State Water Holding Polish Waters
Regional Water Management Board in Szczecin

Environmental Management Plan

ODRA - VISTULA FLOOD MANAGEMENT PROJECT – 8524 PL

Environmental category B – according to the OP 4.01 WB

Component 1:

Flood Protection of the Middle and Lower Odra

Subcomponent 1B:

Flood Protection in the Middle and Lower Odra

Contract 1B.5/2:

Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą

Issue	Date	Author	Checked by	Customer's Approval
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Environmental Management Plan

Component: ***1- Flood Protection of the Middle and Lower Odra***
Subcomponent: ***1B- Flood Protection in the Middle and Lower Odra***
Contract: **1B.5/2 - Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą**

Project Implementation Unit:
State Water Holding Polish Waters
Regional Water Management Board in Szczecin

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Szczecin, September 2020

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List of basic definitions and abbreviations used in the EMP

Name	Description
World Bank / WB	International Bank for Reconstruction and Development / World Bank
PCU / PCU OVFMP	Project Coordination Unit / Coordination Unit for the Odra-Vistula Flood Management Project
BP	World Bank Procedure (*Bank Procedure*)[1]
Environmental decision / ED	Decision on the environmental conditions
Epidemic	The occurrence of a significantly higher number of infections or infectious diseases in a given area than in the previous period or the occurrence of infections or infectious diseases not yet occurring.
ES Policy ES	Environmental Standard - ES, concerning environmental and social issues (i.e. in the scope of the environmental protection, health and safety at work and of the community, gender equality, protection of juveniles, particularly vulnerable people (including the disabled), sexual harassment, sexual violence, awareness and prevention of HIV / AIDS).
ESMF	Environmental and Social Management Framework Plan (*Environmental and Social Management Framework*) for the OVFMP[2]
Investor / Employer / PIU	State Water Holding Polish Waters in Warsaw represented by the Director of the Regional Water Management Board in Szczecin / Project Implementing Unit for the Odra - Vistula Flood Management Project
SWB	Surface Water Body
GWB	Ground Water Body
PIO	OVFMP Project Implementation Office
Consultant / Engineer / Contract Engineer	Company or legal entity providing the Investor with the service of Technical Support Consultant within the OVFM Project

[1] Operational Policies and Procedures of the World Bank are presented in the document The World Bank Operational Manual, available on the website: *https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx*.

[2] The document is available on the website of the PCU for the OVFMP: http://odrapcu2019.odrapcu.pl/popdow_dokumenty/

and on the World Bank's website: *http://documents.worldbank.org/curated/en/717671468333613779/Poland-Odra-Vistula-Flood-Management-Project-environmental-and-social-management-framework*.

Name	Description
Contract / Task	Contract / Task 1.B.5/2 - Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą
IBRD / WB	International Bank for Reconstruction and Development / World Bank
LSDP	Local Spatial Development Plan
OOŚ (Eng. EIA)	Environmental Impact Assessment
OP	World Bank's Operational Policy(*Operational Policy*)[1]
PAD	Project Appraisal Document (*Project Appraisal Document*)[2] for the OVFMP
SWH PW	State Water Holding Polish Waters
ORBMP	Odra River Basin Management Plan (Regulation of the Council of Ministers of 18 October 2016 on the Odra River Basin Management Plan)
HSP Plan	Health and Safety Protection Plan
SEM	State Environmental Monitoring
OP Infrastructure and Environment	Operational EU Programme Infrastructure and Environment
POM	Project Operations Manual (*Project Operations Manual*)[3] for the OVFMP
RAP	Land Acquisition and Resettlement Action Plan (RAP)
OVFMP Project	Odra - Vistula Flood Management Project
PTP	Protection Tasks Plan
EMP	Environmental Management Plan
EIA Report	Report on the Environmental Impact of the Project: "Demolition and construction of the road bridge in km 107+211 of the national road No. 31 in Kostrzyn nad Odrą (km 2.45 of the Warta River) implemented within the framework of the Odra - Vistula Flood Management Project (Task 1B.5 Reconstruction of bridges to ensure minimum clearance)" December 2018 with additions.
RDOŚ (RDFEP)	Regional Directorate for Environmental Protection

[1] See footnote for BP (World Bank Procedure).

[2] The document is available on the website of the World Bank: *http://documents.worldbank.org/curated/en/320251467986305800/Poland-Odra-Vistula-Flood-Management-Project*.

[3] The document is available on the website of the PCU for the OVFMP: http://odrapcu2019.odrapcu.pl/popdow_dokumenty/

Name	Description
SDF	Standard Data Form: The Standard Data Form (SDF) is a uniform template for describing a Natura 2000 area throughout the European Union. It is approved by the decision of the European Commission and compulsory for use in all Member States
Natural habitats	The term natural habitat used in the text refers to the definition of *natural habitats* and the listing of their types in the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Journal of Laws EU L 206, 22.07.1992, as amended). (The Polish nomenclature of natural habitats is set out in the Ordinance of the Minister of the Environment of 13 April 2010 *on natural habitats and species of Community interest and the criteria for the selection of areas eligible for recognition or designation as Natura 2000 sites* (consolidated text in the Journal of Laws of 2014, item 1713), the Ordinance specifies, inter alia, the types of natural habitats of Community interest, which require protection in the form of designation of Natura 2000 sites, with the indication of priority natural habitat types)
State of the epidemic emergency	Legal situation introduced in a given area in connection with the occurrence of an epidemic in order to take up the anti-epidemic and preventive actions to minimise the effects of the epidemic, as defined in the Act of 5 December 2008 *on preventing and combating infections and infectious diseases in humans* (consolidated text: Journal of Laws of 2019, item 1239 as amended).
State of risk of epidemic emergency	Legal situation introduced in a given area in connection with the risk of epidemic occurrence in order to undertake the preventive actions specified in the Act of 5 December 2008 *on preventing and combating infections and infectious diseases in humans* (Journal of Laws of 2019, item 1239 as amended)
Construction area / construction site	Construction area / construction site means places where Permanent Works are to be carried out, including storage and working places where Equipment and Materials are to be supplied, as well as other places indicated in the Contract as being part of the Construction Site. The terms "Construction Area" and "Construction Site" are interchangeable terms and are understood in the Contract Terms and Conditions as the "Construction Site".
EU	European Union
VCM	Voivodship Conservator of Monuments
Contractor / Contractor for Task / Contractor for Part of Contract	Company or entity implementing the Contract 1.B.5/2 - Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą

Name	Description
EHS Guidelines	World Bank Guidelines on Environment, Health and Safety (EHS), General EHS Guidelines (The Environmental, Health, and Safety (EHS) Guidelines , General EHS Guidelines[1]).
Road Administrator	An organisational entity carrying out public road administration responsibilities within the meaning of the *Act on Public Roads* or the responsibilities of private road administration

[1] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines

List of abbreviated names of legal acts used in EMP

The names of legal acts cited in this EMP are provided in a shortened version. The full names of various acts are given in the list below.

Name used in the text	Full name (including publication address)
Birds Directive/BD	Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Journal of Laws EU L 20/7 of 26.01.2010).
Habitats Directive/HD	Directive 92/43/EEC of the Council of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Journal of Laws EU L 206 of 22.07.1992, as amended)
Water Framework Directive (WFD)	Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (Journal of Laws L 327 of 22.12.2000, as amended).
EIA Regulation	Regulation of the Council of Ministers of 10 September 2019 on projects that may significantly affect the environment (Journal of Laws, item 1839)
Environmental Protection Law (EIA) Act	Act of 3 October 2008 on making available information on the environment and its protection, public participation in environmental protection and environmental impact assessments (consolidated text: Journal of Laws of 2020 item 283)
Act on Public Roads	Act of 21 March 1985 on Public Roads (consolidated text: Journal of Laws of 2020, item 470 as amended)
Nature Conservation Act	Nature Conservation Act of 16 April 2004 (consolidated text: Journal of Laws of 2020, item 55)
Waste Act	Act of 14 December 2012 on Waste (consolidated text: Journal of Laws of 2019, item 701, as amended)
Act on Inland Navigation	Act of 21 December 2000 on Inland Navigation (consolidated text: Journal of Laws of 2019, item 1568)
Construction Law Act	Act of 7 July 1994 Construction Law (consolidated text: Journal of Laws of 2019, item 1186 as amended)
Environmental Protection Law Act	Act of 27 April 2001 Environmental Protection Law (consolidated text: Journal of Laws of 2019, item 1396 as amended)
Water Law Act	Act of 20 July 2017 Water Law (consolidated text: Journal of Laws of 2020, item 310)
Act on Protection of Monuments	Act of 23 July 2003 on Protection and Care of monuments (consolidated text: Journal of Laws of 2020, item 282)

SUMMARY

This Environmental Management Plan (EMP) concerns the Task 1B.5/2 - Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą.

This EMP provides, inter alia, the following information:

- brief description of the OVFMP Project and its Component 1, which includes the Task in question (Sections 1.1 and 1.2);
- description of the Task being the subject of this EMP (Section 2);
- description of the institutional, legal and administrative conditions for the implementation of the Task, including the current status of the EIA procedures for the Task (Section 3);
- description of particular elements of the environment in the vicinity of the Task (Section 4);
- summary of the environmental impact assessment of the Task (Section 5);
- description of mitigation measures to eliminate or reduce the potential negative impact of the Project on the environment (Section 6), together with a tabular summary of these measures (Attachment 1);
- description of the environmental monitoring activities applicable to the Task (Section 7), together with a tabular summary of these activities (Attachment 2);
- description of the course of public consultations conducted at particular stages of preparation of the environmental documentation for the Task (Section 8);
- description of the organisational structure of the implementation of the EMP (Section 9);
- time schedule of implementation of the EMP and description of reporting procedures (Section 10);
- list of source materials cited in the EMP (Section 11);
- list of Attachments to the EMP (Section 12);
- copies of administrative decisions on environmental and nature protection issued for the Task (Attachment 4).

Task characteristics

The task concerns the reconstruction of the bridge in km 2.45 of the Warta River. The Project Implementing Unit (PIU) for the Task is the State Water Holding Polish Waters Regional Water Management Board in Szczecin. The Investor of the Task is the State Water Holding Polish Waters in Warsaw, represented by the Director of the Regional Water Management Board in Szczecin, acting on behalf of and for the State Treasury. In connection with the implementation of the Task, the Investor signed an appropriate agreement with the administrator of the national road no. 31 - General Directorate for National Roads and Motorways.

Scope of the Task

The task concerns the dismantling of the existing bridge and the construction of a new road bridge in Kostrzyn nad Odrą within the national road No. 31. The task also includes the execution of accompanying works in the form of extension of the national road No. 31 (General Wł. Sikorski Street) on the access to the bridge, execution of the necessary scope of reconstruction of networks (water supply, stormwater, sanitary, gas, electricity,

telecommunication), as well as road lighting and bridge facilities. A diverted traffic on the temporary bridge will be arranged during the construction of the target bridge. The existing facility is a road bridge, which was built at the end of the 19th century as a 5-span facility - it was rebuilt in 1945 (after the destroying of spans as the result of warfare) and in 2000.

The bridge, in its existing state, hinders and often stops the winter ice-breaking protection and the navigation of icebreakers taking part in the icebreaking action, stops the ice flow in key moments of the action, cutting the icebreakers stationed below the bridge from the icebreaking area on the Warta River and stopping the ice float on the pillars.

Institutional, legal and administrative conditions

The task, with regards to its characteristics, the expected potential environmental impacts and location in relation to protected areas, is carried out in accordance with the relevant national environmental protection regulations in this respect and relevant policies of the World Bank.

Status of administrative procedures for EIA

The Mayor of Kostrzyn nad Odrą carried out an environmental impact assessment (EIA) for the Task. The procedure was completed with the decision of the Mayor of Kostrzyn nad Odrą on environmental conditions of 14.02.2020, Reference No.: GK.6220.9.2018.SSt.

The decision on environmental conditions is included in the Attachment 4a to the EMP. Justification part of the decision includes description of EIA procedure. Description of EIA procedures is presented in chapter 3.5.

Condition of environment elements in the Task surrounding

As the result of works connected with identification of the natural and cultural values, it was stated that the area of the Task implementation and its surroundings are characterised, inter alia, by the following environmental conditions:

- The Task implementation area is located within the river basin area of the Surface Water Body (SWB) Warta from Noteć to the mouth (PLRW6000211899) near the mouth where Warta joins its waters with Odra and the SWB Postomski Canal from Rudzianka to the mouth (PLRW60002418969) and within the river basin area of the Ground Water Body (GWB) with the number 33 (PLGW600033).
- In the area of the Task implementation two natural habitats protected under the Habitats Directive were found and nesting of birds was found on the bridge. The total of 58 bird species were found in the Task implementation area and its vicinity, 5 of which are included in the Annex I to the Birds Directive. Protected amphibian and reptile species were also found in the area of the investment. In the waters of the Warta River, in the area of the bridge and in the close vicinity of the planned Task, the following species, which are listed in the Annex II of the Habitats Directive are very likely to be expected: the asp, spined loach, northern whitefin gudgeon, weatherfish and the European bitterling as well as during spawning trips, the European river lamprey and the Atlantic salmon .
- The following forms of the nature protection are present in the area of Task implementation: Natura 2000 Warta Mouth PLC080001, "Warta Mouth"

Landscape Park. **Additionally, the planned temporary bridge will be built within the boundaries of the "Warta Mouth" National Park;**

- The road bridge planned for demolition is entered in the municipal record of monuments (the Lubuskie Voivodeship Conservator of Monument has agreed for its demolition), however, the existing bridge is located in the place of the previous bridge crossing, the relics of which can be preserved in the earth layers of the Warta banks. Moreover, in the immediate vicinity of the Task implementation area there are other monuments listed in the municipal record of monuments.

Summary of the Environmental Impact Assessment

Land surface and landscape

The Task concerns the demolition of the current bridge and the construction of a new bridge in the same location. The permanent occupation of the area of the site therefore concerns the area already occupied for the reconstruction works (bridge and access sections of the road to the bridge). Temporary occupation of the site concerns the site and the construction site backup facilities, including the foundation of the temporary bridge at the execution stage. The surface of land used for the needs of the construction site and the construction site backup facilities will be restored to its pre-construction condition. The project does not generate any significant impacts on the land surface.

As the result of the Task, no new elements in the landscape will be created. Therefore, no changes in the landscape are expected to occur apart from an overall improvement in the aesthetics of the new structures compared to the current condition.

Climate

The implementation of the Task has no impact on the climate.

Atmospheric air

The emission of dust and gas pollutants will occur primarily at the stage of the Task implementation. At the operation stage, after the completion of the construction works, no significant changes in air emissions are expected to occur in comparison to the conditions before the bridge was reconstructed.

Surface water

The implementation of the Task will have the following impact on the environmental objectives set by the UBSW:

- Warta River SWB from the Noteć River to the mouth; SWB code: PLRW6000211899 and the SWB Postomski Canal from Rudzianka to the mouth (SWB code: PLRW60002418969), the scope of work covers <1‰ of the length of both SWB watercourses, and as the result of the project implementation, there will be a point-based modification of hydromorphological conditions, which is insignificant on the scale of the SWB. The new bridge will, not impact Warta River hydrology and water quality. The impact on the environmental objectives was assessed as insignificant, limited to the

construction period – temporary increase of concentration of suspended solids during works in the river channel can be expected.

Underground water

The implementation of the Task and then the operation of the reconstructed road and bridge infrastructure will not result in the inflow of pollutants to groundwater, thus it will not cause the deterioration of the chemical condition of the body of underground water. The Task will also not have a negative impact on the environmental objectives concerning the quantitative status of the underground water.

Acoustic climate

During the implementation of the Task, the generated noise emissions will be of a local nature, limited to the area of works carried out. Nevertheless, bearing in mind the vicinity of areas subject to acoustic protection, the investment process must be properly planned and organised, therefore technical and organisational measures to minimise noise emissions will be taken into account during the implementation.

Wildlife

Description of impacts on plants, animals and fungi is presented in chapter 5.6.1. A moderate impact on the fish fauna is expected to occur during the Task implementation stage. In particular, the amount of suspended solids and biogenic substances in the water will increase periodically during the works carried out in the bed, resulting in the increase in turbidity and the decrease in transparency and the deterioration of oxygen conditions. Nevertheless, the small area of the works carried out in relation to the width of the river and the volume of flow within this section of the Warta River will cause rapid dispersion of the suspended matter formed, without negative effects on the environment. The impact on the fish fauna will be limited by carrying out the works interfering with the Warta River and the Postomia River channels outside the spawning and roe incubation period, i.e. outside the period from March 1 to June.

The implementation of the Task of a relatively small scale will not have a significant negative impact on the identified bird species in the area of the bridge, among which common species, also inhabiting urban areas, predominate. The task implementation area is located in the surroundings of vast areas much more valuable for the living of birds. The application of time constraints in the removal of trees should effectively minimise impacts to insignificant levels.

The construction and operation of the new bridge on the Warta River is not expected to have a significant negative impact on other protected animal species identified in the bridge area.

Description of impacts on protected area is presented in chapter 5.6.2.The area of the Task implementation is located within the boundaries of the Natura 2000 Warta Mouth PLC080001 area. In order to carry out an assessment of the impact on the Natura 2000 areas, an analysis of the project was made in terms of interference with the natural environment. The following scale of impacts has been used in the environmental impact assessment: No impact, Weak, Moderate, Essential, Significant. As the result of the analyses carried out, **no essential and significant impacts were found** on the conservation condition of the objects of protection and the objectives of the objects of protection as well as on the integrity of the network of the Natura 2000 areas. The possibility of occurrence of moderate impacts, i.e. mid-term, reversible impacts

of local nature, which will not significantly affect the conservation status of the objects of protection and the objectives of protection tasks and the integrity of the nature protection forms, was found in relation to the fish species and selected bird species, associated with the areas covered with water. With respect to the remaining plant and animal species and habitats of protected species, the identified impacts were found to be weak (temporary, reversible, small scale) or no impacts were found. In particular, "Weak" impacts concern the natural habitats: 3150 - oxbow lakes and natural eutrophic water reservoirs with communities of *Nympheion, Potamion*; 91E0 - willow, poplar, alder and ash riparian forests *(Salicetum albo-frigilis)*, which will be damaged during the Task implementation. It is expected that the estimated area of damage to the habitat 3150 - oxbow lakes and natural eutrophic water reservoirs with communities of *Nympheion, Potamion* may account for about 0.043% of the total natural habitat area in the sanctuary. For the habitat 91E0 - willow, poplar, alder and ash riparian forests *(Salicetum albo-fragilis, Populetum albae, Alnenion glutinoso-incanae, alder carrs)*, about 0.025 % of the total natural habitat area in the sanctuary is expected to be damaged. No fragmentation of natural habitats will take place. It is planned to restore the damaged fragment of the oxbow lake after the decommissioning of the temporary bridge, and the decommissioning of the road embankments 75 m each long on both banks of the river will enable to restore the ecological continuity of the flood terrace habitat in this area.

The task will be located on the border of the "Warta Mouth" National Park, directly adjacent to the town of Kostrzyn, thus in the area of reduced biodiversity and natural values, which has been confirmed by the inventories carried out as well as the source data. Within the boundaries of the National Park, a road embankment leading to the temporary bridge will be constructed, which will require removing 71 trees growing at the base of the National Road 31 embankment. The implementation of the Task will not affect the objects of protection of the National Park and the set objectives of its protection. After the completion of the new bridge, the temporary crossing will be decommissioned, the road embankment constructed in the area of the National Park on the left bank of the Warta River will be removed and the area will be subject to land reclamation and restored to its natural function. Within the framework of the Task, activities are planned to create a habitat for terns, gulls and Charadriiformes on the so-called Somer Island within the area of the " Warta Mouth" National Park.

Cultural monuments and structures

The area of the Task implementation is in the immediate vicinity of the objects entered in the municipal record of monuments (in particular the passenger harbour from the 2nd half of 19th century, the road bridge over the Warta River Lagoon, historic cellar (storehouse) from the 2nd half of the 19th century in the area of the Mostowa Street). When applying the activities aimed at the protection of material goods and requirements resulting from the VCM arrangements (including the obligation to ensure archaeological supervision) and the general provisions of the Act on the protection of monuments, the implementation of the Task will not involve a significant impact on the monuments and cultural landscape of the area in question.

The Contractor shall be obliged to implement preventive measures in case of occurrence of negative impacts that may appear at the stage of works (and are currently impossible to determine). In particular, it should be emphasised that the road bridge planned for demolition is located in the place of a previous bridge crossing, the relics of which can be preserved in the earth layers of the Warta banks. It is therefore possible to discover objects that are presumed to be a monument during earthworks or other construction works.

The project concerns the dismantling and construction of a bridge and a section of a public road with the length of approx. 600 m, located mostly outside the vicinity of the buildings. During the implementation stage it will be necessary to implement mitigation measures to protect buildings and facilities in the vicinity of the construction site against unintentional damage.

Human health and safety

The implementation of the Task does not generate significant risks to the human health and safety. They may occur in the event of accidents, catastrophes and other random events (e.g. pollution leakage, fire, finding unexploded ordnance and shells, flooding). Increased occupational safety risks are associated with execution of works on the water and in the bank area.

The area of the Task implementation concerns the area where intensive fighting took place during the 2nd World War. Therefore, it is necessary to ensure the sapper's supervision of works, including the sapper's investigation prior to the commencement of works and ongoing checking and clearing of the area during the earthworks of dangerous objects of military origin together with their disposal.

Mitigation and monitoring measures

In the Sections 6 and 7 and the Attachments 1 and 2 to the EMP there is described and presented in the form of a tabular a set of mitigation and monitoring actions to eliminate or limit the negative impact of the Task on the environment and to ensure effective implementation of the conditions of the EMP. These actions include conditions set out in the administrative decisions issued in the field of environmental protection as well as additional conditions formulated at the stage of works on the EMP.

Public consultations

Section 8 of the EMP presents a report from the public consultations conducted within the procedures related to the environmental impact assessment of the planned Task, including:

- public consultations on the document entitled *Environmental and Social Management Framework Plan (ESMF)* for the OVFMP Project (2015);
- public consultations at the stage of issuing environmental decisions (2019)
- public consultations on this Environmental Management Plan (June / July 2020).

1. INTRODUCTION

This Environmental Management Plan (EMP) refers to the Task 1B.5/2 - Reconstruction of the bridge to ensure minimum clearance - the road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą, constituting a part of the Subcomponent 1B within the Odra - Vistula Flood Management Project (OVFMP) and implemented as the Contract: 1B.5/2.

1.1. ODRA - VISTULA FLOOD MANAGEMENT PROJECT (OVFMP)

The objective of the Odra - Vistula Flood Management Project (OVFMP) is the to increase the level of flood protection for the population living in the selected areas of the Odra and upper Vistula river basins and institutional strengthening of the government administration in terms of providing more effective protection against summer and winter floods and violent floods.

The Project consists of the following components:

Component 1 – Flood Protection of the Middle and Lower Odra, including:

Subcomponent 1A - Flood Protection of the West Pomeranian Voivodship areas;

Subcomponent 1B – Flood Protection in the Middle and Lower Odra;

Subcomponent 1C – Flood Protection of the town of Słubice.

Component 3 – Flood Protection of the Kłodzko Valley, including:

Subcomponent 2A – Active protection;

Subcomponent 2B – Passive protection.

Component 3 – Flood Protection of the Upper Vistula River, including:

Subcomponent 3A– Flood Protection of Krakow and Wieliczka.

Subcomponent 3B– Flood Protection of Sandomierz and Tarnobrzeg.

Subcomponent 3C – Passive and active protection in the Raba catchment area;

Subcomponent 3D – Passive and active protection in the San catchment area;

Component 4 - Institutional strengthening and modernisation of the forecasting system

Component 5 - Project Management and Development of Further Studies

Detailed information and additional documents concerning the OVFMP Project are available on the website of the Project Coordination Unit for the Odra - Vistula Flood Management Project (*http://www.odrapcu.pl*) and on the World Bank website (*http://documents.worldbank.org/curated/en/docsearch/projects/P147460*).

1.2. FLOOD PROTECTION OF THE MIDDLE AND LOWER ODRA RIVER (COMPONENT 1 OVFMP)

The Component 1 OVFMP named *Flood Protection of the Middle and Lower Odra River* aims to protect against flooding by strengthening protection against summer and winter floods within the settlements located along the Odra River.

There will be 3 Subcomponents implemented under the Component 1:

Subcomponent 1A - Flood Protection of the West Pomeranian Voivodship areas;

Subcomponent 1B – Flood Protection in the Middle and Lower Odra;

Subcomponent 1C – Flood Protection of the town of Słubice.

Subcomponent 1B consists of the following tasks:

- 1B.1/1 (a). Reconstruction of the regulation structures of the Odra River - adaptation to the third class of the waterway, in the section from Ścinawa to the mouth of the Nysa Łużycka River - Stage II.
- 1B.1/1 (b). Reconstruction of the road bridge in Krosno Odrzańskie with access roads.
- 1B.2. Modernization works on boundary sections of Odra River, Stage I To provide Good Condition for Ice-breaking.
- 1B.3/1 Stage I: Construction of mooring and berthing base for icebreakers,
- 1B.3/2 Stage II: Construction of berthing and mooring infrastructure on the Lower and Border Odra River and new marking of the shipping lane.
- 1B.4/1. Improvement of floodwater flow in the winter period from the Lake Dąbie.
- 1B.4/2. Dredging of the Klucz-Ustowo cut
- 1B.5/1. Reconstruction of the bridge to ensure minimum clearance - railway bridge in km 733.7 of the Regalica River in Szczecin.
- 1B.5/2. Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą.
- 1B.5/3. Reconstruction of the bridge to ensure minimum clearance - railway bridge in km 615.1 of the Odra River in Kostrzyn nad Odrą.
- 1B.6. Flood protection of the town of Nowa Sól and the areas below the town of Krosno Odrzańskie:

  - 1B.6/1. Nowa Sól Stages I and II,

  - 1B.6/2. Wężyska - Chlebowo.
- 1B.7. WWW Widawa - reconstruction of flood protection systems, municipalities of Czernica, Długołęka, Wisznia Mała and Wrocław.

2. TASK DESCRIPTION

The Task, which is the subject of this EMP, includes the reconstruction of the road bridge in km 2.45 of the Warta River. The Project Implementing Unit (PIU) for the Task is the State Water Holding Polish Waters Regional Water Management Board in Szczecin.

2.1. TASK LOCATION

This task includes the dismantling and construction of the road bridge in km 107+211 of the national road No. 31 in Kostrzyn nad Odrą. The existing structure is the road bridge located in km 2.45 of the Warta River within national road No. 31 Szczecin - Słubice in km 107+211 (General Wł. Sikorski Street in Kostrzyn nad Odrą).

Kostrzyn nad Odrą is situated in the Gorzów County, in the Lubuskie Voivodship.

2.2. TASK CHARACTERISTICS

General information

The task concerns the dismantling of the existing bridge and the construction of a new road bridge in Kostrzyn nad Odrą. The task also includes the execution of accompanying works in the form of extension of the national road No. 31 (General Wł. Sikorski Street) at the access to the bridge, execution of the necessary scope of reconstruction of water supply, sewage and other systems. A diverted traffic on the temporary bridge will be arranged during the construction of the target bridge.

The existing facility is the road bridge, which was built at the end of the 19th century as a 5-span structure. In 1945, as the result of direct warfare, the spans of the bridge were destroyed. This area was under artillery fire, bombed and mined, so there is a relatively high probability of presence of unexploded ordnance and unexploded shells in the vicinity of the bridge.

The pillars of the new bridge will be placed outside the Warta riverbed, the existing supports will be dismantled up to 2 m below the bottom level. When determining the spacing of the newly designed pillars, the specific location of the bridge at the mouth of the Postomia River was taken into account. Obtaining the expected results is only possible when all elements of the existing bridge are completely dismantled and then a new one is built.

It is planned to build a bridge that will provide vertical clearance under the navigable span up to the level of 5.25 m above the HNW. The total length of the designed load bearing structure is about 302 m. The designed bridge structure will be a three-span, continuous, boxed, single-chamber, *extradosed*[1] type superstructure made of prestressed concrete, suspended from pylons by means of ropes. The pylons will be attached to the girder of the load bearing structure.

[1] Supporting structure of extradosed type - "a structure combining the idea of suspended and prestressed beam structure. In bridges of this type, a part of prestressed cables is led over the supports (outside the girder section), which made in the form of low pylons, serve as so-called deviators. Beata Stankiewicz, Ph.D., "Extradosed Bridges ", Construction Engineer

For the duration of the construction of the target bridge, a diverted traffic will be arranged on the temporary bridge on the southern side of the existing facility (from the upper water side). The road bridge on the Warta River cannot be dismantled and left without reconstruction, because it is the only road crossing over the Warta River in Kostrzyn on the Odra River, connecting two parts of the town. Its dismantling without the prior construction of a temporary bridge would result in the necessity to cover a distance of about 35 km in order to reach the nearest bridge on the Warta River.

The supporting structure of the temporary bridge has been designed as a steel lattice structure, assembled from repetitive modules. The temporary bridge will have a vehicle roadway with a width of about 6.0 m and a pedestrian walkway with a width of about 2.0 m. The temporary bridge will have a total length of approx. 246 m and will consist of three spans with a span of approx. 2 x 84 + 77 m. Road embankment leading to the temporary bridge will be constructed from the Western side, at the mouth of Postomia River. It will be removed after ceasing operation of the temporary bridge.

Temporary and permanent land acquisition in connection with the Task are carried out on the principles set out in the Real Estate Acquisition and Resettlement Action Plan (LA&RAP). When acquiring a property, the Contractor will be obliged to apply the World Bank Policy expressed in the Project of the Odra-Vistula Flood Management Project Operational Manual (POM) and apply the LA&RAP. The negotiations and agreements between the Contractor and an owner of the property regarding temporary occupation will be supervised by the Consultant to ensure the integrity of the agreement and its beneficial nature for the land owner.

Technical details

The parameters of the new bridge:

- theoretical span of the bridge (span in the support axes) - 75 m+150 m+75 m,
- length of the supporting system - 302.4 m,
- number of bridge pillars - 2,
- massive reinforced concrete bridgeheads with side wings, indirectly placed on large-diameter piles,
- slope cones protected by concrete openwork slabs.

Other works covered by the Task:

- extension of the national road No. 31 (Sikorskiego Street) in the section from km 107+049.32 to km 107+518.76 (GP class, KR5) - length of about 470m,
- extension of the communal road No. 101421F (Mostowa Street) in the section from km 0+000.00 to km 0+071.70 (class D, KR2) - length of about 72m,
- reconstruction of the existing three-entry crossroads of the national road No. 31 and the communal road No. 101421F in km 107+134.85,
- construction of a 4.00 m wide walking and cycling route in Sikorskiego Street,

- construction of a pavement in Sikorskiego Street,
- construction of a pavement in Mostowa Street,
- construction of a pedestrian crossing with a refuge island within Sikorskiego Street in km 107+111,
- construction of a pedestrian and bicycle crossing in Mostowa Street,
- reconstruction of the existing individual and public exits in the course of Sikorskiego Street and Mostowa Street (surface made of concrete paving stones or asphalt concrete).

Reconstruction of the road system

The designed section of the national road 31 is about 470 m long and 7.00 m wide (lane of 3.50 m). At the crossing with the communal road No. DG 101421F (Mostowa Street), the priority is given to vehicles on the national road No. 31. The designed road infrastructure also includes the extension of the communal road No. 101421F (Mostowa Street) over the section of about 72 m counting from the crossing with the national road No. 31. The road is designed based on parameters of the communal road (class D, KR2) with the width of 6.00 m. Reconstruction of individual and public exits is designed based on parameters in accordance with the Journal of Laws of 2016, item 124 as amended.

Retaining walls were designed in the form of five monolithic reinforced concrete structures in the form of bodies fixed in the continuous footing founded directly. The walls are designed to hold the road embankments in connection with the lifting of the grade line of the road system. The walls are designed with lengths of approx. 77.0 m, 14.3 m, 4.0 m (M1-M3 walls on the right bank), 13.3 m and 40.0 m (M-4 and M-5 walls on the left bank) and heights adjusted to the designed area, from approx. 1.0 m to approx. 6.5 m.

Reconstruction of the water supply system

The existing water supply system in the area of Sikorskiego Street, Mostowa Street and the exit to the "Delfin" marina have been designed for reconstruction. Reconstruction of the *w315* water supply system running along Sikorskiego Street was adjusted to the designed road and bridge system. The water supply system is designed with PE100 SDR17 Dz315 pipes and the section running under the bridge over the Warta River is designed as pre-insulated and protected with a protective pipe.

The reconstruction of the *in200* water supply system was designed from km 107+064 to km 107+144 from Dz280 PE100 SDR17 pipes along Sikorskiego Street in the pavement. All connections located on the north-western side of the road were designed to be switched to the water supply system. The reconstruction of the water supply system was also designed on the south-eastern side of the road. From km 107+085 to km 107+024, the water supply system Dz280 PE100 SDR17 was designed, along with switching of the existing connections to buildings and reconstruction of the *w32* connection from Mostowa Street along the plot 394/36 from pipes Dz50 PE100 SDR17. In this area the connection to the building at 2 Sikorskiego Street should be cut off due to the planned demolition of the building.

At the level of the exit to the internal road in km 107+493 to the "Delfin" marina, a reconstruction and switching of the existing *w80* and *w160* water supply systems – a section – was designed. The water supply systems Dz90 and Dz160 PE100 SDR17 were designed.

