



Państwowe
Gospodarstwo Wodne
Wody Polskie

*State Water Holding Polish Waters
Regional Water Management Authority in Cracow*

ENVIRONMENTAL MANAGEMENT PLAN

FINAL VERSION

ODRA-VISTULA FLOOD MANAGEMENT PROJECT

Loan Agreement no. 8524 PL

Environmental category B – in accordance with WB OP 4.01

Component 3:

Flood Protection of the Upper Vistula

Subcomponent 3A:

Flood Protection of Upper Vistula Towns and Cracow

Works Contract 3A.4

*Extension of a section of the right embankment downstream of the Dąbie Barrage,
including development of a flood gate in the area of a repair yard*

<i>Issue</i>	<i>Date</i>	<i>Authors</i>	<i>Verified by</i>	<i>Client's approval</i>	<i>Description</i>
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ODRA-VISTULA FLOOD MANAGEMENT PROJECT

co-financed by:

World Bank - International Bank for Reconstruction and Development (WB)

– Loan Agreement no. 8524 PL,

Council of Europe Development Bank (CEB)

– Frame Loan Agreement no. LD 1866,

The European Union Cohesion Fund (OPIE 2014-2020), and

State Budget

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Environmental category B – according to OP 4.01 WB

Project Implementation Unit:

State Water Holding Polish Waters

represented by the Director

of Regional Water Management Authority in Cracow

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Document developed by:

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OVFM PIU

AECOM Polska Sp. z o.o.

Technical Assistance Consultant

Cracow – September 2020

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LIST OF BASIC DEFINITIONS AND ABBREVIATIONS APPLIED IN THIS EMP

Name	Description
BGW	Body of Groundwater
BIOZ Plan	Health and Safety Plan developed based upon Article 21a of the Act of July 7, 1994 – Building Law Act
BSW	Body of Surface Water
CE	Contract Engineer
CEB	Council of Europe Development Bank https://coebank.org/en/
Consultant / Engineer / Consultant Engineer	Company or legal person providing services for the Investor Technical Assistance Consultant for the OVFMP Project – AECOM Polska Sp. z o.o.
Contract / Contract 3A.4 / Works Contract / Works Contract 3A.4	Works Contract 3A.4 <i>Extension of a section of the right embankment downstream of the Dąbie Barrage, including development of a flood gate in the area of a repair yard</i>
Contractor	Company or a legal person implementing the Works Contract 3A.4
Designer	Company or a legal person drawing up the design documentation
DQAP / SPZJ	Detailed Quality Assurance Plan
EHS Guidelines	World Bank Group Environmental, Health, and Safety Guidelines https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/EHS-Guidelines/
EIA	Environment Impact Assessment
EMP	Environmental Management Plan
Environmental Decision (ED)	Decision on environmental conditions
Epidemic risk state	Legal situation introduced in a given area in connection with the risk of occurrence of an epidemic, in order to undertake anti-epidemic actions as specified in the Act on combating infectious diseases
Epidemic state	Legal situation introduced in a given area in connection with the occurrence of an epidemic, in order to undertake anti-epidemic and preventive actions to minimize the effects of an epidemic as specified in the Act on combating infectious diseases

Name	Description
ES	The Environmental and Social World Bank Policy – ES, concerning environmental and social issues (i.e. in the scope of the environmental protection, health and safety at work and of the social issues, including gender equality, protection of minors, protection of particularly vulnerable people (including the disabled), sexual harassment, sexual violence, awareness and prevention of HIV/AIDS)
ESMF	Environmental and Social Management Framework http://odrapcu.pl/doc/OVFMP/Environmental_and_Social_Management.pdf
GDOŚ	General Directorate for Environmental Protection
H&S	Health and Safety
IMGW-PIB	Institute of Meteorology and Water Management National Research Institute
KZGW	National Water Management Authority
LA&RAP	Land Acquisition and Resettlement Action Plan
LSDP	Local Spatial Development Plan
MGR	Major Groundwater Reservoirs
MZMiUW	Małopolski Board of Amelioration and Hydraulic Structures in Cracow
PAD	Project Appraisal Document for the World Bank approval of a Loan to the Polish Government to implement OVFMP http://documents.worldbank.org/curated/en/320251467986305800/Poland-Odra-Vistula-Flood-Management-Project
PCU / OVFM PCU	Odra-Vistula Flood Management Project Coordination Unit http://odrapcu2019.odrapcu.pl/en/welcome/
PGW WP	State Water Holding Polish Waters
PIO	Project Implementation Office – created within PIU separate organizational unit responsible for the implementation of Works Contract
PIU / OVFM PIU	OVFM Project Implementation Unit
PIU / Investor / Employer (to December 31, 2017)	Małopolski Board of Amelioration and Hydraulic Structures in Cracow
PIU / Investor / Employer (from January 1, 2018)	State Water Holding Polish Waters, represented by the Director of Regional Water Management Authority in Cracow / OVFM Project Implementation Unit

Environmental Management Plan for the OVFMP – Subcomponent 3A – Works Contract 3A.4:
*Extension of a section of the right embankment downstream of the Dąbie Barrage,
including development of a flood gate in the area of a repair yard*

Name	Description
POM	Project Operations Manual prepared by the Odra Vistula Flood Management Project Coordination Unit, Wrocław 2015 http://www.odrapcu.pl/doc/POM_PL.pdf the binding version is the English one: http://www.odrapcu.pl/doc/POM_ENG.pdf
Project / OVFMP / OVFM Project	Odra-Vistula Flood Management Project
RDOŚ	Regional Directorate for Environmental Protection
Roads authority	Agency responsible for management of public roads in accordance with the Act on public roads
RZGW	Regional Water Management Authority
Waste MP	Waste Management Plan
WIOŚ	Provincial Inspectorate for Environmental Protection
World Bank (WB)	International Bank for Reconstruction and Development http://www.worldbank.org/

LIST OF ABBREVIATED TITLES OF LEGAL ACTS APPLIED IN THIS EMP

Titles, publication reference and abbreviated titles of legal acts quoted within contents of this EMP are given in the table below.

