort (<i>Artemisia campestris</i>) Curly dock (<i>Rumex crispus</i>) Hoary alyssum (<i>Berteroa incana</i>) Greater plantain (<i>Plantago major</i>) Common dandelion (<i>Taraxacum officinale</i>) Large-leaved lupine (<i>Lupinus polyphyllus</i>)
Vegetation of residential areas	Near residential areas and along the P-80 motorway	Anthropogenically transformed soils	Planted lawn grasses and flowers, shrubberies, plantations of cultivated ligneous plants

3.12 WILDLIFE

According to zoogeographical classification, the Project implementation area is located in the transitional zoogeographical district.

The engineering and environmental survey reports provide field survey data and information obtained from literary sources.

3.12.1 *Insects*

Entomological complexes in the area of the proposed activities are represented mostly by species that widely occur in respective ecosystems within the entire territory of Belarus.

A complete list of insect species is not provided.

3.12.2 *Fish*

Species of fish inhabiting both still and streaming waters are the dominant fauna of the Domelka River, which is crossed by the subject road section:

- Common roach (*Rutilus rutilus*);
- Common gudgeon (*Gobio gobio*);
- Common ruffe (*Gymnocephalus cernuus*);
- River perch (*Perca fluviatilis*) and others.

A complete list of fish species of the Domelka River is not provided.

According to the Integrated Map of National Fishing Grounds approved by the Decree the Ministry of Agriculture and Food of the Republic of Belarus No. 29 of 18 June 2014, no fishing grounds are in place in the watercourses crossed by the subject road section.

3.12.3 *Amphibians and reptiles*

The Project implementation area is inhabited by species of amphibians and reptiles that widely occur in the entire territory of Belarus.

The following species of amphibians occur in different types of habitats (forests, riparian areas, etc.):

- Marsh frog (*Rana ridibunda*),
- Edible frog (*Pelophylax esculenta*),
- Fire-bellied toad (*Bombina bombina*),
- Common toad (*Bufo bufo*),
- Green toad (*Bufo viridis*),
- Tree frog (*Hyla arborea*),
- Common spadefoot (*Pelobates fuscus*),
- Common newt (*Lissotriton vulgaris*) and others..

Widely occurring reptile species are:

- Sand lizard (*Lacerta agilis*),
- Viviparous lizard (*Zootoca vivipara*),

- Grass snake (*Natrix natrix*),
- Slowworm (*Anguis fragilis*),
- Common adder (viper) (*Vipera berus*).

No distribution of amphibians and reptiles by identified plant communities (habitats) is provided in the submitted documents.

The engineering and environmental surveys revealed the necessity to perform additional field surveys during preparation of the design documentation in order to identify eventual migration corridors, their locations and use by amphibians.

3.12.4 *Birds*

Birds of the following orders inhabit the subject area:

- Passerines (*Passeriformes*),
- Anserines (*Anseriformes*),
- Diurnal birds of prey (*Falconiformes*),
- Storks (*Ciconiiformes*),
- Gruiformes (*Gruiformes*),
- Wading birds (*Charadriiformes*),
- Pigeons (*Columbiformes*),
- Piciformes (*Piciformes*) and others.

The Passerines are the dominant order. Other abundant species are in the orders Anserines and Charadriiformes birds.

The table below provides the list of bird species and their habitats in the Project implementation area (Table 3.12-1).

Table 3.12-1 List of bird species and their habitats in the Project implementation area

Habitats / plant communities	Species
Agricultural lands and pastures / weed vegetation of agricultural lands	Whinchat (<i>Saxicola rubetra</i>), Tawny pipit (<i>Anthus campestris</i>) Lapwing (<i>Vanellus vanellus</i>) Field lark (<i>Alauda arvensis</i>) Common whitethroat (<i>Sylvia communis</i>) Yellowhammer (<i>Emberiza citrinella</i>) and others Common buzzard (<i>Buteo buteo</i>) Marsh harrier (<i>Circus aeruginosus</i>) Montagu's harrier (<i>Circus pygargus</i>)
Near settlements and on agricultural lands / weed vegetation of agricultural lands, ruderal vegetation, vegetation of residential areas	Hooded crow (<i>Corvus cornix</i>) Rook (<i>Corvus frugilegus</i>) Magpie (<i>Pica pica</i>) Jackdaw (<i>Corvus monedula</i>) White wagtail (<i>Motacilla alba</i>) House sparrow (<i>Passer domesticus</i>) Barn swallow (<i>Hirundo rustica</i>) House martin (<i>Delichon urbica</i>) Whinchat (<i>Saxicola rubetra</i>) Yellowhammer (<i>Emberiza citrinella</i>) and others
Forest communities / Spruce forests, pine forests, birch forests, black alder forests, grey alder	Chaffinch (<i>Fringilla coelebs</i>) Chiffchaff (<i>Phylloscopus collybita</i>) Wood warbler (<i>Ph. sibilatrix</i>)

forests, willow formations, aspen forests, pine forests with admixture of spruce, birch and aspen	Great tit (<i>Parus major</i>) Tree pipit (<i>Anthus trivialis</i>) Wren (<i>Troglodytes troglodytes</i>) Dunnock (<i>Prunella modularis</i>) Pied flycatcher (<i>Ficedula hypoleuca</i>) Oriole (<i>Oriolus oriolus</i>) Common cuckoo (<i>Cuculus canorus</i>) Great spotted woodpecker (<i>Dendrocopos major</i>) Jay (<i>Garrulus glandarius</i>) and others
Inland bodies of fresh water and waterlogged areas / Riparian vegetation, bog vegetation	Mallard (<i>Anas platyrhynchos</i>) White stork (<i>Ciconia ciconia</i>) Grey heron (<i>Ardea cinerea</i>) Garganey (<i>Anas querquedula</i>) Common teal (<i>Anas crecca</i>) Black-headed gull (<i>Larus ridibundus</i>) and others

No bird species listed in the Red Book of the Republic of Belarus, which may be potentially exposed to anthropogenic impacts, are described for the area of the proposed activities.

3.12.5 *Mammals*

The Project implementation area provides habitat for widely occurring mammal species typical of natural forest landscapes and open landscapes (Table 3.12-2).

Table 3.12-2 *List of mammal species and their habitats in the Project implementation area*

Habitats / plant communities	Species
Agricultural lands and pastures / weed vegetation of agricultural lands	Common vole (<i>Microtus arvalis</i>) Field (short-tailed) vole (<i>Microtus agrestis</i>) Root vole (<i>Microtus oeconomus</i>) Bank vole (<i>Myodes glareolys</i>) Striped field mouse (<i>Apodemus agrarius</i>) Common mole (<i>Talpa europaea</i>) Shrews (<i>Sorex sp.</i>) and others Заяц-русак (<i>Lepus europaeus</i>) European (brown) hare (<i>Lepus timidus</i>) Red fox (<i>Vulpes vulpes</i>) Forest polecat (<i>Mustela putorius</i>) Weasel (<i>Mustela nivalis</i>)
Forest communities / Spruce forests, pine forests, birch forests, black alder forests, grey alder forests, willow formations, aspen forests, pine forests with admixture of spruce, birch and aspen	European roe deer (<i>Capreolus capreolus</i>) Wild boar (<i>Sus scrofa</i>) Elk (<i>Alces alces</i>) Red squirrel (<i>Sciurus vulgaris</i>) Pine marten (<i>Martes martes</i>) White hare (<i>Lepus timidus</i>) Forest polecat (<i>Mustela putorius</i>) Red fox (<i>Vulpes vulpes</i>) and other mammal species

The subject road section (km 0.000 – km 14.770) crosses wildlife management areas managed by wildlife management authorities of Minsk and Smolevichi districts. Both are district offices of the Byelorussian Society of Hunters and Fishermen.

According to the Map of Major Migration Corridors of Ungulates in the Republic of Belarus (Figure 3.12-1) the P-80 motorway crosses the migration corridor M2-M3-M6-M7.

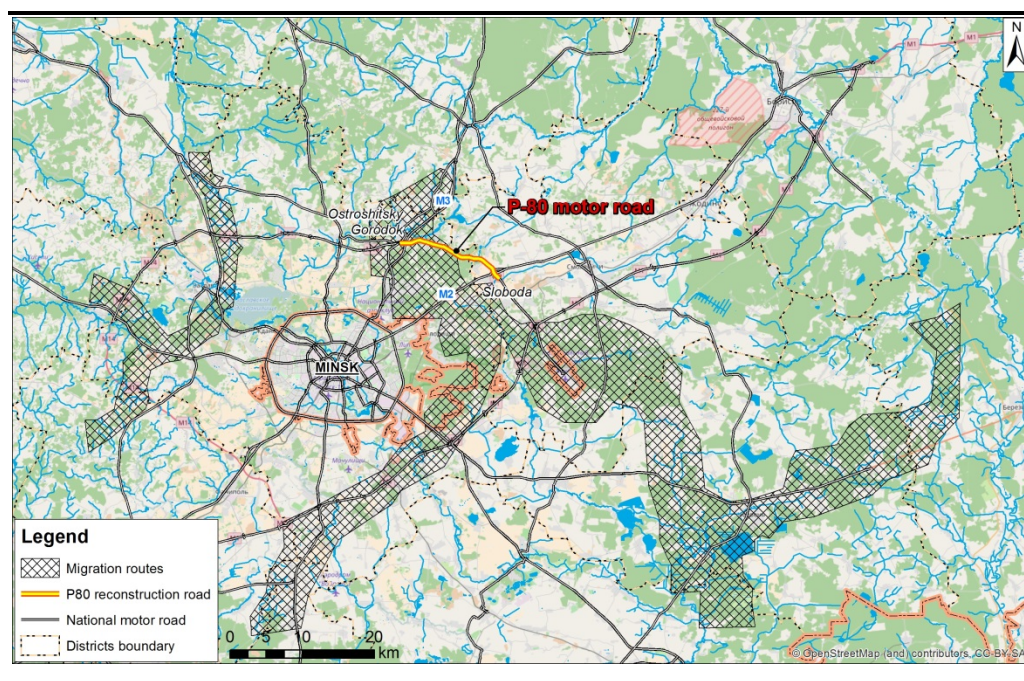


Figure 3.12-1 Map of major migration corridors of ungulates in the Project implementation area

Spatial distribution of road accidents involving wild animals in the subject road section is shown in Figure 3.12-2.

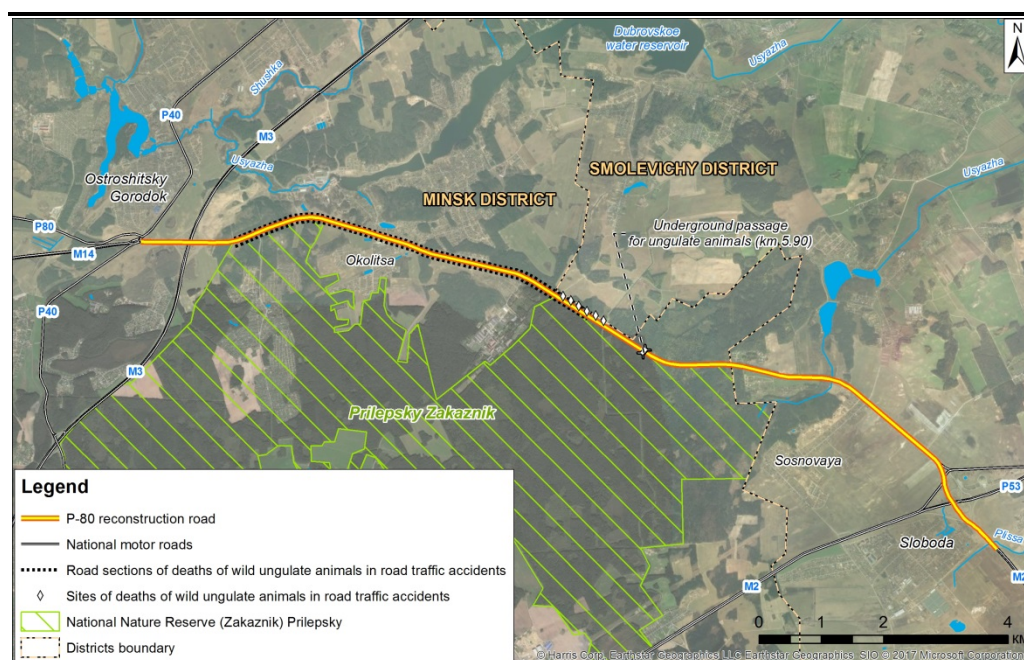


Figure 3.12-2 Spatial distribution of road accidents involving wild animals

4.1

ADMINISTRATIVE STRUCTURE

The P-80 section proposed for reconstruction crosses Minsk and Smolevichi districts of Minsk Region (Figure 4.1-1).

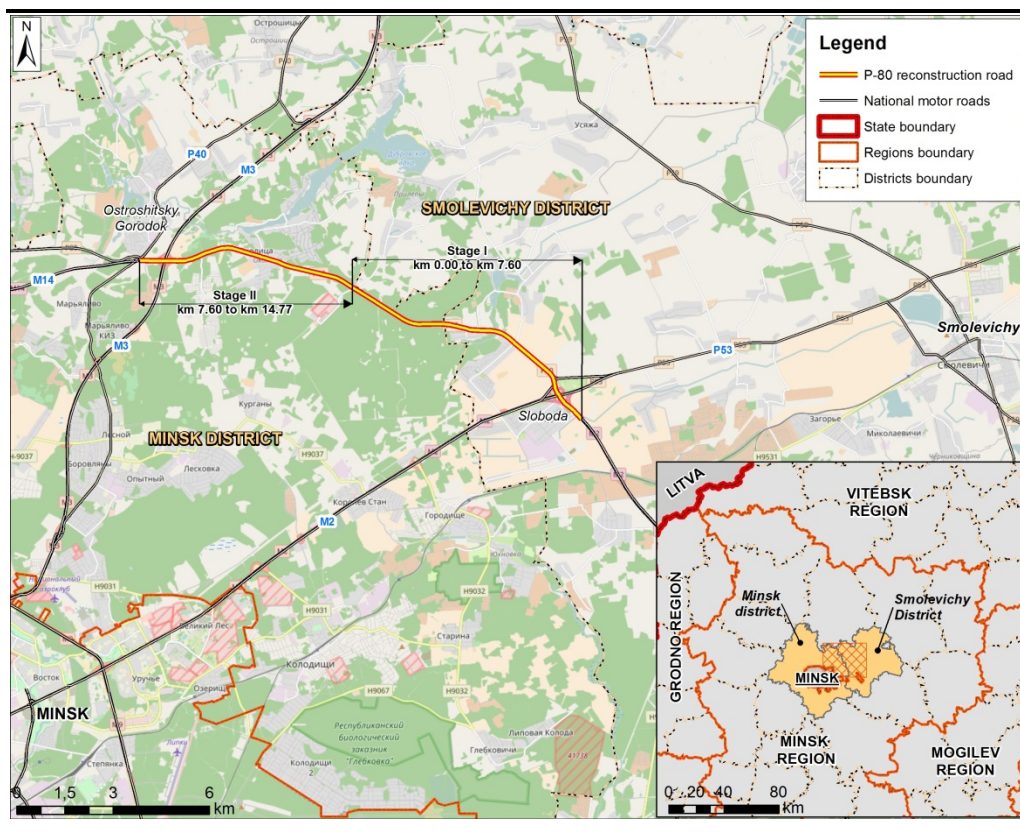


Figure 4.1-1 Administrative map of the Project implementation area

The P-80 motorway crosses densely populated areas and is an important transport link for the local communities.

4.2

POPULATION SETTLEMENT PATTERN

The capital of the Republic of Belarus is Minsk, which is also the administrative centre of Minsk Region and Minsk District. The District is situated in the middle of both Minsk Region and the Republic of Belarus. It borders on Vileyka, Logoysk, Molodechno districts in the north; Volozhin District in the west; Dzerzhinsk District in the south-west, Pukhovichsky and Uzda districts in the south, Cherven District in the south-west and Smolevichi District in the east. All of them are districts of Minsk Region.

Smolevichi District is located in the northeast of the central part of Minsk Region. It borders on Logoysk and Borisov districts in the north, Cherven District in the southeast and Minsk District in the west. All of them are districts of Minsk Region.

Minsk District is administratively divided into 18 rural and 1 settlement councils, whereas Smolevichi District is comprised of 9 rural councils.

According to the National Committee on Statistics of the Republic of Belarus, the population of Minsk and Smolevichi districts as of 1 January 2017 equalled 208.8 and 45.8 thousand inhabitants respectively.

In line with the Government Program for Restoration and Development of Rural Communities for the period of 2005 until 2010, a network of agrotowns as core rural settlements was created in both districts.

The P-80 motorway is a road of national significance providing transport linkages for the city of Minsk and the nearest settlements of Minsk Region. The km 0.000 – km 14.770 section of the P-80 motorway Sloboda – Papernya is the most important transport link for 27 settlements with the total population of 7,085 people.

The road passes a number of settlements (*Figure 4.2-1*):

- In Minsk District:
 - Ostroshitsky Gorodok (2,800 inhabitants);
 - Belye Luzhi (22 inhabitants);
 - Raubichi (483 inhabitants);
 - Okolitsa (with 538 inhabitants living in the village and 819 in the military town near a military installation), *this settlement is divided by the road into two parts; and*
 - (819 inhabitants).
- In Smolevichi District:
 - Baguta (53 inhabitants),
 - Sosnovaya (308 inhabitants),
 - Sloboda (2,882 inhabitants), and
 - Tavalga dachas¹.