As a part of the reconstruction of water supply systems, all hydrants were designed to be reconstructed. In order to connect the PE100 SDR17 water supply sections and switch the existing connections, gate nodes are designed.

Water supply network (including the mains) of PE pipes:

- Dz315; L=68 run metres,
- Dz315 in pre-insulation; L=315 run metres,
- Dz280; L=138 run metres,
- Dz160; L=9 run metres,
- Dz 90; L=27 run metres,
- Dz 50; L=86 run metres,
- Dz32; L=85 run metres.

Reconstruction of the sewerage system

It was designed to reconstruct the existing combined sewerage system and ultimately to divide the existing combined sewerage system into a sanitary sewerage system and stormwater drainage system. The designed gravitational sanitary sewerage system includes the reconstruction of the sewer in the scope of development and switching of existing buildings to a new DN250 intercepting sewer. The reconstruction of the sewerage system pumping pipeline was designed in the pavement and greenery of the designed road system. The section in the bridge area was designed as a pre-insulated pipeline. An plenum chamber has been designed before connection of the pumping pipeline into the gravitational section.

Sanitary gravitational sewerage system, PVC pipes and PE pumping pipes:

- Dz 90; L=116 run metres,
- Dz 90 in pre-insulation; L=315 run metres,
- Dz250; L=96 run metres,
- Dz160; L=19 run metres.

Reconstruction of the stormwater drainage system

Two sections of the stormwater drainage system were designed as a part of the drainage of the designed road system and the bridge structure. The planned reconstruction of the road and bridge system will not significantly increase the hardened area, from which the stormwater drainage was designed. The use of additional pre-treatment devices will have a positive impact on the quality of stormwater sewage discharged to the river.

KD1 sewer - The first section was designed from the southern side of the bridge structure. The drainage of the bridge facility will be connected to the stormwater drainage system and through the gullies, the street drainage system will be connected. The stormwater drainage is designed through a typical river bank outlet to the receiver - the Warta River in the area of the Delfin Sailing Club. At the outlet to the river, an anti-return flap is designed.

KD2 sewer - Stormwater drainage from the northern side of the bridge was designed to the Warta River through the construction of a new sewer and stormwater drainage outlet. The designed sewer was connected to the drainage of the bridge facility, gullies and linear drainage associated with the extended road system of Sikorskiego Street and a new sewer and gullies from Mostowa Street. At the outlet to the river, an anti-return flap is designed.

Designed stormwater drainage - PP/PE/PVC pipes:

- DN300; L=360 run metres,
- DN200; L=152 run metres,
- DN150; L=16 run metres.

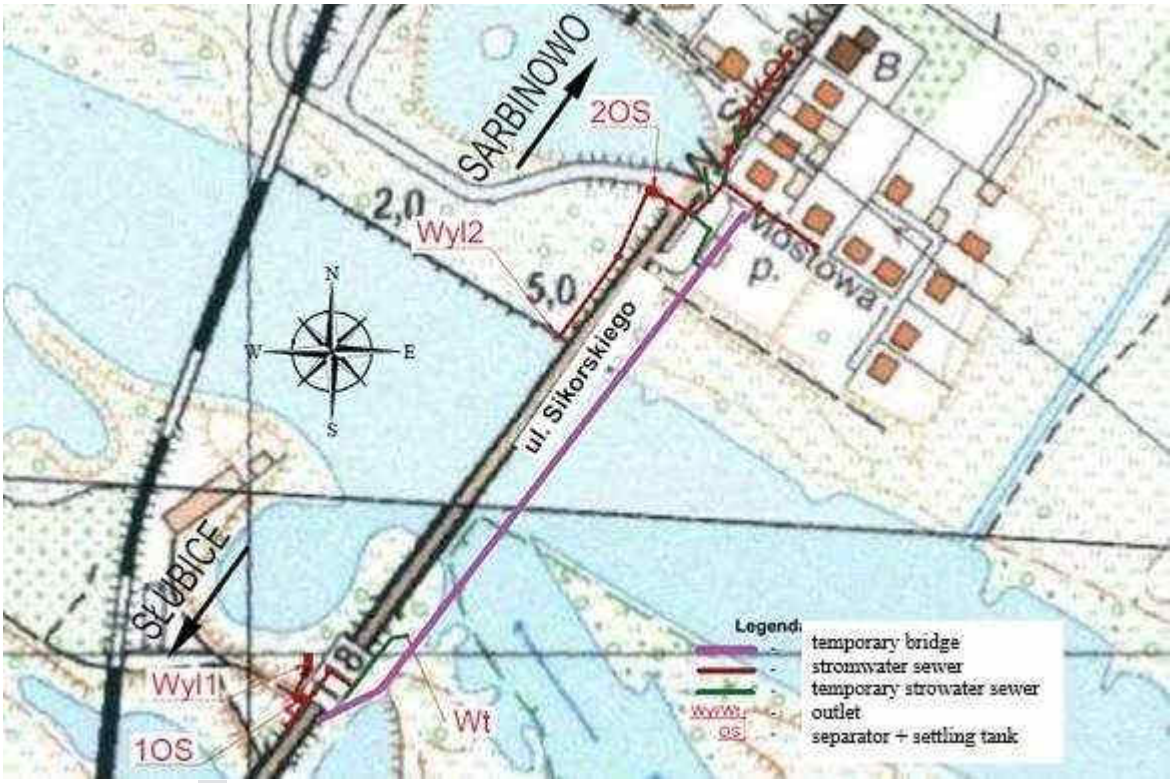


Fig. 1 Diagram of target and temporary stormwater drainage system

Before the outlets of the stormwater drainage system to the river, there have been designed systems of pre-treatment (separator integrated with the settling tank) enabling to pre-treat rainwater to the parameters required in the art. 17 of the Regulation of the Minister of Maritime Economy and Inland Navigation of 12.07.2019 on substances particularly harmful to the water environment and the conditions to be met at the discharge of sewage into waters or to the ground, as well as at the discharge of rainwater or snowmelt into waters or into water facilities.

The operation of the pre-treatment equipment must comply with the guidelines of the manufacturer of the equipment and the conditions of the water law permit. Waste accumulated in the treatment devices - code 13 05 08* (separators and settling tanks/sand traps) (waste catalogue subgroup 13 05 or additionally 19 08) are subject to processing (neutralisation) as

waste hazardous to the environment, in accordance with the provisions of the Act of 14 December 2012 on waste (Journal of Laws of 2018, item 21).

In the existing state, the drainage of the bridge is carried out through bridge gullies with direct discharge to the river, which makes it impossible to treat rainwater. The designed drainage system, due to the use of pre-treatment devices, will have a positive impact on the condition of the environment in terms of reducing the amount of petroleum substances and mineral suspension discharged to the Warta River.

Reconstruction of the gas network

Due to the interference of the DN200 and DN100 steel pipeline sections with retaining walls in the vicinity of Mostowa Street, a reconstruction of the DN200 gas pipeline section was designed. The reconstruction involves moving the gas pipeline beyond the range of the road system from Sikorskiego Street along the plot No. 350 towards the exit to the plot No. 352/1 over the length of approx. 54 run metres, where it will pass under Mostowa Street and connect to the existing DN100 network.

Reconstruction of the MV cable lines

The existing MV 15kV cable line No. K-2241 in the section S-20009 Kostrzyn LIDL - S-2633 Kostrzyn Statoil interfering with the designed road system will be reconstructed using 3x NA2XS2Y 1x120mm2 type cables over a 405 m long section. The designed cable stretches are to be connected to the existing one by means of cable straight-through joints.

The existing cable line SN 15kV no. K-2288 in the section L-201 O-2544 (column No. 155) - S-2598 Żeglarska Kostrzyn type 3x XHAKXS 1x120/25mm2 over a 27 m long section will be repositioned and deepened.

The interfering LV cable lines will be reconstructed outside the interference area in accordance with the reconstruction conditions issued by Enea Operator S.A.

Reconstruction of the LV cable lines

Existing cable joints will be rebuilt outside the interference area, and for this purpose new cubicles and cable–measurement joints of the LV type must be built at the location indicated in the location plan:

- SKP3-0/3-1P at the building No. 1 (Mostowa Street)
- SKP3-1/2-1P at the building No. 4 (DK 31 Sikorskiego Street)
- SKP4-2/2-1P at the building No. 8 (DK 31 Sikorskiego Street)
- ZK1x-1P at the building No. 6 (DK 31 Sikorskiego Street)

The existing LV cable lines in places where there is an interference with the designed road system or the designed land development utilities must be reconstructed using NAY2Y-J cables with a cross-section adapted to the existing load, while the ends of the designed LV cable lines

must be connected with the existing ones by means of cable joints or inserted into the designed cable connectors. The existing cable lines at the site depressions are designed as recessed.

In the area of intersections with the designed road system and the designed or existing utility infrastructure, the cable lines should be secured with casing pipes.

Construction of the road lighting

For the Investment in question, the construction of road lighting is envisaged:

- DK31 national road (Sikorskiego Street) and the target bridge
- crossing of Sikorskiego Street (DK31) with Mostowa Street/internal road
- lighting of pavements, pedestrian and bicycle lanes and pedestrian crossings.

The construction of the illumination of the bridge structure and the power supply of the navigational signs were also designed for the said Investment.

The road lighting will be designed in accordance with the regulations and standards in force at the time of the Investment implementation and will be powered by YAKXS 4x25mm2 cables from the designed lighting cubicle. The illumination of the bridge structure and navigational signs will be supplied from the new cubicle by means of cables, led in the bridge structure in UV-resistant casing pipes. The illumination is designed on galvanised steel poles with the height of 8 m, placed in the ground or anchored to the pavement covers (on the designed bridge), with 1.0 m, 2x1.0 m long and 5˚ angle extension arms and 78W LED type lighting fittings (height of the light point 8 m).

The lighting of pedestrian crossings was designed on 6 m high galvanised steel poles, located in the ground, with asymmetrical lighting fittings with a 46W and 78W LED light source mounted directly on the pole, inclined at 5°.

When illuminating the bridge structure, the following should be exposed with light:

- characteristic features of the structure,
- level, motif of a footbridge (roadway) transverse to the river, informing about the connection of the banks,
- supporting elements (pillars, pylons, slopes) to signal the water overlooking with the image.

Reconstruction of the lighting owned by ENEA Oświetlenie Sp. z o.o.

In order to maintain continuity of lighting circuits, the existing YAKY 4x25mm2 lighting cable line should be rebuilt outside the interference area with a YAKXS 4x25mm2 cable with the total length of 718 m.

Protective action within the "Warta Mouth" National Park

Due to the necessity to carry out some of the works within the boundaries of the "Warta Mouth" National Park, the scope of the Task was complemented by protection measures within the "Warta Mouth" National Park, consisting in:

- exposure, by removing vegetation and the top layer of soil containing roots and stolons, from the so-called "Somer Island" located at the end section of the Postomia River.
- preparation of rock and sandy ground in the border of "Somer Island" in order to create a habitat for terns, gulls and Charadriiformes.

Technology and works schedule

Pylons, 17.5 m high, will be made of reinforced concrete; it is planned that they will be concreted in scaffolding after the execution of support crossbars, in which they will be fixed.

A temporary bridge was designed with a steel, modular structure, in a continuous three-span system with spans of 80.5+80.5+80.5 = 241.5 m. This temporary bridge will be located on the upper water side at the distance of approx. 6.5 to 11.0 m from the edge of the newly designed bridge. The method and design of the temporary bridge assembly lies with the Contractor.

After the commencement of construction, technological accesses will be made in the course of the diverted traffic road (according to the Contractor's technological design), enabling the exit from the road and construction of bridgeheads of the temporary bridge. The target ramps to the temporary bridge will be made after the complete assembly of the structure's supporting structure and its equipment. Connection to the traffic will take place in accordance with the traffic organisation design for the time of construction after the surface and safety devices on the access roads have been made and after positive acceptance of particular works by the Engineer.

The construction works should start with the organisation of the construction site backup facilities, felling of about 240 trees, land re-development works, followed by execution of a temporary bridge with a detour and a temporary repositioning of the necessary networks. Only after the traffic can be shifted from the existing bridge to the temporary one, the demolition of the existing bridge together with all equipment and networks can be started. Before starting the demolition works, preparatory works will be carried out: the work area will be fenced and information and warning boards will be installed. Throughout the duration of the demolition works, the site will be secured against access by third parties. Motor vehicles and construction machines will only move on the technological roads.

It is assumed that the demolition works will be carried out from the top to the bottom of the facility, in compliance with the safety rules applicable to the demolition works. While carrying out the demolition works, it is assumed that the Contractor will apply the principle of economical use of the area and minimal transformation of its surface. The Contractor will limit the works in the riverbed and the Warta river bank zone to a minimum, which is connected with protection of surface and underground waters.

After the execution of demolition, construction of a new facility and retaining walls can start together with the road infrastructure. At the later stage it is possible to start demolition works of the temporary crossing (demolition of the temporary bridge will be carried out according to the assembly design, however in the reverse order) and finishing and cleaning works.

Construction works are planned from the beginning of 2021 until the beginning of 2023. The development of the construction schedule is the responsibility of the Contractor.

The general schedule for the implementation of the Task takes into account the restrictions resulting from the decision on environmental conditions and EMP - these restrictions will also be included in the Contractor's detailed schedule.

Waste generated during works

The estimated quantities of materials resulting from the demolition of the existing bridge are as follows:

- bituminous surface - 2430 m^2 (with the thickness of 10 cm i.e. 243 m^3)
- insulation - 2430 m^2
- kerbs - 390 run metres
- traffic barriers - 37 t
- railings - 19 t (to be recovered as recycled raw material)
- gullies and drain pipes - 220 pieces
- lanterns - 6 pieces.
- concrete and reinforced concrete elements – 2423 m^3
- steel structures - 700 t (to be recovered as recycled raw material)

The quantity of particular assortments intended for secondary use as recycled material will depend on the Investor's decision, while the remainder will be disposed of as waste in accordance with applicable regulations.

The demolition will not involve the excavation of river sediments, but only the levelling of the bottom after the dismantling of the pillar foundations.

Note: The above characteristics of the Task are for illustrative purposes only and do not replace the design documentation for the Task. All works should be carried out in accordance with the Technical Specifications for the Execution and Acceptance of Works, applicable to particular industries.

3. INSTITUTIONAL, LEGAL AND ADMINISTRATIVE CONDITIONS

3.1. INSTITUTIONS INVOLVED IN THE IMPLEMENTATION OF THE TASK

The Investor for the Task is the State Water Holding Polish Waters in Warsaw represented by the Director of the Regional Water Management Board in Szczecin, acting on behalf and for the benefit of the State Treasury. In connection with the implementation of the Task, the Investor signed an appropriate agreement with the administrator of the national road no. 31 – the General Directorate for National Roads and Motorways. For the ongoing coordination of the implementation of the Project by the Project Implementing Unit, the Project Coordination Unit for the Odra - Vistula Flood Management Project functions within the structure of the State Water Holding Polish Waters. Additionally, the implementation of the Task may require the involvement of public administration bodies in the scope of decisions on environmental conditions, decisions issued on the basis of the Nature Conservation Act or waste management arrangements.

3.2. ACTS OF NATIONAL LAW IN FORCE IN THE FIELD OF THE ENVIRONMENT

According to the Polish law, the investment process in the scope of the environmental protection is regulated by several acts and regulations. A list of selected basic legal acts related to the above mentioned thematic scope and in force during the period of works on the EMP is presented in Attachment 3 to the EMP. The number and content of legal acts specified therein may change, along with changes in national environmental protection regulations. In any case, the Contractor shall be obliged to comply with all current legal regulations in force in Poland during the term of the Contract.

3.3. EIA PROCEDURE IN POLAND

The description of the environmental impact assessment procedure applicable in the Polish legislation is included in the *Environmental and Social Management Framework Plan (ESMF)*, published, inter alia, on the websites of the Project Coordination Unit for the Odra - Vistula Flood Management Project[1] and the World Bank[2].

3.4. WORLD BANK GUIDELINES

This Task is co-financed by the World Bank, and the conditions for its implementation in the field of environmental protection are consistent with the Operational Policies and the Bank Procedures in the field of environmental protection, including, inter alia, the policies and procedures of *OP/BP 4.01* (concerning environmental impact assessment), *OP/BP 4.04*

[1] On the website: *http://www.odrapcu.pl/popdow_dokumenty_RPZSiSS.html*.

[2] On the website: *http://documents.worldbank.org/curated/en/717671468333613779/Poland-Odra-Vistula-Flood-Management-Project-environmental-and-social-management-framework*.

(concerning natural habitats) and *OP/BP 4.11* (concerning cultural resources)) and OP/BP 4.12 (concerning involuntary resettlement).

In accordance with the above Operational Policies the herein EMP has been prepared for the Task, and all temporary and permanent land acquisition in connection with the Task are carried out on the principles set out in the Real Estate Acquisition and Resettlement Action Plan (LA&RAP) prepared for the Task.

Source texts of the above mentioned policies and procedures can be found in the document *The World Bank Operational Manual*[1], and their descriptions are presented, inter alia, in the *Environmental and Social Management Framework Plan (ESMF).*

3.5. CURRENT STATUS OF THE EIA PROCEDURES FOR THE TASK

For this Task, in accordance with the requirements of the national legislation, a decision on the environmental conditions for the implementation of the project was obtained (environmental decision).

The Task is a project which may potentially significantly affect the environment as listed in the EIA Regulation:

- Article 3 paragraph 1 item 60 *(roads with hard surface, with the total length of more than 1 km other than those mentioned in the Article 2 paragraph l items 31 and 32 and bridge structures in the course of a road with hard surface, excluding the reconstruction of roads and bridge structures used to service power supply stations and located outside the areas covered by the forms of nature protection referred to in the Article 6 paragraph 1 items 1-5. 8 and 9 of the Nature Conservation Act of 16 April 2004);*
- paragraph 68 *(mains water supply pipes for the delivery of water and mains water supply pipes delivering water from treatment stations to distribution water pipes, excluding their reconstruction with the trenchless method);*

for which the obligation to carry out environmental impact assessment may be required.

The competent authority to issue the above mentioned decision was the Mayor of the Town of Kostrzyn nad Odrą. In the course of the proceedings to issue a decision on the environmental conditions, the authority conducting the proceedings, taking into account the opinion of the Regional Director for Environmental Protection in Gorzów Wielkopolski, the Minister of Maritime Economy and Inland Navigation and the opinion of the State District Sanitary Inspector in Gorzów Wielkopolski, ruled that an environmental impact assessment is necessary to be carried out.

On 10/01/2019, they initiated the legally required procedure for environmental impact assessment, which must be conducted before issuing the environmental permit and includes:

- verifying the environmental impact report;

[1] On the website: https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx.

- obtaining required opinions and approvals, including the approvals issued by: the Regional Director for Environmental Protection in Gorzów Wlkp. (in the scope of nature and environment protection and protected areas including Natura 2000 sites), the Minister of Maritime Economy and Inland Navigation (in the scope of protection water and aquatic organisms, the impact of the Task on achieving the objectives designated in the ORBMP) and the Minister of the Environment (in the scope of impacts within the "Warta Mouth" National Park);
- ensuring public participation in the proceedings.

As part of the EIA, an environmental impact report has been prepared, the scope of which is defined in art. 66 section 1 of the EIA Act. The environmental impact report contained the project characteristics, specified the types and volume of substance and energy emissions, and included necessary calculations, indicating potential risks to the environment. It also described the environment existing on the site and in the potential impact range of the project, and discussed the expected impact on all environmental components and on human health. The report also indicated the technical, process and organisational measures intended to eliminate or minimise any adverse impact on the environment while the project is implemented, operated and possibly decommissioned.

The procedure for issuing the decision on environmental conditions, during which the environmental impact assessment of the project was carried out, was completed with the decision of the Mayor of the Town of Kostrzyn nad Odrą of 14.02.2020, Reference No.: GK.6220.9.2018.SSt. This decision defines the environmental conditions for the implementation of the Task. A copy of the decision is attached as the Attachment 4a to the EMP.

As a part of the EIA, the report on the impact of the Task on the environment, together with the other documentation of the case, was made available for inspection by the public at the seat of the Municipal Office of the Town of Kostrzyn nad Odra from 21 January to 19 February 2019 and from 05 September 2019 to 07 October 2019 (after completing the content of the report following the authority's calls). The public was informed about the possibility of familiarising themselves with the contents of the report on the environmental impact by means of the announcements of the Mayor of the Town of Kostrzyn nad Odrą on the website of the Town of Kostrzyn nad Odrą; on the notice board of the Town Hall at Graniczna 2 Street; on the notice board near the Task implementation site (at Sikorskiego Street next to the building of the Kostrzyn Cultural Centre - KCC).

The terms and conditions of the environmental decision are binding on the Investor and the Contractor and are included in this EMP in the Attachment 1 to the EMP (mitigation actions) and the Attachment 2 to the EMP (monitoring actions). In addition, the EMP is also supplemented with provisions resulting in particular from 1) World Bank policies (including EHS guidelines and anti-discrimination practices); 2) reporting principles in the implementation of the EMP; 3) good construction practices; 4) occupational health and safety requirements. In addition, provisions have been introduced to eliminate extraordinary risks to the human health and life (e.g. supervision and site investigation by sappers) or the protection of cultural assets (in particular, the conditions for dealing with the discovery of monuments, conditions for providing a team of archaeological experts).

Irrespective of the above, the Contractor is obliged to obtain all further administrative decisions and permits necessary at the stage of work execution, if such need arises during the Task execution.

3.6. GRIEVANCE REDRESS MECHANISMS

All project affected persons (PAPs) will have access to adequate and accessible grievance redress mechanisms. Everyone has the right to file a complaint or motion. Filing complaints or motions is not subject to fees. Furthermore, in accordance with the regulations, the person filing a complaint or request may not be exposed to any damage or allegation on account of such submission.

More information on Grievance redress mechanisms employed for projects co-financed from World Bank funds can be found in the Odra-Vistula Flood Management Project Operations Manual (POM) available on the website of the Project Coordination Unit at http://odrapcu2019.odrapcu.pl/doc/POM_ENG.pdf.

4. DESCRIPTION OF ENVIRONMENTAL ELEMENTS IN THE TASK AREA

4.1. LAND SURFACE AND LANDSCAPE

The Task will be carried out within the town limits of Kostrzyn nad Odrą. The direct area of the Task implementation includes the road bridge and a fragment of the road system to be reconstructed. There are residential, service and recreational areas in the vicinity, together with an extensive accompanying infrastructure. In the vicinity of the bridge in question (within the distance of about 150 m - 180 m) there is a railway bridge. Both bridges are landscape dominants in the Warta River axis. In the vicinity of the road bridge, the Warta River is 110-120 m wide, and along its right bank there are port quays, including a harbour for cruise ships. On the other hand, on the opposite bank, between the railway bridge and the road bridge, there is a marina of the "Delfin" Sailing Club. The area designated for the investment is directly connected with about 500 m long section of the Warta River within the distance of 2.45 km from the mouth of the Odra River, and just below the connection of the Warta River with its tributary, the Postomia River. The bridge is located within the boundaries of the Natura 2000 area Warta Mouth PLC08001, on the border of the Warta Mouth National Park and within the boundaries of the Warta Mouth Landscape Park. In addition, the road bridge in question is located within the ecological corridor "Warta Mouth Swamps" GKPn-22, in its extreme part connecting through the Warta Valley with the corridor "Nadodrzańskie Forests" GKPn-28A. In the area of Kostrzyn nad Odrą the connection between these corridors is provided in three places: in the Odra valley where the corridor is about 200 m wide, in the Warta valley where the corridor is about 400 m wide and to the north-east of Kostrzyn with a 1.5 km long strip of forests. In the Warta valley, the corridor's passability is worsened by the location of national road No. 31 along with a bridge crossing. The road embankment leading to the bridge on the left bank reaches the Warta riverbed. Below it there are two more railway bridges, intensifying the barrier effect.

4.2. CLIMATE

The town of Kostrzyn nad Odrą is located in a maritime climate region. The climate according to the Köppen-Geiger classification is referred to as Cfb (oceanic climate). The climate of the region is mild, moderately warm. The area in question is dominated by westerly and north-westerly winds. Kostrzyn nad Odrą is located in the so-called western circulation zone. The parallel arrangement of orographic units and the flat-bottomed ice-marginal valley exposed from the west, create convenient conditions for the inflow of air masses from the west.

4.3. AIR QUALITY

In the Lubuska Zone, to which the Task area belongs, based on the research conducted by the Voivodeship Inspectorate for Environmental Protection in Zielona Góra, exceedances of selected levels are determined - criteria are set out in legal regulations for individual atmospheric air pollutants, in particular: the level of permissible concentrations of suspended dust PM10 determined for the protection of human health and the target level of benzo(a)pyrene contained in PM10 dust, determined for the protection of human health. According to the

Voivodeship Inspectorate for Environmental Protection reports, the main reason for the exceedances of benzo(a)pyrene contained in PM10 dust in the Lubuskie Voivodeship is the so-called ground-level emission, coming from the municipal and living sector, and associated with individual heating of buildings using fossil fuels, mainly coal. An important source are also emissions from the transport. In the case of dust pollution, a clear seasonal variation of air pollution concentrations is visible. In the case of dust pollution, exceeding normative levels occurs primarily in the autumn and winter.

For the remaining parameters, all three zones of the voivodeship were classified as class A.

Below are the results of the State Environmental Monitoring (SEM/PMŚ) in the year 2018 in regarding the parameters causing the Lubuska Zone to be included in class C.

Concentrations of benzo(a)pyrene

Table 1 Statistical parameters calculated on the basis of the series of results of concentration of benzo(a)pyrene for the needs of the health protection assessment in measuring stations in the Lubuskie agglomeration.

Name of the station	Average annual value Sa [ng/m^3]	Standardised target level [ng/m^3]	
		Zone A	Zone C
Sulęcin, Dudka Street	9	≤ 1	> 1
Wschowa, Kazimierza Wielkiego Street	10	≤ 1	> 1
Żary, Szymanowskiego Street 8	6	≤ 1	> 1

Sa - average annual value
Source: Annual assessment of the air quality in the Lubuskie Voivodeship, Voivodeship report for 2018

24-hour PM10 concentrations

Table 2 Statistical parameters calculated on the basis of a series of results of PM10 concentration measurements for the needs of assessment of human health protection (the number of days with exceedances before the deduction of the share of natural sources of PM10 emissions is given in brackets)

Name of the station	Annual average value Sa [µg/m^3] (permissible value for Class A < 40 µg/m^3)	Multiple of 24-hour exceedances S24 > 50 µg/m^3 L>50 (S24)	Criterion for Class A (not more than 35 concentrations of 24 hours. S24 > 50 µg/m^3)	Criterion for Class C (more than 35 concentrations of 24 hours. S24 > 50 µg/m^3)
Sulęcin, Dudka Street	28	27	≤35	>35

Wschowa, Kazimierza Wielkiego Street	34	60	≤35	>35
Żary, Szymanowskiego Street 8	29	37 (38)	≤35	>35

Sa- average annual value

S24 – average daily value

Source: Annual assessment of the air quality in the Lubuskie Voivodeship, Voivodeship report for 2018

Due to designation of the Lubuska Zone as class C, due to the recorded exceedances of the permissible levels of PM10 and benzo (a) pyrene contained in PM10 dust, the current air protection program for the Lubuska Zone[1] includes a short-term action plan until 2027, whose implementation will reduce particulate matter PM10 and particulate matter emissions, including benzo (a) pyrene and heavy metals. The action plan includes activities related in particular to the removal of high-emission low-efficiency heat generation sources (coal fired boilers and boiler houses), extension of municipal heating systems, promotion of environmental - friendly heat generation units (low-emission and zero-emission) as well as decreasing of heat energy consumption by improving thermal insulation of buildings. Regular cleaning of the road surface by road authorities was indicated as the main activity aimed at reducing transport emissions, especially after the winter and during rainless periods. The actions specified in the action plan do not affect the conditions for the implementation and operation of the Task.

4.4. GEOLOGICAL STRUCTURE

Against the background of the main tectonic units of Europe, the bridge planned to be constructed is located within the Paleozoic platform covered by thick sedimentary rocks. This area is located within the structural unit of the so-called Szczecin-Łódź-Miechowska basin.

The area of the town of Kostrzyn nad Odrą is built to the depth of about 100 m below the ground level by Quaternary, Pleistocene and Holocene formations, located on Tertiary formations. In the deeper layers there are formations of the upper Cretaceous. The Quaternary surface is characterised by considerable diversity. Both in the northern and north-eastern part of the town there is a Tertiary elevation, the surface of which is at 40-50 m below the ground level. In the western, north-western, southern and south-eastern directions, the Quaternary area slopes gently down to 70 m below the ground level.

Most of the town is situated on river terraces built of sorted river sands of different granulation. Below them gravels and stones can be found locally. These areas have a homogeneous

[1] Resolution No. XLII/626/18 of the Parliament of the Lubuskie Voivodship of February 26, 2018 on determining the Update of the air protection program for the Lubuska Zone due to exceeding the permissible value of PM10 suspended dust and the target values of benzo (a) pyrene and arsenic contained therein (Official Journal of the Lubuskie Voivodship of 2018, item 506)

geological structure. The Toruń-Eberswalde ice-marginal valley is built of Holocene formations - silty clay, fine to medium and coarse-grained sands and organic mud and peat.

4.5. SOIL AND LAND

Kostrzyn nad Odrą is located in the Skwierzyna-Kostrzyn soil-agricultural region (H. Kern, 1981).In the town there are medium favourable conditions for agricultural production. Within the south-eastern, south-western and southern part of the town, where the Task is located, there are best class soils (III and IV class), associated mainly with low terrace and the edge of the middle terrace. It should be noted, however, that the area of the Task implementation is an anthropogenically transformed area of the existing road lane. In urbanised areas, transformed by human, there are anthropogenic soils. These soils are significantly transformed, where the original system of genetic levels has been destroyed and the soil-forming processes are usually at an early stage and depend on the type of materials deposited (Systematics of Polish Soils, 2011).

4.6. SURFACE WATER

The current development of the Warta and Odra valley in the area of the town of Kostrzyn nad Odrą is the result of regulation works, which began in this area at the turn of the 18th and 19th centuries. The main works were connected with the formation of a single Warta riverbed and its straightening, dredging, bank protections and partial embankment formation. The estuary of the Warta River to the Odra River was also shaped, and the Odra River itself was embanked. The southern areas of the town, where the Task implementation area is located, are the floodplains of the Warta River and the Postomia River flowing into it. In the floodplain area there are fragments of old river beds of the Warta and Postomia rivers, called lakes, which are mostly systems of devastated ditches and drainage canals, partially draining the water after the flooding. The Warta River is also supplied with water from the Odra-Warta River valleys, located between the Odra embankments and the Kostrzyn-Słońsk road.

The Task implementation area, within the Warta River in the vicinity of the mouth of Postomia River, is located within the catchment of:

- SWB ‘Warta from Noteć to the mouth’ (PLRW6000211899) (near the mouth where Warta River joins its waters with Odra River) and;
- SWB ‘Postomski Canal from Rudzianka to the mouth’ (RW60002418969).

The results of monitoring of the Warta water quality at the monitoring point in Kostrzyn nad Odrą (Measurement point code PL02S0401_0682) in 2017 with regards to the parameters of ecological condition/potential assessment (including these characterising the oxygen conditions) are presented below.

