

TA to Connectivity in the Western Balkans

EuropeAid/137850/IH/SER/MULTI

Sub Project

Code: CONNECTA-TRA-INFR-BIH-DD-02

Area: Transport Infrastructure

Technical Assistance for preparatory studies for Project:
Motorway on Corridor Vc – from Interchange Johovac to
Interchange Vukosavlje (36km)

Non-Technical Summary

March 2022



Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
01	16/01/2022	Branislav Sekulović Maja Simov Branko Radovanovic	Z.Varkonyi	D.Savkovic	Draft NTS
02	28/03/2022	Branislav Sekulović Maja Simov Branko Radovanovic	Z.Varkonyi	D.Savkovic C. Germanacos	Final NTS

Information Class: EU Standard

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List of Abbreviations

ARS	Autoputevi Republike Srpske (Motorways of Republika Srpska)
BiH	Bosnia and Herzegovina
CESMP	Construction Environmental and Social Management Plan
CHS	Community Health & Safety
CONNECTA	Technical Assistance to Connectivity in the Western Balkans
EIA	Environmental Impact Assessment
EIB	European Investment Bank
ESAP	Environmental and Social Action Plan
E&S	Environmental & Social
ESDD	Environmental and Social Due Diligence
EU	European Union
FBiH	Federation of Bosnia and Herzegovina
GHG	Greenhouse Gas
ha	Hectare
NTS	Non-Technical Summary
OESMP	Operational Environmental and Social Management Plan
RAP	Resettlement Action Plan
RS	Republika Srpska
SEP	Stakeholder Engagement Plan
WBIF	Western Balkans Investment Fund

1 Introduction

The public company “JP Autoputevi Republike Srpske” (ARS) intends to implement the construction of the 36 km long section of Corridor Vc motorway between Vukosavlje and Johovac (the ‘Project’).

The EIB is considering providing finance of a sovereign-guaranteed loan to ARS. Parallel financing of for this Project will be provided through the EU (WBIF) grant. The Project has been developed by ARS based on the Republika Srpska (RS) legislative requirements and environmental and social standards of the European Investment Bank (EIB).

This document is a Non-Technical Summary providing information on the current design of the Project, the expected environmental and social impacts and management measures that will be undertaken by ARS and the Contractor for the Project, and how members of the public can contact ARS with any further questions they have about the Project.

In addition to this NTS, two more documents have been prepared to address environmental and social issues associated with the Project: Environmental and Social Action Plan (ESAP), Environmental and Social Management Plan (ESMP), Biodiversity Assessment Report (BAR), the Stakeholder Engagement Plan (SEP) and the Resettlement Action Plan (RAP). All documents can be viewed on the ARS website <https://autoputevirs.com/en/our-services/69466a1df7ca8ee5ef18c4b91a5a8eca5927aaaa7254cacd155858c354d58ddd069466a1df7ca8ee5ef18c4b91a5a8eca5927aaaa7254cacd155858c354d58ddba69466a1df7ca8ee5ef18c4b91a5a8eca5927aaaa7254cacd155858c354d58dd/>, while hard copies are available in the affected municipalities and from presidents of local community councils of villages located along the Project footprint.

2 Project Description

The Trans-European Corridor Vc is BiH’s main north-south transport route. It connects Budapest (Hungary) to the Adriatic port of Ploče (Croatia). Within BiH, Corridor Vc’s total length is approximately 335 km.

The subject of this Project is a 36 km long road section called Johovac- Vukosavlje. The Project is located in the northern part of the country and is part of the planned 46.6 km-long section of Corridor Vc that need to be constructed through the administrative entity of Republika Srpska (RS).



Figure 1: Location of the Project

The Project area is situated in the north-east part of BiH, between the towns of Modriča and Doboj. It is a rural area with a number of linear villages formed along the two regional roads: The M-17 (single lane in each direction) passing along the left bank of the River Bosna and the R-465 (single lane in each direction) along the right bank, parallel to the railway road Doboj – Modriča.

The 36 km long proposed alignment is called Johovac - Vukosavlje and consists of two adjacent sub-sections: Northern Odžak-Vukosavlje Section which formally belongs to LOT 1 and Vukosavlje - Johovac Section belonging to LOT 2.

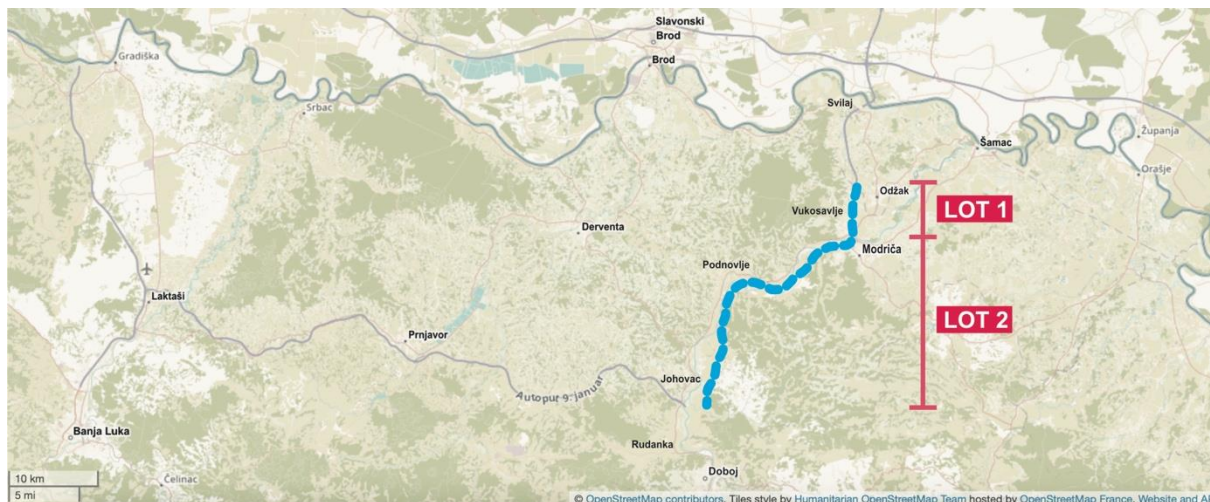


Figure 2: The Project Section

The total length of the Project alignment is 36 km. The northern part of the alignment starts in the Municipality of Vukosavlje, about 6 km north of the town of Modriča. The alignment passes through a wide plain of predominantly cultivated land. After the trumped-shaped interchange Vukosavlje (the main connection with the planned motorway to Serbia), the alignment enters the alluvial plain of the Bosna River and remains in the plain until the end. The cultivated land is characterized by small to medium

plots with monocultures, intersected by the diffuse network of dirt roads. There are several small linear villages along the local roads. The alluvial plane is often flooded by the Bosna River.

The most important structures proposed along the alignment are the cut-and-cover tunnel Dobor (approx. 1 km) and four bridges over the Bosna River (up to 600 m each).

The cut-and-cover tunnel Dobor will be built along the existing regional road M-17, which will be diverted on top of the tunnel.

Besides four bridges across the Bosna River, a number of small water courses will be crossed by culverts. The local agricultural roads will be intersected by 23 underpasses.

The proposed alignment will intersect the existing regional roads by 5 over passes.

There will be one rest area.

The entire alignment is proposed on the embankment with an average height of 4.25 m.

The road will have a design speed of 120 km/h and be approximately 28 m wide and accommodate 2 running lanes of 3.75 m and a hard shoulder of 2x1.5 m and a central reserve of 4 m. Typical cross section of the road is shown in Figure 3.