¹ Translator's note. 'Dacha' is an allotment with a cottage normally near a large city used for leisure and growing garden crops

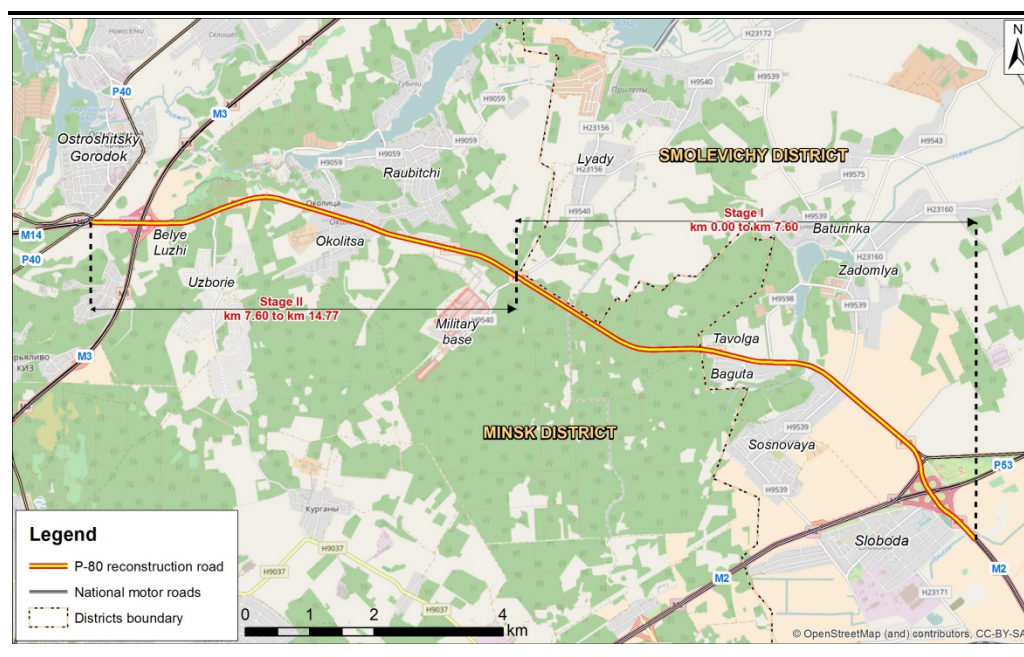


Figure 4.2-1 Settlements located near the P-80 motorway

Major functional types of the above settlements are listed in Table 4.2-1 below.

Table 4.2-1 Types of settlements located within the direct Project influence area

Settlement	Functional type of settlement
Ostroshitsky Gorodok	Industry and service multifunctional settlement with developed public services
Okolitsa	Agricultural settlement with undeveloped public services
Raubichi	Recreational settlement with concentration of non-agricultural businesses
Belye Luzhi	Agricultural settlement with undeveloped public services
Sloboda	Industrial and agricultural, agroindustrial and agricultural settlement with developed public services
Sosnovaya	Recreational and agricultural settlement with undeveloped public services
Baguta	Agricultural settlement with undeveloped public services

4.3 DEMOGRAPHY

Minsk District is distinguished by a favourable demographic situation with stable population growth since 2006 (Figure 4.3-1) accompanied by growing birth rate and falling death rate. The population of Smolevichi District is more stable. However, the past years witnessed a small population growth.

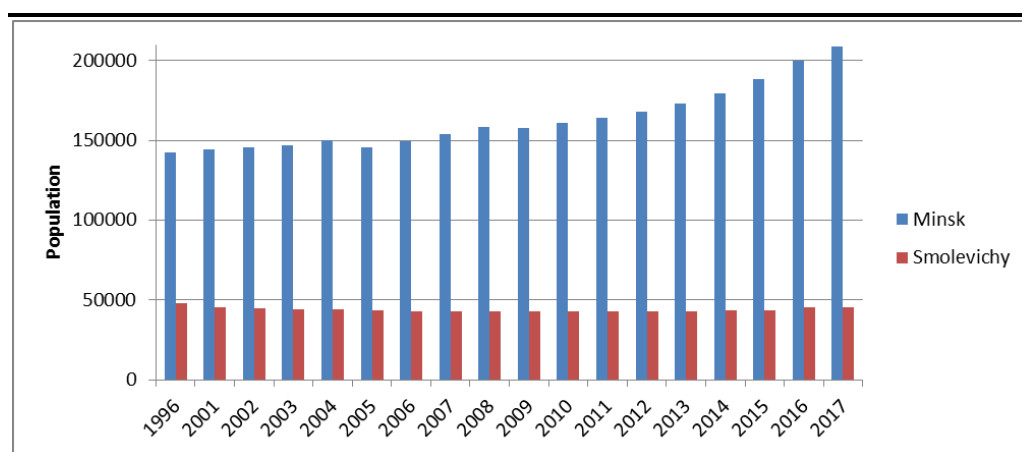


Figure 4.3-1 *Population Trends in Minsk and Smolevichi districts between 1996 and 2017*

Urban and rural population figures are shown in the table below (*Table 4.3-1*). Urban and rural population increased in Minsk and Smolevichi districts between 2011 and 2016 with most intensive growth in rural settlements of Minsk District. The proportion of women and men in the population of Minsk District is 53.1% and 46.9% respectively.

Table 4.3-1 *Urban and rural population in Minsk and Smolevichi districts in 2016*

District	Total population	Urban population	Rural population	Urban population in per cent	Rural population in per cent
Minsk District	200,115	23,466	173,646	11.7	86.8
Smolevichi District	45,308	17,663	27,645	39.0	61.0

The demography of Minsk District substantially differs from other districts of the country. The district is characterized by a stable rate of natural increase supported by a positive migration rate (*Table 4.3-2*). Smolevichi District is characterised by negative dynamics of natural change, which is compensated by positive net migration rate.

Table 4.3-2 *Rates of natural increase/loss in Minsk and Smolevichi districts between 2011 and 2016, ‰*

District	Total rates, ‰	2011	2012	2013	2014	2015	2016
Minsk District	Birth rate	15.9	17	16.5	16	16.9	15.8
	Death rate	12	10.8	10.3	9.4	9.6	8.9
	Rate of natural increase	3.9	6.2	6.2	6.6	7.3	6.9
	Net migration rate	17.8	18.5	21.4	29.3	42.1	52.1
Smolevichi District	Birth rate	13.7	14.9	14.9	14.1	15	14.1
	Death rate	17.6	15.4	14.9	13.5	13.4	14.2

District	Total rates, ‰	2011	2012	2013	2014	2015	2016
	Rate of natural increase	-3.9	-0.5	0	0.6	1.6	-0.1
	Net migration rate	4.3	1.4	9.4	7.1	7.4	30.3

The demography of settlements located in the immediate vicinity of the P-80 section proposed for reconstruction is detailed in *Table 4.3-3*.

Table 4.3-3 *Rates of natural increase and net migration rates in 2016 within the direct Project influence area*

Settlement	Rate of natural increase (loss)			Net migration rate		
	Number of people born	Number of people deceased	Rate of natural increase (loss)	Number of people born	Number of people deceased	Net migration rate
Minsk District						
Ostroshitsky Gorodok	23	49	-26	372	151	221
Belye Luzhi	0	0	0	1	0	1
Okolitsa	4	2	2	21	21	0
Raubichi	2	0	2	56	44	12
Smolevichi District						
Sloboda	38	9	29	105	133	-28
Baguta	1	1	0	4	2	2
Sosnovaya	3	2	1	52	18	34

Rural settlements within the Project influence area are characterized by a high proportion of the working-age population (*Table 4.3-4*). The only exception is Ostroshitsky Gorodok, where the proportion of people older than the working-age population reaches 30%. Settlements of Smolevichi District have a higher proportion of children.

Table 4.3-4 *Population and age structure within the direct Project influence area as of 1 January 2017*

Districts and settlements	Total population	Proportion of people (in per cent)		
		Younger than the working-age population	Working-age population *	Older than the working-age population
Minsk District				
Ostroshitsky Gorodok	2,800	11	59	30
Okolitsa	538	14	67	19
Raubichi	483	13	63	24
Belye Luzhi	22	16	57	27
Smolevichi District				
Sloboda	2,882	26	60	14

Districts and settlements	Total population	Proportion of people (in per cent)		
		Younger than the working-age population	Working-age population *	Older than the working-age population
Sosnovaya	308	21	55	25
Baguta	53	24	59	17

* In accordance with labour regulations of the Republic of Belarus, the working age of men is from 16 to 59 and women from 16 to 54.

Minsk and Smolevichi districts are mono-national areas as the entire Minsk Region and are characterised by a single dominant ethnic group. **No indigenous peoples live in Minsk and Smolevichi districts and they will not be affected by the proposed Project activities.**

Socially vulnerable groups in terms of road/traffic safety in settlements within the Project operations area were identified and include:

- children under 18 years of age, including those of pre-school (0-5) age;
- disabled persons of Group I and II;
- disabled children;
- families at social risk¹; and
- families in need of public protection².

These groups are particularly large in big rural settlements, e.g. agricultural settlement of Sloboda and Ostroshitsky Gorodok.

Table 4.3-5 Socially vulnerable groups

Districts and settlements	Socially vulnerable groups					
	children under 18 years of age	including children of pre-school (0-5) age	adult disabled persons of Group I and II	disabled children	families at social risk	families in need of public protection
Minsk District						
Ostroshitsky Gorodok	272	170	53	6	4	0
Belye Luzhi	3	3	0	0	0	0
Okolitsa	69	58	9	2	0	0
Raubichi	77	40	2	4	0	0
Smolevichi District						
Baguta	11	3	0	0	0	0
Sosnovaya	74	37	0	2	0	0
Sloboda	743	205	3	14	8	1
Total	1249	516	67	28	12	1

¹ Families with parents (or other legal representatives of minors) fail to perform their duties with regard to upbringing, education and/or care of children, or have adverse effect on the children's behaviour

² If measures for support families at social risk do not produce any positive results, these families are recognised as those in need of the public protection, e.g. child protection services take the care and protection of children from these families and minors are placed in social care institutions

The Project implementation area associated with reconstruction of the subject P-80 section is located in the suburban zone of the city of Minsk and is a key area in the territorial structure of the Minsk agglomeration. According to the integrated map of the territorial structure of the Minsk suburban zone, the subject area is categorized as the area reserved for the development of the country's capital city. Its social and economic development is aimed at:

- establishment and development of environmentally safe small and medium-sized businesses linked with the economy of Minsk;
- active development of the recreation and entertainment sector, concentration of trade and trade infrastructure;
- development of highly intensive agriculture with focus on poultry farming, pig-breeding, dairy cattle breeding and vegetable growing with developed potato farming;
- development of the recreation sector focused on short time rest (1 to 3 days) with an expansion of the associated commercial services; and
- development of multimodal transport and logistic complexes with expanded production.

4.4.1

Industry

The following enterprises are located in Sloboda of Smolevichi District:

- ZAO Istela Rosa CJSC, a manufacturer of flavouring compositions and food concentrates for drinks, confectionery and gastronomic products for the food industry (stabilizers, kvass concentrates, sauces, ketchup, mayonnaise, natural food colours, etc.) as well as feed additives and concentrates for the agricultural sector;
- OOO Salatoria, a producer of fresh ready-to-eat salads; and
- OOO Svetlana, a producer of concrete, masonry mortar and lime plaster, lessor of concrete pumps and concrete pumper trucks.

The following industrial enterprises are located in Minsk District in the immediate vicinity of the P-80 section proposed for reconstruction:

- UE Tetraedr production and warehousing facility in Ostroshitsky Gorodok, a research and production enterprise specializing in development and manufacture of hardware and software used in radar and radio electronic control assets, including weapon systems; and
- Production facility of AMTEngineering Ltd. rented by OOO Engineering Center AMTEngineering in Ostroshitsky Gorodok. OOO Engineering Center AMTEngineering is a designer and manufacturer of metal-working equipment.

Thus, Minsk and Smolevichi districts have a developed industrial sector with enterprises of various sectors of economy and various levels of specialization, including export-oriented businesses. Five enterprises of the seven subject settlements are located in agrotowns. Two of them are hi-tech businesses located in Ostroshitsky Gorodok (a research and production enterprise

specializing in development and manufacture of hardware and software used in radar and radio electronic control assets, including weapon systems, and a manufacturer of metal-working equipment for heavy industry). Slovoda is home for two food industry enterprises and one manufacturer of concrete and construction mixes, which also leases construction machinery.

4.4.2 *Agriculture*

Two agricultural enterprises are located adjacent to the P-80 section proposed for reconstruction: ChUP Ozeritsky-Agro in Smolevichi District and OAO Pervaya Minskaya Ptitsefabrika (a subsidiary of Ostroshitsky Gorodok agricultural enterprise) in Minsk District. Key performance indicators of these agricultural enterprises are shown in *Table 4.4-1* below.

Table 4.4-1 *Key performance indicators of ChUP Ozeritsky-Agro and OAO Pervaya Minskaya Ptitsefabrika, a subsidiary of Ostroshitsky Gorodok agricultural enterprise, in 2016*

Performance indicators	ChUP Ozeritsky-Agro	OAO Pervaya Minskaya Ptitsefabrika, a subsidiary of Ostroshitsky Gorodok agricultural enterprise
Headcount	493	287
Number of tractors	56	29
Number of trucks	22	16
Number of busses	4	1
Area of farmlands, ha, including	8,211	4,609
ploughlands, ha	7,000	4,000
meadows, ha	1,211	609
Gross croppage, including leguminous crops, t	14,825	6,780
Gross potato harvest, t	11,663	1,290
Gross vegetables harvest, t	3,733	-
Cattle stock	6,129	1,500
including cows	2,360	800
Milk yield per cow, kg	7,714	5,890
Cargo carriage (freight) volume during the year, thousand tons (according to specialists of the companies)	over 400	over 400

4.4.3 *Trade and services sector*

Twenty-five trade businesses are located in Ostroshitsky Gorodok, including 17 shops, warehouses and a pharmacy. Catering facilities include two canteens in educational institutions.

A sports centre is located in Raubichi. The village has also several trade and catering facilities, including a canteen, a lunchroom and bar in the training centre of the National Bank of the Republic of Belarus, one shop, one small café and two cafés in hotels of the Raubichi sports centre. One café ('Oasis') is located near the entrance of the sports centre at km 12 of P-80.

Four shops and several warehouses are located in Okolitsa.

Sloboda has 7 retail shops, 2 wholesale stores, 4 pavilions (one of them at the halt platform of the railway) and one kiosk.

In Sosnovaya, one café is located in the Sosnovaya recreation camp of ChUP Ozeritsky-Agro.

4.5

LABOUR MARKET AND HOUSEHOLD INCOMES

Labour resources and labour market of Mink and Smolevichi districts are influenced by the following factors:

- inclusion of the subject districts in the suburban zone of the city of Minsk and the Minsk agglomeration; and
- location of several production and social facilities of national significance in these districts (for instance, the Minsk national airport managed by Minsk authorities and the Raubichi Olympic training centre for winter sports).

A further factor of influence is a circular migration between urban and rural settlements of the districts and between the districts and the city of Minsk. A geographical proximity of the capital's labour market of high capacity, payroll rates, dynamism, diversity of jobs and a high level of the public transport development within the Minsk agglomeration evokes active daily movements of labour resources.

Besides, in the warm season, a part of Minsk inhabitants prefer to live in country houses located in gardening partnerships and dacha communities, which results in seasonal increases of the circular migration.

Labour resources of Minsk District are about 140 thousand people. Over 50 thousand people in the district are migrant employees.

Businesses of the non-productive sector are major employers in the district in general and in rural settlements in particular with the share of trade and services of about 60%. About 25% of the total number of the district's working people are employed in industry, 9% in construction and about 6% in agriculture and forestry.

Labour resources of Smolevichi District are about 65 thousand people. About one thousand of the district's inhabitants are employed by enterprises and organizations of the city of Minsk and Minsk District, which accounts for approximately 1.5% of the district's total employment.

The productive sector dominates in the district's total employment with a share of about 60%, of which 55% of people work in cities and towns and 70% in rural areas. Agriculture is the basis of employment in rural areas. Its share in total employment is about 42. The non-productive sector includes transport and communications (about 30 % of total employment), education (18 %), trade and repair services (15 %), healthcare and social services (10 %).

In late 2016, the number of the registered unemployed in Minsk District accounted for 252 people or 0.2% of the economically active population (against 0.3% in 2015), which is lower than the Region's average (0.7%). In Smolevichi District, 79 people were registered as unemployed in late 2016, which accounts for 0.3% of the economically active population (against 0.7% in 2015).

The average monthly wage is a major indicator reflecting household incomes. In 2016 in Minsk District it amounted to 890 Belarusian roubles, which corresponds to about USD 460 (123 % of the Regions' average), and in Smolevichi District 727 Belarusian roubles or USD 375 (about 100% of the Region's average). The real wages in per cent to the last year in both districts decreased by about 4%.

The level of employment in settlements located in the immediate vicinity of the P-80 motorway is partly supported by labour migrations to the Minsk agglomeration and partly by local enterprises and organisations. *Table 4.5-1* below contains a list of such enterprises with a headcount of over 50 people.

Table 4.5-1 *Major employers in settlements located close to the road (enterprises and organisations with a headcount of over 50 people)*

Settlement	Enterprise
<i>Ostroshitsky Gorodok</i>	DEU-5 (road maintenance service) Secondary school of Ostroshitsky Gorodok UE Tetraedr production and warehousing facility, a research and production enterprise specializing in development and manufacture of hardware and software used in radar and radio electronic control assets, including weapon systems OOO Engineering Center AMTEngineering, a designer and manufacturer of metal-working equipment Children's hospital of medical rehabilitation (180 employees) OAO Pervaya Minskaya Ptitsefabrika, a subsidiary of Ostroshitsky Gorodok agricultural enterprise Psychoneurologic boarding school No. 1 (439 employees + 100 new jobs are expected)
<i>Okolitsa</i>	Military post 3310
<i>Raubichi</i>	Raubichi Olympic training centre for winter sports. Training centre of the National Bank of the Republic of Belarus
<i>Sloboda</i>	Secondary school of Ozeritskaya Sloboda ChUP Ozeritsky-Agro OAO Smolevichi Broiler (poultry farm)
<i>Sosnovaya</i>	Sosnovaya recreation camp

Household plots and the use of ecosystem services are very important for household incomes. Household plots in rural settlements are attached to houses (kitchen gardens, orchards, livestock, etc.). Household budgets are sometimes appreciably enlarged by incomes derived from ecosystem services: gathering of mushrooms, berries and other wild plants, fishing, etc.