Element	Parameter	SWB Warta from Noteć to the mouth RW6000211899 (Warta – town of Kostrzyn) *(SWB, within which the project is located)*	
		Value*	Class**
biological components	phytoplankton	0.34	IV
	chlorophyll a	104.7	
	macrophytes	33.42	
	benthic macro-vertebrates	0.45	
	fish fauna	0.667	
physicochemical elements	temperature, °C	11.2	>II
	colour	33	
	overall suspension, mg/l	18.0	
	dissolved oxygen, mg O_2/l	10.0	
	BOD5, mg O_2/l	3.4	
	COD - Mn	11.7	
	TOC, mg C/l	10.3	
	COD - Cr	43	
	conductivity, µS/cm	576	
	dissolved substances, mg/l	410	
	sulphates, mg SO4/l	64.0	
	chlorides, mg Cl/l	63.0	
	calcium, mg Ca/l	93.0	
	magnesium, mg Mg/l	10.9	
	overall hardness mg $CaCO_3$/l	264.0	
	pH	7.7-8.7	
	overall alkalinity	195.0	
	ammonium nitrogen, mg N-NH_4/l	0.098	
	Kjeldahl nitrogen, mg N/l	0.8	
	nitrate nitrogen, mg N-NO_3/l	2.40	
	nitrite nitrogen, mg N-NO_2/l	0.023	
	overall nitrogen, mg N/l	3.2	
	phosphates, mg PO4/l	0.043	
	overall phosphorus mg P/l	0.14	
	silica	9.5	
physicochemical elements - specific synthetic and non-synthetic impurities	formaldehyde, mg/l	0.02	II
	arsenic, mg/l	b.l.q	
	barium, mg/l	b.l.q	
	boron, mg/l	0.04	
	chromium^{+6}, mg/l	b.l.q	
	overall chrome, mg/l	b.l.q	

Element	Parameter	SWB Warta from Noteć to the mouth RW6000211899 (Warta – town of Kostrzyn) *(SWB, within which the project is located)*	
		Value*	Class**
	zinc, mg/l	b.l.q	
	copper, mg/l	0.003	
	volatile phenols - phenolic index, mg/l	0.001	
	petroleum hydrocarbons - mineral oil index, mg/l	b.l.q	
	aluminium, mg/l	b.l.q	
	free cyanides, mg/l	b.l.q	
	bound cyanides, mg/l	b.l.q	
	molybdenum, mg/l	b.l.q	
	selenium, mg/l	b.l.q	
	silver, mg/l	b.l.q	
	thallium, mg/l	0.0004	
	titanium, mg/l	b.l.q	
	vanadium, mg/l	b.l.q	
	antimony, mg/l	b.l.q	
	fluorides, mg/l	0.2	
	beryllium, mg/l	b.l.q	
	cobalt, mg/l	b.l.q	
	tin, mg/l	b.l.q	
ENVIRONMENTAL CONDITION / POTENTIAL		Poor environmental potential	

Explanations:

b.l.q. - below the limit of quantification

** - the column generally gives average values, if no average concentration data were available, the maximum values or the result of a single measurement are given, as indicated in the table below, respectively*

*** - classification and assessment of the condition of Surface Water Bodies in accordance with the Regulation of the Minister of Environment of 21 July 2016 on the method of classification of the condition of Surface Water Bodies and environmental quality standards for priority substances (Journal of Laws 2016, item 1187).*

Source: Assessment of river and lake uniform bodies of surface water in the Lubuskie Voivodship for 2017; WIOŚ [Voivodeship Inspectorate for Environmental Protection] Zielona Góra, 2018

4.7. UNDERGROUND WATER

According to the hydrogeological division of Poland (A. Jaworski, 1986), the town of Kostrzyn nad Odrą is situated within the Szczecin region, in the Kostrzyn Valley subregion. The main aquifer occurs in the Quaternary formations, at the depth of several to 80 m below the ground level. The output reaches the value of 30-90 m^3/h. The usable level also occurs in the Tertiary

formations, at depths exceeding 100 m below the ground level, with the potential output values ranging from several up to 50 m^3/h. In the upland area, which closes the Warta valley from the southern side, the main usable aquifers occur in the Quaternary and Tertiary formations. The area of the town of Kostrzyn nad Odrą is located outside the areas of the Main Underground Water Reservoir (MUWR), which are designated due to their special importance for the water supply.

The Ground Water Body (GWB) is a defined volume of underground water present within an aquifer or aquifer complex. According to the division of Poland into 172 GWBs, the town of Kostrzyn nad Odrą is located within 3 GWBs; 23, 33 and 40. The bridge in question is located within the GWB No. 33.

According to the current Odra River Basin Management Plan:

- The quantitative condition of the GWB 33 with the code of PLGW600033 was defined as good and the chemical condition as weak. Therefore, the overall assessment of the UBUW indicates its weak condition. The GWB in question is at risk of not meeting environmental objectives, mainly due to anthropogenic factors. Concentrations of sulphates, ions of manganese, calcium and iron were exceeded, and the analysis of the values of these indicators from the previous years showed their successive increase.

The assessment of the condition of the GWB in the Odra River Basin Management Plan [1]was based on the monitoring data from 2012. According to the results of the next monitoring cycle for the years 2015 - 2018, carried out by the State Mining Institute at the request of the Chief Inspectorate of Environmental Protection, the GWB No. 33 was qualified as an GWB in a good condition. The change in the assessment of the chemical condition from weak to good, results from the increase in the number of monitoring points (from 3 to 6) and better recognition of the GWB. In 2016, the extent of the contamination was estimated to be less than 29% of the whole GWB, and therefore the unit's condition was considered good and reliable.

The data on the quality of the unified body of underground water No. 33 based on Underground Water Quality Assessment of the Lubuskie Voivodeship in 2018 are presented below (WIOŚ *[Voivodeship Inspectorate for Environmental Protection]* Zielona Góra, 2019). In the area of the Lubuskie Voivodeship the measurement network included 10 measurement and control points (MCP). In relation to the location of the Task, the characteristic survey points were located in Słońsk (No. 1181) and Witnica (No. 1475), i.e. the MCP located closest to the area of the Task implementation within the unified body of underground water No. 33. Both wells take water from the Quaternary resources from aquifers located about 20 m below the ground level.

[1]The report on the condition of Ground Water Bodies in river basins - Status as of 2016, PIG PIB Warsaw, November 2017

Parameter	MCP No. 1181 Słońsk Stratigraphy: Quaternary Depth to the roof of the aquifer: 15.50-20.50 m Water table: free Medium type: porous		MCP No. 1475 Witnica Stratigraphy: Quaternary Depth to the roof of the aquifer: 18.00-25.50 m Water table: free Medium type: porous	
	Value	**Class**	**Value**	**Class**
Temperature [ºC]	11.5	II	10.8	II
Dissolved oxygen [mg/l]	0.02	III	0.82	II
Electrolytic conductivity at 20°C [µS/cm]	559.50	I	448.50	I
pH	7.36	I	7.31	I
Total organic carbon [mgC/l]	<1.0	I	1.3	I
Ammonium ion [mgNH_4/l]	0.09	I	0.26	I
Antimony [mg/l]	0.00006	I	<0.00005	I
Arsenic [mg/l]	<0.002	I	<0.002	I
Nitrates mgNO_3/l	2.36	I	2.62	I
Nitrites mgNO_2/l	<0.01	I	<0.01	I
Bar [mg/l]	0.119	I	0.050	I
Beryllium [mg/l]	<0.00005	I	<0.00005	I
Boron [mg/l]	0.05	I	0.05	I
Chlorides [mg/l]	32.45	I	12.65	I
Chromium [mg/l]	<0.003	I	<0.003	I
Cyanides, free [mgCN/l]	<0.003	I	<0.003	I
Tin [mg/l]	<0.0005	I	<0.0005	I
Zinc [mg/l]	0.004	I	0.012	I
Fluoride [mg/l]	<0.10	I	<0.10	I
Phosphates [mgPO_4/l	<0.30	I	<0.30	I
Clay [mg/l]	0.0007	I	0.0006	I
Cadmium [mg/l]	<0.00005	I	<0.00005	I
Cobalt [mg/l]	<0.00005	I	<0.00005	I
Magnesium [mg/l]	9.4	I	9.3	I
Manganese [mg/l]	0.338	II	0.160	II
Copper [mg/l]	0.00061	I	0.00039	I
Molybdenum [mg/l]	0.00093	I	0.00034	I
Nickel [mg/l]	<0.0005	I	0.0010	I
Lead [mg/l]	<0.00005	I	<0.00005	I
Potassium [mg/l]	11.0	III	2.7	I
Mercury [mg/l]	<0.0001	I	<0.0001	I
Selenium [mg/l]	<0.002	I	<0.002	I
Sulphates [mgSO4/l	104.15	II	32.35	I
Sodium [mg/l]	14.6	I	8.2	I
Silver [mg/l]	<0.00005	I	<0.00005	I
Talc [mg/l]	<0.00005	I	<0.00005	I
Titanium [mg/l]	<0.002	I	<0.002	I
Uranium [mg/l]	0.00140	I	0.00110	I
Vanadium [mg/l]	<0.001		<0.001	
Calcium [mg/l]	95.5	II	85.8	II
Bicarbonates [mgHCO3/l]	228.5	II	266.0	II
Iron [mg/l]	2.97	III	0.52	II

Source: Assessment of underground water quality in the Lubuskie Voivodeship in 2018. (http://www.zgora.pios.gov.pl/ocena-jakosci-wod-podziemnych-wojewodztwa-lubuskiego-w-2018-r/)

Underground water quality assessment on the basis of tests of water samples taken from measurement points in the Lubuskie Voivodeship was carried out on the basis of the Regulation of the Minister of the Environment of 21 December 2015 on the criteria and method of

assessment of the condition of bodies of underground water (Journal of Laws 2016 item 85). According to the Regulation, the classification of physicochemical elements of underground water condition includes five water quality classes. The Regulation also defines good and poor underground water chemical condition. Underground water quality classes I, II and III mean good chemical condition, and quality classes IV and V mean poor chemical condition.

4.8. ACOUSTIC CLIMATE

The main source of noise in the area of the Task implementation is the traffic noise, related mainly to the use of the General Wł. Sikorski Street. This is the national road No. 31 leading the transit traffic through Kostrzyn to the state border. An additional source of noise is the railway line, which goes along the railway bridge, located about 150 m from the Task implementation area. According to the results of the analysis, carried out as a part of the environmental impact assessment, the operation of the road already exceeds the permissible noise levels in the environment in the existing state and there is a need to implement acoustic protection. This situation results from high road load. It should be emphasised that due to the planned implementation of the bypass of the Kostrzyn town, the traffic intensity in the analysed part of the DK No. 31 road will decrease significantly, which may lead to complete elimination of the exceedances of permissible environmental noise levels. The forecast of the traffic intensity after the construction of the Kostrzyn bypass has not been carried out yet, therefore detailed analyses for further time prospects are not possible at this stage.

The nearest acoustically protected buildings are located in the immediate vicinity of the Task implementation area, in the area of Mostowa Street (approx. 5 m from the road edge of the planned investment). Another acoustically protected area is the area of the Delfin Sailing Club, located about 70 m to the west of the planned investment. The above mentioned areas are eligible for single-family housing development, for which the permissible level of noise in the environment is:

- LAeqD=61 dB,
- LAeqN=56 dB.

and for recreational areas, for which the acceptable noise level in the environment is:

- LAeqD=61 dB.

Due to the fact that the club's grounds are not used at night, the permissible noise level for them is not applicable for this time of the day.

4.9. WILDLIFE

4.9.1. FORMS OF NATURE PROTECTION

The Task implementation area is spatially located in the Warta River bed and in the right-hand part of its valley. The investment area is located:

- within the boundaries of the Natura 2000 area Warta Mouth PLC080001 - a special protection area for birds and site of Community importance,
- on the border of the "Warta Mouth" National Park,

- within the boundaries of the "Warta Mouth" Landscape Park.

The location of the Task against the background of the borders of protected areas is shown in the maps in Annexes 5a and 5b.

The Natura 2000 Warta Mouth PLC080001 area, which within its boundaries also includes the buffer zone of the Warta Mouth National Park and the Warta Mouth Landscape Park, is connected with the Warta valley in its lower course and with the Odra valley, to which the Warta River flows.

However, the main value of these areas is determined by bird fauna. There are at least 35 bird species from Annex I of the Council Directive 79/409/EEC in the area, including 5 species from the Polish Red Book (PRB).

Within the boundaries of the Natura 2000 Warta Mouth area (PLC080001), 11 habitat types listed in the Annex I of the Habitats Directive were listed. The sanctuary is of key importance (overall assessment A) for the preservation of oxbow lakes and natural eutrophic water bodies with *Nympheion* and *Potamion* (habitat code: 3150) and flooded muddy river banks (habitat code: 3270). Significant areas, over 832 ha, are occupied by willow, poplar, alder and ash riparian forests (91E0) and alluvial meadows from the *Cnidion dubii* complex (habitat code: 6440; area 432 ha). The high value of the area is also associated with the occurrence of the *Adenostylion alliariae* mountain herb vegetation and the *Convolvuletalia sepium* riverside herb vegetation (code: 6430; area: 432 ha). 66.59 ha), Xeric sand calcareous grasslands (habitat code: 6120) and semi-natural dry grasslands and scrubland facies on calcareous substrates (habitat code: 6210), Galio-Carpinetum oak-hornbeam forests (habitat code: 9170) and lowland hay meadows (habitat code: 6510).

The "Warta Mouth" National Park was established in 2001 (Regulation of the Council of Ministers of 19.06.2001 on the establishment of the "Warta Mouth" National Park - Journal of Laws of 2011, No. 67, item 681). The landscape of the National Park is formed by extensive mosaics of meadows, pastures, sedges and reeds[1]. The "Warta Mouth" National Park is a very valuable area on the national scale, important from the point of view of bird fauna, the purpose of which is, *inter alia*, to protect areas important from the point of view of numerous birds within the Park. Such areas include wet and vast meadows and pastures, which are one of the most important wetland bird sanctuaries in Poland.

The task concerns the area of the National Park in the Chyrzyno protection zone. The activities planned within the framework of the project directly concern a part of the area of the plot in Kostrzyn nad Odrą No. 2/3 (precinct 0006 Old Town), which belongs to the Warta Mouth National Park. The land of the plot belongs to the areas under active protection. The works will also be carried out in the vicinity of the border of the plot No. 2/2, which is partly under strict protection.

The "Warta Mouth" Landscape Park was established in 1997. The Landscape Park covers the area of 19496 ha and is one of the most valuable areas in terms of bird fauna. It was established to protect the nature reserve of "Słońsk", it includes the floodplains of the Warta

[1] https://www.pnujsciewarty.gov.pl/38,o-nas

River in its lower course, xerothermic slopes of the Odra valley as well as many valuable cultural monuments. The park is located right on the Polish-German border and includes the municipalities of: Słońsk, Witnica, Kostrzyn nad Odrą, Boleszkowice and Górzyca.

4.9.2. PLANT COVER

In the area of the Task implementation and in its surroundings, natural and botanical surveys were carried out. The inventory was carried out in the period from July to September 2018. Flora and natural habitats were observed in particular in the area where the impact may occur during the construction and operation phase of the planned Task.

Within the survey area, 3 types of land cover were distinguished - depending on their use and covering with different vegetation/habitat types, i.e.

- surface waters,
- floodplain,
- ruderal areas (these include roadside areas, areas of organised greenery (a fragment of the city park) and built-up areas, where high greenery is accompanied by lawns and mown slopes of embankments).

The map below (Fig. 2) shows the above 3 types of land cover in the area of phytosociological observations (area of the study).

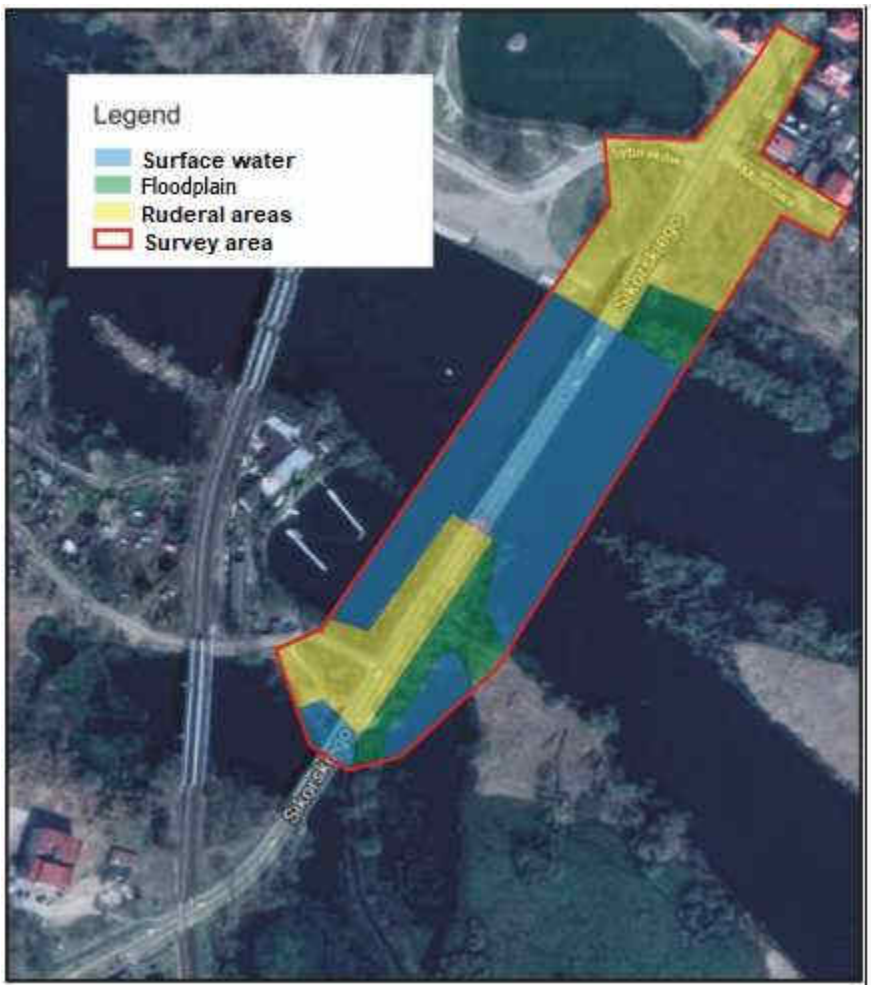


Fig. 2 Types of and cover in the Task implementation area.

Source of the base map: www. http://mapy.geoportal.gov.pl.

Surface water

The area of the Task implementation is a fragment of the valley and the bed of the Warta River with its left tributary - the Postomia River. The Warta River from the side of the town of Kostrzyn (right bank) is partially regulated and its banks are hardened. An inland navigation waterway harbour is located here. The left bank of the Warta River within the boundaries of the "Warta Mouth" National Park has got a natural character. On the other side there is a marina of the "Delfin" Sailing Club.

In the water, and especially in places with free flow, pleustophytes were observed, which are characteristic species of *Lemnetea minoris* class, building clusters on the water surface. In particular, the occurrence of the common duckweed *(Lemna minor)* and the common duckmeat *(Spirodela polyrhiza)* was noted. In the waters of the oxbow lake and in the bay of the Sailing Club the occurrence of floating fern *(Salvinia natans)* was found. It is a species subject to legal protection. There is also a natural habitat 3150 oxbow lakes and natural eutrophic water reservoirs with communities of *Nympheion, Potamion* under protection. The location of the natural habitat is shown on the map – see Fig. 3 .

On the bank there are species connected with the aquatic and muddy environment, e.g. the flowering rush *(Butomus umbellatus)* or the common water-plantain *(Alisma plantago-aquatica)*.

Floodplain

A part of the area located on the left bank of the river is a floodplain. The vegetation of this area is strongly influenced by the water level in the Warta River. Depending on the season of the year, these may be areas covered with water or exposed, with developing warp and reed vegetation. An oxbow lake is located here. On the bank, herbal vegetation patches develop. White willows *(Salix alba)* and brittle willows *(Salix fragilis)* - remains of riparian forests - are also found here individually or in clusters. The vegetation patches form a dynamic spatial mosaic.

Within floodplain there is a reed vegetation. It creates a mosaic of communities of such complexes as:*Phalaridetum arundinaceae, Sparganietum erecti*, *Caricetum gracilis*, *Phragmitetum australis*.

There are species typical of wetlands, e.g. acute sedge *(Carex gracilis)*, common club-rush *(Schoenoplectus lacustris)*, purple loosestrife *(Lythrum salicaria)*, simplestem bur-reed *(Sparganium erectum)*, reed canary grass *(Phalaris arundinacea)*, common reed *(Phragmites australis)*, sea clubrush *(Bolboschoenus maritimus)*, creeping bentgrass *(Agrostis stolonifera)*, hedge bindweed *(Calystegia sepium)*, flowering rush *(Butomus umbellatus)*, common water-plantain *(Alisma plantago-aquatica)*, marsh woundwort *(Stachys palustris)*, great water-parsnip *(Sium latifolium)*, fineleaf water dropwort *(Oenanthe aquatica)*, bittersweet nightshade *(Solanum dulcamara)*, great yellowcress *(Rorippa amphibia)*. The characteristic aspect of the wetlands is given by annual plants. These are: three-lobe beggartick *(Bidens tripartita)*, nodding beggarticks *(Bidens cernua)*, spotted lady's thumb *(Polygonum persicaria)*, knotweed *(Polygonum mite)*, riverside cocklebur *(Xanthium albinum)*.

There is also a protected natural habitat - 6430 mountain herb vegetation *(Adenostylion alliariae)* and riverside herb vegetation *(Convolvuletalia sepium)*. The location of the natural habitat is shown on the map - see Fig. 3.

Ruderal areas

In the roadway strip there are roadside trees, mainly the Norway maple *(Acer platanoides)*, sycamore *(Acer pseudoplatanus)*, European ash *(Fraxinus excelsior)*, European white elm *(Ulmus laevis)*, black locust *(Robinia pseudoacacia)* and horse-chestnut *(Aesculus hippocastanum)*.The herbaceous species are dominated by ruderal species, associated with habitats strongly transformed by human, e.g. common mugwort *(Artemisia vulgaris)*, black horehound *(Ballota nigra)*, hoary alyssum *(Berteroa incana)*.Common species of meadows, herb vegetation and thickets have also been recorded, e.g. common dandelion *(Taraxacum officinale)*, wood small-reed *(Calamagrostis epigejos)*, rough bluegrass *(Poa trivialis)*, cock's-foot *(Dactylis glomerata)*, dog rose *(Rosa canina)*, common hawthorn *(Crataegus monogyna)*.

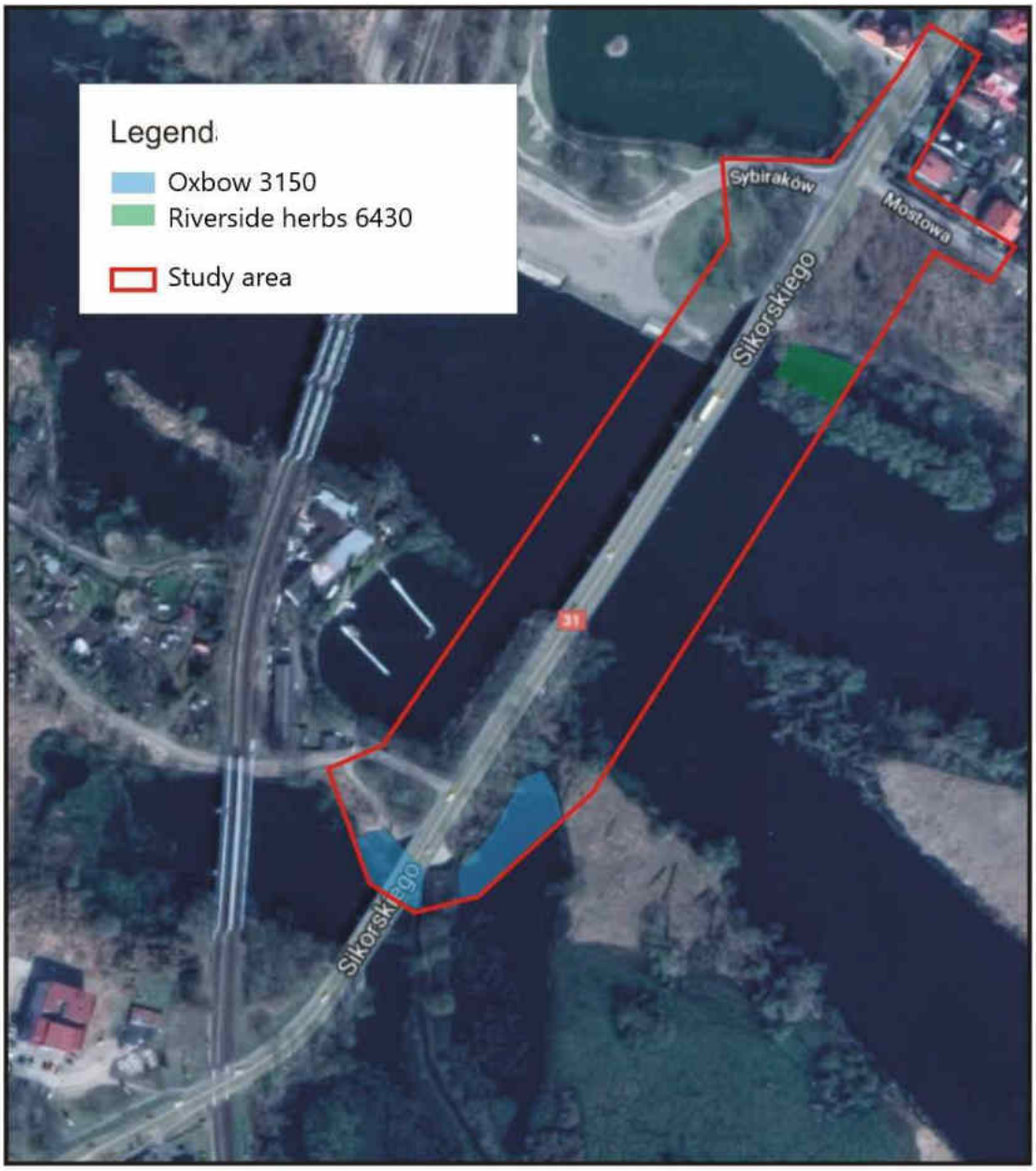


Fig. 3 Land cover in the Task implementation area.

Source of the base map: www. http://mapy.geoportal.gov.pl.

4.9.3. PROTECTED SPECIES OF FUNGI, PLANTS AND ANIMALS

Natural habitats and protected plant species

In the area of the task implementation two natural habitats protected under the Habitats Directive were found - 3150 oxbow lakes and natural eutrophic water reservoirs with communities of *Nympheion, Potamion* and 6430 mountain herb vegetation *(Adenostylion*

alliariae) and riverside herb vegetation *(Convolvuletalia sepium)*. The location of the natural habitats is shown on the map - see Fig. 3.

Natural habitat 3150

In the area of the planned investment, a natural habitat protected under the Habitats Directive was found - 3150 oxbow lakes and natural eutrophic water reservoirs with communities of *Nympheion, Potamion*. It is an oxbow lake near the estuary of the Postomia River to the Warta River. The degree, to which it is filled with water is strongly dependent on the water stages in the Warta River.

During the field works, due to the season of the year and weather conditions (high temperatures, no precipitation), the oxbow lakes were very shallow. There is a large number of floating fern *(Salvinia natans)* here - it is a species subject to legal protection. The presence of this species was also found in the bay of the Sailing Club. In the oxbow lake, species such as rigid hornwort *(Ceratophyllum demersum)*, Eurasian watermilfoil *(Myriophyllum spicatum)*, common duckweed *(Lemna minor)*, common duckmeat *(Spirodela polyrhiza)*, frogbit *(Hydrocharis morsus-ranae)*, yellow water-lily *(Nuphar luteum)*, arrowhead *(Sagittaria sagittifolia)* were also found.

The condition of the habitat was assessed as U1 - unsatisfactory condition, due to a significant degree of shallowness, low diversity of communities and simplified floral composition. The area of the natural habitat was not estimated due to its variability during the year.

Natural habitat 6430

On the right bank of the Warta River, in its unhardened part, a herb vegetation patch developed. The community is also protected as a natural habitat 6430 mountain herb vegetation *(Adenostylion alliariae)* and riverside herb vegetation *(Convolvuletalia sepium)*. It is a small patch located between the river bank and the valley slope. The dominant here is the hedge bindweed *(Calystegia sepium)*, accompanied by the water mint *(Mentha aquatica)* and the marsh woundwort *(Stachys palustris)*. There is also the water chickweed *(Myosoton aquaticum)* and the comfrey *(Symphytum officinale)* and other species of wet and humid habitats. An alien species associated with the river valleys, the wild cucumber *(Echinocystis lobata)* was found.

The condition of the natural habitat was assessed as U2 - bad condition due to a small number of characteristic species, as well as the regulation of the Warta riverbed and the occurrence of synanthropic communities (communities of species adapted to live in the environment strongly transformed by human, related to the place of human residence or activities) in the environment.

Protected animal species

Macrobenthos and malacofauna (species of macroinvertebrates living on bottoms of water reservoirs and species of aquatic mollusc)

Samples were taken one time on 19 September 2018, on the right and left banks of the Warta River near the bridge on the national road 31, at points:
52°35'2,15" 14°38'48.06"
52°34'57,92" 14°38'42.85"

Fig. 4 Sampling places (yellow dot) in September 2018.

Source of the base map: http://mapy.geoportal.gov.pl.

On the basis of the samples taken, alive individuals were found in the collected material:

- *Sinanodonta woodiana* 0.3 individual/m^2,
- *Anodonta anatina* 0.6 individual/m^2,
- *Corbicula fluminea* 1 individual/m^2

and shell scrap with numerous representatives of the *Unionidae* family *(Unio pictorum, U. tumidus, Anodonta anatina)* and *Viviparidae*,

No protected or valuable species were found in the collected material. The fauna was dominated by common and largely foreign or invasive taxa.

Fish fauna (fish and lamprey species)

From the data obtained as the result of the field surveys, the research of data concerning the composition and structure of fish fauna inhabiting the Warta and Postomia rivers, contained in the scientific literature, water cadastre, fishing reports, studies of various rank on the nature and environmental protection, etc., as well as these from the resources of fishing users, or e.g. organisations which have the protection of the water environment as one of their tasks in their statutes, it results that there are at least 42 species of fish and lampreys in Warta along its entire length.

On the site under study (taking into account also the literature) in the close vicinity of the planned investment, the occurrence of species included in the Annex II of the Habitats Directive can be expected with high probability: asp, spined loach, northern whitefin gudgeon, weatherfish and European bitterling as well as during spawning trips, European river lamprey and Atlantic salmon.

Below, in a tabular form, the list of fish and lamprey species under protection found in the Warta River is presented.

Table 3 List of protected fish and lampreys species found in the Warta river.[1]

Pos.	Species name	Protection status / the IUCN threat category[2]
1.	European bitterling *Rhodeus sericeus amarus*	SPP, HD II, LC
2.	spined loach *Cobitis taenia*	SPP, HD II, LC
3.	weatherfish *Misgurnus fossilis*	SPP, HD II, LC
4.	northern whitefin gudgeon *Gobio albipinantus (Romanogobio belingi)*	SPP, HD II, LC
5.	asp *Aspius*	D, HD II, HD V, LC
6.	European river lamprey *Lampetra fluviatilis*	SPP, LC
7.	Atlantic salmon *Salmo salar*	D, HD II, HD V, VU (Global), LC (Europe)
Protection status: SPP - species protection in Poland (partial); HD II - species of the Habitats Directive Annex II; HD V - species of the Habitats Directive Annex V; D - conservation dimension The IUCN threat categories: LC - Least concern, NT – Near threatened, VU – Vulnerable, EN – Endangered, CR – Critically endangered		

In the Task implementation area, the Warta River has no spawning grounds attractive for fish, therefore accidental silting of spawning grounds can be excluded. However, long-term water turbidity is particularly dangerous during the spawning period of key fish species inhabiting the Warta and Odra rivers (March-June).

Periods of increased sensitivity of fish and lamprey, presented in table above, refers also to migration of salmon in the autumn season and river lamprey in spring.

Insect and terrestrial snail fauna (insect and terrestrial snail species)

The area covered by the inventory is located practically over the entire length along the Natura 2000 Warta Mouth area (PLC080001), within the boundaries of the "Warta Mouth" Landscape Park and on the border of the "Warta Mouth" National Park.

The objects of protection of the Natura 2000 area Warta Mouth (PLC080001), from the group of insects are: the great capricorn beetle *(Cerambyx cerdo)* and the hermit beetle *(Osmoderma eremita)*. No such species were found during the fieldwork.

[1] *Source: EIA Report - results of nature inventories made for the purposes of the Report*

[2] https://www.iucnredlist.org/

On the banks of the Warta River, however, a species from the Annex II of the Habitat Directive - the green snaketail *(Ophiogomphus cecilia)* was found.

Another insect species found, subject to partial protection is the common carder bee *(Bombus pascuorum)*. The species is not seldom occurring and in some places, it is even numerous and common. It not at risk of extinction.

A list of insect and terrestrial snail species subject to protection is given below in a tabular form, the presence of which was found during the nature inventory in the Task implementation area.

Table 4 List of insect and terrestrial snail species subject to protection, the presence of which was found during the nature inventory in the Task implementation area[1]

Pos.	Species name	Protection status / the IUCN threat category[2]	Number of observations during inspection	Quantity found during inspection
1.	Roman snail *Helix pomatia*	PP, LC	1	1
2.	Common carder bee *Bombus pascuorum*	PP, LC	2	2
3.	Green snaketail *Ophiogomphus cecilia*	SP, BC, HD II, HD IV, LC	1	1
Protection status: SP - strict protection, PP - partial protection, HD II - Annex II to the Habitats Directive, HD IV - Annex IV to the Habitats Directive, BC - Bern Convention The IUCN threat categories: LC - Least concern, NT – Near threatened, VU – Vulnerable, EN – Endangered, CR – Critically endangered				

Herpetofauna (amphibian and reptile species)

The inventory was carried out between July and September 2018. The inventory area covered the river banks on both sides of the bridge and both sides of the road embankment.

The area under inspection on the northern side is intensively penetrated by people and at the same time heavily transformed. There is, among other things, a passenger marina with a reinforced quay. No amphibians or reptiles were found in this area.

The area on the other side of the road embankment, in the planned investment area, is wooded and shaded, so it is not a convenient habitat for amphibians and reptiles. Several individuals from the common frog complex were found at the distance of about 300 meters from the road bridge - outside the area of the task implementation.

[1] EIA Report - results of nature inventories made for the purposes of the Report

[2] https://www.iucnredlist.org/

From the north-western side, the road embankment goes down directly to the basin of the marina ("Delfin" Sailing Club), where numerous common frog individuals were found, and viviparous lizards were observed on the embankment. The area of the basin is a breeding and living place for amphibians.

The other side of the road lane on the south-eastern side is the area within the boundaries of the "Warta Mouth" National Park. In the investment envelope there is an oxbow lake, which is a habitat for staying of amphibians throughout the year. This area is a valuable breeding site in the spring period due to a large number of shallow, sunny waterholes and marginal lakes. Grass frog, viviparous lizards and grass snakes have been observed here. The dominant here are the representatives of green frogs, the number of which in waterholes was estimated at several hundred.