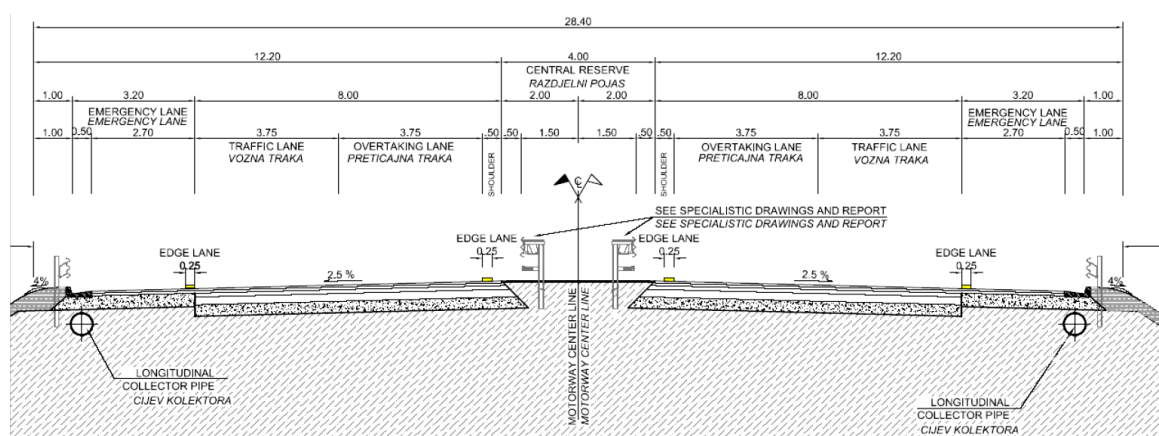


Figure 3: Typical cross section of the proposed alignment

The layout of the Project is shown in a Figure 4 below.

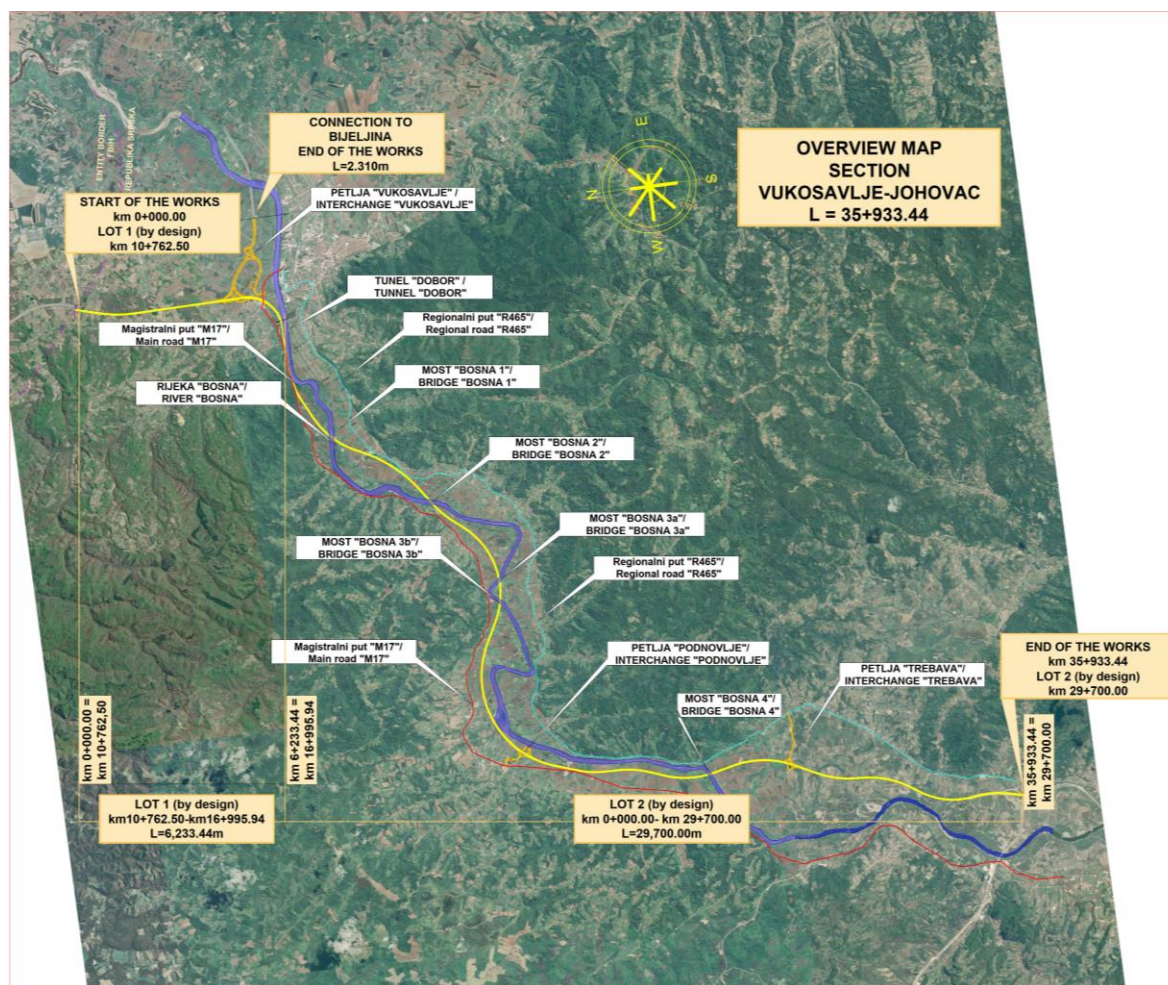


Figure 4: The Project Alignment

3 Project Background

3.1 Rationale for the Project

The Project is significant for connection of the western and eastern areas of Republika Srpska to the Corridor Vc and further to the Corridor X in Croatia. It will increase traffic capacity and reduce the traffic volumes on the existing regional road network.

The Project will deliver a number of key benefits, including: improved regional, national and international connectivity in the western Balkans; facilitating economic development in the region; removal of some through traffic from the local road network; time savings; operating cost savings; traffic emissions reductions; road and community safety improvements, road accident reduction savings; and, short-term local employment opportunities during construction.

3.2 Planning History and Route Selection

Planning of a motorway through Bosnia and Herzegovina as part of the Trans-European road corridors network started in the late 1970s. The Corridor route was defined in 1981 and after public consultations was formally approved as part of the Spatial Plan of BiH in 1982. The first major steps were taken in 2004 when the Council of Ministers of BiH decided to start the corridor development which was followed by the Feasibility Study and the Preliminary Design in 2006. The Spatial Plans of Republika Srpska (2008-2015 and 2015-2025) have considered the Corridor Vc through RS as an essential road transport link with significant economic benefits for the entity.

Several alternatives to the proposed Project route were considered during its development. These are summarised below:

Definition of the Corridor and Early Alignment Considerations: The overall strategic alignment of the Corridor was determined by several planning documents, including the BiH Spatial Plan (1981 – 2000), which identified the corridor as needing to meet the N-S trans European highway E73, and listed the municipalities through which the motorway should pass. Possible alternative alignments were examined, within the corridor identified. For the stretch from Svilaj to Doboj south (within which the Projects is located), eight alternative alignments were considered in 2006. The four criteria used for the evaluation of alternatives were: 1. spatial, 2. ecological (environmental), 3. traffic and 4. economic. The alignment that was selected at that time generally remains and now is to be implemented.

Alternatives Assessment Reported in 2006 EIA: The 2006 EIA for the Corridor described that evaluation of alternative routes for the corridor used four criteria: 1. technical, 2. construction cost, 3. spatial-environment characteristics, and 4. timing/construction conditions. The route (including location of major structures), appeared in the Spatial Plan for the Republika Srpska (1996 – 2015), including in the 2005 draft), and in the updated Plan (2015-2025). The alignment which was passed to ARS was therefore largely pre-determined, leaving only minor alternatives (e.g. micro-alignments, materials, construction techniques) within the scope of ARS to change. The alignment and other Project alternatives were not addressed in either the 2006 or the 2011 EIAs. However, there is no indication that any of the selected alternatives have any more significant E&S risks than the others.