The proposed P-80 reconstruction, including the construction of new driveways and viaducts, will not affect ecosystem services. Therefore, the Project impact on ecosystem services is not assessed.

4.6 HEALTHCARE

4.6.1 Public health

The overall morbidity level in Minsk region tends to grow as in the country in general. In 2016, the number of new cases per 100,000 inhabitants amounted to 79,747.1, which is 1.6 % higher than 5 years ago but 4.2% lower than the country's average..

Divergent trends can be observed in some groups of diseases. Morbidity rates dropped in the following groups of diseases in 5 years:

- infectious and parasitic diseases (94.6% against 2012);
- mental and behavioural disorders (91.9%);
- diseases of the central nervous system (92.4%),
- diseases of the musculoskeletal system and connective tissue (94.1%);
- congenital anomalies, deformities and chromosomal alterations (96,4%);
- injuries, poisoning and some other consequences of external causes (96.9%).

Morbidity rates are growing in all other groups of diseases, especially in the following five groups:

- endocrine, nutrition and metabolic disorders (132.2% against 2012);
- diseases of the eye and adnexa (119.3%);
- diseases of the circulatory system (116.9%);
- ear and mastoid process diseases (114.7%);
- neoplasms (109.3%).

Respiratory diseases are characterized by the highest morbidity rates. In 2016, the number of reported cases was 40,036.7 per 100,000 inhabitants, which is somewhat lower than the country's average (43,297.5). Injuries, poisoning and some other consequences of external causes rank second: 7,264.3 reported cases per 100,000 inhabitants, which is also slightly lower than the country's average. Diseases of the skin and subcutaneous tissue rank third: 4,820.0 reported cases, which is 16% higher than the country's average. Diseases of the musculoskeletal system and connective tissue rank fourth: 4,537.5 reported cases, which is also appreciably higher than the country's average. Diseases of the circulatory system rank fifth and exceed the average level by 18%.

Influenza and acute upper respiratory infections rank first among infectious diseases. Acute intestinal infections rank second.

More than 40 thousand people in the region are registered as patients with malignant diseases and over 940 people as having active tuberculosis. Over 12 thousand people are followed up in T.B. prophylactic centres as patients with active tuberculosis and about 28 thousand people are followed up in healthcare institutions as patients suffering from alcoholism and alcoholic psychosis..

The number of people at the age of 18 and over for the first time recognized as disabled persons increased 1.3 times in 5 years and amounted in Minsk Region to 8,681, of them 4,351 are women (50.1% of the total number). Among able-bodied people 3,369 persons were for the first time recognized as disabled persons, of them 963 are women (28.6%).

Diseases of the circulatory system are the leading causes of death. In 2016, in Minsk and Smolevichi districts as well as in Minsk Region every second death of the total mortality was caused by these diseases: 57.4%, 56.9% and 55.0% respectively. Similar situation can be observed in rural areas. The second biggest mortality rate is attributable to neoplasms. Their proportion in the total mortality in Minsk District is 17.4 % and in Smolevichi District 12.3% compared to the Region's average of 13.4%. The third biggest mortality rate is attributable to external causes: 7% to 8% of the total mortality in 2016 in the subject areas.

4.6.2 *Healthcare infrastructure*

There is a branched network of healthcare institutions of different levels in Minsk and Smolevichi districts, which constitute the basis of the local healthcare infrastructure. The main healthcare institutions in the subject districts are central district hospitals comprising outpatient clinics, dental departments, maternity hospitals, specialized clinics as well as rural district hospitals and feldsher-midwife stations providing medical services in rural areas and medical stations in enterprises.

Key indicators of the availability of medical services are listed in *Table 4.6-1* below. As shown in the table, Minsk District is better provided with doctors, middle medical personnel and beds in hospitals compared to Smolevichi District.

Table 4.6-1 *Indicators of the availability of medical services in Minsk and Smolevichi districts in 2016*

Area	Number of practitioners per 10,000 inhabitants	Number of the middle medical workers per 10,000 inhabitants	Number of beds per 10,000 inhabitants
<i>Republic of Belarus</i>	39.8	119.9	80.5
<i>Minsk Region</i>	30.6	108.7	83.6
Minsk District	52.0	122.1	121.5
Smolevichi District	14.2	55.9	65.9

The Minsk central district hospital includes the outpatient clinic in Ostroshitsky Gorodok, which provides medical services for the inhabitants of Ostroshitsky Gorodok, Raubichi and Belye Luzhi.

Emergency aid is provided by a first-aid station located in Borovlyany with an affiliated station in Senitsa and aid posts in Zaslavl, Kolodischi and Gatovo.

Another healthcare institution in Ostroshitsky Gorodok is the children's hospital of medical rehabilitation located near the Usyazha Lake.

The Smolevichi central district hospital comprises an outpatient clinic in Ozeritskaya Sloboda, which also provides medical services for the inhabitants of Sosnovaya. Medical services for the inhabitants of Baguta are provided by the outpatient clinic in Prilepy.

Medical institutions in the area governed by the Ostroshitsky Gorodok Rural Council can be accessed by the local communities via the P-80 motorway. The inhabitants of Baguta can reach Prilepy by local roads crossing the P-80 motorway. Sloboda can be accessed by the inhabitants of Sosnovaya via the P-80 motorway or via local roads.

The locals crossing the motorway, particularly the inhabitants of Baguta, will have to travel longer distances because of the proposed construction of new driveways and viaducts.

4.7 SOCIAL INFRASTRUCTURE

4.7.1 Education

The education system in the Republic of Belarus is divided into four basic stages:

- pre-school education (nurseries, kindergartens);
- general basic education (required for children from the ages of six until fifteen and lasts for 9 years);
- general secondary education (completion of 11 years of school), elementary vocational education (vocational schools, lyceums) and specialized secondary education (technical schools, colleges);
- higher education.

The following educational institutions are located in the area governed by the Ostroshitsky Gorodok Rural Council:

- Secondary school of Ostroshitsky Gorodok;
- Nursery and kindergarten of Ostroshitsky Gorodok; and
- Interschool vocational training centre in Ostroshitsky Gorodok.

Schoolchildren living in Raubichi and Belye Luzhi are brought to the secondary school of Ostroshitsky Gorodok by school bus. The school is 1.4 km away from the P-80 motorway.

The following educational institutions are located in the area governed by the Ozeritskaya Sloboda Rural Council:

- Secondary school of Ozeritskaya Sloboda;
- Kindergarten of Ozeritskaya Sloboda; and
- Combined kindergarten and secondary school of Prilepy.

The secondary school of Ozeritskaya Sloboda is attended by schoolchildren from the 17 nearest villages of Minsk and Smolevichi districts. The school is 1.2 km away from the P-80 motorway. Schoolchildren also attend biathlon and football training courses delivered by a branch of the specialized Olympic reserve junior sports school of the Smolevichi District Executive Committee.

Children are brought to educational institutions by school busses, which also drive along the P-80 motorway. The premises of school is fenced with no direct access to the P-80 motorway.

The premises of kindergartens located in Ostroshitsky Gorodok and Sloboda have no access to the P-80 section proposed for reconstruction (kindergartens are located 1.2 km and 1.9 km away from the Motorway respectively).

4.7.2 *Sports*

The largest sports facilities of national significance are located in Minsk District: Olympic training centre for equestrian sports and horse-breeding in Ratomka, Olympic reserve training centre for equestrian sports of Minsk Region in Urozhainaya, Staiki Olympic sports center in Yelnitsa, Olympic training centre for winter sports in Raubichi, Sailing training centre in Kachino, Gritsevets central flying club in Borovaya, Rowing basin of the national sports mastery school in Zaslavl. A golf club was established near Kolodischi in 2001.

In Smolevichi District, the majority of sports facilities are located in secondary schools and include gyms, sports grounds, playgrounds as well as numerous recreational and fitness facilities. Large specialized and smaller sports facilities are located primarily in the capital of the district and in Zhodino, a city of region subordination.

The Olympic training centre for winter sports in Raubichi is the only sports facility located in the immediate vicinity of the P-80 section proposed for reconstruction. It is a sports facility of national significance rendering a wide range of high level services, including hosting of international competitions in winter sports.

4.7.3 *Culture*

Minsk District is host to numerous culture institutions. In 2016, they numbered 37 social activities clubs comprising various hobby clubs and numerous amateur teams. Twenty-seven libraries are open in Minsk District.

There is a rural cultural centre and a library in Ostroshitsky Gorodok. A Byelorussian folk arts museum is located in Raubichi.

Culture institutions of Smolevichi District include the Urban Cultural Centre of Smolevichi, a central district library and a children's library, the Ordzhonikidzevskaya affiliated library, a museum, a motor club, a cinema and the District Handicrafts Centre in Smolevichi.

One library is located in Sloboda.

4.8 *PUBLIC UTILITIES*

Public utilities are provided to rural communities in the subject area by two unitary public utility companies located in Minsk and Smolevichi districts respectively. The public utilities infrastructure in settlements located near the P-80 section proposed for reconstruction is described in *Table 4.8-1* below.

Table 4.8-1 *Public utilities infrastructure in settlements of Minsk and Smolevichi districts*

Rural settlement	Water	Sewage	Electricity	Heating	Natural gas
Minsk District					
Ostroshitsky Gorodok	Centralized water supply prevails (80%)	Centralized sewage system encompassing about 60% of households	All housing facilities are provided with electricity	Centralized heating prevails (60% of households)	60% of households are supplied with natural gas. About 30% of households use liquefied natural gas.
Raubichi	Autonomous water supply prevails where water is drawn from dug wells or extracted from artesian wells	Centralized sewage system is not available. Decentralized system encompasses about 80% of households	All housing facilities are provided with electricity	Individual heating. Stove heating prevails (100% of households), stove heating is preserved in households supplied with natural gas	60% of households are supplied with natural gas. About 20% of households use liquefied natural gas.
Belye Luzhi	Autonomous water supply prevails where water is drawn from dug wells	Sewage system is not available.	All housing facilities are provided with electricity	Individual heating. Stove heating prevails (100% of households)	About 80% of households use liquefied natural gas.
Okolitsa	Autonomous water supply prevails where water is drawn from dug wells	Centralized sewage system is not available. Decentralized system encompasses about 80% of households	All housing facilities are provided with electricity	Individual heating. Stove heating prevails (100% of households), stove heating is preserved in households supplied with natural gas	About 80% of households use liquefied natural gas.
Smolevichi District					
Sloboda	Centralized water supply appeared in 1970 and encompasses 80% of households	Centralized sewage system was built in 1982 and encompasses 40% of households. Decentralized system encompasses about 50% of households	All housing facilities are provided with electricity	Centralized heating encompasses 40% of households. Stove heating prevails (30% of households), stove heating is preserved in households supplied with	60% of households are supplied with natural gas. About 30% of households use liquefied natural gas.

Rural settlement	Water	Sewage	Electricity	Heating	Natural gas
				natural gas	
Sosnovaya	Autonomous water supply prevails where water is drawn from dug wells	Centralized sewage system is not available. Decentralized system encompasses about 50% of households	All housing facilities are provided with electricity	Stove heating prevails	30% of households are supplied with natural gas. About 40% of households use liquefied natural gas.
Baguta	Autonomous water supply prevails where water is drawn from dug wells	Centralized sewage system is not available. Decentralized system encompasses about 60% of households	All housing facilities are provided with electricity	Individual heating. Stove heating prevails (96% of households), stove heating is preserved in households supplied with natural gas	60% of households are supplied with natural gas. About 30% of households use liquefied natural gas.

4.9.1

Road network

Minsk and Smolevichi districts have a developed motorway and railway network, which provides good passenger traffic. The road network in the area of Project implementation is shown in *Figure 4.9-1* below.

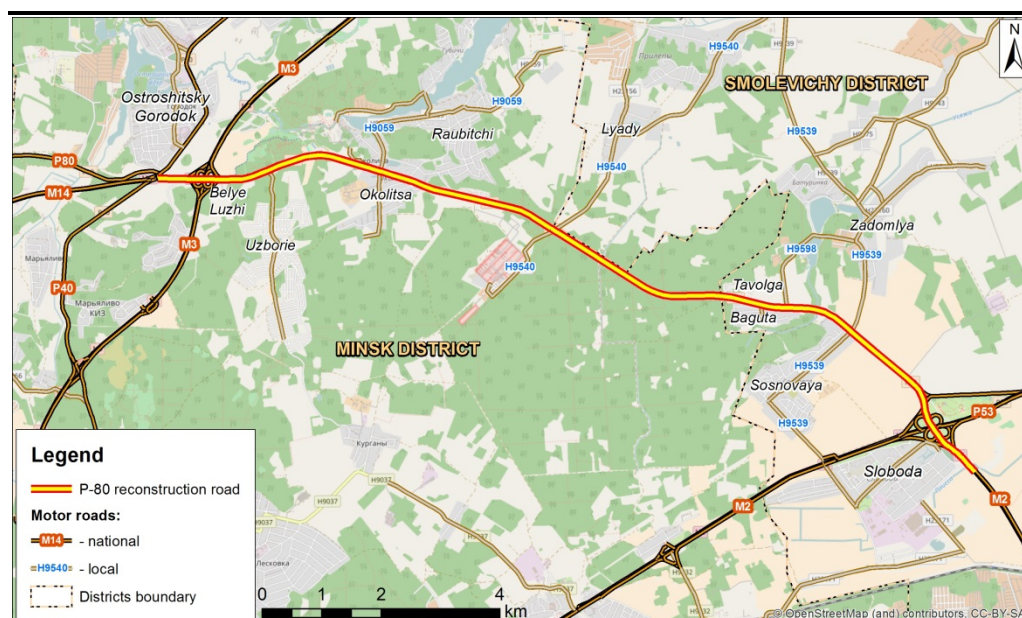


Figure 4.9-1 The road network in the area of Project implementation

The motorway network in Smolevichi District within the Project implementation area comprises:

national-level motorways:

- M-2 Minsk – Minsk National Airport;
- P-53 Sloboda - Novosady;
- P-80 Sloboda - Papernya;

local motorways:

- H-9539 Usyazha – Zadoimlya - Sloboda;
- H-9540 Prilepy - Lyady;
- H-9598 Zadoimlya - Boguta;

The motorway network in Minsk District within the Project implementation area comprises:

national-level motorways:

- M-3 Minsk - Vitebsk;
- M-14 Second ring road around the city of Minsk;
- P-40 Borovlyany - Logoisk;
- P-80 Sloboda - Papernya;
- Access road from P-80 to Uzborie;

Access road from P-80 to Okolitsa;
local motorways:
H-9059 Okolitsa – Raubichi - Krestinovo.

According to traffic volume statistics, the average annual daily traffic volume within the P-80 section of the Motorway Sloboda – Papernya proposed for reconstruction is between 4,346 and 9,256 vehicles per day.

4.9.2 *Public Transport*

Because the P-80 motorway passes in the immediate vicinity of settlements and the Raubichi sports centre, the subject road section is intensively used by public transport (12 to 86 trips per day).

Passenger transport services are provided:

in Smolevichi District:

by the Bus Depot No. 18 (Zhodino), a subsidiary of OAO Minoblavtotrans: 29 trips Smolevichi – Minsk - Smolevichi,

in Minsk District by subsidiaries of GUP Minsktrans (Minsk):

Bus Depot No. 4: 20 trips Minsk – Smolevichi - Minsk, and

Bus Depot No. 5: 21 trips Minsk – Smolevichi – Minsk.

The P-80 section proposed for reconstruction is used by minivans of OOO Evrovisa driving through Sloboda of Smolevichi District:

- Route No. 469-TK 'Minsk – Oreshniki – Smolevichi – Plisa – Chernitsky' (15 vehicles per day in one direction);
- Route No. 470-TK 'Minsk – Dinarovka – Smolevichi' (80 vehicles per day in one direction),
- Route No. 463-TK 'Minsk – Goncharovka – Atlant-2 gardening partnership in Dubrovka (2 vehicles per day in one direction).

Passengers traveling between Minsk and Ostroshitsky Gorodok are transported in minivans by ODO Ekspresslinii (13 vehicles per day in one direction).

Passengers travelling between Raubichi and Minsk can use only buses provided by OAO Minobltrans and GUP Minstrans..

4.9.3 *Traffic intensity*

The existing traffic intensity on P-80 varies from 4.3 thousand to 9.1 thousand vehicles per day (*Figure 4.9-2*). The prediction for the next 20 years is more than 12 thousand vehicles per day (*Figure 4.9-3*).

As indicated in *Figure 4.9-2* below, the traffic flow is redistributed at intersections of P80 with local roads. This traffic redistribution is particularly heavy at the intersection in Okolitsa and at approaches to Sosnovaya and Zadomlya.

The traffic intensity at the intersection in Okolitsa is predominantly created by passenger cars which account for 94% of the traffic flow. The contribution by trucks at approaches to Zadomlya and Sosnovaya is significantly greater: their proportion of the traffic flow is 14.5 and 25.3% respectively.