The location of the areas described above where the occurrence of amphibians and reptiles was found is shown in the Figure below (Fig. 5).

Fig. 5 Areas of occurrence of amphibians and reptiles in the area of the Task implementation.

Source of the base map: http://mapy.geoportal.gov.pl.

A list of amphibian and reptile species subject to protection is given below in a tabular form, the presence of which was found during the nature inventory in the Task implementation area.

Table 5 List of amphibian and reptile species subject to protection, the presence of which was found during the nature inventory in the Task implementation area[1]

Pos.	Species name	Protection status / the IUCN threat category[2]	Quantity
1.	European common frogs of the phenotype *Pelophylax kl. esculentus /P. ridibundus*	PP, LC	Difficult to estimate, at least 300 to 500 adult individuals LC
2.	grass frog *Rana temporaria*	PP, LC	One individual LC
3.	grass snake *Natrix natrix*	PP, LC	Two individuals were observed LC
4.	viviparous lizard *Zootoca vivipara*	PP, LC	At least 4 individuals were observed, the quantity is difficult to estimate LC
Protection status: PP – partial protection The IUCN threat categories: LC - Least concern, NT – Near threatened, VU – Vulnerable, EN – Endangered, CR – Critically endangered			

Mammalian fauna (mammal species)

For the purpose of the Task implementation, inventories were carried out to identify protected mammal species. The area under the bridge and within its buffer zone (50 m) was inspected in order to find traces of existence, hiding places and burrows under the bridges. Only the Eurasian otter was found among the protected mammalian species. Traces of the species existence were recorded near the bridge DK 31 and the bridge DK 22. In both cases single faeces of the Eurasian otter, which moved along the bank, were recorded.

No burrows or hiding places for protected mammalian species were found under engineering structures.

No mammal traces belonging to protected species under the railway bridge in Kostrzyn nad Odrą were recorded.

A list of mammal species subject to protection is given below in a tabular form, the presence of which was found during the nature inventory in the Task implementation area.

[1] EIA Report - results of nature inventories made for the purposes of the Report

[2] https://www.iucnredlist.org/

Table 6 List of species of mammals subject to protection, the presence of which was found during the nature inventory in the Task implementation area.[1]

Pos.	Species name	Protection status / the IUCN threat category[2]
1.	Eurasian otter *Lutra lutra*	PP, HD II NT
Protection status: PP - partial protection, HD II - Annex II of the Habitats Directive The IUCN threat categories: LC - Least concern, NT – Near threatened, VU – Vulnerable, EN – Endangered, CR – Critically endangered		

Bird fauna (bird species)

In 2017 (17.06.2017), during the bridge inspection, 6 species were reported to have nested: the common house martin *(Delichon urbicum)*, the barn swallow *(Hirundo rustica)*, the common starling *(Sturnus vulgaris)*, the black redstart *(Phoenicurus ochruros)*, the common wood pigeon *(Columba palumbus)*, and the city pigeon *(Columba livia f. urbana)*. Moreover, in the vicinity of the bridge (up to 50 m), another 6 breeding or probably breeding species have been recorded: the marsh warbler *(Acrocephalus palustris)*, common blackbird *(Turdus merula)*, the common chaffinch *(Fringilla coelebs)*, the European serin *(Serinus serinus)*, the hooded crow *(Corvus corax)* and the Eurasian magpie *(Pica pica)*. Out of non-breeding species, one feeding individual was observed of each species, i.e. the common tern *(Sterna hirundo)*, the mallard *(Anas platyrhynchos)* and the black-headed gull (*Chroicocephalus ridibundus)*.

In 2018, two inspections of birds at the bridge were carried out - on 31.08.2018 and 06.09.2018.Despite the late date of the inspection, breeding birds under the bridge were still recorded. During these inspections, about 15 active common house martin's nests were observed, where adult birds were still feeding their cubs and 3 pairs of common wood pigeon - two pairs were at the stage of construction of a new nest, while one pair was feeding in the nest a grown cub bird unable to fly yet. Under the bridge, about 25 barn swallows were also observed, both adult and cubs, which already left the nests present here.

During both inspections in 2018, the total of 58 bird species were recorded on and in the vicinity of the bridge (area up to about 200 m from the bridge). Out of all 58 species:

- 5 species are included in the Annex I of the Birds Directive,
- 50 species are under strict national protection,
- 5 species are under partial protection, and 3 species are hunted.

The list of species found is presented in the table below.

[1] *EIA Report - results of nature inventories made for the purposes of the Report*

[2] https://www.iucnredlist.org/

Table 7 List of species of birds subject to protection, the presence of which was found during the nature inventory in the Task implementation area.[1]

Pos.	Latin name	Polish name	Species protection / the IUCN threat category[2]	Birds Directive
1.	*Cygnus olor*	mute swan	SP, LC	
2.	*Anser anser*	greylag goose	H, LC	
3.	*Anas platyrhynchos*	Mallard	H, LC	
4.	*Phalacrocorax carbo*	great cormorant	PP, LC	
5.	*Ardea cinerea*	grey heron	PP, LC	
6.	*Ciconia nigra*	black stork	SP, LC	+
7.	*Haliaeetus albicilla*	white-tailed eagle	SP, LC	+
8.	*Circus aeruginosus*	marsh harrier	SP, LC	+
9.	*Accipiter gentilis*	northern goshawk	SP, LC	
10.	*Accipiter nisus*	Eurasian sparrowhawk	SP, LC	
11.	*Buteo buteo*	common buzzard	SP, LC	
12.	*Grus grus*	common crane	SP, LC	+
13.	*Gallinago gallinago*	common snipe	SP, LC	
14.	*Tringa nebularia*	common greenshank	SP, LC	
15.	*Tringa ochropus*	green sandpiper	SP, LC	
16.	*Actitis hypoleucos*	common sandpiper	SP, LC	
17.	*Chroicocephalus ridibundus*	black-headed gull	SP, LC	
18.	*Larus canus*	common gull	SP, LC	
19.	*Larus argentatus*	European herring gull	PP, LC (Global), NT (Europe)	
20.	*Larus cachinnans*	Caspian gull	SP, LC	
21.	*Columba palumbus*	common wood pigeon	H, LC	
22.	*Alcedo atthis*	common kingfisher	SP OS, LC (Global), VU (Europe)	+
23.	*Picus viridis*	European green woodpecker	SP, LC	
24.	*Dendrocopos major*	great spotted woodpecker	SP, LC	
25.	*Dendrocopos minor*	lesser spotted woodpecker	SP, LC	
26.	*Hirundo rustica*	barn swallow	SP, LC	

[1] EIA Report - results of nature inventories made for the purposes of the preparation of the project information sheet and the Report

[2] https://www.iucnredlist.org/

Pos.	Latin name	Polish name	Species protection / the IUCN threat category[2]	Birds Directive
27.	*Delichon urbicum*	common house martin	SP, LC	
28.	*Anthus pratensis*	meadow pipit	SP, LC	
29.	*Motacilla cinerea*	grey wagtail	SP, LC	
30.	*Motacilla alba*	white wagtail	SP, LC	
31.	*Erithacus rubecula*	European robin	SP, LC	
32.	*Phoenicurus ochruros*	black redstart	SP, LC	
33.	*Turdus merula*	common blackbird	SP, LC	
34.	*Turdus pilaris*	fieldfare	SP, LC	
35.	*Turdus philomelos*	song thrush	SP, LC	
36.	*Sylvia atricapilla*	Eurasian blackcap	SP, LC	
37.	*Phylloscopus collybita*	common chiffchaff	SP, LC	
38.	*Regulus*	goldcrest	SP, LC	
39.	*Parus montanus*	willow tit	SP, LC	
40.	*Cyanistes caeruleus*	Eurasian blue tit	SP, LC	
41.	*Parus major*	great tit	SP, LC	
42.	*Sitta europaea*	Eurasian nuthatch	SP, LC	
43.	*Certhia brachydactyla*	short-toed treecreeper	SP, LC	
44.	*Garrulus glandarius*	Eurasian jay	SP, LC	
45.	*Pica pica*	Eurasian magpie	PP, LC	
46.	*Corvus monedula*	western jackdaw	SP, LC	
47.	*Corvus cornix*	hooded crow	PP	
48.	*Corvus corax*	common raven	SP, LC	
49.	*Sturnus vulgaris*	common starling	SP, LC	
50.	*Passer domesticus*	house sparrow	SP, LC	
51.	*Passer montanus*	Eurasian tree sparrow	SP, LC	
52.	*Fringilla coelebs*	common chaffinch	SP, LC	
53.	*Carduelis chloris*	European greenfinch	SP, LC	
54.	*Carduelis carduelis*	European goldfinch	SP, LC	
55.	*Carduelis cannabina*	common linnet	SP, LC	
56.	*Coccothraustes coccothraustes*	hawfinch	SP, LC	
57.	*Emberiza citrinella*	yellowhammer	SP, LC	
58.	*Emberiza schoeniclus*	common reed bunting	SP, LC	

Protection status: SP - strict protection, PP - partial protection, H - hunting species; Birds Directive: + means that the species concerned is listed in the Annex I of the Birds Directive
The IUCN threat categories: LC - Least concern, NT – Near threatened, VU – Vulnerable, EN – Endangered, CR – Critically endangered

During both inspections in 2018, three-hour observations of birds flying along the Warta River over the bridge or its vicinity were carried out. The observations were recorded in hourly intervals, the flight altitude (up to 30 m above water and exceeding this altitude) and the direction (up and down the river) were recorded. The total of 286 individuals from 21 bird species were observed. Interestingly, 143 individuals were recorded every day, with the average of 47.7 individuals during the observation hour. Noteworthy is the high number of common buzzards *(Buteo buteo)* (32 individuals in total), observed during the migration of the individuals. Most of the birds moved at the altitude above 30 m (64.3% of the observed individuals). The most numerous at that altitude were the greylag goose *(Anser anser)* (55 individuals) and the common buzzard (32 individuals), while at the altitude below 30 m the most numerous were the western jackdaws *(Corvus monedula)* (39 individuals) and the Caspian gulls *(Larus cachinans)* (24 individuals).

Bat fauna (bat species)

The bridge was inspected for bats in July 2017. The inspection was first carried out during the daytime in order to identify the presence of potential structures that could form bats' hiding places. Then, at night, two hours before dawn, bat activity around the bridge was observed to note bats swarming in front of the entrance to the hiding places.

No bat shelters were found during the July inspection. However, the structure of the bridge does not exclude the location of winter hiding places due to the potential existence of spaces and niches in the structural elements just below the roadway. However, due to the difficult access it is not possible to check these sites during the winter season.

4.9.4. INVASIVE SPECIES

In the course of the inventory of presence of insect and terrestrial snail species within the bridge structure in question, numerous shells of the Chinese pond mussel *(Sinanodonta woodiana)*, a species dragged from Asia considered to be invasive, and the zebra mussel *(Dreissena polymorpha)* were found.

4.10. CULTURAL MONUMENT AND STRUCTURES

The cultural landscape values of the town of Kostrzyn nad Odrą are formed by the urban planning and architectural monuments - over 200 objects under conservation protection and areas of arranged greenery. In the town's landscape, an island stands out, covered with greenery, on which the ruins of the medieval town are located - the Kostrzyn Fortress, entered in the register of monuments.

In relation to the area of the Task implementation, the closest monuments, entered into the register of monuments on the basis of the Act of 23 July 2003 on Protection of Monuments (Journal of Laws of 2003 No. 162 item 1568) are the elements of the Kostrzyn Fortress. From the end of the section planned for the reconstruction of the Władysław Sikorski Street, the above mentioned monuments are separated by the distance of about 450 - 500 m.

The road bridge planned for demolition within the national road No. 31 in km 107+211 (km 2.45 of the Warta River) on the Warta River in Kostrzyn nad Odrą was built in the second half of the 19th century and was reconstructed in 1945 and 2000. It is entered into the municipal

record of monuments as item 172 (Ordinance No. 253/2017 of the Mayor of the Town of Kostrzyn nad Odrą dated 06.11.2017 on the adoption of the Municipal Record of Monuments of the Town of Kostrzyn nad Odrą). The Lubuskie Voivodeship Conservator of Monuments agreed to the dismantling of the bridge, in accordance with the bridge reconstruction concept, which was the basis for the application for a decision on environmental conditions (letter of 06.09.2017, Reference No.: ZA-G.5183.81.2017 – Attachment 7). According to the authority's position, as the result of the reconstruction in 1945 and 2000, architectural and historical values of the bridge were obliterated. The bridge is located on the historical communication route leading from the Kostrzyn Fortress, built in the 16th century, to the east. Due to the above, it is reasonable to assume that the existing bridge is located in the place of an earlier bridge crossing, the relics of which can be preserved in the earth layers of the Warta banks.

Moreover, in the immediate vicinity of the Task implementation area there are other monuments listed in the municipal record of monuments:

- Passenger harbour; location: the eastern bank of the Warta River, the General Wł. Sikorski Street – the Sybiraków Street; chronology: 2nd half of the 19th century
- Town villa (measuring office) and now Kostrzyn Cultural Centre; location: the General Wł. Sikorski Street No. 34; chronology: about 1910
- Cellar (storehouse); location: the General Wł. Sikorski Street; chronology: 2nd half of the 19th century
- Railway bridge over the Warta River Lagoon; location: Lagoon of the Warta River, railway line 273 Szczecin-Wroclaw; chronology: 1875, 1948, 1971, 1983
- Railway bridge over the Warta River (Rzepinski); location: Warta River, railway line 273 Szczecin-Wroclaw; chronology: 1875, 1948, 1971, 1983
- Road bridge over the Warta River Lagoon; location: Lagoon of the Warta River, DK No. 31; chronology: 2nd half of the 19th century, 1945, 2000

In the area of the Task implementation, apart from the above mentioned historical objects, the following material goods, which require protection during execution of construction works, can also be indicated:

- Single-family housing in the General Wł. Sikorski Street between the Mostowa and Handlowa Streets;
- Town Park in the Sybiraków Street;
- "Delfin" Marina.

5. SUMMARY OF THE FINDINGS OF THE ENVIRONMENTAL IMPACT ASSESSMENT

5.1. LAND SURFACE AND LANDSCAPE

The permanent occupation of the area of the site therefore mainly concerns the area already occupied for the facilities under reconstruction (bridge and access sections of the road to the bridge). The project does not generate any significant impacts on the land surface. Temporary occupation of the site concerns the site and the construction site backup facilities, including the foundation of the temporary bridge at the execution stage. At the implementation stage there will be a need for only local and temporary transformation of the land surface and shape. The area of land used for the construction site and the construction site backup facilities will be restored to its pre-construction condition.

As the result of the Task, no new elements in the landscape will be created. Therefore, no changes in the landscape are expected to occur apart from an overall improvement in the aesthetics of the new structures compared to the current condition (i.e. bridge intended for demolition and accesses, intended for demolition, to the bridge).

In order to limit the impact of the works on the ground surface and landscape during the Task implementation period, the mitigation measures described in the Attachment 1 to the EMP shall be implemented.

5.2. CLIMATE

Due to the nature of the Task, the investment is not expected to have a negative impact on the climatic conditions of the Warta Valley, both at the stage of the works and at the stage of operation of the Task.

Greenhouse gas emissions

At the construction stage, combustion of fuels by vessels and construction machinery will result in the emission of exhaust gases, including carbon dioxide, which is classified as a greenhouse gas. These impacts will not be significant and will cease after the works are completed. At the Task operation stage, no greenhouse gases will be emitted with the exception of emissions from vehicles using public roads, rebuilt as part of the Task. These emissions will not change significantly as a result of the Task implementation in relation to the current state.

Climate change adaptation measures for the proposed bridge

The task has been designed in accordance with the applicable regulations, which take into account extreme environmental phenomena associated with climate changes (this is regulated by the relevant regulations for the design, construction and operation of bridge structures). The structure of the new bridge will increase its resistance to ice phenomena in comparison with the current 5-span structure - elimination of supports in the river current. Increasing the clearance under the bridge will also further increase the resistance in case of flooding, as well as it will increase the resistance in relation to the risks associated with the formation of ice jams - by improving the working conditions for icebreakers. The implementation of the Task, by improving the conditions for the action of icebreakers, will increase the flood protection of the

Odra Valley towns and villages, and thus contribute to reducing the effects of negative phenomena accompanying the climate changes.

Therefore, it is not proposed to introduce mitigation or climate monitoring measures.

5.3. AIR QUALITY

The emission of dust and gas pollutants will occur primarily at the stage of the construction. At the operation stage, after the completion of the construction works, no significant changes in air emissions are expected to occur in comparison to the conditions before the bridge was reconstructed.

During the implementation of the Task, there will be a short-term (limited to the implementation period), local emission of gaseous and dust pollution. The operation of construction machines and vessels participating in the works will generate pollution, in particular from combustion of fuels in engines (e.g. nitrogen oxides, sulphur dioxide, carbon monoxide, aliphatic hydrocarbons).

The pollutants will be emitted at low altitude, so as the result of their limited spreading, the impact will not have a significant permanent impact on the air quality.

It has been decided that in order to prevent and limit the impact of the works on the sanitary condition of the air during the task implementation period, mitigation measures described in the Attachment 1 to the EMP will be implemented.

5.4. SURFACE WATER

The bridge planned for reconstruction is located in the mouth section of the Warta River, directly at the mouth of the Postomia River to Warta River. With regards to the above, the area of the Task implementation is located within the river basin area of the Surface Water Body (SWB) 'Warta from Noteć to the mouth' (PLRW6000211899) near the entrance of Warta to Odra and SWB 'Postomski Canal from Rudzianka to the mouth' (RW60002418969).

As a part of the EIA, the impact/influence of the project on the water protection objectives were assessed. In particular the analysis was made whether there will be a change in the physical characteristics of the SWB, which may cause the deterioration of the water condition and consequently the failure to achieve the environmental objectives of the Art. 4.1 WFD and thus the necessity to apply the derogation of the Art. 4.7 WFD.

Physical changes within the water bodies include hydromorphological changes in the riverbed and within the bank slopes and modifications to the physical parameters of the waters associated with changes in hydromorphological conditions such as the water temperature, oxygenation and other works carried out under the Task that may potentially affect the physical changes within the SWB and deteriorate their condition are:

- Removal of trees and shrubs in the area of investment in the bank zone,
- Interference with the river bank slopes (on the construction sites of bridgeheads),
- Works in the bed related to the foundation of the supports for the temporary bridge and the demolition of the supports for the existing bridge.

ASSESSMENT OF THE IMPACT OF THE PROJECT ON INDIVIDUAL WATER QUALITY INDICATORS

BIOLOGICAL ELEMENTS

The expected impact of the works on the biological elements of the assessment of the ecological condition/potential will be primarily associated with the physical destruction of habitats and aquatic organisms themselves: macrophytes and macro-invertebrates within the area of executed earthworks and demolition works in the riverbed and the bank slopes.

At the operation stage, however, permanent changes in the structure of river habitats will be limited only to the location of the bridge elements in the current and the bank slopes. Therefore, the transformations will be point-based and additionally limited to the section of rivers (Warta and Postomia estuary) of several dozen metres in length. In the discussed SWBs, the works within the project will cover sections constituting < 1‰ of the length of these SWBs.

Impact on fish fauna

The analysis of the scope of the Task indicates a theoretical possibility of unfavourable factors for the aquatic environment and the fish fauna to occur.

These factors may include:

- deterioration of the natural quality of the natural habitat (hydromorphological criteria, loss of structural elements important for biodiversity of the natural habitat),
- temporary silting or other disturbance of habitats as the result of the works,
- destruction of fish species and other aquatic organisms living in the mud or on the bottom,
- disruption of the life cycle of fish (spawning, migration, overwintering) and other aquatic organisms, in case of inappropriate dates of works.

A moderate impact on the fish fauna is expected to occur during the Task implementation stage. The works may generate tremors and vibrations of the bottom and the water, as well as high levels of noise. Vibrations in the aquatic environment are perceived by fish with sensitive side line receptors, and the same applies to sounds (noises), which are transmitted in the aquatic environment much better than in the air. Therefore, the local fish fauna will be scared-off into the neighbouring areas for the duration of the works, however, as the result of conducting the so-called compensatory migration, it will return after the completion of this construction stage. The works carried out in the riverbed and related to the elimination of the old bridge supports and the execution of two supports for the temporary bridge will result in the local removal of the layer of transit aggradate mud, where benthic fauna, which is a food for some fish species, including young asps and gudgeons, finds favourable living conditions. The scope of these works will be small in relation to the whole width of the Warta riverbed, which is over 100 m here. In the course of the works carried out in the riverbed, as the result of the phenomenon of the re-suspension of bottom sediments, the amount of suspended matter and biogenic substances in the water will increase periodically, which will lead to an increase in turbidity and a decrease in transparency and deterioration of oxygen conditions. However, in this case a small area of the works carried out in relation to the width of the river and the volume of flow

within this section of the Warta River will cause rapid dispersion of the suspended matter, without negative effects on the environment. However, long-term water turbidity is particularly dangerous during the spawning period of key fish species inhabiting the Warta and Odra rivers (March-June). If the works are carried out during this period, losses of spawn and fry may occur, especially susceptible to increased concentrations of suspended matter. In the analysed section, the Warta River has no spawning grounds attractive for fish, therefore accidental silting of spawning grounds is excluded. The loss of habitats in the bank zone as the result of execution of new bridge supports will affect several metres on both banks and this impact will be insignificant.

The anticipated impact of the planned Task on anadromous species (those that spend most of their lives in the sea but migrate to fresh water to spawn) may be associated with disruption of migration during the works in the Warta channel. However, according to the EIA findings (see justification for the decision on environmental conditions in Annex 4a to the EMP), this will be a moderate, short-term and reversible impact.

For these reasons a moderate impact of the project on fish communities in the water body in question should be expected, limited to the duration of the works in the river channel. This impact will be minimised by adapting the time of works in the river channel to the spawning period (i.e. outside the period from March 1 to June 30), execution of works in the riverbed using technologies limiting the inflow of suspended matter to the waters (e.g. sheet piling enclosures) and ensuring the patency of the fish movement corridor in the Postomia River mouth.

At the operation stage, the impacts consisting in permanent transformation of habitats favourable for fish, or modification of the flow affecting the conditions of the water speed and depth, or hiding places and feeding sites for fish will be negligible due to the limited spatial range of the transformation (< 1‰ of the SWB length).

Impact on phytoplankton and phytobenthos

The expected impact of the works on phytoplankton will only occur during the Task implementation stage. The living conditions of algae complex will deteriorate due to the inflow of suspended matter to waters - decrease of water transparency and depth of euphotic zone - periodic limitation of vertical range of algae presence and their biomass. With regards to phytobenthos, deterioration of living conditions of benthic algae complex associated with the inflow of suspended matter to waters is expected at the stage of the work implementation: backfilling of the bottom by sedimentary suspended matter (destruction of phytobenthos complex), reduction of water transparency and depth of the euphotic zone - periodic limitation of the vertical range of algae occurrence.

The range of impacts will not be significant on the scale of the Surface Water Body in question due to the point-based character of works planned in the discussed SWBs within the Task (about 1‰ of the length of the SWB).

Impact on macrophytes

At the stage of the task implementation, mechanical destruction of macrophytes in the area directly covered by demolition works and earthworks in the bed will occur. Moreover, deterioration of living conditions of macrophytes is expected due to the inflow of increased

amounts of suspended matter to waters: backfilling of the bottom by sedimentary suspended matter (destruction of submerged plants), decrease of water transparency and depth of euphotic zone - periodic limitation of vertical range of submerged macrophytes.

The range of the expected impacts will be insignificant due to the point-based nature of works in the discussed UBSW (< 1‰ of the length of the SWB), as the result of which an insignificant impact of works envisaged in the analysed project on the macrophyte complexes of the bodies of surface water in question should be expected.

Impact on benthic macro-vertebrates and phytobenthos

At the stage of the Task implementation, mechanical destruction of benthic animals will occur in the vicinity of demolished and constructed structures in the riverbed and on the bank slopes. It is also expected that the living conditions of macro-vertebrates will deteriorate due to the inflow of suspended matter to waters: backfilling of the bottom by the sedimentary suspension: increase in mortality of animals, especially filtering animals (bivalves) and destruction of natural habitats by changes in the granulation of the bottom substrate (silting, covering with sand).

The range of the expected impacts will be insignificant due to the point-based nature of works in the discussed UBSW (< 1‰ of the length of the SWB), therefore an insignificant impact of works envisaged in the analysed project on macro-invertebrate communities in the discussed SWBs should be expected.

The analysis of the possibility of occurrence of impacts on the biological element indicates that due to the insignificant scope of works on the scale of the SWB, real impacts may be associated only with the construction stage. Therefore, in order to minimise the impact on the biological elements, executive solutions will be applied to limit the inflow of suspended matter into the waters and the time of works in the riverbed and bank zone will be limited.

Hydromorphological elements

The impact on the hydromorphological conditions will be associated with direct interference with the structure of the riverbed and banks and will indirectly be associated with the change in the dynamics of the water flow in the riverbed. These changes, however, will be of a very local character. It should be stressed that the new bridge will be built in the place of the current one, which is being dismantled, and the hydromorphological conditions per balance will not change. A slight (on the SWB scale) improvement can be expected in terms of hydromorphological elements due to the removal of artificial elements in the riverbed - current supports of the bridge intended for the dismantling.

Taking into account the nature of the works, the spatial scope of the transformation and the designed mitigation measures, it can be predicted that the class of the hydromorphological condition assessment will not be affected after all works have been executed.

Physicochemical elements

Due to the temporary nature of the works, the impact on physicochemical indicators that will occur during the implementation phase will be limited to the time of earthworks carried out directly in the bed. In case of failure - leakage of fuel and oil-derivative substances -

contamination of flowing waters may occur. Moreover, potential risks to the water environment are:

- use of faulty machines, construction and transport equipment, including faulty fuel systems of means of transport and construction machines causing the possibility of lubricants or fuel to leak into water,
- improperly conducted material and equipment management, waste and sewage management, posing a risk of penetration of pollutants into waters.

The above mentioned risks have been mitigated by defining appropriate requirements for the Works Contractor and ensuring supervision of their application. In addition, the Works Contractor must have appropriate technical means and materials to remove oil-derivative contamination on the ground and water (sorbents, booms, sorption mats, etc.).

No negative impact of the project on the chemical condition of both SWBs is expected at the operation stage.

Summarising the above mentioned analyses, it was stated in the EIA report that the implementation of the Task will have the following impacts on the environmental objectives set for the bodies surface water:

- **SWB 'Warta River from the Noteć River to the mouth'; SWB code: PLRW6000211899 and the SWB 'Postomski Canal from Rudzianka to the mouth (SWB code: PLRW60002418969)** the scope of work covers <1‰ of the length of both SWB watercourses, and as the result of the project implementation, there will be a point modification of hydromorphological conditions, which is insignificant on the scale of SWB. The impact on the environmental objectives was assessed as insignificant, limited to the construction period. Impacts during the implementation stage will be minimised to eliminate medium-term impacts on fish populations.

The potential impact of the Task on the conservation objectives of the protected areas located at the work execution site and its potential impact zone were also analysed (see section 5.6.) and taking into account factors such as:

- the point-based nature of the works,
- carrying out the works outside the spawning period,
- removal of trees and shrubs outside the breeding season,
- implementation of additional measures to minimise and prevent environmental impacts,

it was found that the implementation of the Task is not connected with the risk of occurrence of significant negative impacts on protected areas.

The quoted assessment, carried out on the basis of the analysis of the impact of the project on particular water quality indicators, consisting of biological, hydromorphological and physicochemical elements of the surface water quality and the analysis of the impact of the project on the environmental objectives of the protected areas listed in the Annex IV WFD:

- it did not show any significant negative impact of the project on particular elements of the water quality and the possibility of deterioration of the ecological condition/potential

- has not demonstrated the risk of failure to achieve the environmental objective for water bodies in relation to the ecological condition/potential and environmental objectives for protected areas.

5.5. UNDERGROUND WATER

The implementation of the Task and then the operation of the reconstructed road and bridge infrastructure will not result in the inflow of pollutants to groundwater, thus it will not cause the deterioration of the chemical condition of the body of underground water. The Task will also not have a negative impact on the environmental objectives concerning the quantitative status of the underground water.

5.6. WILDLIFE

5.6.1. IMPACT ON PLANTS, ANIMALS, FUNGI

Vascular plants

The construction of the new bridge on the Warta River will require the construction of a temporary bridge located above the existing bridge, the demolition of the existing bridge and the construction of a new structure. With regards to the vascular plants, the following stressors are foreseen:

- removal of trees, grubbing of shrubs;
- removal of soil layer together with herbaceous vegetation;
- destruction of habitats for the needs of execution of temporary bridge supports.

During the field surveys, an inventory of the vegetation located in the area of the impact of the planned investment was carried out. The task will be located in the area of the section of the national road 31 at the border of the Warta Mouth National Park, in a place directly adjacent to the town of Kostrzyn, therefore in the area of reduced diversity and natural values, which was confirmed by the conducted inventories as well as the source data. It is estimated that 240 trees (including 71 within the Warta Mouth National Park) will be cut down in relation, in particular, to the need to build a temporary bridge The implementation of the project will not cause any interference with protected sites or rare plant species. No presence of fungi or lichens, insects or hollows, and therefore of bats or dormice, was found during the inventory.

Fish fauna

The impacts on ichthyofauna are described in chapter 5.4. in the description of the Task's impact on the biological elements of water quality assessment.

Entomofauna and malacofauna

The following pressures on entomofauna and malacofauna are expected during the implementation of the Task:

- Destruction of habitats during the occupation of the site for the needs of construction of a temporary bridge;
- Accidental killing of individuals during habitat occupation.

Presence of three protected species was identified as the result of site investigations:

- Two insect species - the common carder bee (partial protection) and the green snaketail (strict protection);
- One species of snail - Roman snail (partial protection).

All three protected species are generally quite numerous components of the fauna. The common carder bee and the Roman snail are expected to continuously inhabit this area and reproduce. In the case of the green snaketail, no breeding behaviour of this species was possible to be observed, which, however, cannot be excluded.

Occupation of the site for the needs of execution of a temporary bridge will not have a significant impact on the bumblebees and the Roman snail, as these are relatively common and widespread species. In the case of the green snaketail, the construction of two pillars of the temporary bridge in the Warta riverbed may result in larval losses, and the scale of possible damages will be small. The pillars of the target bridge will be located outside the riverbed of the Warta River, and therefore do not threaten the potential habitats of the green snaketail larvae. No new impacts are expected to occur at this stage as the bridge will be reconstructed in the track of the existing one, and the class and parameters of the road will not change. A positive effect may be the possibility to restore the habitats along the Warta river bank zone by eliminating road embankments on both banks and using flyovers over the length of approximately 75 m.

Herpetofauna

For this group of animals, the impact of the Task will be concentrated on the left bank where habitats suitable for amphibians are found:

- destruction of a fragment of an oxbow lake located between the embankment of the DK 31 and the estuary of the Postomia River;
- reduction of the area of the oxbow lake and deterioration of the conditions for feeding the oxbow lake with the waters of the Postomia River by locating a temporary road embankment;
- risk of accidental killing of individuals entering the construction site.

Amphibians identified during the inventory belong to relatively common species and are found in the area of numerous water reservoirs, so impacts related to the location of the temporary bridge embankment for the period of the target bridge construction can be considered insignificant. In the case of grass snakes and lizards, there is a risk of scaring-off, accidental killing, temporary restriction of food availability or temporary retreat from the place. Upon completion of the works and dismantling of the temporary bridge and reclamation of habitats in the bridge area, the area will be recolonised by animals. Partial liquidation of the road embankment in the area of the bay of the sailing club means liquidation of the convenient habitat of the viviparous lizard. However, this is a relatively widespread species, which also occupies synanthropic habitats, so the liquidation of the habitat in the section of the embankment will not have a significant impact on the population of the viviparous lizard. The road embankment will be replaced by a flyover and the area underneath will be subject to

reclamation, the bank zone and the river valley habitats will be restored and new habitats for herpetofauna will be created.

After the completion of the construction and the site cleaning up, at the stage of the bridge's operation in its new shape, the habitat conditions along the Warta River bank line will be more favourable than at present. The reason for this will be the partial liquidation of the road embankment, which currently reaches the edge of the riverbed on both banks of the Warta River, creating a migration barrier.

Bird fauna

During the Task implementation period, the following pressures on the bird fauna are expected:

- scaring-off due to the presence of people, noise emitted by working construction equipment;
- loss of breeding sites in the structure of the existing bridge due to its decommissioning;
- removal of trees and shrubs and associated liquidation of shelters and breeding sites.

The Task implementation area is located in the surroundings of vast areas much more valuable for the living of birds. Therefore, the implementation of the Task of a relatively small scale is not expected to have a significant negative impact on the identified species, among which there are predominantly common species, also inhabiting urban areas. The application of time constraints in the removal of trees should effectively minimise impacts to insignificant levels. The new bridge will have a pylon structure, suspended from ropes. The height of the pylons will be relatively low, because it will be about 17.5 m. Also, the operation of the new bridge, with its relatively low construction (up to 17.5 m), is not expected to pose a threat to local bird populations or seasonally migrating bird groups.

Mammalian fauna

During the Task implementation period, the following pressures on the mammalian fauna are expected:

- scaring-off due to the presence of people, noise emitted by working construction equipment;
- habitat loss due to tree removal and shrub grubbing for the needs of execution of a temporary bridge.