Variations in the Detailed Design Going Forward: This Project will be built in accordance with the Fidic Yellow Book (so-called design and built contract), which means that the ARS will select a contractor to make a detailed project and then build the proposed motorway section. ARS has confirmed that no alignment changes or changes in locations of bridges and other structures are envisaged at this stage, and that the only alternatives in the Project which are currently 'open' relate to areas where the contractor will propose specific construction methodologies and some changes in materials or specifications, as well as the detailing of minor elements such as noise barriers and fencing. The contractor has an obligation to consult local communities about the details of motorway crossings (overpasses and underpasses) and to take into account their feedback in finalising the design. Any proposed changes will be reviewed firstly by the Engineer (supervisor) and any changes subject to the approval of ARS.

4 Project EIA, Stakeholder Engagement and Land Acquisition Process

4.1 Environmental Impact Assessment Process (EIA)

The national requirements for environmental assessment have been met through the conducting of an environmental impact assessment for the Project. For both Project sections (LOT 1 Section: Odžak-Vukosavlje and LOT 2 Section: Vukosavlje-Johovac) the local EIA procedures have successfully been completed in line with the Law of Environmental Protection of RS which sets out the procedure for Environmental Impact Assessments and related environmental approvals.

Environmental aspects of the road section from Odžak to Vukosavlje were assessed as part of the EIA for Lot 1 (LOT 1: Svilaj – Vukosavlje, Section 3: Odžak-Vukosavlje), prepared by Technical Institute from Bijeljina (RS) in June 2014.

The sections from Vukosavlje to Johovac were analysed as part of the EIA for Lot 2: Vukosavlje – Johovac, prepared by Projekt from Banja Luka (RS) in 2010.

The EIAs were produced in parallel with the preparation of the Main design documents. Both EIAs had been publicly disclosed for a few months, with public hearings held in the interested municipalities. The Competent Ministry provided a number of comments on both EIAs, primarily summarising the opinions obtained from the institutional stakeholders (relevant ministries). After the revised EIAs were resubmitted, the Competent Ministry gave the positive decisions, approving the EIA for LOT 2 Vukosavlje - Johovac Section in March 2011 and the EIA for LOT 1 Odžak-Vukosavlje Section in November 2014.

Based on the positive decisions, in March 2015, ARS were awarded the **Environmental Permit** (one permit for both Project sections) which was valid for 5 years. In March 2020 the Environmental permit (named "Ecological Permit" in RS) was renewed and is now valid until March 2025.

4.2 Stakeholder Engagement

The Corridor Vc Project has been in development for over 50 years and during that time many plans and presentations were made to the general public and various other stakeholders, as described in previous sections.

In August 2021, the consultants assisting ARS to prepare the relevant E&S documentation, held a number of meetings in all three affected municipalities, with various stakeholders to address primarily social impacts related to the Project and stakeholder engagement issues. The main conclusion from these meetings was that a long time had passed since previous public consultation meetings regarding the Project were held, and people living in villages were not acquainted with the details of it, including particularly the locations of the interchanges, overpasses and underpasses along the motorway, which are very important to them.

To address this gap, the consultant team worked together with ARS to carry out stakeholder engagement activities with the municipalities and local communities located along the Project footprint. A two stage approach was taken, which involved online meetings with representatives of the relevant municipalities, followed by community meetings in the field.

Community meetings were organised as follows:

- 16.11.2021. at 15:30, Vukosavlje, Culture Centre Vukosavlje (26 participants, of whom 9 women)
- 17.11.2021. at 17:00, Modriča, Serbian Culture Centre (41 participants, of whom 9 women)
- 18.11.2021. at 18:00, Dobož, Municipal Assembly Hall (30 participants, of whom 8 women)

ARS representatives provided an overview of the Project, presented the current stage of Project development, showed the detailed Project footprint and responded to participants' questions (see Table 1). The contact details from several ARS employees were also made available to Project participants and people were encouraged to contact ARS directly if they had any more questions or suggestions in relation to the Project.

Table 1: Questions and answers from public meetings

Question	Answer
Will more land need to be acquired for the Project and where can I see if my plots will be affected? What will be the offered compensation price of land in Vukosavlje municipality?	There may be a need to acquire more land for the Project and if so, each owner of affected land will be notified. The best place to get updated information is in the municipal Cadastre office (the office of the Republic Administration for Geodetic and Property Affairs). The compensation price of land which will be offered to owners in Vukosavlje municipality has not been determined yet and it will be determined by certified appraisers, when expropriation starts in accordance with the law.
How will land be accessed on the other side of the motorway, i.e. where are all the planned overpasses and underpasses? What if I have to travel longer distances to reach my land on the other side?	The currently planned overpasses and underpasses were shown to meeting participants on maps. The maps have been provided to the municipalities and people can see them there as well. The contact numbers and emails of representatives of ARS were provided at the meetings and they can be contacted for any questions. The overpasses and underpasses have been defined in a way to prevent situations where someone would have to travel much longer distances to access land. Overpasses and underpasses are created everywhere where there are existing local roads and people will be able to use the same roads as before. The distances between overpasses and underpasses were discussed at the meetings to demonstrate to people that they are close together, so there is limited possibility that someone will have to travel considerably more to access land on the other side of the motorway. Additionally to overpasses

Question	Answer
	and underpasses along the motorway, access roads will be constructed in accordance with the Main Design and Planning documents, to provide proper access and distances.
Will the local road which people from our village use to get on the regional road be closed after the motorway is constructed and how will we reach it? Will the regional road M-17 be closed?	No roads will be closed or can be closed and this is the legal obligation that ARS has to abide by. For the specific road mentioned at the meeting, ARS explained that people will maybe have to travel an additional 50 to 100 m to access that local road. The regional road M-17 will not be closed, nor any other existing road.
Can the access roads be built at the same time as the motorway, to ensure that people have continuous access to their properties?	The access roads will be built simultaneously as the motorway. If there is some time difference, there will have to be temporary bypass roads that people will be able to use until permanent roads are constructed.
Will the road create more flooding or in different locations, because when the water comes in, if it has nowhere to go, the water will remain in some areas? Will the Project create barriers for the water and prevent flooding?	The road is not expected to cause more or less flooding. Since this is a Design and Build type of Project, additional analysis will be conducted by the Designer considering floods and the hydrological data and studies from 2014.
Will the small HPPs project be implemented, is the motorway project aligned with it? Is the motorway project aligned with other planned projects?	ARS does not know if the small HPPs project will be implemented, as it is under the responsibility of other institutions. The Corridor Vc project is aligned with all planned projects, as required by the law including the small HPPs project.
Can the rest area be closer to Dobor tower?	Dobor tower is very close to the Vukosavlje interchange (a few km), so people who decide they want to see the tower can access it easily from this interchange. Also, there will be an additional access route from Vukosavlje, on the north of the Dobor tower, which visitors will be able to use as well.
Will the motorway be above or below the regional road M-17?	The motorway will be above the regional M-17 road.
Where is the final location for the interchange Trebava?	The option that has been selected is to locate the Trebava interchange by the village Kožuhe. ARS showed the location to meeting participants on the map and the participants confirmed they were satisfied, as this is what they had hoped for.
When will construction of the motorway be completed?	The motorway is planned to be completed by the end of 2026.
Question	Answer
Will more land need to be acquired for the Project and where can I see if my plots will be affected? What will be the offered compensation price of land in Vukosavlje municipality?	There may be a need to acquire more land for the Project and if so, each owner of affected land will be notified. The best place to get updated information is in the municipal Cadastre office (the office of the Republic Administration for Geodetic and Property Affairs). The compensation price of land which will be offered to owners in Vukosavlje municipality has not been determined yet and it will be