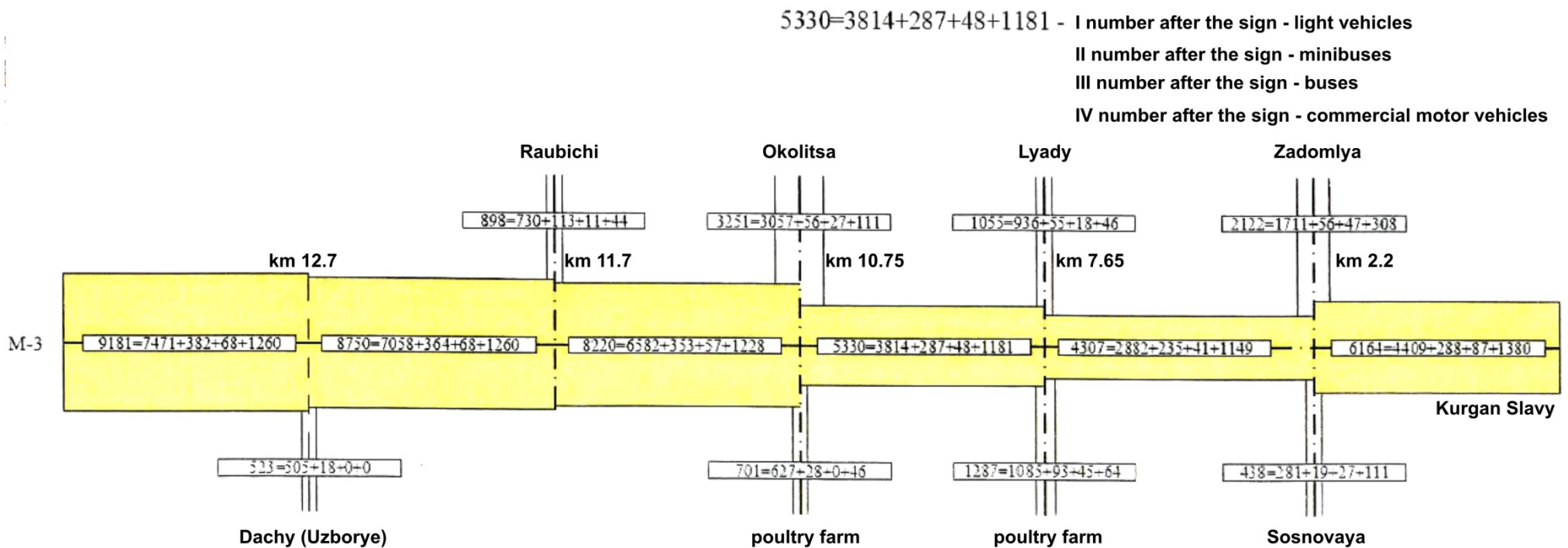


Figure 4.9-2 Intensity of traffic on the P80 Motorway section km 0.0 - km 14.7 between Sloboda and Papernya, vehicles per day in 2017

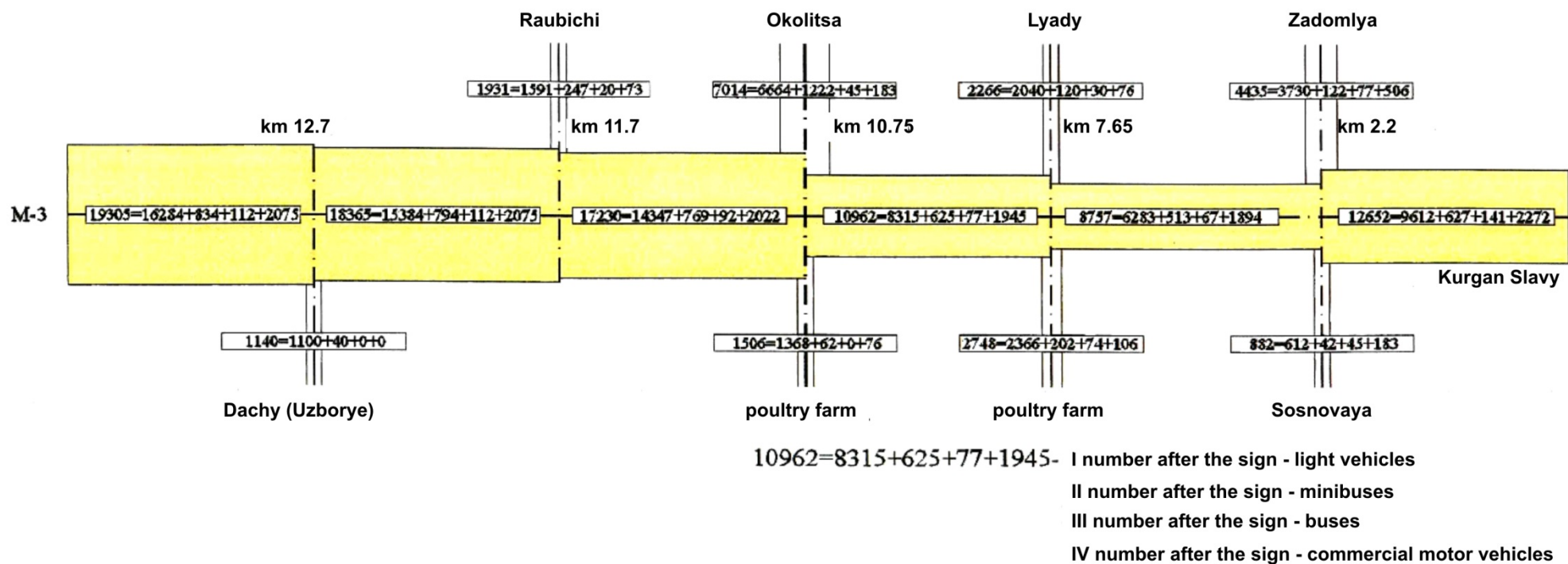


Figure 4.9-3 Predicted intensity of traffic on the P80 Motorway section km 0.0 – km 14.7 between Sloboda and Papernya, vehicles per day in 2040

4.9.4 *Communication*

There is a unique facility in Smolevichi District located near Yemelyanovo: a satellite communication station, the only one in Belarus and the CIS countries, which performs electronic communication with India, China, USA, Israel and several other countries.

The coverage area of all wireless carriers operating in Belarus encompasses the entire country's territory (100 %).

4.10 *CULTURAL HERITAGE AND TOURISM*

4.10.1 *Cultural heritage*

Cultural and historical heritage sites are not affected by the proposed reconstruction of the P-80 section. The nearest cultural heritage sites are:

- Burial Mound of Glory Memorial, a Second World War monument located in Smolevichi District at km 21 of the M2 Motorway Minsk – Minsk National Airport;
- St. Mathew's Church in Raubichi (which hosts a museum of Byelorussian folk arts); and
- Second World War monuments located in 14,7 km of the highway P-80: the tank T-34 and obelisk to the villagers-members of the underground.

Pursuant to the legislation of the Republic of Belarus, chance archaeological finds during excavation works must be reported to the Institute of History of the National Academy of Sciences of Belarus in order to arrange additional archaeological surveys.

4.10.2 *Recreation and tourism*

According to the General Map of Locations and Development of Recreation Areas in the Byelorussian SSR, the following areas are to be developed in Minsk Region:

- 2 resorts of national significance: Zhdanovichi and Naroch;
- 4 recreation areas of national significance: Berezino, Vileyka, Ivenets and Stolbtsy; and
- 50 recreation areas of local significance.

There are 10 travel agencies, 25 hotels and 18 recreational and healthcare institutions in Minsk District.

Tourist services are provided by 21 companies, including 7 sanatoriums (87% of all tourist services). These are, first of all, sanatoriums Yunost, Krinita, Belorusochka and Praleska.

The following recreation areas are located within the Project implementation area:

Ostroshitskoye Water Reservoir,
a pond in Okolitsa,
Dubrovskoye Water Reservoir,
Lake Zadomlya, and
forests near settlements.

4.11

LAND USE

The proposed reconstruction of the P-80 section will affect lands of the following land users:

- Republic unitary enterprise 'Minskavtodor-Centre';
- Borovlyansky Spetsleskhoz, state specialized forestry;
- Ozeritsky-Agro, private unitary enterprise (agricultural company); and
- Private individual. Address: Land plot cadastral No. 623685206601000128, Raubichi, Ostroshitsky Gorodok Rural Council, Minsk District, Minsk Region.

The area of land plots to be acquired for the motorway reconstruction will be determined after formal land allocation certificates have been issued.

This chapter describes the EBRD requirements for the development of a document package for a loan application.

The EBRD will seek to ensure that the projects it finances are designed and operated in compliance with applicable regulatory requirements and good international practice related to sustainable development. The main document, which determines conceptual requirements for the projects financed by the Bank, is the EBRD Environmental and Social Policy¹ ('ESP'). More detailed requirements covering key areas of environmental and social impacts and issues are established in a set of specific Performance Requirements ('PRs') included in the ESP document. The integral element of all PRs is the requirement for compliance with the national legislation and good international practice reflected in international standards and agreements and requirements of other international financial institutions (IFIs).

Consequently, for the success of the EBRD loan application the Project must meet the requirements and standards established in the following documents:

- EBRD Environmental and Social Policy (2014) and Performance Requirements established in this policy document:
 - PR 1: Assessment and Management of Environmental and Social Impacts and Issues
 - PR 2: Labour and Working Conditions
 - PR 3: Resource Efficiency, Pollution Prevention and Control
 - PR 4: Health and Safety
 - PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement
 - PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources ²
 - PR 8: Cultural Heritage³
 - PR 10: Information Disclosure and Stakeholder Engagement.
- International Conventions.
- EU Environmental and Social Standards:
 - Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (EIA Directive, 2014)

¹ EBRD Environmental and Social Policy, May 2014 (<http://www.ebrd.com/downloads/research/policies/esp-final.pdf>)

² PR 7 (Indigenous Peoples) is not applicable to this Project

³ Currently, PR 9 (Financial Intermediaries) is not applicable to this Project

- Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) (Industrial Emissions Directive)
- Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
- Directive 2009/147/EC on the conservation of wild birds.
- National laws and regulations.

5.1

EBRD ENVIRONMENTAL AND SOCIAL POLICY, 2014 AND PERFORMANCE REQUIREMENTS

EBRD will decide if the project should be financed based on the environmental and social appraisal that "will be appropriate to the nature and scale of the project, commensurate with the level of environmental and social impacts and issues, and with due regard to the mitigation hierarchy". All proposed projects will be categorised based on environmental and social criteria to determine the level of potential environmental and social effects and identify the character and scale of issues that must be investigated.

According to Appendix 1 to the EBRD Environmental and Social Policy, "Construction of motorways, express roads and lines for long-distance railway traffic; airports with a basic runway length of 2,100 metres or more; new roads of four or more lanes, or realignment and/or widening of existing roads to provide four or more lanes, where such new roads, or realigned and/or widened sections of road would be 10 kilometres or more in a continuous length" are assigned to Category A projects.

The Project provides for the reconstruction of the existing P-80 motorway section between km 0.000 and km 14.770 with a total length of 15.63 km. The reconstructed section will meet the requirements for roads of Category I-v¹ with four traffic lanes. The length and width of the section and the fact that it passes through different administrative districts enable categorisation of the Project as 'A'. This means that implementation of the project must be supported by certain mandatory activities and procedures.

In addition, as noted previously, the following Performance Requirements should be met during development of the design documentation:

PR 1: Assessment and Management of Environmental and Social Impacts and Issues	<p>This Performance Requirement establishes the importance of integrated assessment to identify the environmental and social impacts and issues throughout the life of the project.</p> <p>Category A projects will require the client to:</p> <ul style="list-style-type: none"> • carry out a comprehensive Environmental and Social Impact Assessment (ESIA), including a scoping stage to identify the potential future environmental and social impacts (scoping study), examination of alternatives to the source of such impacts, and development of recommended measures needed to avoid/minimise potential impacts; • establish and maintain an Environmental and Social Management System (ESMS); • establish as appropriate environmental and social policies; • develop an Environmental and Social Management Plan;
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¹ TKP 45-3.03-19-2006 (02250). Motor roads. Design Standards.

	<ul style="list-style-type: none"> • establish and maintain an organisational structure for ensuring on-going compliance with relevant national regulatory requirements and the PRs; • identify risks associated with its supply chain and exercise reasonable control of primary suppliers; • monitor the environmental and social performance of the project to determine whether the project is being implemented in accordance with the PRs or to take the necessary action to ensure such compliance.
PR 2: Labour and Working Conditions	This Performance Requirement establishes the need for establishing a human resources management system which guarantees respect of workers' rights ¹ and provides them with safe and healthy working conditions.
PR 3: Resource Efficiency and Pollution Prevention and Control	This Performance Requirement recognises the need to adopt and adhere to the approach which enables the client to avoid (where possible) or control the harm to the environment caused by the project. The design and operation of a project should address the issues of resource efficiency, management of harmful and hazardous substances and materials, waste generation, emissions and discharges, including GHG emissions.
PR 4: Health and Safety	This Performance Requirement recognises the need to establish a system for managing health and safety of workers, consumers, and affected communities.
PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement	<p>This Performance Requirement establishes the need to avoid or minimise involuntary resettlement and to ensure fair compensation to affected persons. The client will carry out a socio-economic baseline assessment and identification of potentially affected communities and individuals.</p> <p>This Project does not require physical resettlement and economic displacement.</p>
PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	This Performance Requirement establishes the need to assessment of the risks and impacts on biodiversity and develop biodiversity conservation measures.
PR 7: Indigenous Peoples	Not applicable
PR 8: Cultural Heritage	This Performance Requirement establishes the need to identify, as part of the environmental and social assessment process, potential adverse impact on cultural heritage. If the potential for such impacts exists, the client must develop measures to avoid/ mitigate such impacts and include these measures in the EMS and ESMP (including consultations with affected community groups). In addition, a Chance Finds Procedure will be required.
PR 9: Financial Intermediaries	<p>Currently not applicable.</p> <p>However, its applicability should be addressed in case of Financial Intermediaries involving to the Project financing.</p>
PR 10: Information Disclosure and Stakeholder Engagement	<p>This Performance Requirement recognises importance of a Stakeholder Engagement process.</p> <p>Stakeholder engagement will involve the following elements:</p> <ul style="list-style-type: none"> • stakeholder identification and analysis; • stakeholder engagement planning and implementation of the Stakeholder Engagement Plan (SEP); • disclosure of information and reports related to the project

¹ Projects are required to comply, at a minimum, with (i) national labour, social security and occupational health and safety laws, and (ii) the fundamental principles and standards embodied in the ILO conventions.

	<p>in a manner that is accessible and culturally appropriate;</p> <ul style="list-style-type: none"> • consultations and public involvement in the decision-making process; • establishing and maintaining of a Grievance Mechanism. <p>For Category A projects the client will carry out a formalised, participatory ESIA process which provides for iterative consultation, incorporation of stakeholder views into the decision-making process, and disclosure of ESAP.</p>
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5.2

INTERNATIONAL CONVENTIONS

The P-80 motorway reconstruction Project should meet the requirements of the international conventions and agreements signed and ratified by the Republic of Belarus:

Title	Date and place of signature	Comments on the applicability to the Project and summary of requirements
Climate and Air		
<i>UN framework convention on climate change</i>	1992, New-York	The Client will evaluate predicted GHG emissions and provide for avoidance or mitigation of adverse effects.
<i>Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer</i>	1985, Vienna 1987, Montreal	No substances controlled by the Montreal Protocol will not be used during Project implementation.
<i>Convention on Long-range Transboundary Air Pollution</i>	1979, Geneva	Long-range transboundary air pollution is not expected during Project implementation.
Flora and Fauna		
<i>Convention on Biological Diversity</i>	1992, Rio de Janeiro	The Project must be implemented with due regard to the following principles: <ul style="list-style-type: none"> • Conservation of biodiversity • Sustainable biodiversity use/management • Equitable sharing of the benefits from the use of genetic resources
<i>Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)</i>	1979, Bern	The Project implementation must ensure conservation of wild flora and fauna species and their habitats. Special attention is given to endangered and vulnerable species, including endangered and vulnerable migratory species.
<i>Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)</i>	1979, Bonn	The Project must be implemented with due regard to the principle of conservation of migratory species of wild animals and their habitats.
<i>Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)</i>	1971, Ramsar	Implementation of the Project will not affect natural ecosystems under the Convention.
<i>Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)</i>	1995, Hague	The Project must be implemented with due regard to the following principles: <ul style="list-style-type: none"> • Prevention of decline of waterbird species nesting, migrating and wintering within

Title	Date and place of signature	Comments on the applicability to the Project and summary of requirements
		<p>the African-Eurasian waterbird migration systems</p> <ul style="list-style-type: none"> Restoration of populations of already reduced species. <p>According to the survey, the following bird species listed in the AEWA inhabit the area of the Project implementation:</p> <ul style="list-style-type: none"> Lapwing (<i>Vanellus vanellus</i>) Mallard (<i>Anas platyrhynchos</i>) White stork (<i>Ciconia Ciconia</i>) Grey Heron (<i>Ardea cinerea</i>) Teal-gadwall (<i>Anas crecca</i>) Black-headed gull (<i>Larus ridibundus</i>)
Cultural Heritage		
<i>Convention concerning the Protection of the World Cultural and Natural Heritage</i>	1972, Paris	The Client will identify whether objects of cultural and natural heritage covered by this Convention exist within immediate proximity to the project facilities and will take the adequate protection/conservation measures if required.
Social Aspects / Consultations		
<i>Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters</i>	1998, Aarhus	<p>The Client will provide for:</p> <ul style="list-style-type: none"> access to the Project information; public participation in decision-making; and access to justice in environmental matters.
Health and Safety		
<i>ILO C148 - Working Environment (Air Pollution, Noise and Vibration) Convention</i>	1977, Geneva	The Project will provide for measures for the prevention and control of, and protection against, occupational hazards in the working environment due to air pollution, noise and vibration.
<i>ILO C155 - Occupational Safety and Health Convention</i>	1981, Geneva	The Project will provide for measures to prevent accidents and injury to health arising out of, linked with or occurring in the course of work, by minimising, so far as is reasonably practicable, the causes of hazards inherent in the working environment.
<i>ILO Conventions 29 and 105 (Forced or Compulsory Labour), 87 (Freedom of Association), 98 (Right to Organise and Collective Bargaining), 100 and 111 (Discrimination), 138 (Minimum Age), and 182 (Worst Forms of Child Labour)</i>	1930, Geneva 1957, Geneva 1948, San Francisco 1949, Geneva 1951, Geneva 1958, Geneva 1973, Geneva 1999, Geneva	The Project will provide for measures to prevent discrimination, forced or compulsory labour, or child labour.