The pressure and disturbance caused by the presence of people and machinery in operation may cause animals to avoid the area of works carried out. The relatively small scale of the project and the concentration of works on a small area allow to assume that no significant impacts on terrestrial mammalian fauna will occur, especially as the results of the inventory did not show that the area around the bridge is used particularly intensively by mammals. More favourable sites are upstream from the bridge on the left bank in the area of vast floodplains of the Postomia River estuary to the Warta River, where no works are planned to be carried out.

At the stage of the Task's operation no permanent negative changes of habitat conditions in relation to the current condition are expected. Recolonisation of the construction site area can be expected after it has been cleaned up. The construction of the new bridge, which will ensure the possibility of migration of animals along the bank line, should be indicated as a positive

aspect. Restoration of the continuity of habitats in the valley through elimination of fragments of the road embankment will influence the restoration of the morphological continuity of the valley, including significant improvement of the possibility of migration of animals along the bank line.

Bat fauna

During the Task implementation period, the following pressures on the bat fauna are expected:

- scaring-off due to the presence of people and working machines;
- destruction of potential winter shelters in the structure of the bridge to be demolished.

Species such as the western barbastelle *(Barbastella barbastellus)*, the greater mouse-eared bat *(Myotis myotis)* and the Bechstein's bat *(Myotis bechsteinii)* are found in the Warta River mouth area.

The construction and operation of the new bridge on the Warta River is not expected to have a significant negative impact on bats. At this stage, there are no premises to predict collisions with breeding colonies or winter shelters, and the project will not significantly disturb bats' feeding habitats.

The new bridge will have a different construction than the current one - it will be a suspended bridge with two pylons, about 17.5 m high. Such stationary obstacles should not pose a threat to bat species occurring in the area of Kostrzyn nad Odrą, which feed mainly in woods and forests.

5.6.2. IMPACT ON NATURE CONSERVATION FORMS AND NATURAL HABITATS

Natura 2000 Area "Warta Mouth" PLC080001

The area of the Task implementation is located within the boundaries of the Natura 2000 area Warta Mouth PLC080001. The Natura 2000 area Warta Mouth also includes within its borders the Buffer Zone of the Warta Mouth National Park and the Warta Mouth Landscape Park.

In order to carry out an assessment of the impact on the Natura 2000 areas, an analysis of the project was made in terms of interference with the natural environment. The following scale was used to determine the intensity of the impact:

- weak - short-term, reversible, small-scale negative impacts are anticipated that will not significantly affect the conservation status of the objects of protection and the objectives of the objects of protection, as well as the integrity of the form of nature protection;
- moderate - mid-term, reversible impacts of local nature are anticipated, which will not significantly affect the conservation status and objectives of the objects of protection and the integrity of the form of the nature protection;
- significant – mid-term or long-term negative impacts are anticipated, which may temporary deteriorate the conservation status of objects of protection, periodically affect the process of achieving conservation objectives and the integrity of the form of nature protection;
- severe - it is anticipated that long-term or permanent negative impacts are anticipated, the effect of which is a significant loss of resources of conservation objects, inability to

achieve conservation objectives and deterioration of the integrity of the form of nature protection.

As the result of the analyses carried out, no impacts were found that could permanently deteriorate the state of preservation of the objects of protection and affect the process of achieving the protection objectives and the integrity of the form of nature protection.

The possibility of occurrence of moderate impacts, was found in relation to the following species:

- Fish species: asp (*Aspius aspius*), weatherfish (*Misgurnus fossilis*), spined loach (*Cobitis taenia*), northern whitefin gudgeon (*Romanogobio albipinnatus*), European bitterling (*Rhodeus sericeus amarus*).

  The impacts on ichthyofauna are described in chapter 5.4. in the description of the Task's impact on the biological elements of water quality assessment.

- Bird species: red-necked grebe (*Podiceps grisegena*), mute swan (*Cygnus olor*), greylag goose (*Anser anser*), mallard (*Anas platyrhynchos*), common crane (*Grus grus*), common snipe (*Gallinago gallinago*), common tern (*Sterna hirundo*), black-headed gull (*Larus ridibundus*), great cormorant (*Phalacrocorax carbo*).

  With regards to the above mentioned bird species, which are the object of protection of the Natura 2000 area, the flights of which occur along the Warta River over the bridge or its vicinity. The construction of the bridge, with the height of about 30 m above the medium water, will not constitute a barrier for the migration of birds moving at a higher altitude. For individuals flying at the altitude below 30 m, the construction of the pylon bridge may pose a potential risk of collision, but this is not expected to be a significant impact. The occurrence of grebes in floodplains in the Postomia River estuary to the Warta River was recorded during the inventory for the purposes of drawing up the draft "Warta Mouth" Natura 2000 area protection plan. The project implementation does not pose a risk to the grebe's habitats in the Postomia River estuary as no mechanical interference is expected to occur in these areas during the construction, and after completion of the works the new bridge will not affect the flow regime in Warta and Postomia.

The possibility of occurrence of weak impacts, has been found in relation to the following species and/or natural habitats:

- Natural habitats: 3150 oxbow lakes and natural eutrophic reservoirs with communities of *Nympheion, Potamion*; 91E0 willow, poplar, alder and ash riparian forests *(Salicetum albofragilis, Populetum albae, Alnenion)*.

  Within the limits of the project implementation, there is a fragment of one habitat patch; the designed road embankment of the temporary bridge will be partially located within the natural habitat 3150 oxbow lakes and natural eutrophic water reservoirs with communities of *Nympheion, Potamion*. It is expected that the estimated area of destruction may be about 960m², which is 0.043% of the total area of the natural habitat in the sanctuary. It is planned that the damaged fragment of the oxbow lake bed will be

reconstructed after the decommissioning of the temporary bridge. Within the limits of the project there are fragments of two patches of the natural habitat 91E0 willow riparian forests (91E0). It is expected that the estimated area of destruction may amount to the total of about 2100 m², which is 0.025% of the total area of the natural habitat in the sanctuary. There will be no habitat fragmentation; elimination of road embankments over the length of 75 m on both river banks will allow restoration of ecological continuity of the flood terrace habitat in this area.

- Bat species: greater mouse-eared bat (*Myotis myotis*)

  There are trees and shrubs within the scope of the planned works - they will have to be removed. Within the area of the trees to be removed there are no hollows or crevices that could be bats' hiding places. No summer bat shelters have been identified in the bridge structure. The shelters are located in the fortification structures in Kostrzyn nad Odrą. Noise during the execution of works may cause scaring-off animals. However, this will be a short-term impact and it is expected that once the disturbance ceases, the bank area will be reused by bats - mainly as a feeding ground.

- Mammal species: Eurasian otter (*Lutra lutra*)

  Traces of the otter were found under the bridge. Construction works carried out on the bank may result in scaring-off these animals and loss of shelters locally. After the works are completed, the banks of the Warta River will be settled again. At the operation stage, the modified bridge structure and the decommissioned road embankments will result in the extension of the migration corridor in the bank zone at the width of approx. 75 m on both banks, which will have a positive impact on the restoration of the habitat structure.

- Bird species: black-necked grebe (*Podiceps nigricollis*), black-crowned night heron (*Nycticorax nycticorax*), great egret (*Egretta alba*), whooper swan (*Cygnus cygnus*), taiga bean goose (*Anser fabalis*), greater white-fronted goose (*Anser albifrons*), common shelduck (*Tadorna tadorna*), Eurasian wigeon (*Anas penelope*), gadwall (*Anas strepera*), Eurasian teal (*Anas crecca*), pintail (*Anas acuta*), garganey (*Anas querquedula*), northern shoveler (*Anas clypeata*), common pochard (*Aythya ferina*), tufted duck (*Aythya fuligula*black kite (*Milvus migrans*), red kite (*Milvus milvus*), white-tailed eagle (*Haliaeetus albicilla*), spotted crake (*Porzana porzana*), little crake (*Porzana parva*), corncrake (*Crex crex*), Eurasian coot (*Fulica atra*), Eurasian oystercatcher (*Haematopus ostralegus*), black-winged stilt (*Himantopus himantopus*), pied avocet (*Recurvirostra avosetta*), little ringed plover (*Charadrius dubius*), European golden plover (*Pluvialis apricaria*), northern lapwing (*Vanellus vanellus*), ruff (*Philomachus pugnax*), great snipe (*Gallinago media*) Eurasian curlew (*Numenius arquata*), spotted redshank (*Tringa erythropus*), common redshank (*Tringa totanus*), common greenshank (*Tringa nebularia*), Mediterranean gull (*Larus melanocephalus*), little gull (*Larus minutus*), little tern (*Sterna albifrons*).

  These are species occurring in the Warta Mouth PLC080001 Natura 2000 area, which mostly have not been inventoried in the area of the Warta bridge in Kostrzyn nad Odrą. In relation to species flying over the bridge, there is a potential risk of collision with

structural elements of the bridge. During the observation of birds, the common greenshank was identified in the area up to 200 m from the bridge. Scaring-off is possible due to the noise coming from the construction site, but no breeding habitat of this species has been identified within the Task implementation boundaries. Additionally, during the observation of birds flying along the Warta River over the bridge or in its vicinity, white-tailed eagle was observed at the altitude of more than 30 m above water in the direction both upstream and downstream. The construction of the bridge with the height of about 30 m from the mean water surface will not constitute a barrier for the migration of the white-tailed eagle. During the inventory for the purposes of drawing up the draft Natura 2000 area protection plan for the Warta Mouth, the occurrence of corncrake was recorded in the floodplains in the Postomia River estuary to the Warta River. The implementation of the Task does not threaten corncrake habitats in the Postomia River estuary as no mechanical interference is expected in these areas during the construction and after completion of the works the new bridge will not affect the flow regime in Warta and Postomia.

The lack of possibility of occurrence of impacts was identified in relation to the following natural habitats, which are objects of protection of the Natura 2000 area:

- 3130 banks or drained bottoms of water bodies with communities with *Littorelletea, Isoeto–Nanojuncetea*, 3270 rivers with flooded muddy banks, 6120* xeric sand calcareous grasslands (*Koelerion glaucae*), 6210 semi-natural dry grasslands (*Festuco Brometea)* and thermophilic grasslands with *Asplenion septentrionalis-Festucion pallescentis*, 6430 mountain herb vegetation (*Adenostylion alliariae*) and riverside herb vegetation (*Convolvuletalia sepium*), 6440 alluvial meadows (*Cnidion dubii*), 6510lowland hay meadows in extensive use (*Arrhenatherion elatioris*), 9170 Galio-Carpinetum oak-hornbeam forests (*Galio-Carpinetum*, *Tilio-Carpinetum*), 9190 acidophilus oak forests (*Calamagrostio-Quercetum*), 91F0 riparian oak-elm-ash forests (*Ficario-Ulmetum*).

  The occurrence of the above mentioned natural habitats was not identified within the limits of the project implementation and no direct collisions with the patches of the above mentioned natural habitats or indirect impacts are expected.

Moreover, the lack of possibility of occurrence of the impacts was identified in relation to the following animal species, which are the subject of protection of the Natura 2000 area:

- Desmoulin's whorl snail (*Vertigo moulinsiana*), hermit beetle (*Osmoderma eremita*), great capricorn beetle (*Cerambyx cerdo*), European fire-bellied toad (*Bombina bombina*), European beaver (*Castor fiber*), lesser ramshorn snail (*Anisus vorticulus*).

  The above mentioned species of insects, molluscs and amphibians were not inventoried during the inventory within the Task implementation area, including the examined oxbow lakes and waters of the Warta River. As it results from the inventories carried out for the purposes of the draft Natura 2000 Warta Mouth area protection plan, beavers occur in the Postomia River mouth and on the left bank of the Warta River, but at a distance from the investment. At the construction stage, these animals may avoid the

immediate vicinity of the construction site, however, these nuisances should not cause the abandonment of convenient habitats within the undeveloped floodplains in the Postomia River estuary. At the operation stage, the modified bridge structure and the decommissioned road embankments will result in the extension of the migration corridor in the bank zone at the width of approx. 75 m on both banks, which will have a positive impact on the restoration of the habitat structure.

Warta Mouth National Park

If the Task is carried out, the area within the boundaries of the "Warta Mouth" National Park will be temporarily occupied for the purpose of building a temporary bridge, which will be used during the period of the decommissioning of the existing bridge and construction of a new structure. The construction of the temporary bridge below the existing structure is seriously impeded by the existing development of both banks of the Warta River. On the left bank there is a marina of the sailing club, and on the right bank there is a town marina. After execution of a new bridge, the temporary crossing will be decommissioned, the road embankment constructed in the area of the National Park on the left bank of the Warta River will be removed and the area will be subject to land reclamation.

Permanent and temporary occupation of the area concerns an area of reduced diversity and natural values, which was confirmed by the inventories carried out as well as the source data. The implementation of the Task will not affect the object of protection of the National Park and its protection objectives.

The implementation of the Task will require removing a fragment of riparian forest. Habitat patch 91E0 - willow, poplar, ash and alder and ash riparian forests (*Salicetum albo-fragilis*, *Populetum albae, Alnenion glutinoso-incanae*), alder carrs, with the area of about 0.21 ha is located between the embankment of the road No. 31 and the mouth of the Postomia River. A road embankment leading to the temporary bridge is to be constructed here, which will require removal of about 70 trees growing at the foot of the DK31 embankment. Due to the low natural value of the felling area within the national park, it was not found necessary to restore the loss of natural habitat 91E0. However, as a part of the implementation of the Task, a protective measure was planned in agreement with the National Park to create a "Somera Island" habitat for terns, gulls and Charadriiformes, more important for preserving the natural and landscape values of the National Park.

Nature reserves

There are no nature reserves within the range of potential impact of the project. The nearest such forms of nature conservation are more than 12 km from the location of the bridge in question.

Areas of protected landscape

There are no areas of protected landscape within the range of potential impact of the project. The nearest such forms of nature conservation are more than 30 km from the location of the bridge in question.

Ecological usable lands

There are no ecological usable lands within the range of potential impact of the project. The nearest such forms of nature conservation are more than 7 km from the location of the bridge in question.

Documenting sites

There are no documenting sites within the range of potential impact of the project. The nearest such forms of nature conservation are more than 30 km from the location of the bridge in question.

Nature and landscape complexes

There are no natural and landscape complexes within the range of potential impact of the project. The nearest such forms of nature conservation are more than 14 km from the location of the bridge in question.

5.7. ACOUSTIC CLIMATE

During the implementation of the Task, the generated noise emissions will be of a local nature, limited to the area of works carried out.

During the execution of the construction works, unfavourable acoustic phenomena will occur in the area of the works. The potential source of noise during the implementation of the project will be machines and equipment working on the construction site and means of transport, as well as the traffic of vehicles moving on the temporary bridge. Due to the necessity to use heavy construction equipment, noise emission during execution of earthworks is expected. The range of the noise impact will depend both on the phase of works, number of simultaneously working machines, their type and working time. The greatest, although a short-term source of noise will be the earthworks, related to the preparation of the construction site. These will be periods of intense emissions of a short-term and transitory nature, and significant sources of noise emissions (mechanical equipment in operation) will move along with the progress of work. It is important that a precise estimation of the noise emission levels for the stage of investment execution is possible at the moment of selecting the specific equipment and knowing its parameters influencing the emission. For the estimation of noise emissions, not only the type of equipment and its technical condition is important, but also the number of machines working at the same time or the working time of individual machines. In the area directly adjacent to the residential buildings, no construction works are expected to be carried out, which are characterised by a significant increase in vibrations putting at risk the buildings, in particular the pile driving works. Nevertheless, in the area of the existing buildings, works generating vibrations will be carried out, connected with reconstruction of the road system or demolition of buildings at 2 Sikorskiego Street, inter alia, a residential house, a utility building and a garage.

Nevertheless, bearing in mind the vicinity of areas subject to acoustic protection, the investment process must be properly planned and organised, therefore technical and organisational measures to minimise noise emissions will be taken into account during the implementation.

It should be emphasised that the noise emission, similarly to the emission of exhaust fumes, will be of local, short-term nature and will occur only on the job site/section of works and will cease immediately after the completion of construction works. It is estimated that the acoustic nuisance at the implementation stage, despite its temporary high intensity, will not cause any significant nuisance to the environment or a permanent deterioration of people's living conditions, moreover, due to the positive long-term effect related to the improvement of the traffic infrastructure, it will have an impact on improving and increasing the living comfort of the residents in the long term.

As a part of the environmental impact assessment, the impact of the Task (public road) was assessed for the years 2023 (assumed year of commissioning) and 2033 (10 years after commissioning). In connection with the planned construction of the bypass of the town of Kostrzyn after 2023, the traffic volume on the analysed part of the road will decrease in relation to 2023. Therefore, the year 2023 is the most unfavourable horizon in relation to 2033. The analysis presented in the environmental impact assessment report shows that as the result of the implementation of the Task, using a quiet BBTM8 surface (noise reduction by at least 6 dB), the permissible levels of environmental noise will be maintained and the acoustic nuisance for the surrounding residents will be significantly reduced. The analysis took into account cumulative impacts of the railway line No. 273 between Wroclaw Glowny and Szczecin Glowny, adjacent to the task area. Taking into account the operational and technical parameters of the analysed railway line, the cumulative acoustic impact of the Task and the railway line was determined. It was found that the cumulative impact will not cause the permissible levels of noise in the environment to be exceeded and the road noise will be the dominant source of noise in relation to the above-mentioned railway line.

5.8. POPULATION AND STRUCTURES

The project concerns the dismantling and construction of a bridge and construction of a section of a public road with the length of approx. 600 m, located mostly outside the vicinity of the building development. Only in the section from the Mostowa Street to the vicinity of the Handlowa Street, i.e. over a section of about 130 m long, the reconstructed Wł. Sikorski Street goes along the buildings. The street is adjacent to 4 single-family and service buildings and the Kostrzyn Cultural Centre building.

In the area of the buildings, works related to the reconstruction of the road and the accompanying technical infrastructure will be carried out. In connection with the works planned in this section, it is necessary to demolish the objects located on the plot of land, register No.350 precinct 0004 Town Centre in the 2 Sikorski Street, including a residential house, an utility building and a garage. Due to the above, construction facilities in the area of the road system reconstruction and the above mentioned demolition may be exposed to the impact of vibrations connected with the works carried out. However, no construction works are expected to be carried out in this area that could cause vibrations that could endanger neighbouring buildings, in particular the pile driving works.

The implementation of the Task does not affect the traffic volume within the Wł. Sikorski Street (national road 31) and will not change the current impacts. The impacts on material goods will be typical for the public road operation.

5.9. CULTURAL MONUMENTS

The implementation of the Task will not affect the condition of preservation and the protection requirements of protected objects entered in the register of monuments, which in the area of the project include elements of the Kostrzyn Fortress fortifications. The construction works will be carried out at a sufficient distance from the Kostrzyn Fortress (over 450 m), which eliminates the possibility of any significant impacts.

The Task consists in dismantling the bridge, which is entered in the municipal record of monuments. The Lubuskie Voivodeship Conservator of Monuments in Zielona Góra, due to the fact that as the result of the reconstruction in 1945 and the reconstruction in 2000, the architectural and historical values of the bridge were obliterated, agreed to dismantle the bridge in accordance with the bridge reconstruction concept, which was the basis for the decision on environmental conditions.

The area of the Task implementation is in the immediate vicinity of the objects entered in the municipal record of monuments (in particular the passenger harbour from the 2nd half of the 19th century, the road bridge over the Warta River Lagoon, historic cellar (storehouse) from the 2nd half of the 19th century in the area of the Mostowa Street). When applying the activities aimed at the protection of material goods and requirements resulting from the VCM arrangements (including the obligation to ensure archaeological supervision) and the general provisions of the Act on the protection of monuments, the implementation of the Task will not involve a significant impact on the monuments and cultural landscape of the area in question.

5.10. HUMAN HEALTH AND SAFETY

The impact on the human health and safety during the implementation of the Task may be related, inter alia, to the following factors:

- increased noise emission,
- pollution by oil-derivative substances,
- access of unauthorised persons to the area of construction works,
- occurrence of increased water stages and ice jams in the Warta River that pose a risk to the works area and adjacent areas,
- transport of materials and elements of the bridge construction by water and/or transport of oversize elements by land,
- carrying out works within the water area and the bank slope areas in direct vicinity to the water,
- change of traffic organisation for the construction period (in particular, traffic organisation using a temporary bridge),
- discovery of unexploded ordnance and unexploded shells in the course of the execution of works.

Detailed selection of equipment units for the purpose of executing the Works covered by this Task is left to the discretion of the Contractor, after prior consultation with the Engineer. Equipment, machines or tools, which do not guarantee compliance with the quality requirements of works, health and safety regulations and the Health and Safety Protection (BIOZ) regulations, and which may cause damage to the existing infrastructure and elements of building and land development will not be admitted to the Works by the Engineer.

The operation of floating equipment, the execution of works using it, as well as the movement of workers in the immediate vicinity of the riverbed (e.g. in the case of works within the area of groynes) also poses a risk to the health and life of people executing these works. Therefore, is important to ensure that workers have adequate equipment to protect their health and life during the execution of works (including appropriate belaying equipment) and to develop and implement appropriate safety procedures when carrying out the works.

During the implementation of the Task, the generated emissions of pollutants into the air and noise emissions will be of a local nature, limited to the area of executed works. The works will be carried out in the riverbed and directly on its bank, which means that they will not pose a risk to the health of people living in the built-up areas located in the area of the Task implementation sites. It should be emphasised that the works related to the reconstruction of the bridge will be carried out outside the housing development areas. In the area of the housing development, works connected with the reconstruction of the road system will be carried out. The construction site will be secured against unauthorised entry.

5.11. EXTRAORDINARY RISKS (CRISIS AND EMERGENCY SITUATIONS)

The implementation of the planned Task entails the possibility of the following crisis or emergency situations, which may cause extraordinary risks to the environment:

- **Uncontrolled emissions (leakage) of oil-derivative products**
  At the construction stage, an emergency situation may occur, resulting in the leakage of oil-derivative substances from vehicles, floating equipment, construction machinery, tanks, etc., resulting in contamination of the surface water or ground surface (including soil). During the execution of works, the risk of an emergency situation will be minimised by ensuring that appropriate procedures and measures are in place to limit losses in the event of occurrence of environmental damage.

- **Fire or explosion of flammable substances**
  During the construction phase, an emergency situation related to the occurrence of a fire may occur (e.g. due to equipment failure, personnel negligence, explosion of flammable substances, lightning strike, etc.). The occurrence of such a situation poses a risk to both the Contractor's personnel and the environment. Nevertheless, in order to minimise such situations, inter alia, only equipment in proper technical condition shall be used and properly operated and maintained.

- **Finding of unexploded shells and ordnance**
  It is possible to find unexploded ordnance or unexploded shells in the course of construction works (the town of Kostrzyn nad Odrą was an area of intensive warfare in

1945 and the bridge was destroyed), such as: fuses, missiles, aerial bombs, artillery and rifle cartridges, rocket-propelled grenades, grenades, all types of mines, explosives charges, scrap metal containing residual explosives and other. The Task will be carried out in such a way as to eliminate the risk of any danger to the Contractor's staff and local residents. Procedures will be developed in case of occurrence of such a situation and appropriate personnel will be involved (sapper's supervision).

- **Sudden water freshet, flooding**
  The Task implementation area includes the Warta River and the areas adjacent to the river. At the construction stage, there may be a sudden increase in the water stage in the Warta River on the construction site or a flood, threatening the health and life of personnel and causing material losses on the construction site. During the period of occurrence of high water stages or ice-jam floods, the Contractor's equipment and elements of the construction site backup facilities may be located within the area of the river bed and in the bank zone. Therefore, procedures will be developed in case of occurrence of such a situation.

- **Epidemiological risk**
  In the event of occurrence of epidemic, there may be risks to the health and life of the Contractor's employees and the Employer's and Engineer's staff as well as to the construction process. By the Ordinance of the Minister of Health of 20 March 2020 *on declaring the state of the epidemic on the territory of the Republic of Poland* (Journal of Laws, item 491, as amended) in the period from 20 March 2020 until further notice, the state of the epidemic was declared on the territory of the Republic of Poland in connection with SARS-CoV-2 virus infections.

5.12. CUMULATIVE AND CROSS-BORDER IMPACTS

In the environmental impact assessment procedure, issues related to cumulative impact were analysed. According to the information contained in the justification of the decision on the environmental conditions issued for the Task (see Attachment 4a), cumulative impacts were considered in particular in the context of the following tasks within the area related to the proposed investment:

- Task 1B.2. Modernisation works on the Border Odra River, Stage I - Modernisation works to ensure winter icebreaking,
- construction of the bypass of Kostrzyn within the national road No. 31,
- new crossing of the Odra River in the course of the national road No. 22,
- 1B.5/3. Reconstruction of the bridge to ensure minimum clearance - railway bridge in km 615.1 of the Odra River in Kostrzyn nad Odrą.

All the mentioned investments include components related to the works in the riverbed. These activities are related to the emission of vibrations to the water environment and in particular to the increased inflow of suspended matter to the waters. This is particularly dangerous during the spawning period of key fish species inhabiting the Odra and Warta rivers. Taking into account the scope of works, the location of the place where increased suspended matter supply

to the Warta River waters is created (more than 2 km from the location of the accompanying dredging area on the Odra River), the sedimentation of suspended matter in the Warta River before its inflow to the Odra River as well as mixing of the Warta and Odra waters, it should be stated that there will be no significant accumulation of impacts of activities carried out within the area of the Odra River and activities implemented under the Task on the Warta River about 2.45 km from the estuary to the Odra River.

According to the provisions of the justification of the decision on environmental conditions issued for the Task, the potential accumulation of impacts may occur in case of simultaneous implementation of the Kostrzyn nad Odrą bypass and implementation of the Task. The accumulation of impacts would occur within the Natura 2000 areas (Warta Mouth PLC080001), through which the bypass in between the Odra riverbed and Warta in Kostrzyn nad Odrą would go. However, according to the draft Government Programme for the construction of 100 bypasses for 2020 - 2030, published as a part of the public consultation after the issue of decision on environmental conditions, the construction of the Kostrzyn bypass is planned for 2024 - 2026, i.e. after completion of the Task.

According to the information of the Ministry of Infrastructure about the above mentioned programme, the basic aim of the construction of the Kostrzyn-Oder bypass is to lead out transit traffic, which is concentrated in the town, from the national roads 31 and 23. The bypass will allow to unload traffic in the north and west direction, provide service and access to the economic zone and access to the border crossing with Germany. At the same time, a procedure is underway to implement the construction of a new border bridge over the Odra River with the Federal Republic of Germany, on the national road No. 22 as a complementary task. This will improve the safety of the residents, relieve the traffic system and increase the traffic capacity in Kostrzyn nad Odrą itself[1]. Therefore, the implementation of the bypass, such as the construction of a new border bridge on the extension of the German B1 road and the Polish national road No. 22, will reduce traffic intensity on the bridge on the Warta river, which is being reconstructed within the framework of the Task, and thus will reduce the impact of the operation of the national road 31 in the area of the Task on the natural environment and the surrounding residents.

Within the framework of the environmental impact assessment the possibility of cross-border impacts was also excluded. The planned project will be fully implemented on the territory of Poland, at the distance of about 1 km from its western border. Despite the close location of the investment from the national border, its local character and the scope of works excludes the possibility of cross-border impact on the areas located outside Poland, both at the stage of implementation and operation.

[1] https://www.gov.pl/web/infrastruktura/wojewodztwo-lubuskie (accessed 12.05.2020)

6. DESCRIPTION OF MITIGATION MEASURES

In order to limit the negative impact of the planned Task on the environment, the Attachment 1 to the EMP contains a set of mitigation measures to be taken by the Contractor. These measures were developed on the basis of the conditions contained in the administrative decisions in force in the field of environmental protection issued for the Task, with the addition of additional conditions established at the stage of preparation of the EMP. The implemented mitigation measures should ensure that the Task is carried out taking into account the World Bank's guidelines (guidelines for the Environment, Health and Safety: The Environmental, Health, and Safety (EHS) Guidelines). The requirements for the construction stage are defined in the General EHS Guidelines[1], in particular in the Section 4 (Construction and Decommissioning stage *"Construction and Decommissioning"*).

Temporary and permanent occupation of land in connection with the implementation of the Task takes place according to the rules specified in the Land Acquisition and Resettlement Action Plan (RAP).

In order to supervise and monitor the mitigation actions included in the EMP, a dedicated position of the EMP coordinator in the Contractor's team will be appointed within the Contractor's structure (see item 128 of Cat. O - Requirements for the Contractor's personnel involved in the implementation of the EMP)[2] .

Below, there is a selection of characteristic mitigation measures, broken down into individual environmental components discussed in the Section 5 of the EMP.

6.1. LAND SURFACE AND LANDSCAPE

In order to limit the negative impact of the Task on the ground surface and landscape, mitigation measures are foreseen to be implemented during and also prior to the commencement of the construction works.

The stage of execution of construction works should be preceded by works related to the preparation of the Task implementation area, including, but not limited to, preparation of construction material storage places, construction site backup facilities, etc. Temporary and permanent occupation of the area in connection with the implementation of the Task takes place according to the rules specified in the Land Acquisition and Resettlement Action Plan (RAP). Mitigating measures have been introduced in order to limit the occupation of the site to the necessary minimum, ensure arrangements with its administrator, obtain any approvals or derogations required by the regulations.

[1]https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines

[2] In the Attachment 1 of the EMP, mitigation actions are assigned to 17 thematic categories (from Cat. A to Cat. S).

The selection of places for temporary storage yards will be consulted and accepted by the environmental supervision just before the commencement of works, due to the dynamic stage of the water and consequently, different population of the site by species of fauna and flora.

Internal technological roads, storage yards and construction site backup facilities should be located in such a way as to preserve trees and shrubs growing outside the places necessary to be occupied for the purpose of works. Access to the construction site backup facilities should be via public roads.

The aim of the mitigation measures during the implementation phase is to minimise the transformation of the land surface during the ongoing works, to secure the land that is valuable in terms of nature and to restore the land surface used for the site and construction site backup facilities to the condition from before the implementation.

Mitigation measures to reduce the impact on the ground surface and the landscape are in particular the following items in the table in the Attachment 1 to the EMP:

- items 3 - 12 (cat. B - Requirements for the transport service of the Task implementation area),
- items 16 – 18 (cat. C- Requirements for the location of construction backup facilities and roads, material storage and parking areas),
- item 58 (cat. H - Requirements for the conservation of protected natural resources),
- items 59 - 69 (cat. I - Requirements for the restoration of natural resources after completion of construction)
- item 102 (cat. K- Requirements for waste and waste water management).

6.2. CLIMATE

In the case of this Task, no mitigation measures to protect local climatic conditions were identified as necessary to be introduced.

6.3. CONDITION OF THE AIR

The implementation of the Task requires the implementation of solutions that will reduce emissions to the atmosphere of exhaust fumes from machines and vehicles used to implement the Task and reduce dust during earthworks or transport of materials. Therefore, the aim of the implemented mitigation measures is to ensure that the Contractor uses efficient equipment, machines, devices, vehicles and vessels and plans the works in such a way as to minimise the emission of pollutants into the atmosphere, including e.g. switching off combustion engines during breaks in operation, reducing the emission during the so-called idling phase. In addition, organisational and technical measures will be implemented to reduce dust emissions at the construction stage, including during transport operations.

Measures to reduce the impact on the air condition are indicated in the table in the Attachment 1 to the EMP in the following items: 72, 76, 84 – 86, 89 (cat. J - Requirements for the prevention of environmental pollution (including the limitation of emissions into the environment).

6.4. SOIL AND LAND

During the implementation of the Task, measures shall be implemented to mitigate negative impacts on soils with respect to the reduction of the area of temporary occupation of sites, protection of the soil productive layer and prevention of soil and ground contamination. In particular, the actions introduced are aimed at:

- ensuring the storage of materials and waste in a way that prevents the emission of harmful substances into the soil and water environment;
- ensuring the operation of efficient equipment, machinery, devices, vehicles and vessels, free from leakage of fuel or other operating fluids;
- providing surfaces that are properly sealed for operations threatening to pollute the ground and the groundwater;
- ensuring measures and procedures for prevention and removal of pollution;
- ensuring the collection, storage and use of the fertile soil layer (humus) to restore the sites.

The humus layer of the soils should be removed and used for post-construction land reclamation or for greenery arrangement purposes. In the event of possible spillage of oil-derivative substances (or other substances hazardous to the environment), the spills shall be removed immediately and the contaminated soil layers managed in accordance with the applicable regulations. Such sites will be restored to their original condition.

The mitigation measures to reduce the impact on soils and land are in particular the following items in the table in the Attachment 1 to the EMP:

- item 2 (cat. A Requirements concerning the Task implementation schedule),
- item 16 (cat. C Requirements concerning the location of the construction site backup facilities and roads, material storage and parking places),
- items 19 - 20 (cat. D - Requirements for the management of earth masses),
- items 21 - 26 (cat. E - Requirements for handling the humus layer),
- items 70, 73 - 81, 91 - 96 (cat. J - Requirements for the prevention of environmental pollution (including the limitation of emissions into the environment)),
- items 97 - 102 (cat. K- Requirements for waste and waste water management).

6.5. SURFACE WATER AND UNDERGROUND WATER

Measures for the protection of surface water and underground water are consistent with those for protection against soil and land contamination (see section 6.4.).