Question	Answer
	determined by certified appraisers, when expropriation starts in accordance with the law.
How will land be accessed on the other side of the motorway, i.e. where are all the planned overpasses and underpasses? What if I have to travel longer distances to reach my land on the other side?	The currently planned overpasses and underpasses were shown to meeting participants on maps. The maps have been provided to the municipalities and people can see them there as well. The contact numbers and emails of representatives of ARS were provided at the meetings and they can be contacted for any questions. The overpasses and underpasses have been defined in a way to prevent situations where someone would have to travel much longer distances to access land. Overpasses and underpasses are created everywhere where there are existing local roads and people will be able to use the same roads as before. The distances between overpasses and underpasses were discussed at the meetings to demonstrate to people that they are close together, so there is limited possibility that someone will have to travel considerably more to access land on the other side of the motorway. Additionally to overpasses and underpasses along the motorway, access roads will be constructed in accordance with the Main Design and Planning documents, to provide proper access and distances.
Will the local road which people from our village use to get on the regional road be closed after the motorway is constructed and how will we reach it? Will the regional road M-17 be closed?	No roads will be closed or can be closed and this is the legal obligation that ARS has to abide by. For the specific road mentioned at the meeting, ARS explained that people will maybe have to travel an additional 50 to 100 m to access that local road. The regional road M-17 will not be closed, nor any other existing road.
Can the access roads be built at the same time as the motorway, to ensure that people have continuous access to their properties?	The access roads will be built simultaneously as the motorway. If there is some time difference, there will have to be temporary bypass roads that people will be able to use until permanent roads are constructed.
Will the road create more flooding or in different locations, because when the water comes in, if it has nowhere to go, the water will remain in some areas? Will the Project create barriers for the water and prevent flooding?	The road is not expected to cause more or less flooding. Since this is a Design and Build type of Project, additional analysis will be conducted by the Designer considering floods and the hydrological data and studies from 2014.
Will the small HPPs project be implemented, is the motorway project aligned with it? Is the motorway project aligned with other planned projects?	ARS does not know if the small HPPs project will be implemented, as it is under the responsibility of other institutions. The Corridor Vc project is aligned with all planned projects, as required by the law including the small HPPs project.
Can the rest area be closer to Dobor tower?	Dobor tower is very close to the Vukosavlje interchange (a few km), so people who decide they want to see the tower can access it easily from this interchange. Also, there will be an additional access route from Vukosavlje, on the north of the Dobor tower, which visitors will be able to use as well.
Will the motorway be above or below the regional road M-17?	The motorway will be above the regional M-17 road.

Question	Answer
Where is the final location for the interchange Trebava?	The option that has been selected is to locate the Trebava interchange by the village Kožuhe. ARS showed the location to meeting participants on the map and the participants confirmed they were satisfied, as this is what they had hoped for.
When will construction of the motorway be completed?	The motorway is planned to be completed by the end of 2026.

Based on the outcomes of these meetings and the issues which participants raised and wanted to know more about, ARS, with assistance from consultants prepared a Stakeholder Engagement Plan. The purpose of the SEP is to present identified Project stakeholders and how ARS plans to disclose Project related information to them and consult them during the implementation of the Project. The SEP also describes the Grievance Mechanism which will be implemented by ARS to receive and respond to Project related grievances, comments or questions from stakeholders.

All stakeholder engagement activities for the Project will be carried out with full respect of Covid-19 prevention measures in force at the time of engagement.

4.3 Biodiversity Assessment Study

At the request of EIB, a Biodiversity Screening Study was conducted on the Project area, to provide a better understanding of the potential Project related risks and impacts on biodiversity, and to ensure that the project will comply with EIB's E&S standards, and with EU legislation on protecting biodiversity, such as the EU Habitats Directive. This involved biodiversity experts from RS, making an additional survey of the Project area, with a view to identifying the presence of habitats or species which could be considered as significant from an EU perspective, and discussing the possible impacts with stakeholders. This study was conducted from June-November 2021, and it informed the discussion of risks and impacts outlined below. In summary, some areas of important habitat were identified, and the presence of some protected species was found in the area. However, with some minor adaptations to the Project plans, especially during construction, the risks to these protected biodiversity resources can be managed satisfactorily in compliance with the the EU requirements

4.4 Land Acquisition and Resettlement Planning Process

According to the preliminary design, the Project requires the acquisition of 426 ha of land in Doboj, Modriča and Vukosavlje municipality, of which, 195 ha (46%) are public land. Only two households will be physically displaced and both are located in Vukosavlje municipality.

Approximately 1,400 individuals own the affected land and close to 40% of the owners are women. There are only 6 affected legal entities - agricultural cooperatives, a hunting association and a religious community.

The majority of the privately owned land is arable land (89%), with very little pasture land and meadows (7%) and forest land (3%), as well as less than 1% of orchards or courtyard (garden) land.

Land for the Project is being acquired through an expropriation process, conducted by the Republic Administration for Geodetic and Property Affairs (RAGPA), through its branch offices in the municipalities (property administrations). The Beneficiary of Expropriation is Republika Srpska, represented by the RS Public Attorney's Office.

At the time of developing this document, the situation with land acquisition differs in the three affected municipalities. In Modriča, expropriation is almost completed and in Doboj, more than half of the expropriation decisions are legally binding i.e. cannot be appealed against. In Vukosavlje, land acquisition has not begun. There is a possibility that more land will need to be acquired when the final design of the Project is prepared by the Design and Build Contractor.

To address all land acquisition impacts of the Project, ARS, with assistance from consultants, prepared a Resettlement Action Plan which is fully aligned with national legislation and EIB requirements.

5 Summary of Baseline Environmental and Social Conditions

5.1 Environmental Baseline

General Setting: The proposed Motorway corridor sits in a wide alluvial floodplain formed by the lower stretch of the Bosna River which is bounded by a hilly upland covered by deciduous, broadleaved forestlands and pasturelands. The floodplain is flat, and the land through which the Motorway passes is mostly cultivated fields, with some strips of riparian vegetation along the river banks. The soils in the valley are typical for a lowland river basin. The predominant soil is a carbonate fluvial soil developed on recent gravel, sand or clay sediments. A number of linear villages have formed along the two main roads in the area: the M-17, which passes along the left bank of the Bosna, and the R-465, which runs along the right bank. The landscape of the valley is partly affected by several gravel extraction facilities operating along the River banks.

Climate and Environmental Conditions: The area has a moderate continental climate characterised by very cold winters and hot summers. The average annual rainfall is about 900 mm, and is highest in late spring and early summer. Air quality in the area is generally good as there are no industrial facilities in the Project area. The roads and the use of wood and coal for heating, do give rise to some emissions. Similarly, noise and vibration levels are low. The area is prone to erosion from floods.

Geology and Water Resources: The Bosnia River floodplain is predominantly covered by Quaternary deposits consisting of river material up to 10 m in depth, which has been eroded and re-deposited over time. The surface layer consists mostly of silt, silty clay, and sand. Underneath is a thick Tertiary bedrock. The area is underlain by a shallow alluvial aquifer which is used for local water supply of the villages of Odžak, Srnava and Osječani. Several drilled and dug wells in villages are located within a radius of 1,000 m of the proposed Motorway.

River Bosna: In the Project area, the proposed Motorway runs parallel to the River Bosna. The Bosna flows northwards to join the Sava River in Croatia. The average flow in the Project area is between 118m³/s and 161 m³/s. It is fed by several other small rivers in the area as well as a number of smaller intermittent streams, some of which will be crossed by the Project (eight in total). The Bosna and its tributaries are prone to flooding, with a major flood experienced in 2014, which significantly exceeded the flood levels experienced in recent memory.

The River is the main recipient of untreated industrial and municipal wastewater from the towns in its catchment, and its ecological status is categorised as the 3rd class (moderate status), with significant microbiological pollution measured.