5.3

EU ENVIRONMENTAL AND SOCIAL STANDARDS

Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment, which amended Directive 2011/92/EU, establishes the need for compulsory assessment of impact of projects which may result in significant adverse effects on the environment. According to

Annex I, this Project falls under the category of projects that are subject to such an assessment.

The main document that regulates relations in regards to control and management of environmental impact in the European Union is “**Directive on integrated pollution prevention and control**” **Directive No. 2010/75/EU** dated November 24, 2010 (replaced Directive No. 2008/1/EU and Directive No. 96/61/EU). The Directive No. 2010/75/EU represents a management system based on the integrated approach for control and reduction of industrial facilities’ environmental impact. The Directive No. 2010/75/EU does not set fixed maximum emission values but defines recommended methods for design and operation of equipment to ensure environmental protection by means of the “best available techniques (BAT)”.

Reference Document on Best Available Techniques for the Waste Treatments Industries (August 2006) shall be considered during the process of the Project design.

These documents contain recommended techniques and other information for reference.

In addition, the Project must respect requirements specified in Directive 92/43/EEC (on the conservation of natural habitats and of wild fauna and flora) and Directive 2009/147/EC (on the conservation of wild birds).

5.4 *REQUIREMENTS OF NATIONAL ENVIRONMENTAL AND SOCIAL LEGISLATION*

In accordance with the EBRD ESP and PRs, the Project must meet the requirements of the national legislation.

This Section provides a review of the key laws and regulations of the Republic of Belarus which cover the following aspects of the Project implementation process:

- development of design documentation;
- State Environmental Review, environmental and social impact assessment, information disclosure;
- impacts on individual components of the natural environment;
- waste management;
- health and safety (industrial safety, health and safety of personnel and population);
- land management; and
- impact on cultural and historical heritage.

Due to the large number of bylaws which directly or indirectly apply to the Project, the documents listed in this Section are limited to the laws and regulations which establish the key limitations for environmental and social impacts of projects. The List of key applicable Belarussian regulations is given in *Annex 1*.

This section provides a description of the general approach and methodology the Supplementary Environmental Impact Assessment conducted to determine the Project's compliance with Applicable Requirements (see 5).

6.1 *DESCRIPTION OF THE GENERAL APPROACH*

To determine the Project's compliance with Applicable Requirements, the Consultant has performed the following:

- Analysed available Project design documentation and other information about the Project (see 1.3);
- Reviewed the adequacy of the Project embedded measures to prevent and/or reduce potential environmental and social impacts of the Project (see *Section 2.5* and *Section 2.8*).
- Significance of the identified Project gaps has been assessed in the range of "high – medium – low".
- For each risk identified recommendations have been made on further assessment, additional mitigation measures, and their monitoring.
- The results of the evaluation and recommendations are presented in this Report in the form of the Compliance Summary Table, which indicates the degree of the Project's conformity to the relevant EBRD Performance Requirements, and, if necessary, actions required to achieve compliance.
- The Consultant has also identified the need for further research and development of additional documentation to achieve compliance with Applicable Requirements.

In addition, the Consultant has reviewed the Project's Preliminary EIA compliance with the Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment.

6.2 *COMPLIANCE SUMMARY TABLE*

The Compliance Summary provides a systematic review of project compliance with the EBRD Environmental and Social Policy, as defined through the applicable Performance Requirements (PRs).

Between 2 and 10 indicators are identified for each of the applicable PRs.

For all PRs (Indicators with whole number references) provide a summary of overall compliance with the PR. Justification for any derogation from a PR is summarised and supported by documents referenced.

For each indicator within a PR was carried out in several stages:

1. **Decide whether the indicator is applicable.** For Category A projects the starting point is that all indicators are applicable unless the project has no significant aspects relevant to the indicator (i.e. no risks), in which case the indicator should be scored "NA".

2. **Decide whether an opinion is possible.** If not (for example if the indicator will apply, but it is too early in the project) score as "NOP". Where lack of opinion represents a material omission to the review refer to where this is addressed in the report and summarise any recommendations.
3. **Score the indicator as follows and provide brief justification.**

EC	Exceeding Compliance: The project has gone beyond the expectations of EBRD's PR requirements. EBRD should be able to use projects rated EC as a role model for positive Environmental and Social effects.
FC	Fully Compliant: The project is fully in compliance with EBRD's requirements, and EU and local environmental, health and safety policies and guidelines.
PC	Partial Compliance: The project is not in full compliance with EBRD's requirements, but has systems, processes or mitigation measure in place which are working towards addressing the deficiencies.
MN	Material Non-compliance: The project is not in material compliance with EBRD's requirements, and the systems, processes and mitigation measures in place are not working towards addressing the deficiencies.

4. **Comments/Issues:** Provide a brief commentary on the relevance of this requirement for the project and an explanation of the chosen score.
5. **Actions Required:** Where applicable, briefly describe any actions required by the client to achieve full compliance with each requirement. Where a relevant action is included in the ESAP for this project, please provide a reference to the ESAP.
6. **PR Summary:** Provide an overall summary against the PR.

6.3

RISK SIGNIFICANCE DETERMINATION

The table below illustrates the approach to be taken for risk significance determination (Table 6.3-1).

In risk significance determination ERM considers both the level of residual (post-approval) *risk* and whether the measures sufficiently address deficiencies (i.e. the level of *confidence* that the Project can successfully bring the issue into compliance with the requirements).

Table 6.3-1 Risk significance determination

Risk	High	PC	MN	MN
	Medium	PC	PC	MN
	Low	FC	PC	PC
		High	Medium	Low
		Confidence		

This Section contains the results of the Supplementary Environmental Impact Assessment which was undertaken to evaluate compliance of the Project with the Applicable Requirements (*Section 5*) using the approach described in *Section 6*.

Gaps and noncompliance identified during this analysis are reported below in the Compliance Summary Table (*Table 6.3-1*).

Table 6.3-1 Compliance Summary Table (Project's Compliance with the Applicable Requirements)

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
1	Assessment and Management of Environmental and Social Impacts and Issues				
	<p>Summary:</p> <p>The Project is currently undergoing an investment feasibility study (TEO stage). The Project evolves in accordance with the national legal requirements. The national law regulates some of the aspects addressed in Performance Requirement 1 (e.g. the clients are required to undertake an environmental and social impact assessment). Some provisions of PR1 (e.g. the need to establish an environmental and social policy and management plans) are not regulated by the national law but, according to the Consultant's opinion, may be implemented by the Client.</p> <p>The Client has conducted the preliminary environmental impact assessment (Preliminary EIA) for the Project in accordance with the national law. Further the Client intends to prepare the final version of the EIA (Final EIA) and undertake additional surveys for the Final EIA purpose.</p> <p>The Social Impact Assessment has been carried out by the Consultant on assignment of the Bank.</p> <p>Given the above inconsistencies of the Preliminary EIA with the Bank's Requirements, and the fact that the Project is at early stage, the Consultant recommends the Client to perform additional assessment of the Project's environmental and social impacts in accordance with the Bank's Requirements (Bankable ESIA).</p> <p>Overall score for the Project's compliance with PR1 is 'PC' (Partial Compliance).</p>				
1.1..	Environmental and social assessment	PC	<p>The Client is currently conducting the national environmental impact assessment (EIA) process for the Projects. The currently available <i>Preliminary EIA Report</i> addresses, as provided for by the national legislation, potential environmental and socioeconomic impacts of the Project. Further the Client intends to prepare the final version of the EIA (Final EIA) according to the requirements of national legislation.</p> <p>The Preliminary EIA was based on the Project information from the TEO document for the reconstruction of the P-80 motorway section between Sloboda and Papernya, km 0.000 – km 14.770. This document was prepared in 2017 and, to the</p>	Undertake additional surveys for the Final EIA purpose according to the recommendations given in the Preliminary EIA.	11.1.
				Conduct the Final EIA in accordance with the requirements of the national law.	11.2.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			<p>knowledge of the Consultant, contains the most recent formally available information about the Project.</p> <p>During preparation of this Report, of all the documents comprising the TEO package the Consultant had access only to the Executive Summary ('Explanatory Note'). Description and delineation of the Project and associated activities of the Client presented in the said document are sufficiently accurate for the current stage of the Project.</p> <p>Environmental and social baseline description in the Preliminary EIA is based on the data of the environmental and engineering survey undertaken for the reconstruction of the P-80 motorway section between Sloboda and Papernya, km 0.000 – km 14.770. This survey was performed in 2017 and, to date, the survey report can be recognised as a source of the most credible information about environmental and socioeconomic baseline within the subject area.</p> <p>The environmental and social baseline information used for the Preliminary EIA preparation is based on predominantly file/archive materials. The minimum area coverage for some components provided by these materials corresponds to an administrative region or district level. Consequently, the level of detail of the data used for the Preliminary EIA cannot be considered to be sufficient. The authors of the Preliminary EIA emphasise the need for further surveys to obtain results necessary for the Final EIA version.</p> <p>The Preliminary EIA Report identifies current national environmental and social regulations and requirements applicable to implementation of projects.</p> <p>The Preliminary EIA Report has also identified some</p>	<p>Carry out field and laboratory studies t on environmental and socio-economic conditions in the area of the Project (in case of EBRD request).</p>	1.1.
				<p>Conduct bankable ESIA in accordance with the EBRD's Requirements (in case of EBRD request).</p>	1.2.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			<p>impact mitigation measures, but contains no explicit reference to the use of mitigation hierarchy or best practices during the design process. The Project is based on design decisions which are in compliance with the national legal requirements. It should be noted that the national law requires clients to use best available techniques.</p> <p>While the Preliminary EIA Report contains information about affected land users, the stakeholder identification process cannot be regarded as completed. Stakeholder engagement activities are in compliance with the national legal requirements which do not include the need to develop a Stakeholder Engagement Plan (SEP). The Consultant will conduct the standard stakeholder identification process and will develop a SEP for the Project.</p> <p>The Preliminary EIA does not address all project-related direct and indirect impacts and issues (e.g. changes to accessibility of farming facilities located on other sides of the motorway, etc.).</p> <p>The Preliminary EIA does not identify and characterise potentially significant environmental and social issues associated with activities or facilities which are not part of the project, but which may be directly or indirectly influenced by the project, exist solely because of the project or could present a risk to the project (sand and stone pits and impacts occurring during transportation of construction materials to construction sites).</p> <p>The Preliminary EIA does not consider cumulative impacts of the project in combination with impacts from other relevant past, present and reasonably foreseeable developments as well as unplanned but predictable activities enabled by the project that may occur later or at a different location (e.g. impacts of the</p>		

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			<p>Project operations on the traffic situation on P-53 and other nearby roads).</p> <p>The Preliminary EIA does not fully consider social impacts of Project's, so the Consultant's has performed the Social Impact Assessment on the Bank's assignment.</p> <p>The results have been used to develop an Environmental and Social Action Plan (ESAP) which includes measures to ensure compliance of the Project with the EBRD Performance Requirements.</p> <p>Given the above inconsistencies of the Preliminary EIA with the Bank's Requirements, and the fact that the Project is at early stage, the Consultant recommends the Client to perform additional assessment of the Project's environmental and social impacts in accordance with the Bank's Requirements (Bankable ESIA).</p> <p>The Bankable ESIA should be based on more detailed and revised version of the Project design documentation, and on updated and detailed environment and social baseline data. The updated environment and social baseline data should be obtained during the desktop and field research. The Bankable ESIA should also cover all relevant Project-related direct and indirect environmental and social impacts and issues, including impacts related to the Project's associated facilities and supply chains.</p> <p>The Bankable ESIA Report can be submitted as a single document, or as several supplementary notes covering the Project's impacts on particular environmental and social components.</p> <p>The Bankable ESIA can be conducted by the Bank's decision.</p>		
1.2.	Environmental and Social Management Systems	PC	Under the national law Clients are not required to	Develop and regularly update	1.3.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			develop an environmental and social management system, environmental and social policy, or environmental and social management plans. As of now, no such documents have been developed for the Project.	environmental and social management plans for the Project.	
1.3.	Environmental and Social Policy	PC	Under the national law clients are not required to develop an environmental and social management policy. The Client has certificates of compliance with ISO 90001 and ISO 14001 requirements and declares it environmental, health and safety objectives, although environmental and social policies do not exists as separate documents.. Separate environmental and social policies for the Project have not been developed.	—	—
1.4.	Environmental and Social Management Plan	PC	Under the national law clients are not required to develop environmental and social management plans. Environmental and social management plans for the Project has not been developed.	Develop and regularly update environmental and social management plans for the Project.	1.3.
1.5.	Organisational potential and commitment	PC	The Client's organisational structure aims to ensure compliance with the national regulations. To ensure compliance with PR provisions, the existing organisational structure may be modified taking into account the outcomes of the ESMS (environmental and social management system) development and implementation. Potential changes to the Client's organisational structure are not expected to of a fundamental character.	Adapt the existing organisational structure to ensure compliance with the EBRD Performance Requirements.	1.4.
1.6.	Supply chain management	PC	Risks associated with the Project's supply chain are regulated by the existing environmental regulations and other laws of the Republic of Belarus. Identification of risks, assessment and monitoring of	Address the risks of impacts associated with the main supply chains in the bankable ESIA process.	1.5.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			impacts associated with the Project's supply chains is performed in accordance with the adopted procedures separately for each supplier or project. The Project suppliers have necessary permits, certificates and other documents which confirm compliance of supplied goods and provided services with the existing national requirements which proves that any risks associated with their performance are taken into account by the Client. Due to the above clients are not legally required to undertake a separate identification of risks associated with their supply chains in line with the national legislation. Due to the absence of relevant requirements in the national law, the Preliminary EIA does not consider the risks associated with the Project's supply chain. It should be noted that major supply chains that are essential for construction activities (primarily supply of sand and stone) may be associated with environmental and social risks.		
1.7.	Project monitoring and reporting	PC	The Client will monitor environmental and social performance of the Project in accordance with the national regulatory requirements. The scope of such monitoring is somewhat narrower compared to the EBRD monitoring requirements. The monitoring and reporting in compliance with the EBRD requirements may follow completion of the integrated ESIA, ESMS development, and production of other relevant documents.	Organize and conduct the environmental and social monitoring of the Project.	1.6.
				Include the Environmental and Social Monitoring Plan into the strucrure of the Project Management Plans.	1.3.
2	Labour and Working Conditions				
	Summary: The Project implementation is not expected to be intensive in terms of human resources. The national law regulates most aspects associated with labour relations and working conditions. Some provisions of PR2 (e.g. consideration of grievances with regard to contractors' performance) are not regulated by the national law but, according to the Consultant's				

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
	<p>opinion, may be implemented by the Client.</p> <p>Overall score for the Project's compliance with Performance Requirement 2 is 'PC' (Partial Compliance)</p>				
	General	FC	Labour relations during implementation of the Project will be regulated by the Labour Code of the Republic of Belarus which provides for respect and protection of main workers' rights embodied in the fundamental ILO conventions on forced labour, freedom of associations, right to collective bargaining, discrimination, minimum age, worst forms of child labour, etc.	—	—
2.1	Management of worker relationships and human resources policies	FC	<p>Under the national law clients are not required to develop separate human resources policies or worker relations management procedures. Most labour relations management issues addressed in PR2 are regulated by the national legislation.</p> <p>According to available information, the Client has no separate documents on human resources policies and systems or procedures for management of worker relationships. The Client's approach to worker relations is based on the national legal requirements.</p> <p>Given the scale of the Project and also due to the fact that the construction work will be performed by contractors, development of a separate human resources policy is not deemed reasonable.</p>	—	—
2.2	Child and forced labour	FC	<p>The national law provides for respect and protection of main workers' rights embodied in the fundamental ILO conventions on forced labour, minimum age, and worst forms of child labour.</p> <p>No under-age labour will be used for the Project.</p>	—	—
2.3	Non-discrimination and equal opportunity	FC	The national law provides for respect and protection of main workers' rights embodied in the ILO Convention on discrimination.	—	—

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
2.4	Workers' organisations	FC	The national law provides for respect and protection of main workers' rights embodied in the ILO Convention on freedom of associations.	—	—
2.5	Wages, benefits and conditions of work	FC	The national law provides for respect and protection of main workers' rights embodied in the ILO Convention on the right to collective bargaining. Relations of the Client and workers with regard to wages, benefits and conditions of work are also regulated by the national legislation.	—	—
2.6	Retrenchment	NA	No collective dismissals are expected to occur during the Project implementation.	—	—
2.7	Grievance mechanism	PC	At the time of this Report the Client has implemented a grievance mechanism which meets the national regulatory requirements and allows all stakeholders, including workers, to raise concerns and claims. The national law does not provide for consideration of anonymous complaints with the exception of reported crimes. However, the client, when possible, does review anonymous grievances.	Implement measures to improve the existing grievance mechanism in accordance with the SEP provisions.	2.1.
				Ensure that the grievance mechanism is implemented throughout all stages of the Project implementation.	2.2.
2.8	Non-employee workers	PC	The Client has established the Procedures for Procurement of Goods (works or services) which sets out main requirements for suppliers and contractors, but does not cover labour relations issues. Labour relations in contractor organisations are regulated by the national legislation.	The Client and contractors will implement measures provided by the SEP, including those related to labour relations, in particular, implementation of the grievance mechanism for contractors' employees.	2.2.
2.9	Supply chain	FC	The Project provides for the use of contractors operating under the jurisdiction of the Republic of Belarus. The national law prohibits use of child or forced labour, so such incidents are not expected to	—	—