In addition, mitigation measures dedicated to the protection of surface water will be implemented to:

- protect surface waters against contamination due to the leakage of harmful substances (through applying leakage prevention and containment measures),
- ensure the pre-treatment of rainwater from tight construction sites,
- limit the increase in suspension concentration and deterioration of oxygen conditions in the waters of the Warta and Postomia rivers to protect, in particular, the fauna and flora of these rivers (by carrying out works under the water surface in the steel sheet piling wall shielding, with the time of carrying out works in the riverbed and in the Warta and Postomia bank zone as well as their spatial range being limited to the necessary minimum, and the ban on moving earth masses by pushing material in the riverbed);
- protection of fish fauna in the period of its increased sensitivity to impacts (by carrying out works interfering with the Warta and Postomia riverbed outside the period of fish spawning and spawn incubation;
- preventing the contamination of rivers with elements from bridge demolition or materials and elements used for the construction of a new bridge and the construction and dismantling of a temporary bridge.

It should be noted that execution of dredging works and excavation of river sediments is not foreseen in the implementation of the Task as a part of the bridge dismantling.

Mitigation measures to reduce the impact on the surface water and the groundwater are indicated in particular in the following items in the table in the Attachment. 1 to the EMP:

- items 19 - 20 (cat. D - Requirements for the management of earth masses),
- items 21 - 26 (cat. E - Requirements for handling the humus layer),
- items 40, 45 (cat. H - Requirements for the conservation of protected natural resources),
- items 70, 76 - 81, 91 - 96(cat. J - Requirements for the prevention of environmental pollution (including the limitation of emissions into the environment)),
- items 97 - 102 (cat. K- Requirements for waste and waste water management).

6.6. ACOUSTIC CLIMATE

At the construction stage, there may be an increase in the noise level due to the operation of construction machinery, as well as the noise generated by heavy vehicles delivering construction materials and the operation of the temporary bridge.

Therefore, mitigation measures have been introduced in order to, among other things:

- reduce of the acoustic nuisance of the Task implementation for the residents of the areas located in the area of the Task implementation (in particular, by eliminating execution of works in the vicinity of residential buildings at night, using temporary acoustic barriers where necessary, locating the construction site backup facilities as far as possible from residential buildings);

- reduce the acoustic nuisance of the implementation of the Task for the fauna of the "Warta Mouth" National Park (in particular by carrying out the demolition and construction of individual parts of the temporary bridge only between dawn and dusk, using temporary acoustic barriers, if necessary);
- reduce noise emission generated by equipment, machinery, devices, vehicles and vessels involved in the Task implementation (in particular by using efficient equipment, machinery, devices, vehicles and vessels, equipped with appropriate noise reducing devices);
- minimise the impact of vibrations on buildings in the vicinity of the implementation area.

In order to limit the impact of the reconstructed road system on the acoustic climate at the operation stage, a condition was introduced for the use of the so-called quiet surface with a 6 dB lower noise factor than the standard one.

Mitigation actions to reduce the impact of noise emissions are indicated in particular in the following items in the table in the Attachment 1 to the EMP:

- item 17 (cat. C- Requirements for the location of construction backup facilities and roads, material storage and parking areas),
- items 71, 76, 82 - 88 (cat. J - Requirements for the prevention of environmental pollution (including the limitation of emissions into the environment).

6.7. WILDLIFE AND NATURE CONSERVATION FORMS

During the execution of the works, the Contractor will be obliged to observe the standards, prohibitions and indications as well as to respect the restrictions resulting from the existence of areas and objects created on the basis of the Act on Nature Conservation and the location within and in the vicinity of the Task implementation area of protected natural habitats and sites of protected species of fauna and flora.

In order to protect natural values in the area of the Task implementation and its vicinity, the Contractor shall be obliged to provide its own environmental team (Contractor's environmental supervision team, referred to in item 129 of the Attachment 1 to the EMP), which shall be involved in proper implementation of the EMP conditions during the execution of works. The tasks of the environmental team shall include, inter alia:

- training of employees supervising the construction site, in the field of dealing with wild animals and notifying the environmental supervision,
- carrying out the necessary bird and bat fauna checks, in particular before and during the period of the bridge demolition and tree removal,
- taking appropriate protective measures,
- temporary marking of places of natural value in order to preserve them from destruction, crushing, trampling,
- ongoing specialist subject-related assistance,
- reporting on all significant events relating to protected environmental components.

Mitigation actions will be carried out mainly to:

- directly, physically protect the naturally valuable sites against accidental destruction (in particular habitat patches - 6430 riverside herb vegetation (*Convolvuletalia sepium*)),
- protect the bird hatching during the demolition of the bridge designed for reconstruction and then the temporary bridge,
- protect the bird hatching during tree removal,
- protect bats during the bridge demolition,
- protect the construction site against the entry of animals, in particular amphibians,
- protect the fish fauna, especially during the spawning and roe incubation period,
- maintain the patency of the Postomia River mouth by proper design and construction of a temporary bridge,
- protect the habitats within the Task implementation area and ensure inflow of the Warta and Postomia waters to the oxbow lake located on the southern side of the bridge,
- protect trees and shrubs not intended to be removed from accidental damage and, in the case of damage to the tree, to carry out the necessary care measures under the environmental supervision, limiting the effects of damage,
- restoration of the land on both banks of the river under the flyovers of the new bridge and their protection against the development of ruderal vegetation and foreign species,
- execution of restoration tree planting within the area of the "Warta Mouth" National Park in a number not less than the number of trees removed for the Task execution,
- implementation of a protective measure in the "Warta Mouth" National Park within the so-called "Somer Island" - to create a habitat for terns, gulls and Charadriiformes - an excerpt from the technical concept, illustrating the scope of work within the "Somer Island", is presented in Annex 9 to the EMP.

It should be emphasised that before commencing the construction works, the environmental supervision team of the Contractor will carry out a site investigation of the Task implementation area in order to determine the location of places of natural value and to clarify the scope of required mitigation measures. In case the presence of protected habitats and species of fauna and flora is found, for which it will be necessary to violate the prohibitions specified in the applicable regulations, the Contractor's environmental supervision team will obtain decisions allowing for derogations from the rules on plant, fungi and animal species protection. The Contractor shall be obliged to precisely and timely implement the conditions contained in these decisions.

Mitigation measures to reduce the impact on the wildlife and forms of nature protection are indicated in particular in the following items in the table in the Attachment 1 to the EMP:

- item 18 (cat. C- Requirements for the location of construction backup facilities and roads, material storage and parking areas),
- items 27 – 28 (cat. F- Requirements for removal of trees and shrubs),
- items 29 – 30 (cat. G - Requirements for protection of trees and shrubs not designed for cutting),
- items 31 - 58 (cat. H - Requirements for the conservation of protected natural resources),

- items 59 - 69 (cat. I - Requirements for the restoration of natural resources after completion of construction),
- item 83 (cat. J - Requirements for the prevention of environmental pollution (including the limitation of emissions into the environment)),
- items 129, 130 (cat. O - Requirements for the Contractor's personnel involved in the implementation of the EMP).

6.8. CULTURAL LANDSCAPE AND MONUMENTS

The knowledge and materials gathered concerning the planned Task indicate that it will not cause significant direct, negative impacts on monuments and cultural landscape. However, the Contractor is obliged to implement preventive measures in case of negative impacts that may appear at the stage of executing the works, in particular due to the fact that the bridge to be demolished is located on the historical route leading from the Kostrzyn Fortress built in the16th century. According to the Act *on Protection of Historical Monuments,* whoever, in the course of execution of construction works or earthworks, has discovered an object which is presumed to be a monument, is obliged to stop any works that may damage or destroy the discovered objects, secure, using the available means, this object and the place of discovery, immediately notify the Voivodeship Conservator of Monument, and if this is not possible, the territorially competent municipality head (mayor, city mayor). The Contractor shall also notify the Engineer and Director of the Kostrzyn Fortress Museum in this respect. In order to implement the above mentioned provisions of the EMP related to the Protection of Cultural Heritage and Monuments, the Contractor will also obtain, if necessary, a permit from the Voivodeship Conservator of Monuments (VCM) to carry out archaeological rescue surveys and will conduct such surveys. In order to execute the Tasks in the scope of monuments protection, throughout the whole period of earthworks execution, the Contractor shall ensure participation of a team of archaeological experts (Contractor’s archaeological supervision), referred to in item 123 cat. N - Requirements for the protection of cultural monuments.

Additionally, measures will be implemented aimed at the protection of material goods, particularly the facilities entered in the municipal record of monuments, against damage as the result of construction works in the area of implementation of the Task and in the area of access roads. The Contractor shall be responsible for any damage caused by it or its Subcontractors during the execution of the works and shall immediately repair any such damage at its own expense, in agreement with the monument protection services.

Mitigation actions to reduce the impact on monuments and cultural assets are indicated in particular in the following items in the table in the Attachment 1 to the EMP:

- item 11 (cat. B - Requirements for the transport service of the Task implementation area),
- items 123 - 126 (cat. N - Requirements for the protection of cultural monuments),

- item 132 (cat. O - Requirements for the Contractor's personnel involved in the implementation of the EMP).

6.9. STRUCTURES

The Contractor shall be liable for any damage to structures and buildings, roads, drainage ditches, culverts, water and gas pipelines, pillars and power lines, cables, geodetic network points and installations of any kind, and other objects such as vertical and horizontal signs, navigation signs, information boards, cultural goods objects, etc., caused by it or its Subcontractors during the execution of works. The Contractor shall be also responsible for restoring the patency of ditches and drainage systems in the area of the works being carried out and the transport routes being used, in the event of damage caused by the works and transport related to the services for the works. The Contractor shall immediately repair at its own expense any damage caused and, if necessary, carry out any other works ordered by the Engineer.

Prior to the commencement of works, during which tremors and vibrations may occur that pose risk to the surrounding residents and nearby buildings, infrastructure facilities or cultural goods, the Contractor shall carry out an inventory of the existing buildings and facilities, with particular emphasis on cracks and damages. During the execution of the works, the Contractor shall monitor the condition of these buildings and facilities on an ongoing basis.

The Contractor shall be obliged to carry out traffic organisation according to the agreed traffic project for the time of Task implementation (marking and securing the work area and marking the diverted traffic and recommended road markings connected with the change of the traffic organisation, etc.).

During the execution of the works, the Contractor shall make every effort to minimise the nuisance to the existing road traffic in the area of works (e.g. by securing the access to the property, the access to the public utility facilities).

Mitigation actions to reduce the impact on material goods are indicated in particular in the following items in the table in the Attachment 1 to the EMP:

- items 3 - 15 (cat. B - Requirements for the transport service of the Task implementation area),
- item 108 (cat. L - Requirements for the protection of human health and safety).

6.10. HUMAN HEALTH AND SAFETY

Activities related to the protection of human health and safety have been identified relating to the appropriate organisation of works, technical measures, fire protection, construction sites, the condition and use of vehicles and machines and training in the spread of HIV-AIDS and other infectious diseases, including e.g. COVID 19.

In order to ensure safe working conditions, the Contractor shall ensure constant supervision of the occupational health and safety services during the Task implementation. The scope of

responsibilities, qualifications and personnel composition of the health and safety services of the Contractor shall be in accordance with the Polish labour law.

The Contractor will develop a Health and Safety Protection Plan (so called BIOZ plan) containing the information relevant to the occupational safety during construction and guidelines and rules of conduct specified for persons working on the site. When developing the BIOZ plan (see 6.13.), the Contractor shall place particular emphasis on the safety of the works within the area of waters and in the immediate vicinity of the flowing water and ensure safety during demolition works.

In order to minimise the risk associated with finding unexploded ordnance and unexploded shells in the area of Task implementation, in particular in connection with the significant intensification of fighting in the area of the task location during the Second World War, the Contractor during the execution of works shall ensure sapper supervision of the works (carried out by a team of sapper supervision holding relevant licences), including sapper site investigation prior to the commencement of works and current checking and clearing of the area during the execution of earthworks of dangerous objects of military origin (including unexploded ordnance and unexploded shells) together with their disposal.

In connection with the specificity of the Task, which includes carrying out the works and transport works within the Warta River area, conditions have been defined in the EMP in order to, in particular, minimise the risk of collision of vessels taking into account the conditions prevailing on the waterway (including the occurrence of low water stages and the risk of adverse navigation conditions). Despite the use of protective sheets (see section 6.5.), when the bridge is being demolished, waste rubble or steel elements may fall into the river and endanger the safety of the vessels. In addition, as a part of the Task, the supports will be dismantled with foundations to 2.0 m below the bottom. Therefore, after completion of construction works and demolition of the temporary bridge, the Contractor shall carry out an attestation of cleanliness of the bottom in the area of the reconstructed bridge and in the clearance of the temporary bridge in order to ensure that in connection with the Task implementation, no obstacles restricting the operation of the bridge or putting at risk the safety of vessels occur.

Additionally, in order to limit the impact on the human health in the Task implementation area and in the neighbourhood of the Task implementation area, mitigation measures in other categories were introduced in the Attachment 1 to the EMP.

The mitigation actions in the scope of the protection of human health and safety are summarised as follows in the Attachment 1 to the EMP; these are in particular the following items in the table:

- items 3 - 15 (cat. B - Requirements for the transport service of the Task implementation area),
- item 17 (cat. C- Requirements for the location of construction site backup facilities and roads, material storage and parking areas),
- items 71, 82, 87 (cat. J - Requirements for the prevention of environmental pollution (including the limitation of emissions into the environment)),
- item 101(cat. K- Requirements for waste and waste water management),

- items 103 - 113 (cat. L - Requirements for the protection of human health and safety),
- items 114 - 116, 118 - 122 (cat. M - Requirements for exceptional environmental hazards).

6.11. EXCEPTIONAL ENVIRONMENTAL HAZARDS

Crisis situation

In the event of occurrence of an emergency situation, competent services must be notified first:

Service	**Telephone number**
Emergency number from a mobile phone	112
Police	997
Fire Brigade	998
Emergency medical services	999
Municipal Police	986 (95-727-82-03)
Municipal Public Works (reporting of accidents)	95 727 96 17

The rules of notifying about emergency situations, including accidents on or near the construction site and accidents related to the implementation of the Task (e.g. during transport) are included in the Attachment 1 to the EMP:

- item 115 (cat. M - Requirements for exceptional environmental hazards).

It is the Contractor's obligation to counteract the risks first and, in the event of their occurrence, limit the consequences of their occurrence. The basic hazards are described below, and the list of given hazards is open and does not exhaust the risk of other hazards not listed in the EMP.

Flood

The equivalent of an industrial accident in relation to this Task can be considered to be the occurrence of high water stages or the occurrence of ice-jam floods within the riverbed. Prior to the commencement of the works, the Contractor will prepare an appropriate plan of proceedings in case of occurrence of such events (*Flood Protection Plan for the construction site*) (see section 6.13). In the event of occurrence of flood, the Contractor shall follow the procedures described in the aforementioned document, in particular, in the event of anticipated high water stages on the Warta River, the Contractor shall secure the construction site against negative effects of surface water flow and shall evacuate people, equipment and materials accordingly, and prevent water pollution with substances and materials coming from the construction site, including hazardous ones.

The requirement to develop and approve the above mentioned plan is contained in the Attachment 1 to the EMP:

- item 114 (cat. M - Requirements for exceptional environmental hazards).

Leakage of oil-derivative substances

Another type of extraordinary hazard is the leakage of oil-derivative and other chemicals into water or soil. Mitigation actions, as defined in the Attachment 1 to the EMP for the protection of the soil and water environment, are characterised in sections 6.4. - 6.5.

Due to the risk of a possible leakage, the Contractor will prepare a document called the spillage procedure (see section 6.13) and shall obtain its acceptance by the Engineer. The requirement to develop and apply the spillage procedure is contained in the Attachment 1 to the EMP:

- item 117 (cat. M - Requirements for exceptional environmental hazards).

Finding of unexploded shells and ordnance

Due to the fierce fighting in Kostrzyn nad Odrą in 1945 and direct warfare, which among other things led to the destroying of the bridge spans, it should be emphasised that despite the passage of more than 80 years since the end of Second World War, the possibility of finding unexploded ordnance and unexploded shells during earthworks is high. The Employer did not carry out a prior inspection of the work site for the presence of unexploded ordnance and unexploded shells.

The Contractor is obliged to ensure, during the execution of earthworks, the sapper supervision, including the sapper investigation prior to the commencement of works as well as ongoing checking and clearing of the area during the execution of earthworks of dangerous objects of military origin (including unexploded ordnance and shells), together with their disposal. Under no circumstances may workers carrying out the works lift, dig, bury, carry or throw into fire or into places such as rivers, canals, oxbow lakes, ditches, etc. unexploded ordnance or unexploded shells found.

Mitigation measures related to the risks of finding unexploded ordnance
and shells are defined in the following items in the Attachment 1 to the EMP:

- item 107 (cat. L - Requirements for the protection of human health and safety)
- item 116 (cat. M - Requirements for exceptional environmental hazards).

Fire

The Contractor shall be responsible for fire protection in the Task implementation area. At the construction stage, an emergency situation related to fire may occur (e.g. due to the equipment failure, personnel negligence, explosion of flammable substances, lightning strike, etc.). Limiting the risk and effects of such incidents is achieved by strict observance of health and safety regulations, proper organisation of construction site backup facilities and taking care of proper technical condition of vehicles, machines and equipment used on the construction site, and in case of their occurrence - strict observance of emergency and crisis procedures.

Detailed procedure in case of fire will be included in the Health and Safety Protection Plan (so called BIOZ plan) prepared by the Contractor (see section 6.13.). The requirement to develop

the BIOZ plan by the Contractor and to obtain the Engineer's approval for its contents is specified in item 101 of the table in the Attachment 1 to the EMP.

Shipping accident

Taking into account the specificity of the works, a potential fire hazard is also a collision of the vessels used during the Task implementation. Guidelines on the waterway safety / prevention of shipping accidents are contained in items 118 − 122 (cat. M - Requirements for exceptional environmental hazards) in the Attachment 1 to the EMP.

Epidemiological hazard

In the event that an epidemic hazard or state of epidemics is in force during the execution of works, the Contractor shall be obliged to act in accordance with legal requirements, in particular the Act of 5 December 2008 *on preventing and combating infections and infectious diseases in humans* (consolidated text: Journal of Laws of 2019, item 1239 as amended), all obligations resulting from announcing an epidemic or state of epidemic emergency and relevant World Bank guidelines. The Contractor's actions should reduce the risk of spreading the infection both to the Contractor's staff as well as to the staff of the Employer and the Engineer and the local community. Guidelines on how to deal with an epidemic hazard or state of epidemics are presented in item 146 (cat. S − Guidelines on procedures in case of an epidemic hazard or state of epidemics in force during the execution of works) in the Attachment 1 to the EMP.

Regardless of the above, in accordance with item 112 (cat. L - Requirements for the protection of human health and safety), the Contractor shall implement an awareness-raising programme for the spread of infectious diseases (e.g. COVID 19).

6.12. WASTE AND WASTE WATER

The implementation of the Task will involve the generation of waste, therefore during the execution of works it is necessary to minimise its number and limit its negative impact on the environment. Waste management should be conducted in accordance with the provisions of the *Waste Act* of 14 December 2012.

Therefore, minimisation measures have been put in place in order, inter alia, to:

- protect the land and water surfaces from pollution in connection with temporary storage of waste, including hazardous waste;
- protect the air by storage in a way that prevents dust and light fractions from spreading;
- protect the wildlife by prohibiting the storage of waste, including demolition waste, within the boundaries of the " Warta Mouth" National Park and within protected natural habitats
- eliminate and prevent formation of illegal waste disposal sites.

It should be emphasised that the implementation of the Task does not provide for the excavation of river sediments.

In order to ensure proper waste water management, the Contractor shall provide the construction site backup facilities with tight sanitary facilities for household sewage and ensure that they are systematically emptied by authorised entities.

The mitigation measures for the waste management are in particular the following items in the table in the Attachment 1 to the EMP:

- item 16 (cat. C - Requirements for the location of construction site backup facilities and roads, material storage and parking areas)
- item 19 (cat. D - Requirements for the management of earth masses),
- items 97 - 102 (cat. K – Requirements for waste and waste water management).

6.13. REQUIREMENTS FOR THE IMPLEMENTATION OF ACTION PLANS AT THE CONSTRUCTION STAGE

In order to ensure the proper organisation of the execution of works as well as the proper implementation of the conditions set out in the Attachments 1 and 2 in the Environmental Management Plan, the Contractor shall develop and obtain the Engineer's approval, and then implement the following documents that will constitute the elements of **the Contractor's Environmental and Social Management Plan** (C-ESMP):

1) **Site organisation project**, which should include, inter alia, the following elements:

- location of the construction site backup facilities;
- development of the construction site backup facilities;
- securing the construction site backup facilities;
- technological roads;
- environmental protection at the construction site backup facilities.

2) **Waste management plan**, which should include, inter alia, the following elements:

- expected types and quantities of waste,
- ways of preventing the negative impact of waste on the environment,
- waste management method including waste collection, transport, recovery and disposal,
- the type of the waste generated and the way it is stored (with particular emphasis on hazardous waste).

3) **Quality assurance plans** for particular categories of works and other activities of the Contractor (depending on the needs, including the Engineer's requirements), which should include – from the point of view of the principles of the EMP, inter alia:

- information on the planned organisation of the execution of a given category of works or activities;
- information on the conditions of implementation of a given category of works or activities included in the EMP and the ES policy.
- information on possible other ways to counteract the negative environmental impact of a given category of works.

4) **Flood protection plan for the construction site**, which should include – from the point of view of the principles of the EMP, inter alia, the following elements:

- monitoring the hydrological and meteorological situation;
- conditions for the passage of flood flows during the period of the execution of works;
- rules of work of the Contractor's team during the period of flood risk;
- basic duties of key members of the company's flood management team;
- list of functionaries in the period of flood;
- list of equipment and means of transport needed to carry out rescue operations.

The provisions of the Flood Protection Plan for the construction site should ensure that in the case of forecast high water stages on the Warta and Postomia rivers, the construction site will be protected against negative effects of the surface water flow, and people, equipment and materials will be evacuated according to the magnitude of the risk.

5) **Health and Safety Protection (BIOZ) plan**, which should include, inter alia, the following elements:

- indication of the elements of plot or land development that may pose a risk to the human safety and health;
- information on expected risks occurring during the execution of construction works; specifying the scale and types of risks and the place and time of their occurrence; including these related to the natural environment;
- information on the separating and marking of the place where construction works are carried out, according to the type of risk;
- information on the manner of instructing workers before commencing the execution of particularly dangerous works;
- determination of the method of storage and movement of hazardous materials, products, substances and preparations on the construction site;
- indication of technical and organisational measures to prevent risks resulting from the execution of construction works in areas of particular health risk zones or in their vicinity, including safe and efficient communication, enabling quick evacuation in case of fire, breakdown and other risks;
- indication of the place where construction documentation and documents necessary for proper operation of machines and other technical devices are stored.

The BIOZ Plan BIOZ will include information on combating problems related to epidemiological threads such as COVID-19, including measures provided in item 146 (cat. S - Guidelines on procedures in case of an epidemic hazard or state of epidemics in force during the execution of works) in the Attachment 1 to the EMP.

6) **Spillage procedure**, which should include, inter alia, elements concerning the procedure in case of spillage of chemical and oil-derivative substances, i.e.:

- mode of equipping with appropriate materials in relation to the anticipated risks and substances;
- mode of alerting and notifying particular services;

- course of action to limit spillage;
- mode of handling sorbent materials.

In the Spillage Procedure, the Contractor shall in particular take into account the execution of works with the use of floating equipment, as well as works within and in the immediate vicinity of flowing water.

7) **ES Management Strategies and Implementation Plans** (management strategies and implementation plans for environmental, social, health and safety risks), which include, inter alia, such elements as:

   - description of actions taken to manage risks;
   - description of materials used, equipment, management processes, etc., which will be implemented by the Contractor and its Subcontractors in order to minimise risks.

The Contractor shall be obliged to submit for approval of the Engineer and then to implement the Contractor's Environmental and Social Management Plan (C-ESMP), in accordance with the Terms and Conditions of the Subclause 4.1 SW, **including, inter alia, the agreed Management Strategies and ES Implementation Plans** and the Contractor's Code of Conduct for the Contractor's Personnel (ES). The Environmental Management Plan (EMP/PZŚ) will be a binding part of the C-ESMP. The Contractor shall not be entitled to modify the provisions and conditions set out in the EMP/PZŚ. The Contractor shall review the C-ESMP plan periodically and update it in accordance with the requirements of the Contract to ensure that it includes measures suitable for the Works. The updated C-ESMP is submitted to the Engineer for inspection. The procedures for reviewing the C-ESMP and its updating are as described in the Subclause 4.4.1 SW.

The Contractor, while preparing the above mentioned documents, shall take into account relevant World Bank's operational policies on health, environment and safety rules, including the EHS Guidelines[1]. These documents must be approved by the Engineer before implementation, who then also monitors their correct implementation.

8) **ES Code of Conduct for the Contractor's Personnel** (Code of Conduct ensuring the implementation of measures to address environmental and social risks associated with the implementation of the Task, including the risk of sexual abuse, mistreatment for sexual exploitation and sexual harassment).

[1] See:

- https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx#S3-2 (w części pt. Investment Project Financing / Environmental and Social Safeguard Policies)
- https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines
- https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=jOWim3p

The Contractor shall submit the ES Code of Conduct containing provisions defining the obligations of the Contractor selected as the result of the contract award procedure, in particular resulting with respect to the environmental protection, social, health and safety issues, in accordance with the template, after it has been signed (on each page) together with the bid. Thus, it acknowledges the need to apply the requirements contained therein at each stage of the contract execution.

The Code of Conduct forms a part of the measures to address the environmental and social risks associated with the implementation of the Task, including the risks of sexual harassment and mobbing, as well as discrimination based on gender. It applies to all the Contractor's personnel, workers and other employees in the area of the Task implementation. It also applies to the staff of each Subcontractor and any other staff assisting the Contractor in the Task implementation.

The Contractor will also conduct training on the terms and conditions of implementation of the EMP for the Contractor's managerial and engineering staff, as well as regular training of Employees in occupational health and safety, raising awareness in the field of combating sexual harassment and mobbing.

The requirement to develop and obtain the acceptance of the content of the above mentioned documents, to ensure compliance with the ES policy and the ES Code of Conduct, and to conduct training on the terms and conditions of the EMP, as well as training in occupational health and safety and raising awareness on combating sexual harassment and mobbing is indicated in particular in the table in the Attachment 1 to the EMP in the items:

- item 19 (cat. D - Requirements for the management of earth masses),
- items 65 - 69 (cat. I – Requirements for the restoration of natural resources after completion of construction),
- item 92 (cat. J - Requirements for the prevention of environmental pollution (including the limitation of emissions into the environment)),
- item. 97 (cat. K - Requirements for waste and waste water management),
- items 103 - 105 (cat. L - Requirements for the protection of human health and safety),
- item 117 (cat. M - Requirements for exceptional environmental hazards),
- item 123 (cat. N - Requirements for the protection of cultural monuments),
- item 132 (cat. O - Requirements for the Contractor's personnel involved in the implementation of the EMP),
- items 138 - 145 (cat. N – Specific requirements of the ES World Bank policies).

6.14. SPECIFIC REQUIREMENTS WITH RESPECT TO THE ES POLICIES OF THE WORLD BANK (ENVIRONMENTAL AND SOCIAL ASPECTS, INCLUDING THE RISK OF SEXUAL ABUSE, MISTREATMENT FOR SEXUAL EXPLOITATION AND SEXUAL HARASSMENT)

The Task implementation is connected with the need to meet a number of ES requirements (environmental, social, health and safety aspects), which are regulated by national regulations governing environmental protection, health and safety at work and labour law. Their observance is supervised by state institutions and bodies. In particular, with respect to compliance with occupational health and safety regulations and labour law, the authorities of

the state sanitary inspection and the state labour inspection are authorised to control the activities of entrepreneurs, including these on construction sites. However, due to the high importance paid by the World Bank to the ES requirements, the terms and conditions of the contracts financed by the World Bank loans impose obligations to ensure the implementation of the applicable regulations. Particular attention is paid to issues such as:

- Protection of juveniles employed in the implementation of the Contract,
- Elimination of inappropriate forms of behaviour of persons employed in the implementation of the Contract (including sexual harassment and mobbing),
- Ensuring the Health and Safety Protection of persons employed in the implementation of the Contract, including the provision of legally required Health and Safety services.
- Ensuring proper social and employment conditions for employees employed in the implementation of the Contract (including fair pay conditions).

The following is a list of issues in the form of requirements for the Contractor related to ES WB policies. It should be noted that the ES requirements and conditions set for the Contractor and its employees also apply to the Contractor's Subcontractors and their employees or Subcontractors.

- The Contractor shall conduct training and implement an awareness-raising programme on the prevention of sexual harassment and mobbing. These activities shall be carried out throughout the entire term of the Contract, including the Defects Notification Period at least every two months. These actions will have the form of information, education and awareness-raising campaigns.
- The Contractor shall inform the Consultant immediately about all reported cases and suspicions concerning sexual harassment and mobbing.
- The Contractor will inform all employees on the construction site about the possibility of lodging complaints about working and pay conditions and will provide an information leaflet with the necessary information on how to lodge complaints and requests, in which it will ensure that there are no repercussions for the person reporting a problem. The content of the leaflet will be agreed with the Consultant.
- The Contractor shall inform the Consultant about all accidents involving employees and third parties in accordance with the procedure provided by the Consultant. In the event of an accident, the Contractor shall take all actions, which it is obliged to take under applicable laws, such as the Construction Law and the Labour Code.
- The Contractor shall ensure equal pay for employees carrying out the same work without taking into account gender, sexual orientation or age, and in addition the persons employed under the Contract shall not be persecuted or discriminated against on the basis of gender, sexual orientation and age.
- The Contractor, in accordance with the possibilities and conditions and the Labour Code provisions, will meet the living and social needs of employees in the workplace.
- The contractor shall facilitate the improvement of professional qualifications of employees.

- The Contractor may employ only such a juvenile worker who is at least 15 years old, has completed primary school of at least eight years duration and has presented a medical certificate stating that the work in question does not endanger his / her health. The Contractor shall ensure that juvenile employees (persons under 18 years of age) will not perform works prohibited to juvenile employees[1], including in particular works which create accident hazards, such as inter allia construction and demolition works.
- The Contractor shall employ a health and safety specialist with qualifications and professional experience in accordance with the Polish labour law.

Therefore, in the table of mitigation measures in the Attachment 1 to EMP (items 138 - 145, cat. R – Specific requirements of the ES World Bank policies), detailed conditions binding for the Works Contractor, covered by the obligation of monitoring and reporting during the Task implementation period are included. It should be stressed, however, that the Contractor shall apply and comply with all provisions of the Labour Code and shall comply with the ES Code of Conduct.

6.15. ACTIVITIES AT THE OPERATION STAGE

The Task does not require the implementation of mitigation measures set out in the EMP beyond the construction stage.

The operator (administrator) of the bridge and the road infrastructure shall be obliged to maintain the colour scheme of the bridge and provide night lighting (ensuring the protection of birds against the collision with the bridge structure and the area of the "Warta Mouth" National Park against light pollution). The operator of the bridge and the road infrastructure will be responsible for, as well as maintaining and controlling the road surface drainage and rainwater treatment systems in order to maintain its noise reduction capacity.

[1] i.e. works specified in the Regulation of the Council of Ministers of 24 August 2004 on the list of prohibited work for juveniles and the conditions for their employment in some of these works (consolidated text: Journal of Laws of 2016, item 1509)

7. DESCRIPTION OF MONITORING ACTIONS

7.1. ENVIRONMENTAL MONITORING DURING THE EXECUTION OF WORKS

Attachment 2 to the EMP provides a set of monitoring activities applicable to the Contractor for the Task. These measures were developed on the basis of the conditions contained in the administrative decisions issued for the Task, with the addition of additional conditions established at the stage of preparation of the EMP.

The monitoring activities listed in the Attachment 2 to the EMP include carrying out monitoring of the implementation of mitigation measures listed in the Attachment 1 to the EMP (items 1-146 in the Attachment 2 to the EMP), conducting permanent nature monitoring of the construction works being executed, leakage control of tanks, in which fuels and oils will be stored, visual and organoleptic quality control of earth masses (items 147 - 149 in the Attachment 2 to the EMP).

7.2. ENVIRONMENTAL MONITORING IN THE OPERATION PERIOD

There is no need to carry out environmental monitoring of the Task at the stage of operation. The implementation of mitigation measures ensures that the scale and intensity of possible negative impacts are reduced only to the duration of the works. After the completion of the project, the operation of the bridge will not require monitoring, except for periodic inspection of the technical condition of the facility, drainage facilities and road surfaces (see also section 6.15.).

8. PUBLIC CONSULTATIONS

8.1. PUBLIC CONSULTATIONS ON THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK PLAN FOR THE OVFMP (2015)

The draft document entitled *Environmental and Social Management Framework Plan (ESMF)* for the OVFMP Project (including Component 1, which covers this Task) was subject to a public consultation procedure, conducted in accordance with the operational policy of the World Bank *OP 4.01.* Their purpose was to enable the public to acquaint with the content of this document and to provide the public with the opportunity to submit any comments, questions or requests to its content.