Flora and Fauna and Biodiversity: The Project area has been under anthropogenic influence for many years, and the predominant habitats are modified – the cultivated fields sown with crops. Secondary dry shrub vegetation has developed on grasslands as a result of land use changes, and some wetland habitats are present along the watercourse which contain willow, poplar, reed and swamp vegetation. The hilly upland is covered by broad-leaved oak and hornbeam forests. The Project area includes small, isolated patches of forests looking as the islands of relatively natural vegetation in an otherwise modified landscape. Twenty such patches of forests were identified - fourteen are predominantly willow, five is dominated by oak, and one by alder which represent *priority biodiversity features* and should be protected during construction. Just one patch of the alder wood, (which is well developed and presents an example of an Annex 1 Habitat under the EU Habitats Directive), overlap with the project footprint (approx.2,5 ha) in the area of Kožuhe. The muddy river banks may also include some important natural habitat types, although this wasn't confirmed, and these will only be affected in isolated areas where the bridge works will be implemented. Several species which are of conservation concern were also found in the area, notably in the small streams leading to the Bosna River (e.g. beavers and otters). Steps will be taken to preserve these streams and these habitats and allow continued passage of animals through them. Some conservation significant birds were spotted in the area, although none were found to be nesting or roosting along the proposed road corridor, and are unlikely to be significantly affected by the Project. The Motorway was found to cut across three possible animal crossing points – (1) Kožuhe ("Dijelovi" locality), (2) Dugo Polje ("Kutlovac" locality) and (3) Botajica ("Botajičke luke" locality), where the river lies close to natural wooded areas, so large underpasses will be installed to allow these crossing points to continue being used. Given the available data on the Bosna River ecological status, the fish fauna in the River is predominantly made up of species more tolerant of organic pollution. No formal fisheries are based in the area and any fishing is largely recreational.

5.2 Social Baseline

The Project footprint passes through the territory of a number of smaller villages which belong to the three municipalities – Doboj, Modriča and Vukosavlje. The settlements are predominantly linear, concentrated along the two regional roads (M-17 and R-465) and local roads. The settlements form local communities and they have their own elected local community councils, represented by presidents of councils. The Project footprint and the settlements located on each side of it are presented in Figure 5 below.

Population data: The total population living along the footprint is estimated at close to 26,000 people, however it should be noted that the settlement centres which are more densely populated are located further from the footprint, while in most cases only the outskirts of these settlements are in fact close to the project area. The whole region where the project is being implemented was strongly affected by migration during and after the war in BiH in the 1990-ies and, unfortunately, the negative population growth continues, with low birth rates and significant outmigration of young people.

The average age in all three municipalities is fairly consistent with the average age at the level of Republika Srpska (43,17). The aging index¹ in Vukosavlje and Doboj (139) is below the national average of 152,11 while in Modriča, the aging index is higher at 162,90. This means that the population in Modriča is aging more quickly than in the other two municipalities. The leading cause of death in the affected municipalities is cardiovascular disease.

Serbs make up the largest ethnic group in Doboj and Modriča, while in Vukosavlje close to half of the population comprises Bosniaks and a larger Croat community than in the other two municipalities.

The majority of the population in all three municipalities has completed secondary education. In the city of Doboj, education levels are higher than in the other two municipalities.

¹ The aging index represents the ratio of the number of older inhabitants (60 and older) and younger inhabitants (0-19 years of age).

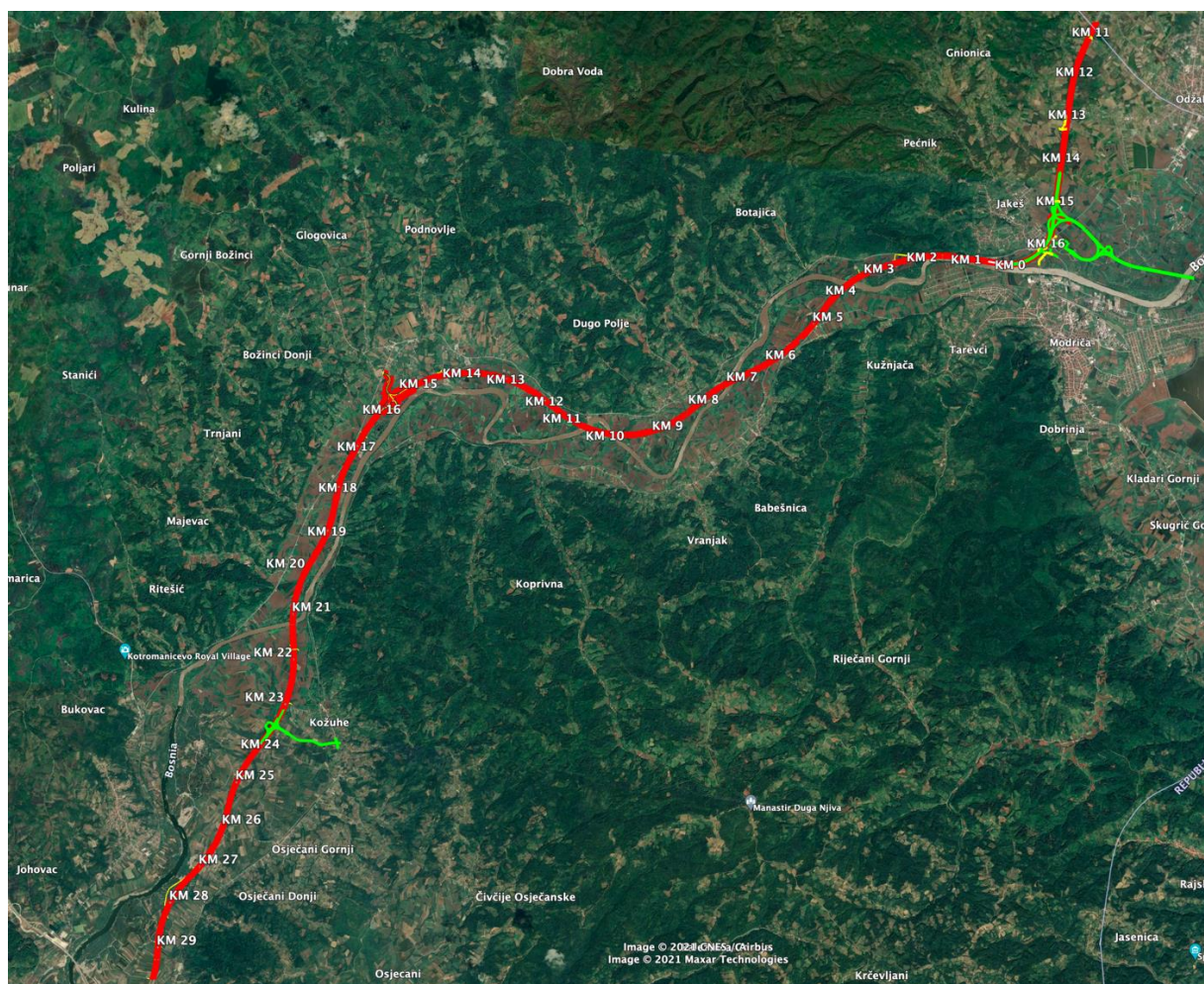


Figure 5: The Project Footprint and Settlements on Each Side

Unemployment data: Following the Covid 19 crisis in 2020, registered unemployment² has been steadily declining in Republika Srpska, and has reduced by over 14% compared to the last quarter of 2020. In September 2021, there were 3.134 registered unemployed persons in Doboј (55 % women) and 1.163 in Modriča and Vukosavlje together (53% women), the majority of whom are skilled and highly skilled individuals.

Local incomes and livelihoods: Due to the proximity of villages to urban centres, primary incomes of households in the affected area are salaries and pensions, while farming is often carried out on a small-scale and is subsistence based. Plots are small and farming techniques are undeveloped resulting in low to moderate yields. Crops, which include corn, oats, barley and rye are often used as animal feed or for household subsistence. Households also have a small number of animals, which they mainly keep for household consumption.

Utilities and transport: Water supply in villages is provided from local groundwater wells. No sewer system is present in the area so the wastewater in villages is discharged either to private septic tanks or directly to local streams. The area is covered with electrical power infrastructure and telecommunications network. Public bus transport is available to the communities through a network of local buses operating in the area and regional and international buses with stops in the urban centres of the municipalities. The primary form of individual transport is car, while bicycles are not widely used.