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			occur in the Project's supply chain. Labour safety and protection issues are also regulated by the national legislation.		
2.10	Security personnel requirements	NOP	No information with regard to the Client's intention to use security services was available at the time of this report. The decision on the involvement of private or state security services will be made at a later stage of the Project.	Ascertain the Client's plans with regard to the Project's security and safety management in bankable environmental and social impact assessment process. Identify and evaluate potential risks and impacts associated with security personnel (if necessary).	2.3.
3	Resource Efficiency and Pollution Prevention and Control				
	Summary: The Project design aims to minimise consumption and improve efficiency of the use of various resources. Identified noncompliance can be subsequently removed/rectified during the bankable ESIA process. Overall score for the Project's compliance with Performance Requirement 3 is 'PC' (Partial Compliance)				
3.1	Resource efficiency	PC	The Preliminary EIA Report includes description of the key resource-saving design solutions and controls and comparison of environmental and social impacts of the Project with the no-project (zero) alternative. The report also provides a comparison of two methods for the carriageway widening. Design solutions and controls aimed at minimisation of consumption and improvement of efficiency of the use of various resources were selected in accordance with the requirements established in Belarus. No explicit comparison of the Project alternatives with consideration of best practice is found in the available documents.	Identify available options and alternatives of best practices with regard to resource efficiency applicable to the Project during the bankable environmental and social impact assessment process.	3.1.
3.2	Pollution prevention and control: air emissions	PC	The Preliminary EIA Report offers air emission prevention and control methods for the construction and operation stages of the Project. These methods	Update emission estimates in the bankable environmental and social impact assessment process using the	3.2.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			<p>were selected based on the national regulatory requirements and the findings of preliminary assessment of impact on ambient air. The assessment included calculations of total emissions from the Project implementation activities and the modelling of pollution dispersion in surface air. Calculations and modelling were carried out taking into account characteristics of the Project's facilities, types of the project-related activities, geographical location of the Project and environmental conditions in the subject area.</p> <p>The Preliminary EIA Report does not explicitly mention application of the mitigation hierarchy approach during development of impact mitigation measures, nor does it refer to the use of best practices in the design process. It should be noted that the national law requires clients to use best available techniques.</p>	detailed Project data.	
3.3	Pollution prevention and control: discharges	PC	<p>In accordance with the national environmental protection requirements the Project design solutions aim to minimise water use. Some of them provide for reuse of water.</p> <p>Technical water for the construction will be supplied from surface water bodies located in the vicinity of the Project operations (i.e. motorway section subject to reconstruction). The local community does not use these water bodies for drinking water supply.</p> <p>Although water use requirements are not indicated in the available documents, the Project is unlikely to fall under the category of projects with large water consumption (over 5,000 m³ per day).</p> <p>According to the national legislation, the permit intake/abstraction for water for the Project needs will be issued by respective local environmental protection authorities (regulators). When issuing a water permit</p>	Update estimated impacts on surface waters and groundwater in the bankable environmental and social impact assessment process using the detailed Project data.	3.3.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			<p>local authorities evaluate potential impact of water intake on other water users and local ecosystems. Consequently, the issue of such permit to the Client will confirm the absence or acceptability of any adverse impact of water abstraction on other users of water resources.</p> <p>Given the significant hydraulic connectivity of the aquifers on the territory of Project implementation, the Consultant recommends to consider in detail the potential impact on groundwater in the bankable ESIA.</p>		
3.4	Greenhouse gases	PC	<p>The Preliminary EIA documentation contains no analysis of the Project implementation alternatives with regard to emissions of greenhouse gases. The said documentation reports the results of assessment of estimated emissions of greenhouse gases during operation of the reconstructed motorway. According to these estimates, annual emissions of greenhouse gases will not exceed 25,000 tonnes of CO₂-equivalent.</p>	Undertake analysis of emissions of greenhouse gases from the Project operations during the bankable environmental and social impact assessment process.	3.4.
3.5	Waste	PC	<p>In accordance with the requirements of the national environmental legislation the Project design solutions aim to prevent and minimise the generation of hazardous and non-hazardous waste.</p> <p>Under the national environmental requirements priority is to be given to reuse, recycling, or recovery of waste rather than to neutralisation or disposal (burial). Where waste cannot be recovered or reused, priority should be given to neutralisation rather than disposal (burial)..</p> <p>The Preliminary EIA documentation provides an indicative list of major waste types that will be generated during construction and includes recommendations with regard to preferred waste</p>	Update estimated waste management impacts during the bankable environmental and social impact assessment process using the detailed Project data.	3.5.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			management methods. Non-recoverable/recyclable waste will be transferred to the formally registered contractors and facilities for treatment or disposal in accordance with the procedure established by the national legislation.		
3.6	Safe use and management of hazardous substances and materials	NA	Hazardous substances and materials management will be regulated by the relevant national legislation. The national legal requirements aim to minimise and/or avoid the use of hazardous substances and materials. The Project is not associated with manufacture, trade and use of hazardous substances and materials subject to international bans. The available documents contain no information with regard to the use of pesticides during the Project implementation. It is expected that no pesticides will be used for the Project operations.	—	—
4	Health and Safety				
	Summary: Most aspects addressed in Performance Requirement 4 are regulated by the national legislation. Some provisions of PR4 were not addressed during development of the Project, but, according to the Consultant's opinion, may be implemented by the Client. Identified noncompliance can be subsequently removed/rectified during the impact assessment process. Overall score for the Project's compliance with Performance Requirement 4 is 'PC' (Partial Compliance)				
4.1	Occupational health and safety	FC	Health and safety issues will be regulated in accordance with the relevant national legislation which provides for risk assessment, development of risk minimisation measures and subsequent monitoring of implementation of these. Procedures for registration and investigation of accidents are also defined in the national labour codes.	—	—
4.2	Community health and safety	PC	The Preliminary EIA process included assessment of project-related risks and adverse impacts to the health of affected communities. The air pollution modelling undertaken for the subject	Update assessment on community health and safety impacts during the bankable environmental and social impact assessment process taking	4.1. 4.2.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			<p>P-80 section indicated that the Project would have no significant impact on the ambient air quality.</p> <p>No modelling of pollutant emissions from new driveways and viaducts, in particular, from street sections to be reconstructed within the Village of Okolitsa, was conducted.</p> <p>The Project provides for the installation of noise screens along the settlements adjacent to the subject motorway section in order to minimise noise impacts.</p> <p>At the time of the Supplementary Environmental Impact Assessment Report no final decision had been made with regard to particular sand and stone borrow pits to be used for supply of the roadbed filling material. For this reason the preliminary EIA documentation does not include calculations of air and noise pollution in areas adjacent to the roads that will be used for sand transportation during construction. Potential risks and impacts to the health and safety of the communities living along these roads have not been identified and assessed.</p> <p>It is expected that the Project construction personnel will be accommodated in Minsk. Due to this no impacts associated with potential conflicts with local residents or risks of potential spread of infectious diseases from temporary construction camps are expected.</p>	into account identified noncompliance issues.	
4.3	Infrastructure, building, and equipment design and safety	FC	<p>The Project is being developed in accordance with design standards legally adopted in the Republic of Belarus. The national legislation requires that clients incorporate health and safety considerations into the design, construction, operation and decommissioning of the structural elements or components of the project.</p> <p>The design developer has extensive experience in the</p>	—	—

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			development of road construction and reconstruction projects.		
4.4	Hazardous materials safety	FC	<p>Hazardous materials safety issues will be regulated by the national legislation. The national legal requirements aim to minimise and/or avoid the use of hazardous substances.</p> <p>The Project is not associated with manufacture, trade and use of hazardous substances and materials subject to international bans.</p>	—	—
4.5	Services safety	FC	<p>The national legislation regulates safety and quality of roads and, consequently, the quality of traffic services provided by the road. Respective procedures and requirements are established in standards and regulations.</p> <p>Compliance of the Project with the national regulatory requirements will be verified during the State acceptance test of the motorway. Compliance with the EU requirements will be checked during the Audit of road safety.</p>	—	—
4.6	Traffic and road safety	PC	<p>The Preliminary EIA documentation contains no assessment of potential risks associated with reduced traffic safety during construction. Such risks may arise during movement or operation of construction machinery within settlements and due to traffic restrictions at the road section under reconstruction. Potential traffic and road safety risks may affect both construction workers and local communities.</p> <p>The Preliminary EIA documentation contains no assessment of potential risks associated with reduced traffic safety during operation. Such risks may be due to increased traffic intensity on reconstructed streets within Okolitsa which will serve as a transport junction.</p>	Implement measures recommended by the Consultant as the result of the Social Impact Assessment undertaken for the Project.	4.3.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			These impacts were considered by the Consultant during the Social Impact Assessment process.		
4.7	Natural hazards	FC	The Project is being developed taking into account potential impacts and risks caused by natural hazards as these relate to the Project implementation area. Information about potential natural hazards is included in the environmental and engineering survey reports and in the Preliminary EIA documentation. This information will be supplemented as project documentation development.	—	—
4.8	Exposure to disease	FC	The Project provides for measures to prevent or minimise the potential for worker and community exposure to diseases in accordance with the national legislation on health and safety and epidemiological and sanitary wellbeing of the population.	—	—
4.9	Emergency preparedness and response	FC	Emergency preparedness and response will be regulated in accordance with the national legislation. The national legislation requires that construction organisations and road operators plan and implement emergency prevention and response measures. Emergency response will be provided in accordance with the Emergency Prevention and Response Plan. Road construction organisations and subsequent operators of the road facilities must develop these plans.	—	—
5	Land Acquisition, Involuntary Resettlement and Economic Displacement				
	<p>Summary: Allocation of land for the Project will not result in involuntary resettlement or economic displacement. The compensation procedure is regulated by the national legislation. However, this procedure had not been initiated at the time of this Report. Noncompliance identified during the Social Impact Assessment process can be removed/rectified. Overall score for the Project's compliance with Performance Requirement 5 is 'PC' (Partial Compliance)</p>				

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
5.1	Avoid or minimise displacement	FC	<p>The Project is planned taking into account the need to minimise physical and/or economic displacement of the local communities.</p> <p>According to preliminary assessment the permanent acquisition of private land for the Project will be limited to one plot for the construction of under-crossing of P-80 in Okolitsa</p> <p>The acquisition of land will not result in involuntary resettlement of the owner (owners) of this plot because the land is currently not built-up and offered for sale.</p> <p>In addition to the said plot the Project needs some land adjacent to P-80 and currently owned by the farming enterprise Ozeritsky-Agro.</p> <p>The Consultant assessed the risks and impacts of the Project related to purchase of land and land acquisition during the Social Impacts Assessment (SIA).</p>	Update the assessment of the impacts related to purchase of land and land acquisition during the bankable environmental and social impact assessment process	5.1.
5.2	Consultation	PC	<p>The final scope of land acquisition or full list of affected land users are not currently known and will be identified and finalised later in the Project.</p> <p>At the time of this Report the Client had undertaken preliminary identification of private owners of properties potentially affected by the Project.</p> <p>Formal consultations with land owners/ users will be conducted later in the Project after completion of identification.</p>	Identify and conduct consultations regarding compensation for withdrawn lands with the affected landowners during bankable ESIA and Stakeholder Engagement process.	5.2.
5.3	Compensation for displaced persons	PC	<p>Compensations to the affected landowners will be determined in accordance with the national legislation.</p> <p>According to the national legislation, affected farming and forestry enterprises will be entitled to material compensation of production losses.</p> <p>The land plot to be acquired for the undercrossing</p>	Provide compensation in compliance with the national legislation and the EBRD Performance Requirements.	5.5.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			may be purchased at a price which is not lower than its cadastral value taking into account the inflation from the date of valuation, or it may be exchanged for equivalent property.		
5.4	Grievance mechanism	PC	At the time of this Report the Client had implemented the grievance mechanism which meets the national regulatory requirements	Improve the existing grievance mechanism based on the findings of the final impact assessment and stakeholder engagement process.	5.5.
				Ensure that the grievance mechanism is implemented throughout all stages of the Project implementation. The relevant recommendations detailed present in the SEP developed by the Consultant.	5.6.
5.5	Resettlement and/or Livelihood Restoration Framework: documentation	PC	<p>The Project implementation will not result in involuntary resettlement or economic displacement. The Project will abolish at-grade intersections which will limit the use of P-80 by some groups of current users. E.g. left turns and drive through via the H9539 road near Sosnovaya will be prohibited. This will increase the travel distance for vehicles moving from Sosnovaya via H9539 by approximately 6 km for all road users. Agricultural machines and trucks will also have to pay for passing via the intersection at Kurgan Slavy at km 0.0 of P-80. As the result, transport expenses of local enterprises (in particular, ChUP¹ Ozeritsky-Agro) will increase.</p> <p>In addition, construction of new intersections and the</p>	Identify the affected parties and evaluate the risks and impacts associated with land acquisition and withdrawal during the bankable ESIA process.	5.7.

¹ Private unitary enterprise

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			widening of the road near residential buildings may lead to depreciation of land and housing properties of private land users. The Consultant evaluated these impacts during the Social Impact Assessment process and recommended respective impact mitigation measures.		
5.6	Resettlement and/or Livelihood Restoration Framework: implementation	PC	The Project implementation will not result in involuntary resettlement or economic displacement. At the time of this Report the Client had undertaken preliminary identification of private owners of properties potentially affected by the Project. The client plans to go ahead with the purchase of private property (land plot), partial withdrawal of land owned by organisations, and provision of compensations in accordance with the national regulatory procedures and in compliance with the EBRD Requirements.	Initiate the process of engagement with the affected land users and determine compensation in accordance with the national legislation and the EBRD Requirements. Provide compensation in compliance with the national legislation and the EBRD Performance Requirements.	5.2. 5.3.
5.7	Monitoring	NA	The Project implementation will not result in involuntary resettlement or economic displacement. No audit of the resettlement and livelihood restoration process is required.	—	—
6	Biodiversity Conservation and Sustainable Management of Living Natural Resources				
	Summary: As part of the Project implementation framework the Client has performed a preliminary assessment of impact on vegetation and wildlife and proposed the key measures aimed at minimisation of these impacts. No significant impacts of the Project on ecosystem services are expected. The Preliminary EIA does not fully meet the provisions of Performance Requirement 6. A more detailed analysis of some issues is required, in particular, those associated with identification of critical habitats and assessment of impacts at the ecosystem level. Overall score for the Project's compliance with Performance Requirement 6 is 'PC' (Partial Compliance)				
6.1	Assessment of issues and impacts	PC	The Preliminary EIA Report contains assessment of potential impacts of the Project on vegetation and wildlife and the key measures aimed at minimisation	Update the data on potential impacts on biodiversity during the bankable ESIA process using	6.1.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			of these impacts. Potential impacts of the Project on ecosystem services were not addressed in the Preliminary EIA. Information available at the time of this Report indicates that the Project will have no significant impact on ecosystem services.	detailed design data and environmental baseline information.	
6.2	Biodiversity conservation requirements and legally protected and internationally recognised areas of biodiversity value	PC	<p>The Preliminary EIA Report proposes measures aimed at minimisation of the Project's impacts on biodiversity.</p> <p>The Preliminary EIA does not fully meet the EBRD requirements, e.g.:</p> <ul style="list-style-type: none"> ecosystems exposed to potential impact of the Project were not identified; potential landscape/ecosystem level impacts were not addressed; no review of areas potentially affected by the Project was conducted to identify areas considered 'priority biodiversity features' or 'critical habitats'; due to the lack of identification of 'critical habitats' the absence of potential impacts of the Project on critical habitats within the Prilepsky Protected Landscape Area cannot be confirmed. 	Update the data on potential impacts on biodiversity during the bankable ESIA process taking into account the identified noncompliance.	6.2.
6.3	Sustainable management of living natural resources	NA	This indicator is not applicable to the Project because it is not associated with crop or livestock production, natural or plantation forestry, aquaculture or fisheries, and production and use of biomass for energy or biofuel production.	—	—
7	Indigenous Peoples				
	Summary: This Performance Requirement is not applicable to the Project.				