The documentation of the process of public consultations of the above mentioned document is available on the website of the Project Coordination Unit for the Odra - Vistula Flood Management Project[1].

8.2. PUBLIC CONSULTATIONS AT THE ENVIRONMENTAL PROCEDURES STAGE FOR THE TASK

The consultations with public participation were conducted by the locally competent authority, issuing the decision on environmental conditions, i.e. the Mayor of Kostrzyn nad Odrą.

The application for the issue of a decision on environmental conditions was submitted to the Mayor of Kostrzyn nad Odrą on 18.07.2018. After obtaining the opinion of competent authorities: The Regional Director for Environmental Protection in Gorzów Wielkopolski, the Minister of Maritime Economy and Inland Navigation and the State District Sanitary Inspector in Gorzów Wielkopolski, with the decision of 03.09.2018, Reference No. GK.6220.9.2018.SSt, the Mayor of Kostrzyn nad Odrą confirmed the obligation to carry out an environmental impact assessment.

Acting on the basis of the Article 33.1. in connection with Article 79.1 of the Environmental Protection Law Act, the Mayor of Kostrzyn nad Odrą provided the possibility of public participation in the proceedings by providing information:

- on the website of the authority,
- on the notice board at the seat of the authority,
- on the advertising pole near the investment site - next to the building of the Kostrzyn Cultural Centre (KCC).

about proceeding to the environmental impact assessment of the project, about the possibility to get acquainted with the contents of the environmental impact report and other necessary documentation of the case, as well as about the possibility to submit comments and requests at the seat of the Town Hall of Kostrzyn nad Odrą setting a 30-day deadline for their submission (21 January 2019 - 19 February 2019).

[1]On the website: http://odrapcu2019.odrapcu.pl/popdow_dokumenty/

Due to the later update of the documentation of the case and the environmental impact report in the process of obtaining the arrangements of the competent authorities, the Mayor of Kostrzyn nad Odrą acting again ensured the possibility of public participation in the proceedings by providing access to the documentation for 30 days from the date of making the information public with the possibility to submit comments and requests. The interested parties could familiarise themselves with the necessary documentation of the case, including the application submitted by the applicant and the report on the environmental impact of the project (05 September 2019 - 07 October 2019).

The above was informed by the announcement of the Mayor of Kostrzyn nad Odrą:

- on the website of the Town of Kostrzyn nad Odrą;
- on the notice board of the Town Hall at 2 Graniczna Street;
- on the notice pole in the Sikorski Street (next to the building of the Kostrzyn Cultural Centre) in Kostrzyn nad Odrą.

In accordance with the Article 33.1 of the Environmental Protection Law Act on announcements about administrative proceedings with the public participation, the following information was provided:

- about proceeding to carry out the environmental impact assessment of the project,
- the initiation of the procedure, the subject matter of the decision to be issued in the case,
- the authority competent to issue decisions and the authorities competent to give opinions and make arrangements,
- the opportunity to consult the necessary documentation of the case and
- the place where it is made available for inspection,
- the opportunity to submit comments and requests,
- the manner and place of submission of comments and requests, while indicating the 30-day deadline for their submission,
- the authority competent to consider comments and requests.

No comments or requests were received during the public participation procedure.

The manner of ensuring public participation in the proceedings was described in the justification of the decision on the environmental conditions issued for the Task. The decision is included in the Attachment 4a.

8.3. PUBLIC EMP CONSULTATIONS

Draft of the Environmental Management Plan (EMP) for Contract 1B.5/2 - Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą was subject to public consultation conducted in accordance with the requirements of the World Bank's operational policy (OP 4.01). The purpose of the consultation was to enable natural persons, institutions, and all interested parties to become acquainted with the content of this document and to provide them with the opportunity to submit any comments, queries, and

requests related to its content. Because of the state of epidemiological threat, the formula for conducting public consultations on the draft EMP document has changed. There was no open meeting for all interested parties and the consultation was conducted in the form of a webinar.

Once the draft EMP was prepared, the document was submitted to the World Bank for approval to begin the publishing procedure. After obtaining the approval of the World Bank to begin the draft EMP publishing procedure, the electronic version of the document with the notice of public consultation was published on the following websites:

- State Water Management Polish Waters, Regional Water Management Authority in Szczecin – (Fig. 6);
- Odra-Vistula Flood Management Project Coordination Unit – (Fig. 7Fig. 2);
- Kostrzyn nad Odrą City Hall – (Fig. 8);
- Odra-Vistula Flood Management Project – (Fig. 9)

Information on the possibility to review the content of the EMP draft and to submit requests and comments, along with detailed information (correspondence address, e-mail address, and phone number) was published in local press. The notice was published on 29.06.2020 in the Gazeta Lubuska (Fig. 10) and Kurier Szczeciński (Fig. 11). The published Notice contains information about the revised formula for conducting public consultations due to the state of epidemiological threat in Poland, which included the website address and a step-by-step instruction on how to join the online meeting conducted as part of concluding the public consultations of the EMP draft (along with the date, time, website where the link to the webinar will be posted, and the purpose of the meeting).

Information (Fig. 12) about the initiated EMP draft publishing procedure and the possibility to submit requests and comments as well as the invitation to participate in the webinar was sent via email to the identified project stakeholders.

In order to ensure the widest possible access to information on the EMP draft due to the epidemiological threat in Poland, it was decided that the electronic version of the documentation would be posted and accessible to all interested parties during the period from 29.06.2020 to 20.07.2020 (i.e. 16 working days) on the following websites:

- State Water Management Polish Waters the Regional Water Management Authority in Szczecin, at www.szczecin.wody.gov.pl;
- Odra-Vistula Flood Management Project Coordination Unit, at www.odrapcu2019.odrapcu.pl;
- Kostrzyn nad Odrą City Hall, at www.kostrzyn.pl,
- Odra-Vistula Flood Management Project, at www.bs.rzgw.szczecin.pl.

Information on planned public consultation meeting was also posted on the notice board in the Kostrzyn nad Odra City Hall (Fig. *13*13).

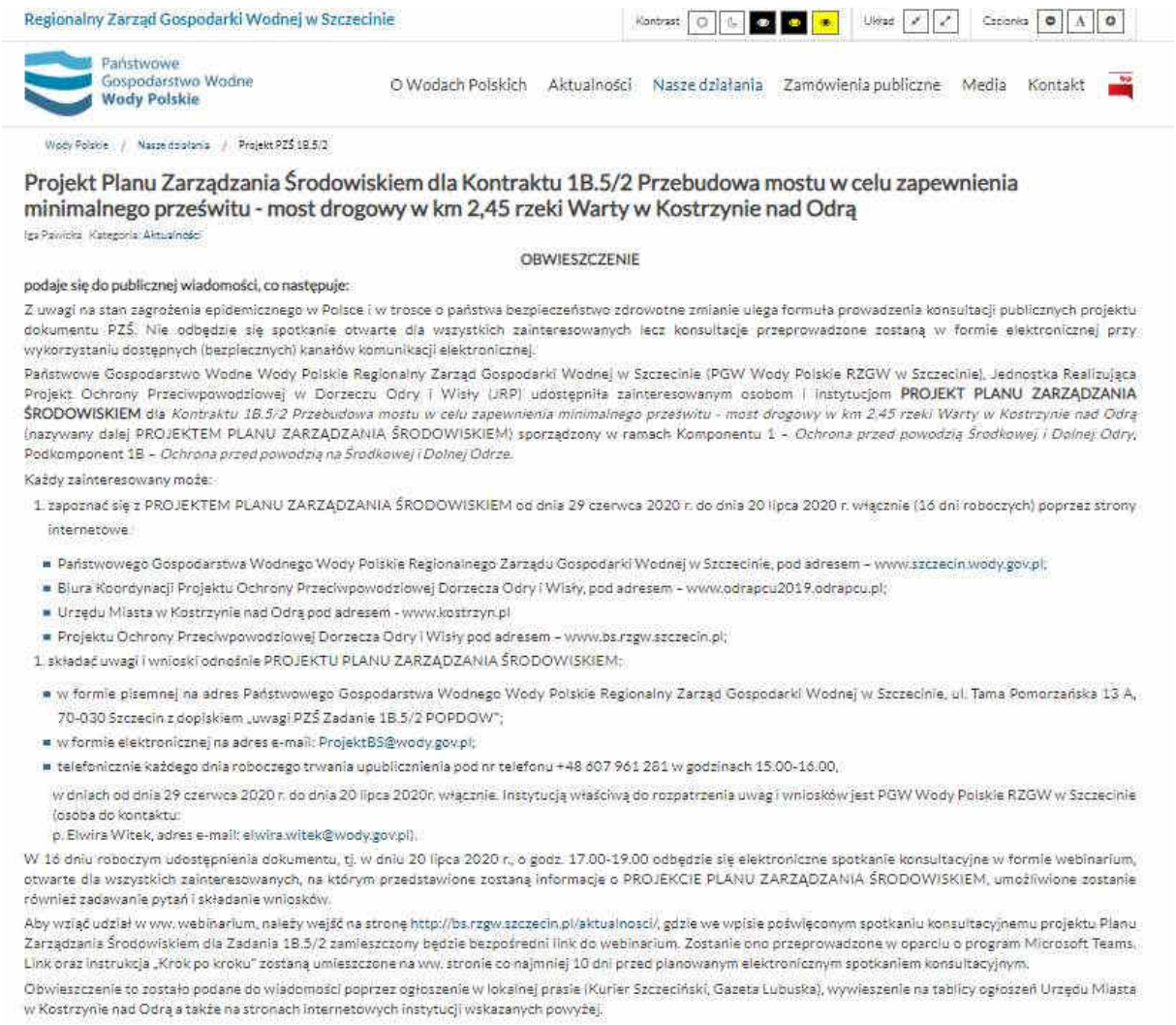
Consultation meeting

After the end of the EMP draft publishing period (electronic version of the documentation was available to all interested parties from 29.06.2020 to 20.07.2020), an open online meeting was organised in the form of a webinar for all interested parties. The meeting was organised on 20.07.2019 and took place via the Microsoft Teams programme. In order to take part in the webinar, one had to go to http://bs.rzgw.szczecin.pl/aktualnosci/, where a link to the webinar was posted in the entry on the consultation meeting for the draft Environmental Management Plan for Task 1B.5/2. As indicated in the notice, the meeting started at 5 p.m. Representative of the PIU and a private person joined the online meeting. For the purpose of the meeting, a multimedia presentation was prepared containing information on the principles of development and functioning of the EMP during the implementation of investments co-financed by the World Bank and detailed information on the draft EMP for Contract 1B.5/2: Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą The meeting ended at 7 p.m. The webinar was chaired by the Consultant at the headquarters of Sweco Consulting.

COMMENTS SUBMITTED DURING THE PUBLISHING PERIOD

During the webinar as well as during the entire public disclosure procedure of the EMP draft, no comments were made to the content of EMP or its annexes.

Therefore, the public consultation process was deemed completed.



Regionalny Zarząd Gospodarki Wodnej w Szczecinie

Kontrast | Układ | Czcionka

Państwowe Gospodarstwo Wodne Wody Polskie

O Wodach Polskich | Aktualności | Nasze działania | Zamówienia publiczne | Media | Kontakt

Wody Polskie / Nasze działania / Projekt PZŚ 1B.5/2

Projekt Planu Zarządzania Środowiskiem dla Kontraktu 1B.5/2 Przebudowa mostu w celu zapewnienia minimalnego prześwitu - most drogowy w km 2,45 rzeki Warty w Kostrzynie nad Odrą

Iga Pawicka Kategoria: Aktualności

OBWIESZCZENIE

podaje się do publicznej wiadomości, co następuje:

Z uwagi na stan zagrożenia epidemicznego w Polsce i w trosce o państwa bezpieczeństwo zdrowotne zmianie ulega formuła prowadzenia konsultacji publicznych projektu dokumentu PZŚ. Nie odbędzie się spotkanie otwarte dla wszystkich zainteresowanych lecz konsultacje przeprowadzone zostaną w formie elektronicznej przy wykorzystaniu dostępnych (bezpiecznych) kanałów komunikacji elektronicznej.

Państwowe Gospodarstwo Wodne Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Szczecinie (PGW Wody Polskie RZGW w Szczecinie), Jednostka Realizująca Projekt Ochrony Przeciwpowodziowej w Dorzeczu Odry i Wisły (JRP) udostępniła zainteresowanym osobom i instytucjom **PROJEKT PLANU ZARZĄDZANIA ŚRODOWISKIEM** dla *Kontraktu 1B.5/2 Przebudowa mostu w celu zapewnienia minimalnego prześwitu - most drogowy w km 2,45 rzeki Warty w Kostrzynie nad Odrą* (nazywany dalej PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM) sporządzony w ramach Komponentu 1 – *Ochrona przed powodzią Środkowej i Dolnej Odry*, Podkomponent 1B – *Ochrona przed powodzią na Środkowej i Dolnej Odrze*.

Każdy zainteresowany może:

1. zapoznać się z PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM od dnia 29 czerwca 2020 r. do dnia 20 lipca 2020 r. włącznie (16 dni roboczych) poprzez strony internetowe:
   - Państwowego Gospodarstwa Wodnego Wody Polskie Regionalnego Zarządu Gospodarki Wodnej w Szczecinie, pod adresem – www.szczecin.wody.gov.pl;
   - Biura Koordynacji Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły, pod adresem – www.odrapcu2019.odrapcu.pl;
   - Urzędu Miasta w Kostrzynie nad Odrą pod adresem - www.kostrzyn.pl
   - Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły pod adresem – www.bs.rzgw.szczecin.pl;
1. składać uwagi i wnioski odnośnie PROJEKTU PLANU ZARZĄDZANIA ŚRODOWISKIEM:
   - w formie pisemnej na adres Państwowego Gospodarstwa Wodnego Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Szczecinie, ul. Tama Pomorzańska 13 A, 70-030 Szczecin z dopiskiem „uwagi PZŚ Zadanie 1B.5/2 POPDOW";
   - w formie elektronicznej na adres e-mail: ProjektBS@wody.gov.pl;
   - telefonicznie każdego dnia roboczego trwania upublicznienia pod nr telefonu +48 607 961 261 w godzinach 15.00-16.00,

   w dniach od dnia 29 czerwca 2020 r. do dnia 20 lipca 2020r. włącznie. Instytucją właściwą do rozpatrzenia uwag i wniosków jest PGW Wody Polskie RZGW w Szczecinie (osoba do kontaktu:
   p. Elwira Witek, adres e-mail: elwira.witek@wody.gov.pl).

W 16 dniu roboczym udostępnienia dokumentu, tj. w dniu 20 lipca 2020 r., o godz. 17.00-19.00 odbędzie się elektroniczne spotkanie konsultacyjne w formie webinarium, otwarte dla wszystkich zainteresowanych, na którym przedstawione zostaną informacje o PROJEKCIE PLANU ZARZĄDZANIA ŚRODOWISKIEM, umożliwione zostanie również zadawanie pytań i składanie wniosków.

Aby wziąć udział w ww. webinarium, należy wejść na stronę http://bs.rzgw.szczecin.pl/aktualnosci/, gdzie we wpisie poświęconym spotkaniu konsultacyjnemu projektu Planu Zarządzania Środowiskiem dla Zadania 1B.5/2 zamieszczony będzie bezpośredni link do webinarium. Zostanie ono przeprowadzone w oparciu o program Microsoft Teams. Link oraz instrukcja „Krok po kroku" zostaną umieszczone na ww. stronie co najmniej 10 dni przed planowanym elektronicznym spotkaniem konsultacyjnym.

Obwieszczenie to zostało podane do wiadomości poprzez ogłoszenie w lokalnej prasie (Kurier Szczeciński, Gazeta Lubuska), wywieszenie na tablicy ogłoszeń Urzędu Miasta w Kostrzynie nad Odrą a także na stronach internetowych instytucji wskazanych powyżej.

ANNOUNCEMENT

the following shall be made public:

Due to the state of the epidemic emergency in Poland and in the interest of your health safety, the formula of public consultations of the draft document of the EMP has been changed. There will be no meeting open to all interested parties, however the consultations will be conducted in an electronic form using available (safe) electronic communication channels.

The State Water Holding Polish Waters Regional Water Management Board in Szczecin (PGW Wody Polskie RZGW in Szczecin), the Project Implementation Office for the Odra - Vistula Flood Management Project (PIO) has made available to interested persons and institutions the draft of the **ENVIRONMENT MANAGEMENT PLAN** for the *Contract 1B.5/ 2 Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą* (hereinafter referred to as the DRAFT ENVIRONMENTAL MANAGEMENT PLAN) prepared under the Component 1 - *Flood Protection of the Middle and Lower Odra*, Subcomponent 1B - *Flood Protection on the Middle and Lower Odra.*

Anyone interested may:

1. read the Draft Environmental Management Plan from 29 June 2020 to 20 July 2020 inclusive (16 working days) via the websites of:
   - State Water Holding Polish Waters Regional Water Management Board in Szczecin, at: www.szczecin.wody.gov.pl;
   - Project Coordination Unit for the Odra - Vistula Flood Management Project, at: www.odrapcu2019.odrapcu.pl;
   - Municipality Office in Kostrzyn at www.kostrzyn.pl
   - Flood Protection Project for the Odra and Vistula Basin - www.bs.rzgw.szczecin.pl;
1. submit comments and requests on the DRAFT ENVIRONMENTAL MANAGEMENT PLAN:
   - in writing to the address of the State Water Holding Polish Waters Regional Water Management Board in Szczecin, ul. Tama Pomorzańska 13 A, 70-030 Szczecin with the note "EMP Task 1B.5/2 OVFMP comments";
   - in an electronic form to the e-mail address: ProjektBS@wody.gov.pl;
   - by telephone every working day of the publication at +48 607 961 281 between 3.00 p.m. and 4.00 p.m.,

from 29 June 2020 to 20 July 2020 inclusive. The institution competent to consider comments and applications is the PGW Wody Polskie RZGW in Szczecin (contact person: Ms. Elwira Witek, e-mail address: elwira.witek@wody.gov.pl).

On the 16th working day of making the document publicly available, i.e. on 20 July 2020, between 5 p.m. and 7 p.m., an electronic consultation meeting in the form of a webinar will be held, open to all interested parties, during which information about the DRAFT ENVIRONMENT MANAGEMENT PLAN will be presented, and it will be possible to ask questions and submit requests.

In order to take part in the above mentioned webinar, please go to http://bs.rzgw.szczecin.pl/aktualnosci/, where a direct link to the webinar will be provided in the post dedicated to the consultation meeting of the Draft Environmental Management Plan for the Task 1B.5/2. The webinar will be based on the Microsoft Teams program. The link and the "step-by-step" instruction will be placed at the above page at least 10 days before the planned electronic consultation meeting.

This announcement was made public by an announcement in the local press (Szczecin Supplement to Kurier Szczeciński, Gazeta Lubuska), putting on the announcement board of Municipality Office in Kostrzyn nad Odrą, as well as on the websites of the institutions indicated above.

Załączniki:

Plik	Opis	Rozmiar	Utworzono	Ostatnia modyfikacja
PZŚ_1_B.5_2_Zal_9.pdf		1164 kB	2020-06-29 09:10	2020-06-29 09:10
PZŚ_1_B.5_2_Zal_8.pdf		636 kB	2020-06-29 09:10	2020-06-29 09:10
PZŚ_1_B.5_2_Zal_7.pdf		756 kB	2020-06-29 09:09	2020-06-29 09:09
PZŚ_1_B.5_2_Zal_6.pdf		165 kB	2020-06-29 09:09	2020-06-29 09:09
PZŚ_1_B.5_2_Zal_5b.pdf		168 kB	2020-06-29 09:09	2020-06-29 09:09
PZŚ_1_B.5_2_Zal_5a.pdf		154 kB	2020-06-29 09:09	2020-06-29 09:09
PZŚ_1_B.5_2_Zal_4e.pdf		1431 kB	2020-06-29 09:09	2020-06-29 09:09
PZŚ_1_B.5_2_Zal_4d.pdf		1428 kB	2020-06-29 09:08	2020-06-29 09:08
PZŚ_1_B.5_2_Zal_4c.pdf		1866 kB	2020-06-29 09:08	2020-06-29 09:08
PZŚ_1_B.5_2_Zal_4b.pdf		1846 kB	2020-06-29 09:08	2020-06-29 09:08
PZŚ_1_B.5_2_Zal_4a.pdf		1575 kB	2020-06-29 09:07	2020-06-29 09:07
PZŚ_1_B.5_2_Zal_3.pdf		184 kB	2020-06-29 09:07	2020-06-29 09:07
PZŚ_1_B.5_2_Zal_2.pdf		898 kB	2020-06-29 09:07	2020-06-29 09:07
PZŚ_1_B.5_2_Zal_1.pdf		561 kB	2020-06-29 09:06	2020-06-29 09:06
PZŚ_1_B.5_2_tekst.pdf		1774 kB	2020-06-29 09:06	2020-06-29 09:06
EMP_1B.5_2_Attachment_9.pdf		1174 kB	2020-06-29 09:01	2020-06-29 09:01
EMP_1B.5_2_Attachment_8.pdf		634 kB	2020-06-29 09:01	2020-06-29 09:01
EMP_1B.5_2_Attachment_7.pdf		186 kB	2020-06-29 09:01	2020-06-29 09:01
EMP_1B.5_2_Attachment_6.pdf		160 kB	2020-06-29 09:01	2020-06-29 09:01
EMP_1B.5_2_Attachment_5b.pdf		173 kB	2020-06-29 09:01	2020-06-29 09:01
EMP_1B.5_2_Attachment_5a.pdf		154 kB	2020-06-29 09:01	2020-06-29 09:01
EMP_1B.5_2_Attachment_4e.pdf		240 kB	2020-06-29 09:00	2020-06-29 09:00
EMP_1B.5_2_Attachment_4d.pdf		232 kB	2020-06-29 09:00	2020-06-29 09:00
EMP_1B.5_2_Attachment_4c.pdf		135 kB	2020-06-29 09:00	2020-06-29 09:00
EMP_1B.5_2_Attachment_4b.pdf		163 kB	2020-06-29 09:00	2020-06-29 09:00
EMP_1B.5_2_Attachment_4a.pdf		457 kB	2020-06-29 09:00	2020-06-29 09:00
EMP_1B.5_2_Attachment_3.pdf		137 kB	2020-06-29 09:00	2020-06-29 09:00
EMP_1B.5_2_Attachment_2.pdf		861 kB	2020-06-29 09:00	2020-06-29 09:00
EMP_1B.5_2_Attachment_1.pdf		557 kB	2020-06-29 08:59	2020-06-29 08:59

Fig. 6 Notice on PGW WP RZGW Szczecin website

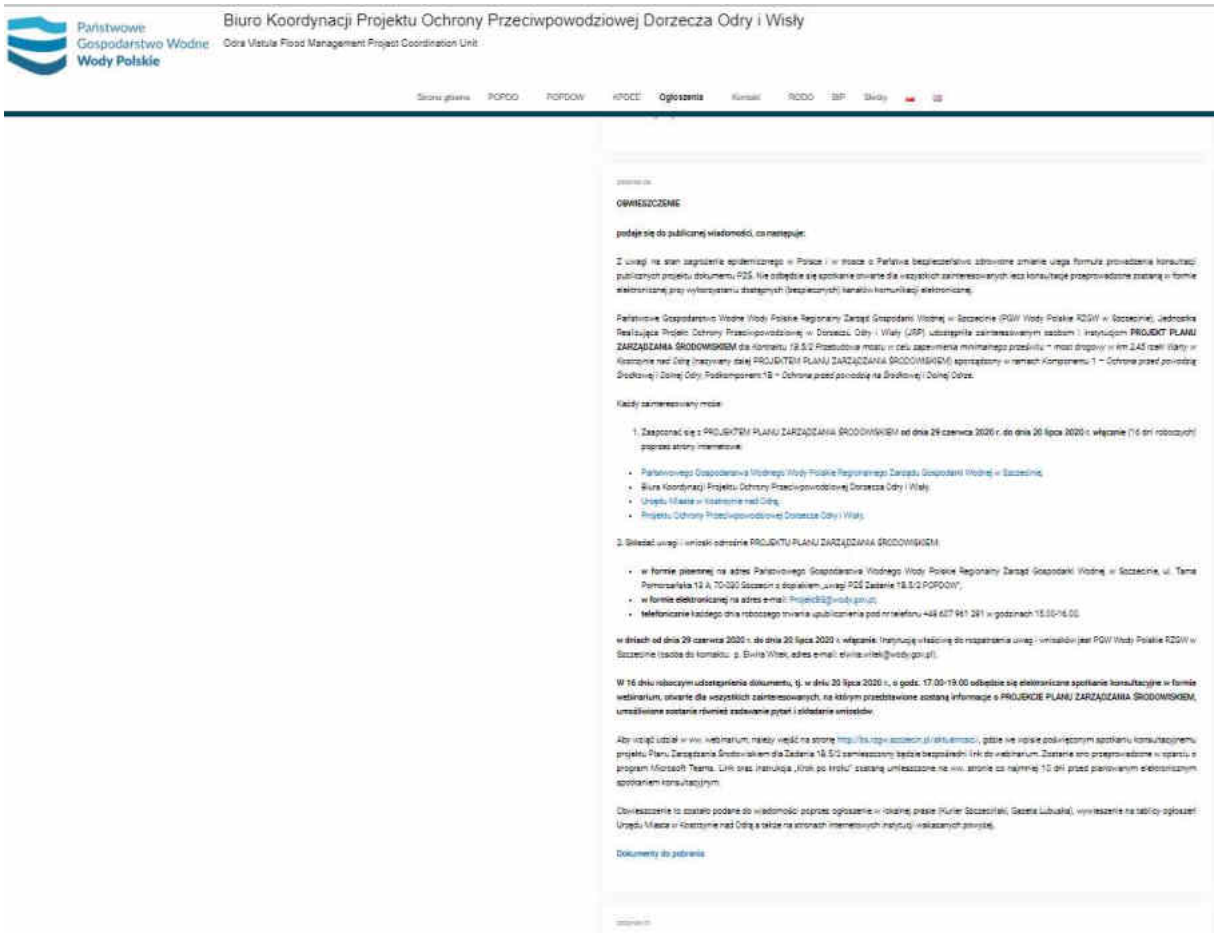


Fig. 7 Content of the draft document on the OVFM PCU website

Fig. 8 Notice on the website of the Kostrzyn nad Odrą City Hall

SWECO

Zadania Aktualności Kontakt ZADAJ PYTANIE

Obwieszczenie o upublicznieniu PZŚ dla zadania 1B.5/2

29.06.2020

OBWIESZCZENIE

podaje się do publicznej wiadomości, co następuje:

Z uwagi na stan zagrożenia epidemicznego w Polsce i w trosce o państwa bezpieczeństwo zdrowotne zmianie ulega formuła prowadzenia konsultacji publicznych projektu dokumentu PZŚ. Nie odbędzie się spotkanie otwarte dla wszystkich zainteresowanych lecz konsultacje przeprowadzone zostaną w formie elektronicznej przy wykorzystaniu dostępnych (bezpiecznych) kanałów komunikacji elektronicznej.

Państwowe Gospodarstwo Wodne Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Szczecinie (PGW Wody Polskie RZGW w Szczecinie), Jednostka Realizująca Projekt Ochrony Przeciwpowodziowej w Dorzeczu Odry i Wisły (JRP) udostępniła zainteresowanym osobom i instytucjom PROJEKT PLANU ZARZĄDZANIA ŚRODOWISKIEM dla Kontraktu 1B.5/2 Przebudowa mostu w celu zapewnienia minimalnego prześwitu - most drogowy w km 2,45 rzeki Warty w Kostrzynie nad Odrą (nazywany dalej PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM) sporządzony w ramach Komponentu 1 – Ochrona przed powodzią Środkowej i Dolnej Odry, Podkomponent 1B – Ochrona przed powodzią na Środkowej i Dolnej Odrze.

SWECO

Zadania Aktualności Kontakt ZADAJ PYTANIE

Announcement about the publication of the ENVIRONMENTAL MANAGEMENT PLAN for the Contract 1B.5/2

29.06.2020

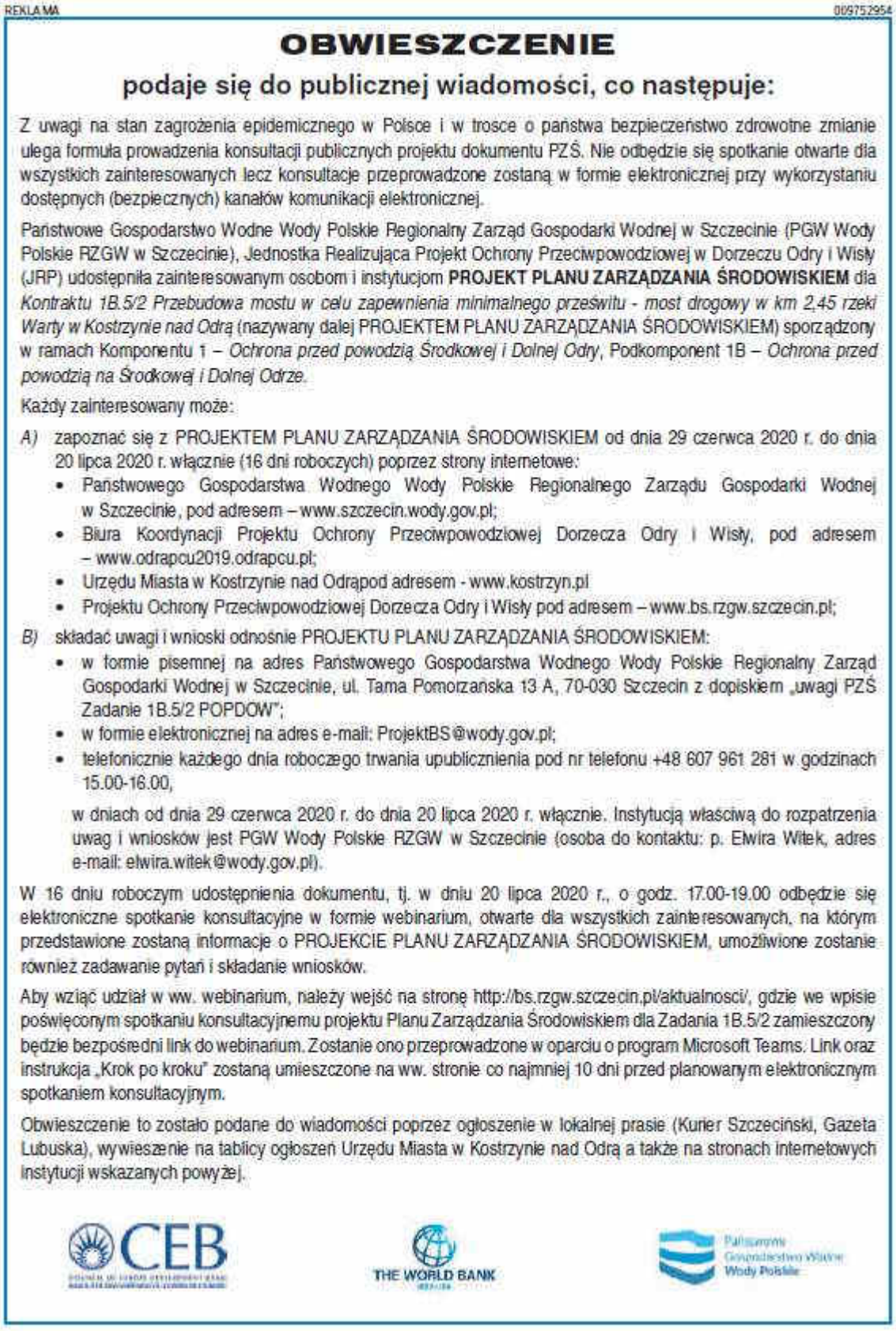
ANNOUNCEMENT

the following shall be made public:

Due to the state of the epidemic emergency in Poland and in the interest of your health safety, the formula of public consultations of the draft document of the EMP has been changed. There will be no meeting open to all interested parties, however the consultations will be conducted in an electronic form using available (safe) electronic communication channels.

The State Water Holding Polish Waters Regional Water Management Board in Szczecin (PGW Wody Polskie RZGW in Szczecin), the Project Implementation Office for the Odra - Vistula Flood Management Project (PIO) has made available to interested persons and institutions the draft of the ENVIRONMENT MANAGEMENT PLAN for the Contract 1B.5/ 2 Reconstruction of the bridge to ensure minimum clearance - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą (hereinafter referred to as the DRAFT ENVIRONMENTAL MANAGEMENT PLAN) prepared under the Component 1 - Flood Protection of the Middle and Lower Odra, Subcomponent 1B - Flood Protection on the Middle and Lower Odra.

Fig. 9 Notice on the Project website – bs.rzgw.szczecin.pl



REKLAMA 009752954

OBWIESZCZENIE

podaje się do publicznej wiadomości, co następuje:

Z uwagi na stan zagrożenia epidemicznego w Polsce i w trosce o państwa bezpieczeństwo zdrowotne zmianie ulega formuła prowadzenia konsultacji publicznych projektu dokumentu PZŚ. Nie odbędzie się spotkanie otwarte dla wszystkich zainteresowanych lecz konsultacje przeprowadzone zostaną w formie elektronicznej przy wykorzystaniu dostępnych (bezpiecznych) kanałów komunikacji elektronicznej.