Housing: Residential houses in the project area are predominantly one to two storey buildings in moderate condition. Individual small holdings usually comprise a plot of land with a house, a few outbuildings (e.g. for livestock etc.) and an area for growing produce, such as vegetables (potatoes,

² Public Institution Employment Institute of Republika Srpska

tomatoes, peppers, cabbage) and fruits (plums, pears and apples). Local people keep livestock (cattle, pigs, sheep) and poultry (chickens, hens, turkeys).

Cultural Heritage: Nationally designated medieval fortress Dobor Tower is situated within a direct zone of influence of the Project. The fortress is located on a hill, hypsometrically about 10 m above the regional road M-17 Dobož-Modriča, about 4 km upstream from the town of Modriča, near the village of Jakeš. The fortress was built in the 14th century and is designated as the National Monument of Bosnia and Herzegovina³. The Project proposes a cut-and-cover tunnel in the hill where the fortress is located. The cut-and-cover tunnel will not intersect the Dobor Tower. The tunnel and the existing road M-17 will remain below the tower. The M-17 will be diverted on the top of the tunnel.

6 Environmental and Social Benefits, Impacts and Mitigation Measures

During the EIAs, and the subsequent assessment process conducted by Connecta, the potential environmental and social benefits and adverse impacts were assessed. Assessment topics included: ambient air, water, noise and vibration, biodiversity & habitats; landscape; local communities, employment and livelihoods, access and severance, cultural heritage, community, health, safety and security (including road safety and emergency response) and labour and workforce issues.

The benefits of the Project are summarised below:

- **Improved Connectivity:** The Project is part of the pan European Corridor Vc, which will improve regional, national and international connectivity in the western Balkans, and improve transport links with neighbouring countries to the north and south.
- **Economic Development:** Improved connectivity provided by the Motorway network will facilitate the exchange of goods and services along the Corridor, and increase access to tourism centres and industrial areas in Bosnia & Herzegovina. This will encourage the creation of jobs in the areas of tourism, manufacturing, supply and services, which will have a knock on positive benefit to the regional economy.
- **Improved Level of Service and Reduced Congestion:** The removal of some through traffic from the local road network will reduce congestion in the towns and built up areas.
- **Time savings:** The project will lead to significant travel time savings.
- **Operating cost savings:** The project will lead to vehicle operating cost savings and will reduce the cost of transportation in the area.
- **Road accident reduction:** The project should also reduce the numbers of accidents on local roads, caused by through traffic.
- **Local air and noise emission savings:** The project will alleviate air pollution and noise generated from through traffic.
- **Short-term Local Employment During Construction:** The Project will provide short-term opportunities for local employment during the construction period.
- **Local Development Opportunities:** The motorway will pass near the medieval Dobor Tower, which is currently in poor condition and not an attractive visitors' site. The vicinity of the motorway will increase the visibility of this national monument, which could serve as an incentive for the authorities to initiate the revival of the monument, thereby increasing its cultural value and tourism potential.

Table 2 below provides a high-level summary of the adverse impacts and risks, and how they can be managed. This is based on the work done in the EIA reports and the environmental and social due diligence exercise carried out by independent consultants. The table provides a simple rating system which summarises the residual significance of each impact, assuming that the management control is applied as stated.

³ Decision of the Commission to Preserve National Monuments in BiH, Published in the "Official Gazette of BiH" no. 75/08. http://old.kons.gov.ba/main.php?id_struct=50&lang=4&action=view&id=2545

Table 2: Summary of Adverse E&S Impacts and Mitigation / Enhancement Measures

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
<p>Air Quality Effects:</p> <p>Emissions of dust from working areas, access roads, stockpiles and during loading/unloading activities; emissions from concrete and asphalt plants; exhaust emissions from construction machinery; emissions due to peaks in traffic movements, will result in temporary air emissions.</p> <p>(Phase – During Construction)</p> <p>Emissions of particulates, exhaust gases and volatile organic compounds, including Greenhouse Gas (GHG) emissions, will result from road traffic on the Motorway.</p> <p>(Phase – During Operation)</p>	Airshed, local flora and fauna, local communities.	Along entire road corridor.	<p>Good maintenance of plant to reduce unnecessary emissions, and to remove and replace any heavily polluting plant. Standard construction measures to reduce dust (wetting down dusty areas, covering vehicles, etc.).</p> <p>Emissions levels from traffic on the road will increase over time as traffic levels increase. Air quality along the Motorway should be monitored.</p>	<p>During construction - Negative impacts of medium significance reduced to low significance with effective contractor management.</p> <p>During operation - Negative impacts will be of low significance.</p>
<p>Noise and Vibration Effects</p> <p>Noise will be generated by construction plant and activities, especially if blasting and rock breaking is required.</p> <p>(Phase – During Construction)</p> <p>Traffic noise levels will increase gradually over time with increased traffic flows, which will particularly affect communities close to the road.</p> <p>(Phase – During Operation)</p>	Local communities.	All settlements close to the road.	<p>Management controls typical for construction work include: restriction to daytime working hours and informing local communities on the construction schedule.</p> <p>Where residential areas are identified as at risk from high noise levels noise barriers may be erected. Noise levels will be monitored during construction and road operation, at specific nearby settlements and potential introduction of sound barriers needs to be iteratively dimensioned, and over time extended and reconstructed</p>	<p>During construction - negative impacts of low significance reduced further with effective contractor management.</p> <p>During operation – negative impacts of medium significance at specific locations will be reduced to low significance by noise barriers.</p>

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
			<p>according to real needs. Affected receptors (households) will be consulted in this process.</p> <p>Vibrations will be monitored by a licensed third party in accordance with RS regulations and blasting/consent decisions to prevent unacceptable loading. In case that harmful effect is identified, mitigation measures need to be applied.</p>	
<p>Soil and agricultural land: Any spillages – e.g. of oil or fuel - during construction or operation of the road could cause contamination of the soil in the area, and affect the adjacent agricultural lands. There may also be a small effect from vehicle exhaust particulates which settle in the surrounding fields. Contaminated road runoff could also pollute the soil, if discharged untreated.</p> <p><i>(Phase - During Construction and Operation)</i></p>	Soil and agricultural land close to road scheme.	Agricultural lands are found along most of the route.	<p>Various construction management control measures to reduce spillage will be addressed in CESMP.</p> <p>Road run off will be sealed and treated in oil separators and sediment tanks before discharge.</p> <p>Emergency Response Plan.</p>	Negative impacts of low significance reduced to not significant with contractor management controls.
<p>Water and Water Resources, including Groundwater: There is a risk to the River Bosna from increased sedimentation and pollution during construction works in the watercourses, particularly for bridge works.</p> <p>Additionally, any major spillages – e.g. of oil or fuel - during construction could cause contamination of the river and groundwater in alluvial and river terrace sediments. The risk of significant effects is low, and any effects would</p>	River Bosna and nearby groundwater resources for water supply of the villages Srnava (Odžak) and Osječani.	All along the route where it runs close to the River Bosna.	<p>Various construction management control measures which place restrictions on the Contractor working in watercourses to reduce spillage. Including development of and adherence to a method statement for working on and close to the river, as outlined in the CESMP.</p>	Negative impacts of medium significance reduced to low significance with contractor management controls.