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
8	Cultural Heritage				
	Summary: The Project implementation will not affect the existing (identified) tangible cultural heritage. In the event of chance finds during execution of construction works the Client will follow procedures established by the national legislation, in particular, will commission additional archaeological survey. Overall score for the Project's compliance with Performance Requirement 8 is 'FC' (Fully Compliant)				
8.1	Assessment and management of impacts on cultural heritage	FC	Potential impacts of the Project on tangible cultural heritage were considered during the environmental and engineering survey. According to available information, the Project implementation will not affect the existing (identified) tangible cultural heritage. In accordance with the national legislation chance archaeological finds discovered during excavation works must be reported to the Institute of National History under the National Academy of Sciences in order to mobilise additional archaeological survey.	—	—
8.2	Consultation with affected communities and other stakeholders	NA	According to available information, the Project implementation will not affect the existing (identified) tangible cultural heritage.	—	—
8.3	Project's use of cultural heritage	NA	The Project will not entail the use of cultural resources, knowledge, innovations or practices of local communities embodying traditional lifestyles for commercial purposes.	—	—
9	Financial Intermediaries				
	Summary: This Performance Requirement is not applicable to the Project. The applicability of the Requirement is to be considered should financial intermediaries become to be involved in the Project financing.				
10	Information Disclosure and Stakeholder Engagement				
	Summary: The Project is currently undergoing an investment feasibility study (TEO stage). The Project evolves in accordance with the national legal requirements. The client plans to implement stakeholder engagement activities in accordance with the national legislation and in compliance with Performance Requirement 10. Any noncompliance with PR10 will be				

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
	resolved/removed during the social impact assessment (SIA) and stakeholder engagement process. Overall score for the Project's compliance with PR10 is 'PC' (Partial Compliance)				
10.1	Stakeholder Engagement Plan	PC	<p>Representatives of the client and design contractor together with ERM consultants informed the officials of the Minsk and Smolevichi districts about the Project.</p> <p>In accordance with the requirements of the national legislation the client plans to conduct public consultations on the EIA materials.</p> <p>As part of the Social Impact Assessment the Consultant will additionally:</p> <ul style="list-style-type: none"> • identify and analyse stakeholders; • plan stakeholder engagement activities, develop and implement a Stakeholder Engagement Plan (SEP); • provide stakeholders with accessible and 	Carry out the identification and analysis of stakeholders during bankable ESIA.	10.1.
				Update Stakeholder Engagement Plan (SEP) taking into account the results of the bankable ESIA.	10.2.
				Provide to stakeholders accessible and understandable information and reports relating to the Project during bankable ESIA.	10.3.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			<p>understandable information and reports relating to the Project;</p> <ul style="list-style-type: none"> • take part in conducting two rounds of consultations and facilitate participation of the public in decision-making; and • improve and maintain the feedback mechanism. 	Hold consultations and provide for participation of the public in decision-making during bankable ESIA.	10.4.
10.2	Existing grievance mechanism	PC	At the time of this Report the client had implemented a grievance mechanism which meets the requirements of the national legislation.	Implement measures to improve the existing grievance mechanism in accordance with the SEP provisions.	10.5.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			The national law does not provide for consideration of anonymous complaints with the exception of reported crimes. However, the client, when possible, does review anonymous grievances.	Inform the stakeholders about availability of the grievance mechanism.	10.6.
				Ensure that the grievance mechanism is implemented throughout all stages of the Project implementation.	10.7.
11	Overall compliance				
11.1	National requirements relating to environmental protection, social performance, health and safety (ESHS)	FC	The Project is being developed in accordance with the requirements of the national legislation. The Preliminary EIA Report is currently available on the Client's website and websites of local executive authorities. ¹ . Client intends to conduct the Final EIA. The reconstructed reagents storage located in the	Undertake additional surveys for the Final EIA purpose according to the recommendations given in the Preliminary EIA.	11.1.
				Conduct the Final EIA in accordance with the requirements of the national law.	11.2.

¹ Смолевичский районный исполнительный комитет : <http://smolevichi.minsk-region.by/ru/aktualnaya-informatsiya/item/1393-vedomlenie-ob-obshchestvennykh-obsuzhdeniyakh.html>

Минский районный исполнительный комитет: <http://mrik.gov.by/ru/obsuzhdenia/view/uvedomlenie-o-provedenii-obschestvennogo-obsuzhdeniya-otcheta-ob-otsenke-vozhdejstviya-na-okruzhajushchuyu-9827/>

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			water protection zone of the Ostroshitsky field. Additional activities will be necessary to conduct during its reconstruction in accordance with the legislation of the Republic of Belarus.	Clarify design solutions regarding ton reagents storage. If necessary, develop and implement the activities required by the legislation of the Republic of Belarus.	11.3
11.2	ESHS requirements of the European Union (EU)	PC	<p>The Project progress is generally in compliance with broad ESHS requirements of EU.</p> <p>The Preliminary EIA for the Project identifies, describes and evaluates potential significant impacts on environmental and social components. In addition, the Consultant has performed a Social Impact Assessment and developed a Stakeholder Engagement Plan for the Project.</p> <p>While the Preliminary EIA was generally performed in accordance with the approach detailed in Directive 2011/92/EU (as amended by Directive 2014/52/EU), some issues were not addressed, e.g.:</p> <ul style="list-style-type: none"> • The impact assessment does not cover potential cumulative impacts; • The Project description does not include some parameters listed in Appendix IV to Directive 2011/92/EU (e.g. quantity of water abstraction/intake, emissions during 	Update the cumulative impact assessment during the bankable ESIA.	12.1.
				Update the impact assessment on the environment in regard with more detailed information about the Project (e.g. quantity of water abstraction/intake, emissions during construction, etc.) during the bankable ESIA.	12.2.

No	Performance Requirements	Score	Comments / Issues	Actions Required	ESAP Reference
			<p>construction, etc.)</p> <ul style="list-style-type: none"> Description of potential impacts of the Project sometimes does not allow conclusion on their characteristics (as defined in Appendix III to Directive 2011/92/EU): scale, extent, probability, etc. <p>The Project will not affect the sites of Natura 2000.</p> <p>The Safety Audit of the Project will be conducted separately in accordance with the requirements of Directive 2008/96/EU "On road infrastructure safety management".</p>	Update impact assessment on the environment taking into account scale, extent, probability, etc. during the bankable ESIA.	12.3.

Annex 1

List of the applicable normative acts of the Republic of Belarus

Table 2 *Design development regulations*

General requirements for design documentation development	Specific requirements for road construction and reconstruction projects
1. Law on Architectural, Town-planning and Construction Activity in Belarus, No. 300-Z of 05.07.2004 2. GOST 21.001-2013. System of design documentation for construction. General provisions. 3. TKP ¹⁷ 45-1.02-295-2014 (02250). Construction. Design documentation. Scope and content. 4. TKP 45-1.02-298-2014 (02250). Construction. Pre-project (pre-investment) documentation. Scope, development and approval procedures.	5. TKP 21.701-2013. System of design documentation for construction. Rule for preparation of working documents for road construction. 6. TKP 45-3.03-19-2006 (02250). Motor roads. Design standards. 7. TKP 45-1.02-100-2008 (02250). Design documentation for road construction. Development regulations. 8. TKP 068-2011 (02191). Motor roads. Classification and scope of work for construction, reconstruction and overhaul.
Procedure for development of the EP section (Environmental Protection)	
9. Explanatory notes PZ-02 to construction standards SNB 1.03.02-96. Scope and procedure for the development of the Environmental Protection section of the design/project documentation.	
State expert review of design/project documentation, environmental expert review	
10. Resolution of the Council of Ministers of Belarus 'On the approval of the Regulations for the procedure of the State expert review of town-planning projects, architectural and construction projects, stages of such projects, start-up complexes and cost estimate documentation and of the Regulations on the procedure for development and approval of town-planning projects and design documentation', No. 1476 of 08.10.2008.	
Requirements for infrastructure project surveys	
11. GOST 32836-2014. Public motor roads. Surveying. General requirements. 12. GOST 32847-2014. Public motor roads. Required for performance of environmental surveys. 13. TKP 45-1.02-253-2012 (02250). Engineering and geoecological surveys for construction. Procedures.	

Table 2 *Regulations concerning procedures for environmental expert review, environmental and social impact assessment, and information disclosure*

Requirements for environmental expert review, environmental and social impact assessment, and project information disclosure
1. Law 'On the State environmental review, strategic environmental assessment and environmental impact assessment', No. 399-Z of 18.07.2016. 2. Resolution of the Council of Ministers of Belarus 'On the approval of the Regulations for the procedure for public consultations on decisions of environmental significance, environmental impact assessment reports, consideration of adopted decisions of environmental significance, and on amendments and supplements to some resolutions of the Council of Ministers', No. 458 of 14.06.2016. 3. Resolution of the Ministry of Natural Resources and Environmental Protection 'On the approval and implementation of the technical regulations', No. 1-T of 05.01.2012. 4. Resolution of the Council of Ministers of Belarus of 13.01.2017 N 24 5. Resolution of the Council of Ministers of Belarus of 19.01.2017 N 47 "On particular measures for implementation of the Law 'On the State environmental review, strategic environmental assessment and environmental impact assessment', No. 399-Z of 18.07.2016"

¹⁷ Technical Code of Common Practice

Table 3

Regulations concerning impacts on environmental components

General environmental protection requirements	
1.	Law 'On Environmental Protection', No. 1982-XII of 26.11.1992.
2.	Decree of the President of the Republic of Belarus 'On the criteria for identification of environmentally hazardous economic and other activities', No. 349 of 24.06.2008.
3.	Resolution of the Council of Ministers of Belarus 'On the approval of the State Programme for Environmental Protection and Sustainable Management of Natural Resources for 2016–2020', No. 205 of 17.03.2016.
Environmental protection requirements for the process of design of the motor road infrastructure	
4.	TKP 17.02-06-2011 (02120). Environmental protection and management of natural resources. Incorporating environmental safety controls in the design of industrial facilities, buildings, and motor road infrastructure.
5.	TKP 17.02.01-2006 (02120). Environmental protection and management of natural resources. Environmental safety regulations for filling stations.
Ambient Air	
6.	Law 'On Air Protection', No. 2-Z of 16.12.2008.
7.	Resolution of the Council of Ministers of Belarus 'On the approval of the Regulations on the procedure for issuing of permits for pollutant air emissions, introduction of changes and/or supplements to these permits, suspension, renewal and extension of the effective period of the permits, and cancellation of permits', No. 664 of 21.05.2009.
8.	State Standard STB 17.08.02-01-2009. Environmental protection and management of natural resources. Ambient air. Air pollutants. Codes and list.
9.	Resolution of the Ministry of Natural Resources and Environmental Protection 'On the approval of the list of pollutants, categories of air impact sources (facilities) subject to the establishing of permissible air emission limits, and of the list of air impact sources (facilities) which do not require establishing of permissible air emission limits, and on the annulment of the Resolution of the Ministry of Natural Resources and Environmental Protection dated 28.02.2005', No. 31 of 29.05.2009.
10.	Resolution of the Ministry of Healthcare 'On the approval of the limit values of maximum permissible concentrations of pollutants in ambient air and approximate safe levels of impact of pollutants in the air of settlements and public recreation areas and on the annulment of the Resolution of the Ministry of Healthcare No. 75 of 30.06.2009', No. 186 of 30.12.2010.
11.	Resolution of the Ministry of Natural Resources and Environmental Protection 'On the introduction of limit values for environmental safe concentrations of pollutants in the ambient air of specially protected natural areas, individual natural complexes and parts of specially protected natural areas', No. 5 of 24.01.2011.
Soil and Subsurface	
12.	Land Code of the Republic of Belarus, Law No. 425-Z of 23.07.2008.
13.	Subsurface Code of the Republic of Belarus, Law No. 406-Z of 14.07.2008.
14.	GOST 17.4.3.04-85. Environmental protection. Soil. General requirements for control and protection from pollution.
15.	GOST 17.4.3.02-85. Environmental protection. Soil. Requirements for conservation of fertile topsoil during execution of earth-moving work.
16.	GOST 17.5.3.04-83. Environmental protection. Land. General reclamation and rehabilitation requirements.
17.	Resolution of the Chief Sanitary Inspector of the Republic of Belarus 'On the approval of health (hygiene) standards 2.1.7.12-1-2004: Maximum permissible concentrations (MPC) and approximate permissible concentrations (APC) of chemical substances in soil', No. 28 of 25.02.2004.
18.	Resolution of the Ministry of Healthcare 'On the approval of the health standard for 'Approximate permissible concentration of ammonium nitrogen in soil for all land categories', No. 1 of 04.01.2014.
19.	Resolution of the Ministry of Healthcare 'On the approval of the limit values for the maximum permissible levels of total mercury and arsenic in soil of different functional areas

<p>within settlements', No. 107 of 04.08.2010.</p> <p>20. Resolution of the Ministry of Healthcare 'On the approval of the limit values for the maximum permissible levels of active forms of nickel, copper and total lead in soil of different functional areas within settlements', No. 125 of 19.11.2009.</p> <p>21. Resolution of the Ministry of Healthcare 'On the approval of the health standards for maximum permissible levels of active forms of zinc, chromium, and cadmium in soil of different functional areas within settlements, in land areas designated for use by industry, transport, communication, energy, defence or other purposes', No. 187 of 06.11.2008.</p> <p>22. Health standards. 12.03.2012 No. 17/1. Maximum permissible levels of petroleum products in soil for different land categories.</p> <p>23. Order of the State Committee on Land Resources, Geodesy and Cartography 'On the approval of the Regulations on the procedure for the handover of rehabilitated land plots to land owners and land users by economic entities engaged in extraction of minerals and peat or in geological exploration, survey and other works associated with disturbance of soil cover', No. 22 of 25.04.1997.</p>
Surface Water and Groundwater
<p>24. Water Code of the Republic of Belarus, Law No. 149-Z of 30.04.2014.</p> <p>25. STB 17.06.03-01-2008. Environmental protection and management of natural resources. Hydrosphere. Protection of surface waters from pollution. General requirements.</p> <p>26. STB 17.1.3.06-2006. Environmental protection. Hydrosphere. Protection of surface waters from pollution. General requirements.</p> <p>27. SanPiN¹⁸ 2.1.2.12-33-2005. Health requirements for protection of surface water from pollution.</p> <p>28. Resolution of the Ministry of Natural Resources and Environmental Protection 'On the introduction of water quality standards for surface water bodies', No. 13 of 30.03.2015.</p> <p>29. Resolution of the Ministry of health of the Republic of Belarus of 05.12.2016 № 122 "On approval of sanitary norms and rules "Requirements to the keeping of the surface water bodies in terms of their recreational use," hygienic standard "valid values for the safety indicators of water from surface water bodies for recreational use" and a recognition of becoming invalid for the resolution of the Ministry of health of the Republic of Belarus of December 30, 2008 No. 238.</p> <p>30. Health (hygiene) standards GN 2.1.5.10-20-2003. Approximate permissible levels (APL) of chemical substances in the water of water bodies used for domestic and drinking water supply and recreational purposes.</p> <p>31. GN 2.1.5.10-21-2003. Maximum permissible concentrations (MPC) of chemical substances in the water of water bodies used for domestic and drinking water supply and recreational purposes.</p> <p>32. GN 2.1.5.10-29-2003. Maximum permissible concentrations (MPC) and Approximate permissible levels (APL) of chemical substances in the water of water bodies used for domestic and drinking water supply and recreational purposes.</p>
Flora and fauna, specially protected animal and plant species
<p>33. Law 'On Fauna', No. 257-Z of 10.07.2007.</p> <p>34. Law 'On Flora', No. 205-Z of 14.06.2003.</p> <p>35. Resolution of the Council of Ministers of Belarus 'On certain aspects of management of wild animals and plants', No. 638 of 18.05.2009.</p> <p>36. Resolution of the Ministry of Natural Resources and Environmental Protection 'On the approval of the lists of rare and endangered species of wild animals and plants that will be included into the Red Book of the Republic of Belarus', No. 26 of 09.06.2014.</p> <p>37. Resolution of the Council of Ministers of Belarus 'On certain aspects of management of wild plants', No. 1426 of 25.10.2011.</p> <p>38. Resolution of the Council of Ministers of Belarus 'On the approval of the Regulations on the procedure for the estimation and payment of compensations', No. 168 of 07.02.2008.</p> <p>39. TKP 17.05-01-2014 (02120). Environmental protection and management of natural resources. Flora. Regulations for the protection of wild plant species listed in the Red Book of the</p>

¹⁸ Sanitary Regulations and Standards

<p>Republic of Belarus, including habitats of these plants.</p> <p>40. TKP 17.07-01-2014 (02120). Environmental protection and management of natural resources. Fauna. Regulations for the protection of wildlife species listed in the Red Book of the Republic of Belarus, including habitats of these animals.</p>
Specially Protected Natural Areas
<p>41. Law 'On Specially Protected Natural Areas', No. 3335-XII of 20.10.1994.</p> <p>42. Resolution of the Council of Ministers of Belarus 'On the approval of the Regulations on the procedure for preparation of applications for declaration, transformation and termination of specially protected natural areas', No. 1657 of 04.11.2008.</p> <p>43. Resolution of the Council of Ministers of Belarus 'On the expansion of the system of specially protected natural areas, No. 649 of 02.07.2014.</p> <p>44. Resolution of the Ministry of Natural Resources and Environmental Protection 'On the approval of the guidelines for the assessment and introduction of limit values for permissible load on specially protected natural areas', No. 129 of 30.12.2008.</p> <p>45. Resolution of the Ministry of Natural Resources and Environmental Protection 'On the declaration of fine wood forest areas natural monuments of national importance', No. 81 of 08.10.2008.</p> <p>46. Resolution of the Council of Ministers of Belarus on "On establishment of the Republican landscape reserve "Prilepsky" of 20.09.2000 No. 1451 (as amended by the resolutions of the Council of Ministers of Belarus dated 12.11.2008 No. 1697, dated 30.06.2012 № 611 of 21.10.2015 No. 884, of 30.09.2016 No. 793)</p>
Radiation safety, noise and light impacts
<p>47. Law 'On the Legal Status of Areas Affected by Radioactive Contamination from the Chernobyl Disaster', No. 385-Z of 26.05.2012.</p> <p>48. Law 'On Radiation Safety of Population', No. 122-Z of 05.01.1998.</p> <p>49. Resolution of the Council of Ministers of Belarus 'On the approval of the list of settlements and assets located within areas of radioactive contamination and on the annulment of some previous resolutions of the Council of Ministers', No. 9 of 11.01.2016.</p> <p>50. Resolution of the Ministry of Healthcare 'On the approval of SanPiN 'Radiation safety requirements for the execution of work within areas of radioactive contamination' and on the amendments to Resolution of the Ministry of Healthcare No. 211 of 28.12.2012', No. 89 of 02.07.2015.</p> <p>51. Resolution of the Ministry of Healthcare on the approval of SanPiN 'Radiation safety requirements' and GN 'Criteria for the assessment of radiation impact', No. 213 of 28.12.2012.</p> <p>52. TKP 45-2.03-134-2009 (02250). Procedure for examination and criteria for the assessment of radiation safety of construction sites, buildings and structures.</p> <p>53. Resolution of the Ministry of Healthcare on the approval of the sanitary standards, regulations, and health standards 'Noise at workplaces, in vehicles, inside residential and public buildings, and in residential areas' and on the annulment of certain resolutions of the Chief Sanitary Inspector of the Republic of Belarus', No. 115 of 16.11.2011.</p> <p>54. TKP 45-2.04-154-2009 (02250). Noise protection. Construction design standards.</p>

Table 4

Waste management regulations

Waste management requirements, including: waste categories, hazardous waste management procedures, requirements for landfills, development of waste management documents as part of the project documentation
<p>1. Law 'On Waste Management', No. 271-Z of 20.07.2007.</p> <p>2. Resolution of the Council of Ministers of Belarus 'On certain waste management issues', No. 1104 of 23.07.2010.</p> <p>3. Resolution of the Ministry of Natural Resources and Environmental Protection 'On the approval and implementation of the technical regulations', No. 15-T of 22.12.2014.</p> <p>4. Resolution of the Ministry of Natural Resources and Environmental Protection 'On the approval of the classification catalogue of waste generated in the Republic of Belarus', No. 85 of 08.11.2007.</p> <p>5. Resolution of the Chief Sanitary Inspector of the Republic of Belarus 'On the approval of</p>

SanPiN 2.1.7.12-9-2006: Health requirements for design and operation of solid municipal waste landfills.', No. 68 of 29.05.2006.
6. Explanatory notes PZ-02 to construction standards SNB 1.03.02-96. Scope and procedure for the development of the Environmental Protection section of the design/project documentation.