Państwowe Gospodarstwo Wodne Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Szczecinie (PGW Wody Polskie RZGW w Szczecinie), Jednostka Realizująca Projekt Ochrony Przeciwpowodziowej w Dorzeczu Odry i Wisły (JRP) udostępniła zainteresowanym osobom i instytucjom **PROJEKT PLANU ZARZĄDZANIA ŚRODOWISKIEM** dla *Kontraktu 1B.5/2 Przebudowa mostu w celu zapewnienia minimalnego prześwitu - most drogowy w km 2,45 rzeki Warty w Kostrzynie nad Odrą* (nazywany dalej PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM) sporządzony w ramach Komponentu 1 – *Ochrona przed powodzią Środkowej i Dolnej Odry*, Podkomponent 1B – *Ochrona przed powodzią na Środkowej i Dolnej Odrze.*

Każdy zainteresowany może:

A) zapoznać się z PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM od dnia 29 czerwca 2020 r. do dnia 20 lipca 2020 r. włącznie (16 dni roboczych) poprzez strony internetowe:
- Państwowego Gospodarstwa Wodnego Wody Polskie Regionalnego Zarządu Gospodarki Wodnej w Szczecinie, pod adresem – www.szczecin.wody.gov.pl;
- Biura Koordynacji Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły, pod adresem – www.odrapcu2019.odrapcu.pl;
- Urzędu Miasta w Kostrzynie nad Odrąpod adresem - www.kostrzyn.pl
- Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły pod adresem – www.bs.rzgw.szczecin.pl;

B) składać uwagi i wnioski odnośnie PROJEKTU PLANU ZARZĄDZANIA ŚRODOWISKIEM:
- w formie pisemnej na adres Państwowego Gospodarstwa Wodnego Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Szczecinie, ul. Tama Pomorzańska 13 A, 70-030 Szczecin z dopiskiem „uwagi PZŚ Zadanie 1B.5/2 POPDOW";
- w formie elektronicznej na adres e-mail: ProjektBS@wody.gov.pl;
- telefonicznie każdego dnia roboczego trwania upublicznienia pod nr telefonu +48 607 961 281 w godzinach 15.00-16.00,

w dniach od dnia 29 czerwca 2020 r. do dnia 20 lipca 2020 r. włącznie. Instytucją właściwą do rozpatrzenia uwag i wniosków jest PGW Wody Polskie RZGW w Szczecinie (osoba do kontaktu: p. Elwira Witek, adres e-mail: elwira.witek@wody.gov.pl).

W 16 dniu roboczym udostępnienia dokumentu, tj. w dniu 20 lipca 2020 r., o godz. 17.00-19.00 odbędzie się elektroniczne spotkanie konsultacyjne w formie webinarium, otwarte dla wszystkich zainteresowanych, na którym przedstawione zostaną informacje o PROJEKCIE PLANU ZARZĄDZANIA ŚRODOWISKIEM, umożliwione zostanie również zadawanie pytań i składanie wniosków.

Aby wziąć udział w ww. webinarium, należy wejść na stronę http://bs.rzgw.szczecin.pl/aktualnosci/, gdzie we wpisie poświęconym spotkaniu konsultacyjnemu projektu Planu Zarządzania Środowiskiem dla Zadania 1B.5/2 zamieszczony będzie bezpośredni link do webinarium. Zostanie ono przeprowadzone w oparciu o program Microsoft Teams. Link oraz instrukcja „Krok po kroku" zostaną umieszczone na ww. stronie co najmniej 10 dni przed planowanym elektronicznym spotkaniem konsultacyjnym.

Obwieszczenie to zostało podane do wiadomości poprzez ogłoszenie w lokalnej prasie (Kurier Szczeciński, Gazeta Lubuska), wywieszenie na tablicy ogłoszeń Urzędu Miasta w Kostrzynie nad Odrą a także na stronach internetowych instytucji wskazanych powyżej.

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Fig. 10 Notice in Gazeta Lubuska dated 29.06.2020 r.

OBWIESZCZENIE

podaje się do publicznej wiadomości, co następuje:

Z uwagi na stan zagrożenia epidemicznego w Polsce i w trosce o państwa bezpieczeństwo zdrowotne zmianie ulega formuła prowadzenia konsultacji publicznych projektu dokumentu PZŚ. Nie odbędzie się spotkanie otwarte dla wszystkich zainteresowanych lecz konsultacje przeprowadzone zostaną w formie elektronicznej przy wykorzystaniu dostępnych (bezpiecznych) kanałów komunikacji elektronicznej.

Państwowe Gospodarstwo Wodne Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Szczecinie (PGW Wody Polskie RZGW w Szczecinie), Jednostka Realizująca Projekt Ochrony Przeciwpowodziowej w Dorzeczu Odry i Wisły (JRP) udostępniła zainteresowanym osobom i instytucjom **PROJEKT PLANU ZARZĄDZANIA ŚRODOWISKIEM** dla *Kontraktu 1B.5/2 Przebudowa mostu w celu zapewnienia minimalnego prześwitu – most drogowy w km 2,45 rzeki Warty w Kostrzynie nad Odrą* (nazywany dalej PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM) sporządzony w ramach Komponentu 1 – *Ochrona przed powodzią Środkowej i Dolnej Odry, Podkomponent 1B – Ochrona przed powodzią na Środkowej i Dolnej Odrze*.

Każdy zainteresowany może:

A) zapoznać się z PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM od dnia 29 czerwca 2020 r. do dnia 20 lipca 2020 r. włącznie (16 dni roboczych) poprzez strony internetowe:
- Państwowego Gospodarstwa Wodnego Wody Polskie Regionalnego Zarządu Gospodarki Wodnej w Szczecinie, pod adresem – www.szczecin.wody.gov.pl;
- Biura Koordynacji Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły, pod adresem – www.odrapcu2019.odrapcu.pl;
- Urzędu Miasta w Kostrzynie nad Odrą pod adresem – www.kostrzyn.pl
- Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły pod adresem – www.bs.rzgw.szczecin.pl;

B) składać uwagi i wnioski odnośnie PROJEKTU PLANU ZARZĄDZANIA ŚRODOWISKIEM:
- w formie pisemnej na adres Państwowego Gospodarstwa Wodnego Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Szczecinie, ul. Tama Pomorzańska 13A, 70-030 Szczecin z dopiskiem „uwagi PZŚ Zadanie 1B.5/2 POPDOW";
- w formie elektronicznej na adres e-mail: ProjektBS@wody.gov.pl;
- telefonicznie każdego dnia roboczego trwania upublicznienia pod nr telefonu +48 607 961 281 w godzinach 15.00-16.00,
- w dniach od dnia 29 czerwca 2020 r. do dnia 20 lipca 2020 r. włącznie. Instytucją właściwą do rozpatrzenia uwag i wniosków jest PGW Wody Polskie RZGW w Szczecinie (osoba do kontaktu: p. Elwira Witek, adres e-mail: elwira.witek@wody.gov.pl).

W 16 dniu roboczym udostępnienia dokumentu, tj. w dniu 20 lipca 2020 r., o godz. 17.00-19.00 odbędzie się elektroniczne spotkanie konsultacyjne w formie webinarium, otwarte dla wszystkich zainteresowanych, na którym przedstawione zostaną informacje o PROJEKCIE PLANU ZARZĄDZANIA ŚRODOWISKIEM, umożliwione zostanie również zadawanie pytań i składanie wniosków.

Aby wziąć udział w ww. webinarium, należy wejść na stronę http://bs.rzgw.szczecin.pl/aktualnosci/, gdzie we wpisie poświęconym spotkaniu konsultacyjnemu projektu Planu Zarządzania Środowiskiem dla Zadania 1B.5/2 zamieszczony będzie bezpośredni link do webinarium. Zostanie ono przeprowadzone w oparciu o program Microsoft Teams. Link oraz instrukcja „Krok po kroku" zostaną umieszczone na ww. stronie co najmniej 10 dni przed planowanym elektronicznym spotkaniem konsultacyjnym. Obwieszczenie to zostało podane do wiadomości poprzez ogłoszenie w lokalnej prasie (Kurier Szczeciński, Gazeta Lubuska), wywieszenie na tablicy ogłoszeń Urzędu Miasta w Kostrzynie nad Odrą a także na stronach internetowych instytucji wskazanych powyżej.

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2019-20-A

Fig. 11 Notice in Kurier Szczeciński dated 29.06.2020 r.

SWECO

Państwowe Gospodarstwo Wodne Wody Polskie

PROJEKT OCHRONY PRZECIWPOWODZIOWEJ W DORZECZU ODRY I WISŁY
POŻYCZKA nr 8524-PL

***Sweco Consulting sp. z o.o. – Lider JV*, ul. Łyskowskiego 16, 71-641 Szczecin**
Tel. 605 071 242, email: odra.szczecin@sweco.pl

Nr pisma: POPDOW-OG.101.8.2020 Szczecin, dnia 29.06.2020

ZAPROSZENIE

Szanowni Państwo,

W związku z trwającym procesem upublicznienia PROJEKTU PLANU ZARZĄDZANIA ŚRODOWISKIEM, dla Kontraktu *1B.5/2 Przebudowa mostu w celu zapewnienia minimalnego prześwitu - most drogowy w km 2,45 rzeki Warty w Kostrzynie nad Odrą* sporządzonego w ramach realizowanego Projektu Ochrony Przeciwpowodziowej w Dorzeczu Odry i Wisły (Komponent 1 – Ochrona przed powodzią Środkowej i Dolnej Odry, Podkomponent 1B – Ochrona przed powodzią na Środkowej i Dolnej Odrze), współfinansowanego ze środków Banku Światowego, mamy przyjemność zaprosić Państwa do wzięcia udziału w otwartym spotkaniu, na którym przedstawione zostaną informacje o PROJEKCIE PLANU ZARZĄDZANIA ŚRODOWISKIEM, przeprowadzone zostaną publiczne dyskusje na temat dokumentu oraz uwag złożonych w ramach procesu upublicznienia oraz w trakcie przedmiotowego spotkania.

Webinarium informacyjne odbędzie się po zakończeniu procesu upublicznienia, w dniu 20.07.2020 r. o godz. 17.00-19.00, pod adresem: http://bs.rzgw.szczecin.pl/aktualnosci/, gdzie we wpisie poświęconym spotkaniu konsultacyjnemu projektu Planu Zarządzania Środowiskiem będzie bezpośredni link do webinarium.

Szczegółowe informacje na temat możliwości zapoznania się z dokumentacją oraz wnoszenia uwag znajdują się w obwieszczeniu, dołączonym do niniejszej korespondencji.

Uprzejmie prosimy o potwierdzenie udziału w spotkaniu, za pomocą poczty elektronicznej na adres: odra.szczecin@sweco.pl lub pod numerem telefonu +48 605 071 242.

Z wyrazami szacunku
Krystyna Araszkiewicz
Kierownik Projektu

Otrzymują:
1. Adresat
2. a/a

Załączniki:
1. obwieszczenie o upublicznieniu PZŚ

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Fig. 12 Invitation to the meeting sent to representatives of local governments, private individuals, and NGOs

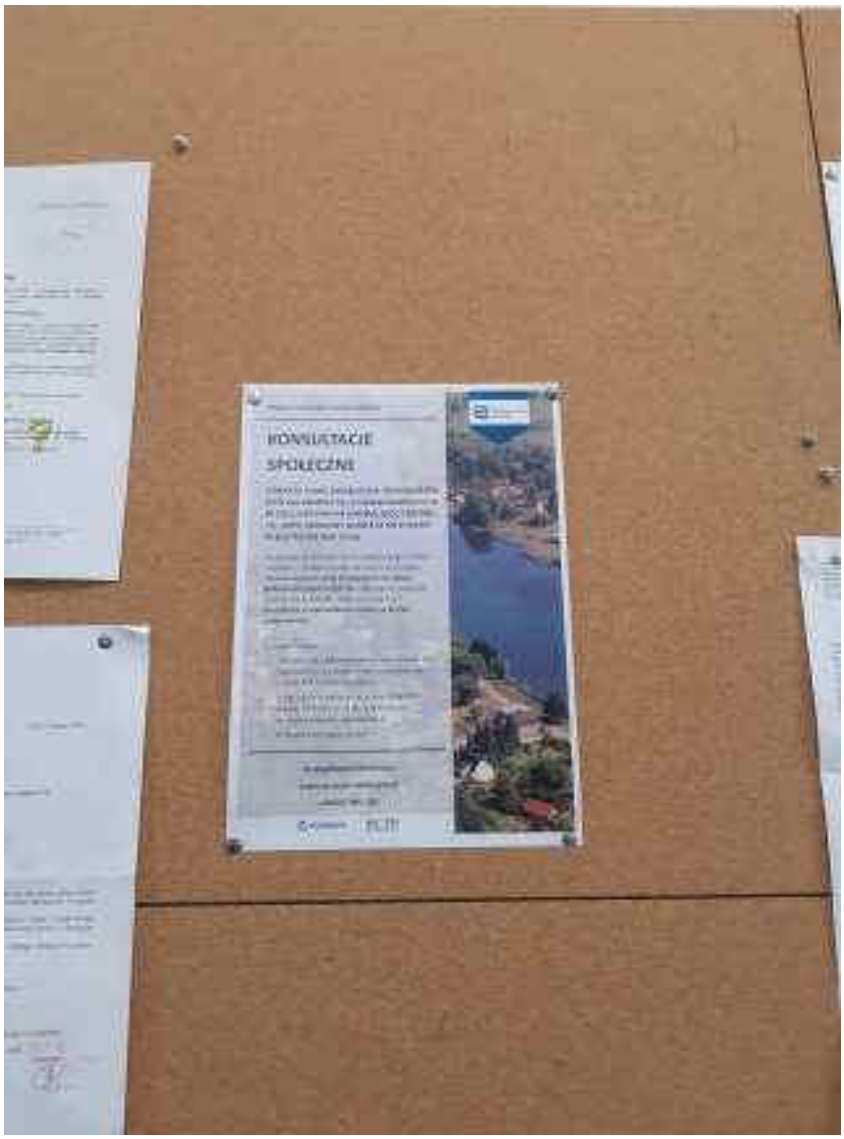

Fig. 13 Poster informing about public consultations, displayed on the notice board of the Kostrzyn nad Odrą City Hall

9. ORGANISATIONAL STRUCTURE OF THE EMP IMPLEMENTATION

The Task, which is the subject of this EMP is implemented within the framework of the Odra - Vistula Flood Management Project (see section 2.1), co-financed from the World Bank, the Council of Europe Development Bank, the Cohesion Fund and the State budget. Therefore, the structure of supervision of the implementation of the EMP must comply with both the Polish law and the World Bank's requirements.

9.1. PROJECT COORDINATION UNIT FOR THE ODRA - VISTULA FLOOD MANAGEMENT PROJECT (PCU OVFMP)

The overall coordination of the implementation of the particular EMPs within the Project is the responsibility of the Project Coordination Unit (PCU), which functions as an organisational unit within the structures of the National Water Management Authority, which is an organisational unit of the Polish Water Holding Polish Waters.

The scope of tasks of PCU OVFMP includes, inter alia:

- Management of tasks of Project Implementation Offices (PIO) and Project Implementing Units (PIU) in the scope of implementation of tasks included in the Projects,
- Technical assistance and support to the PIO and PIU in the implementation of the tasks included in the Projects, including the application of the World Bank procedures on procurement, environmental protection and social issues,
- Preparation of annual work programmes for the Projects and evaluation of their progress,
- Supervising the works under the Projects and evaluation of their progress,
- Ongoing control and monitoring of funds allocated for the implementation of the Projects and participation in the management of funds of the Projects,
- Reporting, including preparation and submission of quarterly reports on the implementation of the Projects to the World Bank, the BRRE and the Steering Committee,

9.2. PROJECT IMPLEMENTATION UNIT (PIU) AND PROJECT IMPLEMENTATION OFFICE

The entity directly responsible for the implementation of the Task and monitoring the progress of its implementation will be the Project Implementing Unit (PIU), i.e. the State Water Holding Polish Waters Regional Water Management Board in Szczecin.

In connection with the implementation of the OVFMP Project, the Project Implementation Office (PIO) was separated within the structure of the PIU, constituting a separate organisational unit and supervised by the Chairman of the State Water Holding Polish Waters. Such a structure is transparent and has a very high decision-making level, which increases the

effectiveness of the Project implementation. In the organisational structure positions of specialists in environmental, technical, public procurement, legal, financial, real estate and resettlement and international cooperation have been appointed, who will be involved in the implementation of the EMP. As a part of the supervision of the implementation of the EMP, the PIO performs the following tasks:

- monitoring of the EMP implementation progress;
- financial management and accounting;
- drawing up the necessary reports for monitoring the implementation of the EMP and coordinating its implementation by all services involved in the implementation of the EMP;

The scope of responsibilities of the PIO employees related to the supervision of the implementation of the EMP is as follows:

- managing, coordinating and supervising the implementation of the EMP by the Consultant and the Contractor;
- direct supervision of the proper implementation of the Task;
- cooperation with the PCU;
- administrative and legal supervision of the implementation of the EMP;
- verification of reports on the implementation of the EMP prepared by the Consultant and the Contractor;
- exercising financial supervision of the implementation of the EMP;
- supervision of the correctness of the application of formal procedures in the implementation of the EMP, resulting, inter alia, from the requirements of the Contract, *Construction Law, Environmental Protection Law* and other relevant administrative decisions and legal acts.

9.3. CONSULTANT / ENGINEER

The role of the Consultant/ Engineer is to support the PIU (State Water Holding Polish Waters Regional Water Management Board in Szczecin) in the effective implementation of the entire investment process - from the preparation of the project to its settlement.

The Consultant/Engineer was selected using the QCBS (Selection based on quality and price) method, in accordance with the "*Guidelines for Selection and Employment of Consultants by World Bank Borrowers"*.

In accordance with the planned structure of the Engineer - Technical Support Consultant team, supervision over the proper performance of construction works and compliance with and implementation of the provisions of the EMP will be performed by the Engineer Team (supervision inspectors in cooperation with the environmental team coordinated by a Key Expert on the environment). In addition to the Key Expert, it is envisaged to involve three experts in the environmental team, i.e. two experts dealing with ongoing monitoring of the EMP implementation by the Contractor, including reporting and documenting activities related to the supervision of the implementation of the EMP, and one expert who will provide support to the Key Expert in the course of implementation contracts for construction works, especially in

situations related to e.g. the need to resolve different opinions of environmental supervision team of the Contractor and the Engineer's team.

In accordance with the scope of activities specified in the Technical Support Consultant Contract, the Engineer-Consultant will be obliged to ensure that the team is composed in such a way that it can properly supervise the implementation of the EMP through, inter alia, the following:

- monitoring of the EMP implemented by the Contractor;
- monitoring of the activities of the Contractor;
- checking the quality of construction works carried out by the Contractor and embedded construction products, and in particular preventing the use of defective products and products not permitted for use in the construction industry;
- representing the State Water Holding Polish Waters, Regional Water Management Board in Szczecin on the construction site by controlling the compliance of its implementation with the design and construction permit, environmental protection regulations and technical knowledge rules;
- supervising all issues related to the environmental protection by specialists in the field of environmental protection and other Engineer's personnel;
- constant monitoring of the correctness of execution of measures mitigating the negative impact on the environment;
- carrying out additional tests in case of the need to verify the Contractor's reports;
- identification of problems resulting from the harmful impact of the works on the environment and presenting proposals for solving these problems;
- checking and acceptance of construction works that will be covered or removed from sight, participating in tests and technical acceptance tests of technical systems and equipment and preparing and participating in acceptance activities of finished construction facilities and their commissioning;
- confirmation of actually executed works and remedying of defects, as well as, at the request of the Investor, control of construction settlements.

Social issues will be monitored at the works implementation stage by the real estate team of the Consultant, coordinated by the Key Real Estate Expert, who will work closely with the team of construction supervision inspectors.

9.4. CONTRACTOR

In order to carry out the construction works, a Contractor will be selected, which will responsible for the implementation of the EMP. The Contractor's obligations in this respect include:

- execution of construction works according to the rules specified in the EMP, in accordance with the contractual terms and conditions and the design documentation, and in accordance with applicable laws and requirements of administrative decisions issued for the Task;

- ensuring environmental supervision team of the Contractor consisting of: botanist-phytosociologist, dendrologist, zoologist-ichthyologist, zoologist-herpetologist, zoologist-ornithologist, zoologist-teriologist, zoologist-chiropterologist, zoologist-entomologist;
- implementation of the Engineer's recommendations (including environmental supervision specialists and investor supervision inspector) concerning the implementation of the EMP;
- ensuring that the following are prepared prior to the commencement of construction: the Health and Safety Protection Plan (BIOZ) plan, the Waste Management Plan, the Construction Site Flood Protection Plan for the duration of works as well as the construction site organisation project;
- submission with the bid of the signed ES Code of Conduct (thus, the Contractor acknowledges the necessity to apply the requirements contained therein in each phase of the Contract execution);
- presenting for the Contract Engineer's approval the Management Strategy and Implementation Plans described in the bidding documentation, developed at the bid submission stage, and verifying these documents as the result of periodic recommendations of the CI;
- keeping the construction site documentation;
- preparation of monthly reports and inspection reports;
- preparation of reports on environmental protection;
- applying to the Investor for changes in design solutions, if it is justified by the need to increase the safety of construction works or improve the construction process in the scope concerning the implementation of the EMP.

10. TIME SCHEDULE FOR THE EMP IMPLEMENTATION AND REPORTING PROCEDURES

The implementation of the EMP enables the parties involved in the preparation, implementation and supervision of the Task:

- identification of various environmental aspects with a significant impact on the condition of the environment, thanks to which they can be controlled, corrected, mitigated, but - as the result - they bring economic effects;
- correction of adverse effects of the works carried out during the implementation for the benefit of the environment and financial results;
- determination of objectives and tasks implemented within the adopted environmental policy, covered by the EMP, which require expenditures and bring notable effects;
- identification and elimination of potential risks and accidents, prevention and elimination of environmental effects, which may be related to them and entail losses disproportionate to the preventive costs of the loss;
- rational use of natural assets, with minimal environmental losses and optimal cost generation.

Moreover, the implementation of recommendations and actions resulting from the EMP may reduce or even eliminate the risk on the Contract, in particular:

- risk of omission of the environmental protection issues in the process of the Task implementation by the Contractor;
- risk of escalation of protests of local communities as the result of the Contractor's failure to comply with the work technology and environmental procedures approved by the Engineer;
- risk of additional environmental penalties;
- risk of incurring additional losses in the environment.

Taking into account the importance of issues determining the environmental and social conditions, the following procedures for the implementation of the EMP are envisaged:

- before selecting the Contractor, the Employer will submit a draft of this EMP to the World Bank for its opinion;
- the EMP will then be subject to public consultations;
- after the public consultations (and supplementing the document with the results of the consultations), the EMP will be completed and the final version will be submitted to the World Bank for approval;
- after the approval of the EMP by the World Bank, the final document will be included in the bidding documentation for the selection of the Contractor;
- all activities of the Contractor will be reported at regular intervals (monthly), in paper and electronic format, with respect to the obligations under the EMP and other contractual documents. These reports will be subject to approval by the Engineer and the Employer.

The environmental monitoring in the scope of the impact of the Task on the environment consists, inter alia, in:

1. Control of the execution of construction works related to the implementation of the Task under the supervision of a team of environmental specialists appointed by the Contractor for the Contract implementation period.

2. The team of environmental specialists of the Contractor shall carry out activities including, but not limited to:

- review and ongoing control of the area covered by the construction and hydraulic engineering Works prior to their commencement and inspections during the execution of construction works, together with preparation of relevant reports, constituting documentation of the proper performance of environmental supervision and, at the same time, informing about the proper implementation of mitigation measures,
- formulating and submitting to the Engineer conclusions regarding the need to take mitigation measures (including their implementation) necessary to mitigate the potential adverse effects of the Task on natural habitats and species of fauna and flora of interest to the Community and subject to legal protection (species protection), unforeseeable and/or impossible to reveal at the stage of determining the conditions of the implementation of the Task in question as a part of the procedure to issue a decision on environmental conditions. The measures can only be implemented after the Engineer's approval,
- obtaining, if necessary, the necessary permits to derogate from the prohibitions of species protection of plants, fungi or animals in accordance with the rules and procedure laid down in the Act on Nature Conservation,
- reporting in the form of periodical reports.

3. The Contractor will appoint specialists in the following fields as a part of the team of environmental specialists: botanist/phytosociologist, fish fauna specialist, herpetologist, bird fauna specialist, mammalian fauna specialist, bat fauna specialist, entomologist. The above mentioned specialists must have documented experience in this field and have education in the field of environment protection or related fields. One specialist can combine a maximum of two of these functions.

At the stage of the works implementation, it is planned that the Contractor will prepare collective reports on environmental monitoring, confirmed by specialists of the environmental team of the Contractor's team, approved by the environmental supervision of the Engineer. The detailed scope of the report will be determined by the Engineer (commencement report, periodical - monthly, quarterly, ad-hoc, closing), he / she will also determine the dates of their execution. The Contractor's environmental team shall also prepare periodic reports, submitted to the environmental protection authorities in writing in accordance with the requirements of administrative decisions issued in connection with the implementation of the Task. These

reports (in advance, two weeks before the date of submission to the authority) shall be submitted to the Engineer.

The Project reporting system will be based, however, on monthly reports submitted by Contractors to the PIO through the Engineer and on monthly reports from the Engineer. As a part of the monthly reports or as a separate document, monthly reports on the implementation of the EMP (Contractor and Engineer) will also be prepared. Collective quarterly reports will also be prepared on this basis.

The PIU shall submit quarterly and monthly reports to the PCU in the part concerning the tasks carried out by them. They will contain the required set of information and descriptions to enable the PCU to prepare a quarterly report on the Project. Moreover, especially in case of problems with the implementation of the Task, the PCU will expect from the PIO the submission of summaries and data, including more detailed information and explanations, on a monthly basis.

The following reporting procedures have been established:

1) Reporting:
    a) reports (commencement, monthly, quarterly, final), reports to the environmental authorities prepared by the Works Contractor,
    b) Engineer's review of reports,
    c) submission of a report to the Employer (for information purposes),
    d) submission of reports to the environmental protection authorities by the Engineer,
    e) submission of a quarterly report by the PIU to the PCU.
2) Archiving:
    a) Contractor: 1 copy of each report in electronic version for 5 years from the date of completion of the Contract,
    b) Engineer: 1 copy of each report in electronic version for 5 years from the date of completion of the Contract,
    c) Employer: 1 copy of each report in electronic version for 5 years from the date of completion of the Contract.
3) Evaluation - ongoing evaluation of the results of the implementation of planned activities resulting from the EMP. Current analysis of documentation (Contractor's Reports) by the Engineer. Providing the Employer with reliable information on the course of the construction process, with particular emphasis on the implementation of actions reducing negative impact on the environment and recommendations resulting from the environmental decisions.

The PCU shall also prepare, at quarterly intervals, reports submitted to the World Bank as a part of the Project's quarterly reports.

The following are planned:

- *ex-ante* evaluation: Report prior to the commencement of the Contract implementation (Engineer's Report),
- ongoing evaluation: Engineer's quarterly reports,
- *ex-post* evaluation:
  - ✓ Report after completion of the Contract implementation (Final Report from the EMP prepared by the Contractor and the Engineer),
  - ✓ Report on the EMP after the defects notification period prepared by the Engineer.

11. LIST OF SOURCE MATERIALS

1) Report on the environmental impact of the project entitled "Demolition and construction of the road bridge in km 107+211 of the national road No. 31 in Kostrzyn nad Odrą (km 2.45 of the Warta River) implemented within the framework of the Odra - Vistula Flood Management Project (Task 1B.5 Reconstruction of bridges to ensure minimum clearance)", Sweco Consulting, 2018 (with additions).
2) Concept: Task 1B.5 Reconstruction of bridges - road bridge in km 2.45 of the Warta River in Kostrzyn nad Odrą, Sweco Consulting, 2017.
3) Technical concept: Somer Island - compensatory actions, Sweco Consulting sp. z o.o., 11.2019.
4) Decision of the Mayor of Kostrzyn nad Odrą of 14.02.2020, Reference No.:GK.6220.9.2018.SSt on environmental conditions named "Extension of the national road DK 31 within the framework of the task named "Demolition and construction of a road bridge in km 107+211 of the national road No. 31 in Kostrzyn nad Odrą (km 2.45 of the Warta River) implemented as part of the Odra - Vistula Flood Management Project "Task 1B.5 Reconstruction of bridges to ensure minimum clearance".
5) Project Operational Manual (POM) for the Odra - Vistula Flood Management Project. OVFMP Project Coordination Unit. Wrocław, 2015 and its update (July 2017).
6) Decision of the Regional Director for Environmental Protection in Gorzów Wielkopolski, Reference No.: WZŚ.4221.21.2019.AN of 14.02.2019 agreeing on the implementation of the project named "Demolition and construction of a road bridge in km 107+211 of the national road No. 31 in Kostrzyn nad Odrą (km 2.45 of the Warta River)" and the decision of the Regional Director for Environmental Protection in Gorzów Wielkopolski, Reference No.: WZŚ.4221.52.2019.AN of 18.04.2019 sustaining the position expressed in the ruling of 14.02.2019.
7) Decision of the Minister of Environment of 08.10.2019, Reference No.: DOP-WPN.436.164.2019.ŁN, 997731.3034781.2303313, authorising derogations from certain prohibitions applicable to species subject to species protection in the area of the "Warta Mouth" National Park.
8) Decision of General Director for Environmental Protection of 18.06.2019, Reference No.: DzP-WG.6401.01.17.2019.eb, allowing to conduct incidental, intentional destruction of up to 20 larvae of the green snaketail.
9) Decision of the Regional Director for Environmental Protection in Gorzów Wielkopolski of 08.08.2019, Reference No.: WPN-I.6401.248.2019.KS, granting permit for certain actions banned for the protected species.
10) Decision of Marshal of Lubuskie Voivodeship of 24.02.2020, Reference No.: DW.I.7131.2.2020, allowing to perform the action of disturbance for the following game species: mallard (*Anas platyrhynchos*), greylag goose (*Anser anser*), wood pigeon (*Columba palumbus*) including the decision of 18.03 2020 on correcting error.

11) Environmental and Social Management Framework Plan for the Odra - Vistula Flood Management Project - final document. RZGW *[Regional Water Management Board]* in Szczecin, RZGW in Wrocław, RZGW in Kraków, Lubuski ZMiUW *[Board of Land Amelioration and Water Facilities]* in Zielona Góra, West Pomeranian ZMiUW in Szczecin, Świętokrzyski ZMiUW in Kielce, Dolnośląski ZMiUW in Wrocław, Małopolski ZMiUW in Kraków, Podkarpacki ZMiUW in Rzeszów, IMiGW - State Research Institute. April 2015.

12. LIST OF ATTACHMENTS

Attachment 1. Plan of mitigation measures

Attachment 2. Plan of monitoring actions

Attachment 3. List of national legal acts related to environmental protection

Attachment 4. Copies of administrative decisions on environmental protection issued for the Task

Attachment 4a. Decision of the Mayor of Kostrzyn nad Odrą of 14.02.2020, Reference No.: GK.6220.9.2018.SSt on environmental conditions named "Extension of the national road DK 31 within the framework of the task named "Demolition and construction of a road bridge in km 107+211 of the national road No. 31 in Kostrzyn nad Odrą (km 2.45 of the Warta River) implemented as part of the Odra - Vistula Flood Management Project "Task 1B.5 Reconstruction of bridges to ensure minimum clearance".

Attachment 4b. Decision of the Minister of Environment of 08.10.2019, Reference No.: DOP-WPN.436.164.2019.ŁN, 997731.3034781.2303313, authorising derogations from certain prohibitions applicable to species subject to species protection in the area of the "Warta Mouth" National Park.

Attachment 4c. Decision of General Director for Environmental Protection of 18.06.2019, Reference No.: DzP-WG.6401.01.17.2019.eb, allowing to conduct incidental, intentional destruction of up to 20 larvae of the green snaketail.

Attachment 4d. Decision of the Regional Director for Environmental Protection in Gorzów Wielkopolski of 08.08.2019, Reference No.: WPN-I.6401.248.2019.KS, granting permit for certain actions banned for the protected species.

Attachment 4e. Decision of Marshal of Lubuskie Voivodeship of 24.02.2020, Reference No.: DW.I.7131.2.2020, allowing to perform the action of disturbance for the following game species: mallard (*Anas platyrhynchos*), greylag goose (*Anser anser*), wood pigeon (*Columba palumbus*), including the decision of 18.03.2020 on correcting error.

Attachment 5a. Map with Task location against the background of protected areas (Natura 2000)

Attachment 5b. Map with the location of the Task against the background of protected areas (reserves, landscape parks, nature and landscape complexes, ecological usable lands)

Attachment 6. Map with location of general elements of the Task

Attachment 7. Letter of the Lubuskie Voivodship Conservator of Monuments

Attachment 8. Requirements in the scope of restoration of natural habitats

Attachment 9. Scope of work within Somer island - compensatory measures and within " Warta Mouth" National Park an excerpt from the technical concept

Attachment 10. Decision of State Water Holding Polish Waters Director of the Catchment Board in Gorzow Wielkopolski of 23.07.2020 (Reference No.: PO.ZUZ.1.4210.165m.2020.MK) granting water permit with a letter explaining the records of decision of 31.07.2020 (Reference No.: PO.ZUZ.1.4210.165m.2020.MK_ED).