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
<p>likely be confined to the local area, except in the event of a major spill which carried downstream.</p> <p>(Phase – During Construction)</p> <p>There is a risk of pollution to the River Bosna and the groundwater if contaminated road runoff were to enter the River or alluvial sediments where groundwater level is close to the surface, or in the result of a major oil or chemical spill close to one of the river crossings. The Main Design envisages stormwater from the road under operation to be captured and treated in a sediment tank and separator before discharge, with oil and sediments being removed from the tanks and separators resulting that the risk of significant effects is low, and any effects would likely be confined to the local area.</p> <p>(Phase – During Operation)</p>			Emergency Response Plan.	Negative impacts during operation are of low significance .
<p>Biodiversity:</p> <p>Permanent loss of the Alder wood;</p> <p>Construction of the interchange "Trebava" near the village of Kožuhe, will lead to permanent loss of about 2.5 ha (or 15%) of isolated alder wood stand (Annex I of the Habitat Directive, Code 91E0*).</p> <p>Phase – During Construction</p>	Alder wood stand, part of the riparian forest near the Bosna River (Annex I of the Habitat Directive, Code 91E0*)	Area of Kožuhe village	<p>Biodiversity Management Plan (BMP) to be developed to address all biodiversity risks.</p> <p>Various construction management control measures to prevent destruction or damage to the alder wood trees outside of the narrowest construction zone;</p> <p>Restrict access to workers and machinery by fencing; Carry out afforestation in accordance to the Biodiversity Assessment Report (BAR).</p>	Negative impacts of medium to high significance expectedly reduced to low significance with implementation of BMP and effective contractor management.

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
<p>Damage of the muddy and gravel river banks;</p> <p>Construction works in the vicinity of the Bosna River and its tributaries could lead to damage of their muddy and gravel river banks (Annex I of the Habitats Directive (code 3270, 3130))</p> <p>Phase – During Construction</p>	<p>Muddy and Gravel river banks of the Bosna River and its tributaries (Annex I of the Habitats Directive (code 3270, 3130))</p>	<p>Near the watercourses</p>	<p>Various construction management control measures to avoid river bank areas and to reinstate it once the works are completed.</p>	
<p>Disturbance of protected and important medium and large mammals;</p> <p>Construction works may disrupt mammals' access to the river, and lead to their collision with traffic;</p> <p>Phase –during construction</p> <p>Three areas have been identified along the alignment where large and medium mammals may cross the road corridor.</p> <p>Phase –during operation</p>	<p>10 species of medium and large mammals as specified in the Biodiversity Assessment Report, 2021</p>	<p>Three areas where large and medium mammals may cross the road corridor:</p> <p>(1) Kožuhe ("Dijelovi" locality), (2) Dugo Polje ("Kutlovac" locality), and (3) Botajica ("Botajičke luke" locality);</p>	<p>Various construction management control measures to avoid disturbance of mammals;</p> <p>Wildlife underpasses, designed and constructed (at least at one, or all three proposed locations). Box culverts and tunnels, land passage designed and constructed in line with recommendations provided in BAR, 2021. Motorway equipped with eco-protective devices for repelling the game away;</p>	
<p>Disturbance of protected aquatic and semi-aquatic animal species;</p> <p>There are eight small streams which flowing into the Bosna River which host certain protected species of fauna. Construction (8 fish species, European pond turtle, otter and beaver). Construction works could temporarily affect the functioning of the watercourses (e.g. changes to their hydrological regime) which are used by protected species;</p>	<p>Otters, beavers (listed on Annex IV of the EU Habitats Directive) and European pond turtle (EN according to IUCN; Annex II of Habitat Directive, and Strictly Protected by National Regulations of RS) as specified in the Biodiversity</p>	<p>Eight small watercourses along the alignment (see Annex 12, Maps 10 and 11 of BAR, 2021);</p>	<p>Adequately sized culverts designed and constructed, land passages provided under bridges over the small watercourses;</p> <p>Various design/construction measures in order to maintain the diversity of hydraulic and morphological elements of the creeks and channels, to provide natural passages for fish and semi-aquatic animals, and to</p>	

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
<p>Phase – both during construction and operation</p> <p>Risk of spreading of invasive plant species;</p> <p>Phase – During Construction</p> <p>Disturbance of protected and other bird species;</p> <p>Phase –during construction</p> <p>Collision of birds with transparent noise barriers;</p> <p>Phase – During Operation</p>	<p>Assessment Report, 2021)</p> <p>Natural vegetation, mostly willow-poplar, alder forests, river banks, soil and gravel exploration pits;</p>	<p>Project footprint</p> <p>Zone of Dobor hill (as specified in the BAR 2021, Annex 12, Map 11)</p> <p>Possible nesting places in areas with natural vegetation and riverbanks;</p>	<p>prevent and control water pollution;</p> <p>Various construction management control measures to prevent intrusion of any invasive flora species. Borrow pits and disposal sites needs to be recultivated and horticultural landscaped, using only autochthonous species.</p> <p>Various construction management control measures to limit disturbance of birds. Construction work in the vicinity of nesting places to be performed out of the nesting period;</p> <p>Design of non-transparent noise barriers (as recommended in BAR, 2021);</p>	
<p>Landscape Effects:</p> <p>Construction works could lead to the temporary impacts on landscape, including the movement of construction vehicles, machinery, removal of vegetation specifically for construction, installation of temporary works compounds, material depos, temporary road access/traffic control, road works, turning areas, signing, lighting, etc;</p>	<p>Landscape in the Bosna valley</p>	<p>Along the whole scheme in the river valley.</p>	<p>Various construction management control measures to limit visual/landscape effects during construction.</p> <p>Bridge design to take account of landscape context, and include landscape engineer as part of design team. Limit land clearance to areas where strictly necessary. Landscaping and planting for</p>	<p>Negative impacts of medium significance further reduced to low significance after landscaping.</p>

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
<p>Phase – During Construction</p> <p>The formation of the Motorway and bridges along the river valley will alter the landscape in this area, and the road embankments will be landscaped to minimise this. The elevated sections will create additional opportunities for road users to enjoy the views of the valley and surrounding land from a new perspective. The visual contact between the river and the nearby settlements will be disrupted by the road but will be compensated by landscaping of the river valley and rehabilitation of the areas with abandoned gravel extraction facilities.</p> <p>(Phase – During Operation)</p>			embankments, and rehabilitation of all construction areas, with input from horticultural experts.	
<p>Effect on Utilities: The scheme construction may interfere with existing utilities in the area, including electricity transmission and distribution lines and telecoms cables, as well as water supply pipelines and wastewater pipelines.</p> <p>(Phase – During Construction)</p>	Existing utility infrastructure	Along the route in the vicinity of settlements.	<p>Consultations with utility stakeholders already held during the design process. Contractor to verify the presence and position of any suspected cables or pipes, with the local utility provider before construction.</p> <p>In case of any accidental impacts on utilities, causing disruptions of the supply for local communities, promptly repair the utility and inform impacted local communities when supply will be established.</p>	With appropriate management by contractor, risks reduced to low significance .
<p>Nuisance During Construction: The local communities along the route and the existing road will be subject to nuisance effects from the construction, including noise, dust and a</p>	Local communities	All along the route, particularly where the works	Nuisance effects will be short-term and readily manageable by good construction management and controls, and careful engagement	Negative risk of medium significance of a short-term nature would reduce to low

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
<p>general reduction in amenity of the local area during the construction period.</p> <p>(Phase – During Construction)</p>		<p>areas are close to inhabited areas.</p>	<p>with the local communities by the Contractor.</p> <p>In case of significant nuisance caused by increased transport and traffic through local communities, consider options for community compensation by investing in small development projects (repairs of community infrastructure, construction of a playground, etc.) to be discussed and agreed with affected communities.</p>	<p>significance with adequate management controls.</p>
<p>Land Acquisition, Potential Economic Displacement and Limited Physical Displacement, Impacts on Vulnerable Individuals: the Project requires acquisition of predominantly arable land and is expected to require acquisition of only two residential properties, of which only one is inhabited, reportedly. Evidence from site visits suggests that economic displacement is not likely to occur (or will be minimal) as compensation being provided is far above full replacement cost. There is a possibility that some individuals affected by land acquisition are vulnerable and therefore can be more adversely affected by land acquisition, requiring provision of additional assistance. Remaining land acquisition and potential economic and physical displacement, as well as any impacts on vulnerable individuals, have to be managed in accordance with national legislation and EIB requirements.</p> <p>(Phase – Prior to and During Construction)</p>	<p>Land owners and land users, including any identified vulnerable individuals.</p>	<p>Within the expropriation area along the route</p>	<p>Implementation of the Resettlement Action Plan, which is aligned both with national legislation of Republika Srpska and EIB requirements in relation to land acquisition, physical and economic displacement, as well as assistance for vulnerable individuals and/or groups.</p> <p>In case of additionally needed land (based on the updated design), a RAP Appendix or a new RAP will be developed and implemented</p>	<p>Negative risk of medium significance would reduce to not significant assuming implementation of all requirements from the RAP and RAP Appendix.</p>