Table 5 *Health and safety laws and regulations*

General health and safety requirements
1. Law 'On the Sanitary and Epidemiological Well-being of Population', No. 340-Z of 07.01.2012.
2. Law 'On Industrial Safety', No. 345-Z of 05.01.2016.
3. TKP 45-1.03-40-2006 (02250). Safety of labour in construction. General requirements.
4. Labour Code of the Republic of Belarus, Law No. 296-Z of 26.07.1999.
5. Law 'On Labour Protection', No. 356-Z of 23.06.2008.

Table 6 *Regulations concerning use and management land of different land categories*

Requirements for/limitations of the use and management of land of different categories and conditions of acquisition of land plots for construction
1. Land Code of the Republic of Belarus, Law No. 425-Z of 23.07.2008.
2. Decree of the President of the Republic of Belarus 'On withdrawal and allocation of land plots', No. 667 of 27.12.2007.
3. Decree of the President of the Republic of Belarus 'On certain measures for improvement of practices in relation to withdrawal, allocation and use of land plots', No. 431 of 23.09.2011.
4. Resolution of the Council of the Republic of the National Assembly of the Republic of Belarus on the Decree of the President of the Republic of Belarus No. 10 of 06.08.2009 'On creating additional conditions for investment activity in the Republic of Belarus', No 141-SR4/III of 22.10.2009.
Requirements for economic activity on forest lands: need for land re-categorisation, preparation of forest development plans, management of wood and cutting waste, rehabilitation, compensatory planting
5. Forest Code of the Republic of Belarus, Law No. 332-Z of 24.12.2015.
6. Decree of the President of the Republic of Belarus 'On the approval of the Regulations on the procedure for classification of forests according to protection groups and categories, transfer of forest from one protection group or category to another, and identification and establishing of specially designated protection forest areas', No. 364 of 07.07.2008.
7. Resolution of the Ministry of Forestry 'On the approval of regulations for radioactive contamination control of forests', No. 9 of 15.04.2011.
8. TKP 143-2008 (02080). Tree cutting regulations.
9. TKP 026-2006 (02080). Sustainable forest management and use. Sanitary regulations for forests.
10. TKP 047-2009 (02080). Sustainable forest management and use. Guidelines for restoration and cultivation of forests in the Republic of Belarus.

Table 7 *Protection and conservation of cultural heritage*

Cultural heritage
1. Land Code of the Republic of Belarus, Law No. 425-Z of 23.07.2008.
2. Culture Code of the Republic of Belarus, Law No. 413-Z of 20.07.2016 (will come into effect from 02.01.2017).
3. Law 'On protection of cultural heritage of the Republic of Belarus', No. 98-Z of 09.01.2006.
4. Resolution of the Council of Ministers of the Republic of Belarus 'On the status of historical

Cultural heritage	
	and cultural values', No. 578 of 14.05.007.
5.	Resolution of the Council of Ministers of the Republic of Belarus 'On the approval of the Regulations on protection/ conservation of archaeological sites during execution of earth-moving and construction works, No. 651 of 22.05.2002.
6.	Resolution of the Ministry of Defence 'On the approval of the Procedure for the state control of war graves in the Republic of Belarus', No. 60 of 22.10.2003.

Annex 2

Minutes of consultations
with stakeholders
July 31, 2017

Stakeholder consultations on design decisions related to the P80 reconstruction were conducted on 31 July 2017.

The meetings were held:

- at 11.00 in the secondary school of Sloboda, Smolevichi Distruct; and
- at 16.00 in the premises of the Rural Council of Bolshevik, Minsk District.

The Project presentation was made by representatives of Minskavtodor-Tsentr (Company), Belgiprodor (Design Organisation) and ERM (EBRD Consultant).

The meeting in Sloboda was attended by 32 people, including:

- residents of Sosnovaya and Okolitsa; and
- a representative of the Raubichi Olympic Training Centre.

The meeting in Bolshevik was attended by 15 people, including:

- residents of Okolitsa, Belye Luzhi and Ostroshitsky Gorodok.

Major design decisions related to the reconstruction of the P80 section Sloboda – Papernya at km 0.0 – km 14.7 were presented at the meetings.

The stakeholders were informed about the environmental and social impact assessment and the specifics of the assessment procedure pursuant to the national legislation and the EBRD requirements. A point of contact was communicated for dealing with public enquiries, concerns, comments and proposals.

Residents of the affected settlements actively participated in discussions of the design decisions. Concerns and proposals were partly formulated in writing and handed over to representatives of Minskavtodor-Tsentr. These public enquiries will be reviewed and the relevant answers will be communicated to the addresses specified in such enquiries.

Annex 3 below contains a list of stakeholder questions, concerns and proposals received at the meetings and the relevant answers of the Company and the Design Organisation representatives.

The following decisions were taken following the discussions:

- The Project presentation, including the road reconstruction layouts and major design decisions, will be published on the corporate web site of Minskavtodor-Tsentr within five days after the public consultations;
- Due to public concerns, a revision of the design decisions related to the road interchange in Okolitsa will be proposed at the technical meeting to be held in the Ministry of Transport and Communications on 3 August 2017. The junction layout will be reconsidered and alternative design decisions will be communicated to the village inhabitants. Additional meetings with residents of Okolitsa will be held to coordinate the updated design decisions. If necessary, there will be several such meetings in order to reach a compromise.

Annex 3

List of stakeholder
questions, concerns and
proposals received at
the meetings held on
July 31, 2017

Public questions, comments, concerns and proposals	Answers and decisions of the Company and/or the Design Organisation
Questions about stakeholder engagement procedure	
To whom comments and concerns about the motorway reconstruction have to be addressed?	<p>All Project-related questions, inquiries and concerns can be sent to Minskavtodor-Centre. Contact information is available on the corporate web site of Minskavtodor-Centre and was communicated during the Project presentation.</p> <p>Questions about the national environmental and social impact assessment procedure and a written statement demanding a meeting to discuss the EIA Report are to be sent to district executive committees.</p> <p>Public consultations on the EIA Report will be conducted from 15 July until 15 August 2017 in Smolevichi District and from 29 July until 28 August 2017 in Minsk District.</p>
Where Project-related documents can be found?	<p>The Project presentation, including major design decisions, will be published on the corporate web site of Minskavtodor-Centre within five days after the public consultations (i. e. until 04 August 2017).</p> <p>The EIA Report is published on the web sites of the district executive committees and the corporate web site of Minskavtodor-Centre.</p>
Why the meetings are held in Sloboda and Bolshevik and not in Okolitsa?	Premises for the meetings were provided by the district executive committees. Additional meetings to discuss an alternative traffic plan for Okolitsa will be held in Okolitsa, if possible.
Construction of the road interchange and expansion of the carriageway near Sosnovaya	
Will the trees and houses located on the elevation remain during the reconstruction (km 2.4 of P80)?	The P80 reconstruction will not affect residential houses and trees. The roadbed will be expanded in the opposite direction.
Where noise barriers will be installed, what will be the height and material?	Noise barriers will be installed in settlements along the P80 Motorway. Their height, materials and location with reference to residential houses and the road will be determined at the construction project development stage following the noise level modelling in settlements. The proposed decisions on noise barriers will be submitted for the sanitary and environmental expert review.
How the traffic on the road interchange will be arranged?	Public transport vehicles, agricultural machinery, cyclists and pedestrians will use local roads.
Construction of the road interchange and expansion of the carriageway in Okolitsa	
How road expansion will be implemented in Okolitsa?	The P80 Motorway will be expanded to the right from km 10 (in the direction of traffic from the Burial Mound of Glory Memorial) to the H9059 crossing (Tsentralnaya Street) and to the left after the

Public questions, comments, concerns and proposals	Answers and decisions of the Company and/or the Design Organisation
	pedestrian crossing. The existing roadbed width allows minimization of the additional road expansion. Residential houses will not be affected. The cuts for the road expansion will be lined with retaining walls accompanied by the installation of noise barriers.
Where bus stops will be located?	Option 1: the existing bus stops are retained in Okolitsa on the P80 Motorway; and Option 2: if the traffic interchange project is implemented for the Solnechnaya, Lugovaya and Tsentralnaya streets, 3 pairs of bus stops can be arranged in each of them.
How the traffic on the road interchange in Okolitsa will be arranged?	According to the traffic interchange plan for Okolitsa, vehicles going to Okolitsa, Raubichi, Gubichi and the poultry farm will drive through the Lugovaya, Solnechnaya and Tsentralnaya streets. The Project provides for the reconstruction and improvement of these streets, including lighting, construction of pavements and installation of traffic lights and arrangement of bus stops.
<p>Concerns were voiced regarding the passage of freight vehicles (including trucks of OAO Pervaya Minskaya Ptitsefabrika and the vegetable warehouse located in Raubichi) and private cars of Raubichi and Gubichi communities on the reconstructed streets of the village. The number of local vehicles is currently assessed at about 3 thousand, which can create a high density traffic during rush hours at 12 to 50 vehicles per minute.</p> <p>The residents pointed out the following adverse impacts of the design decision providing for the transfer of the local traffic load onto the streets inside settlements:</p> <ul style="list-style-type: none"> • residential houses will be too close to the carriageway resulting in noise and, especially, dust impacts; • pedestrian safety will be affected as it will be impossible to use the streets for walking, free movement in residential areas and free movement of children; • unequal distance between bus stops (in case these will be relocated) for inhabitants of different residential areas, including children riding a school bus (some people will have to walk around 30 minutes to reach a bus stop); • the school bus timetable has to be changed as it will be impossible for the bus to travel 3 times per our due to a longer distance and speed restrictions (traffic lights, speed humps): see details below; • the proposed construction of a pedestrian underpass 200 m away from the existing ground level pedestrian crossing will make people walk additional 	<p>Due to concerns voiced during public consultations, it was decided to propose for reconsideration of design decisions related to the road interchange at the technical meeting to be held in the Ministry of Transport and Communications on 3 August 2017.</p> <p>The junction layout will be reconsidered and alternative design decisions will be communicated to the village inhabitants. Additional meetings with residents of Okolitsa will be held to coordinate the updated design decisions. If necessary, there will be several such meetings in order to reach a compromise.</p>

Public questions, comments, concerns and proposals	Answers and decisions of the Company and/or the Design Organisation
<p>400 m to visit the only shop in the village. This can be critical for vulnerable groups of the population: wheelchair riders and elderly people.</p> <p>Five written public complaints were drawn up (and handed over to the Company) during consultations on this issue.</p>	
<p>There were proposals to reconsider the road interchange layout in Okolitsa.</p> <p>Proposals were received to re-design the road interchange in Okolitsa as follows:</p> <ul style="list-style-type: none"> the road interchange near the military installation at km 9.8 – 9.9 of the P80 Motorway has to be relocated (closer to Okolitsa) shifting the road centreline southwards; the road interchange has to be located west of Okolitsa at km 10.8; the roundabout interchange has to be constructed at the proposed viaduct (km 10); the road interchange in Okolitsa has to be combined with the interchange at the Raubichi Olympic Training Centre; and a bypass road has to be built for freight vehicles and private cars of the inhabitants of Gaubichi outside Okolitsa. 	
<p>How school bus traffic will be arranged? Concern: a school bus will have too little time to pick up schoolchildren at bus stops in the Lugovaya, Solnechnaya and Tsentralnaya streets as it will have only 15 minutes to travel from the military installation to Ostroshitsky Gorodok with the speed restricted to 60 km per hour.</p>	<p>Option 1: the existing bus stops are retained in Okolitsa on the P80 Motorway. The school bus route remains unchanged; and</p> <p>Option 2: if the traffic interchange project is implemented for the Solnechnaya, Lugovaya and Tsentralnaya streets, 3 pairs of bus stops can be arranged in each of them. The school bus route has to be changed: busses will come to the village, pick up schoolchildren at bus stops and go to Ostrishitsky Gorodok.</p>
<p>Road surface runoff will be discharged to the village and wash out the local roads?</p>	<p>Road surface runoff will be collected by the drainage system and diverted to local treatment facilities.</p>
<p>How the exit from the Motorway in the Shosseynaya Street to residential houses will be arranged for private cars and fire fighting vehicles?</p>	<p>Direct exit from the P80 Motorway to residential houses will be lined with noise barriers. The exit to the local roads and the Shosseynaya Street will be arranged via the Tsentralnaya Street and the H9059 Motorway.</p>
<p>Can the bus stops be relocated with installation of two pairs of bus stops at the opposite ends of the village?</p>	<p>According to the safety regulations, bus stops cannot be installed at such a short distance from the crossroads.</p>

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	Relocation of the bus stops may cause discontent of other locals used to their present location.
How the access to bus stops will be arranged if these will remain where they are?	A pedestrian underpass will be constructed near the existing bus stops. The footways on both sides of the underpass will connect it with the bus stop.
How the passage to bus stops will be arranged through noise barriers? Is it possible to arrange a door so that children and domestic animals cannot run out onto the motorway?	A passage break will be arranged between noise barriers as such a barrier will be installed with partial overlapping (counter barrier or double barrier). It is also possible to make a door. However, there is a risk that it can be broken and the noise will pass through the opening in the noise barrier. Therefore, the option involving partial overlapping is preferable.
What will be the vehicle speed on the P80 Motorway after the proposed reconstruction?	The design speed of passenger cars and freight vehicles will be 120 km/h and 100 km/h respectively.
Travelling of vehicles on concrete surface at high speed is associated with considerable noise levels. Can asphalted road sections be constructed in settlements?	The use of different types of road pavement is not reasonable during construction as well as at the operation stage as this will cause an increased road surface wear and make it necessary to permanently repair the road at junctions of different pavements.
Will old lindens be cut down near the crossroads in Okolitsa?	The lindens will not be cut down as the expansion in this road section will be in the opposite direction.
Two pedestrian underpasses have to be built in Okolitsa because a children's camp is operational in summer and a church is being constructed in the western part of the village. At the moment, people can cross the road at km 11 where no specially equipped road crossing is available as according to the regulations this is allowed on a two-lane road where no pedestrian crossing is available in sight. No crossing of the road outside specially equipped pedestrian crossings is allowed on the Category 1 motorway.	According to the regulations, a pedestrian crossing has to be arranged where pedestrian traffic is no less than 50 people per hour. The pedestrian traffic density is much less at the moment. The pedestrian crossing is proposed to be arranged near the bus stop, from which pedestrians will move out to the summer camp and the church.
Construction of the road interchange near the Raubichi Olympic Training Centre	
During public consultations, a written request was received from an employee of the Raubichi Olympic Training Centre for Winter Sports to construct a parking lot for 1,000 vehicles (including 300 busses and 700 cars) and provide it with fencing, main and reserve entrances, international-level infrastructure and convenient exits for fans and visitors.	<p>The Project provides for the construction of a parking lot with an interchange at the Raubichi Olympic Training Centre.</p> <p>The request will be additionally reviewed by Minskavtodor-Tsents jointly with Belgiprodor.</p>
Motorway reconstruction near Belye Luzhi and Ostroshitsky Gorodok	

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<p>A request to install noise barriers in Belye Luzhi was received.</p> <p>At what distance these barriers will be installed? Is it possible to install them as far as possible from the fence (closer to the road)?</p>	<p>The Project provides for the installation of noise barriers in Belye Luzhi.</p> <p>The distance at which noise barriers are to be installed will be determined at the construction project development stage. The minimum distance from the fence to the noise barrier (where the fence is located at the shortest distance to the road) will amount to about 3 meters.</p> <p>The Design Organisation representatives noted that installation of noise barriers directly at the carriageway (not the houses) is most efficient.</p>
<p>During public consultations, a written request was received from inhabitants of Ostroshitsky Gorodok to install noise barriers between residential houses and the P80 Motorway, to close the driveway from the P80 Motorway to the houses and to construct a new driveway to the P40 Motorway.</p>	<p>The Project provides for the installation of noise barriers in Ostroshitsky Gorodok (Vilnyusskaya Street).</p> <p>The written request will be additionally reviewed by Minskavtodor-Tsents jointly with Belgiprodor.</p>

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