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
<p>Access and Severance Effects to Communities During Construction: The construction of the motorway may cause temporary disruptions of access of local land users to their fields or access of local residents to other community resources / facilities.</p> <p><i>(Phase – During Construction)</i></p>	Local residents and land users	Along the Project footprint	The Contractor will develop a Traffic Management Plan (before construction) which will be presented to local residents and land users and implemented to ensure that sufficient access to fields and any other community resources is retained at all times.	Negative risk of medium significance of a short-term nature would reduce to low significance with adequate management controls.
<p>Access and Severance Effects to Communities During Operation: Some stretches of the Motorway will cut across farmland, and access from houses to fields and between different fields will be disrupted. The proposed underpasses and overpasses have to ensure that journey times from one side of the road to the other are not significantly longer than before the project.</p> <p><i>(Phase – During Operation)</i></p>	Local residents and land users	Along the Project footprint	Underpasses, and local service roads have been defined within the preliminary design, however, it will be necessary to confirm the location of all underpasses and local service roads in the detailed design and present them to affected communities for comments and suggestions before completing the design, as detailed in the Project SEP.	Negative risk of medium significance of a long-term nature would reduce to low significance with adequate consultation and management controls
<p>Damages to Crops or Other Assets, including Local Roads: Construction sites will be surrounded by agricultural land in certain locations and there is potential for workers to cause damages to nearby crops or other assets, including local roads used during construction, with construction machines or in other ways.</p>	Local land users	Along the Project footprint	<p>Contractor to ensure that all work areas are clearly marked and workers instructed to never cross these boundaries into unacquired, privately owned land</p> <p>In case of damages, the Contractor will promptly compensate affected people at full replacement cost</p> <p>Restore all disturbed land / roads / any other assets to prior condition</p>	Negative risk of low significance reduced further with effective contractor management.

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
Increased Accident Risk in Communities Near Construction Sites or Construction Traffic Routes: Depending on the final selection of routes for construction traffic, if some of them pass through or near inhabited areas, on roads that are used by the local population, there will be an increased risk of accidents, that requires mitigation. (Phase – During Construction)	Local residents, road users	Along roads used for construction traffic	Contractor to inform local communities of planned transport routes which may affect them, enforce a strict code of conduct for safe driving among workers, implement a safety awareness campaign for local receptors, particularly vulnerable ones (e.g. school children).	Negative risk of medium significance of a short-term nature would reduce to low significance with adequate consultation and management controls
Impacts on Community Health & Safety (CHS) during Construction: The construction process may increase the risk of accidents to the public, near or in the works sites. There is also a (minor) risk of influx of non local workers, possibly accommodated in a workers camp, which may give rise to certain risks to the communities. The Contractor will need to implement measures to address this. (Phase – During Construction)	Local residents	Work sites along the Project footprint	Contractor to implement good site management, security, health and safety measures, warning signs etc. to minimise risks to an acceptable level. Fencing and signage to discourage public from entering the works area. Contractor to make appropriate arrangements and select appropriate location for workforce accommodation (if any) and engage with local communities, including through grievance management.	Negative impacts of medium significance of a short-term nature reduced to low significance with contractor management controls.
Risks to Worker Health & Safety during Construction: The works will give rise to occupational, health and safety risks to workers, including Covid-19, those related to working with plant and machinery, formation of asphalt, use of cement, working at height, working near utilities, and working over water for the bridge sections. In case of non local	Workforce (Construction)	All along the route, especially in proximity to residential areas of roads, paths and crossing points.	Contractor's CESMP, including Health and Safety provisions, in accordance with the Employer's Requirements and the Law on Occupational Safety. Good workforce management, implementation & enforcement of	Negative impacts of medium significance of a short-term nature reduced to low significance with contractor

Impact	Receptor	Location	Mitigation/Control/Enhancement	Rating
<p>workers, there is a possibility that worker accommodation camps may need to be established.</p> <p>(Phase – During Construction)</p>			<p>code of conduct, provision of health surveillance & healthcare access for workers, appropriate worker accommodation.</p>	<p>management controls.</p>
<p>Cultural Heritage: Risks of damage to the medieval Dobor Tower during the construction of the proposed cut and cover tunnel.</p> <p>Other risks to hitherto unknown cultural heritage sites from excavations along the road corridor.</p> <p>(Phase – During Construction)</p>	<p>Cultural heritage sites.</p>	<p>Tunnel below Dobor Tower; All along route.</p>	<p>Contractor's CESMP Chance Finds Procedure. Coordination with local authorities and the Institute for Cultural and Natural Heritage of RS.</p>	<p>Risk is of medium to low significance with contractor management controls</p>

7 Environmental and Social Management and Monitoring

7.1 Environmental and Social Management

Measures to manage the environmental and social effects of the Project are included in the Ecological Permit issued by the Ministry of Physical and Spatial Planning following acceptance of the EIAs, and in the Employer's Requirements, issued by ARS. These requirements will be included in the Tender Documents. Measures related to stakeholder engagement are detailed in the Stakeholder Engagement Plan and those remaining actions and commitments related to land acquisition are detailed in the Resettlement Action Plan, whose implementation is under the responsibility of ARS. The key elements of the required mitigation measures have been summarised in Table 2 above and the key steps which ARS must take are described in the Environmental and Social Action Plan.

The Contractor will develop a Construction Environmental and Social Management Plan, to identify how the commitments will be addressed during Construction. This will draw together all the management requirements to minimise disturbance to environmental and social receptors during construction. An Operational Environmental and Social Management Plan (OESMP) will be produced, containing the mitigation and monitoring actions which need to be implemented during road operation. ARS will engage a Contractor to implement these on its behalf.

7.2 Environmental and Social Monitoring

The Environmental Permit contains a number of monitoring requirements. During both construction and operation, certain activities, indicators and environmental and social resources will be monitored. Monitoring during construction will include air, noise, water quality, soil quality, observations on the adjacent lands. Monitoring will also include employment, labour and working conditions, including occupational health and safety. Operations phase monitoring will include levels of noise and air quality at representative road side receptors, water quality in the Bosna River, and the quality of road run off discharged from the oil separators. Observations on soil, flora and fauna will also be made.

Monitoring and management actions for stakeholder engagement and land acquisition are proposed in the SEP and RAP. There will also be an ongoing requirement for ARS and (during construction) the Contractor to monitor stakeholder grievances and take appropriate management action should trends be identified or key issues occur.

Monitoring reports will be produced by the Contractor during the construction works, which will be submitted to the Register of Polluters and ARS. FIDIC Supervising Engineer, as an independent third-party consultant, will supervise the monitoring activities. ARS will regularly send the yearly monitoring reports to financiers. Operational monitoring reports will be submitted to the Register of Polluters (available for the State Inspector) and to financiers on yearly basis..

8 Further Information and Contact Details

Project documents are available in English and the local language, on the ARS website <https://autoputevirs.com/en/our-services/69466a1df7ca8ee5ef18c4b91a5a8eca5927aaaa7254cacd155858c354d58ddddd069466a1df7ca8ee5ef18c4b91a5a8eca5927aaaa7254cacd155858c354d58dddba69466a1df7ca8ee5ef18c4b91a5a8eca5927aaaa7254cacd155858c354d58dd/>

and in hard copy, upon request. Hard copies for review are also available at the information counter in each municipality (Doboj, Modriča and Vukosavlje), as well as with presidents of local community councils in all villages located along the future motorway.

Questions, information requests and grievances can be submitted to ARS by post, email, fax or by telephone through the following contact details:

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