Abbreviated title	Full title (with publication reference)
<i>APC</i>	The Act of June 14, 1960 Code of Administrative Procedure (consolidated text: Journal of Laws of 2020, item 256 as amended)
<i>CC</i>	The Act of April 23, 1964 Civil Code (consolidated text: OJ of 2019, item no. 1145 as amended)
<i>LC</i>	The Act of June 26, 1974 Labour Code (consolidated text: OJ of 2020, item no. 1320)
<i>PC</i>	The Act of June 6, 1997 Penal Code (consolidated text: OJ of 2020, item no. 1444)
<i>BIOZ Regulation</i>	Regulation of the Minister of Infrastructure of June 23, 2003 on Information Concerning Safety and Health Protection and Safety and Health Protection Plan (Journal of Laws of 2003, No.120, item 1126)
<i>Noise level Regulation</i>	Regulation of the Minister of Environment of June 14, 2007 on admissible noise levels in the environment (OJ of 2014, item no. 112)
<i>Regulation on the protection of fungi species</i>	Regulation of the Minister of Environment of October 9, 2014 on the protection of fungi species (OJ of 2014, item no. 1408)
<i>Regulation on the protection of plant species</i>	Regulation of the Minister of Environment of October 9, 2014 on the protection of plant species (OJ of 2014, item no. 1409)
<i>Regulation on the protection of animal species</i>	Regulation of the Minister of Environment of December 16, 2016 on the protection of animal species (OJ of 2016, item no. 2183 as amended)
<i>Regulation on works prohibited for juveniles</i>	Regulation of the Council of Ministers of August 24, 2004 on the list of prohibited work for juveniles and the conditions for their employment in some of these works (consolidated text: OJ of 2016, item no. 1509)
<i>EIA Regulation</i>	Regulation of the Council of Ministers of September 10, 2019 on the investment that may significantly affect the environment (consolidated text: OJ of 2019, item no. 1839)
<i>Water MP</i>	Regulation of the Council of Ministers of October 18, 2016 on Water Management Plan for waters within the Vistula River Basin (Journal of Laws 2016, item 1911)

Abbreviated title	Full title (with publication reference)
<i>Act on public roads</i>	The Act of March 21, 1985 on the public roads (consolidated text: OJ of 2020, item no. 470 as amended)
<i>EPI Act</i>	The Act of July 20, 1991 on the Environmental Protection Inspectorate (consolidated text: OJ of 2020, item no. 995 as amended)
<i>Waste Act</i>	The Act of December 14, 2012 on the waste (consolidated text: OJ of 2020, item no. 797 as amended)
<i>EIA Act</i>	Act of October 3, 2008 on access to information on the environment and its protection, public participation in environment protection and environmental impact assessments (consolidated text, Journal of Laws of 2020, item 283, as amended)
<i>NP Act</i>	Act of April 16, 2004 on the nature protection (consolidated text, Journal of Laws of 2020, item 55 as amended)
<i>Act on combating infectious diseases</i>	The Act of December 5, 2008 on preventing and combating infections and infectious diseases in humans (consolidated text: OJ of 2019, item no. 1239 as amended)
<i>Act on heritage protection</i>	The Act of July 23, 2003 on the protection of heritage and on the care for heritage (consolidated text: OJ of 2020, item no. 282 as amended)
<i>SLI Act</i>	The Act of April 13, 2007 on the State Labour Inspectorate (consolidated text: OJ of 2019, item no. 1251)
<i>SSI Act</i>	The Act of March 14, 1985 on the State Sanitary Inspectorate (consolidated text: OJ of 2019, item no. 59 as amended)
<i>EPL Act</i>	The Act of April 27, 2001 Environmental Protection Law (consolidated text: OJ of 2020, item no. 1219 as amended)
<i>Building Law Act</i>	Act of July 7, 1994, Construction Law (consolidated text: Journal of Laws of 2020, item 1333)
<i>Water Law Act</i>	The Act of July 20, 2017 Water Law (consolidated text: OJ of 2020, item no. 310 as amended)
<i>Equal Treatment Act</i>	The Act of December 3, 2010 on implementation of some regulation of the European Union in reference to equal treatment (consolidated text: OJ of 2016, item no. 1219 as amended)
<i>Damage Act</i>	The Act of April 13, 2007 on preventing damages to the environment and their removal (consolidated text: OJ of 2019, item no. 1862 as amended)

Summary

This Environmental Management Plan (EMP) refers to Works Contract 3A.4 *Extension of a section of the right embankment downstream of the Dąbie Barrage, including development of a flood gate in the area of a repair yard.*

Contract 3A.4 remains a part of Subcomponent 3A implemented within *Odra-Vistula Flood Management Project* (OVFMP), co-financed by the International Bank for Reconstruction and Development (World Bank), and by the Council of Europe Development Bank, European Union Cohesion Fund, and by the State Budget.

This EMP includes the following elements:

- Brief description of the OVFMP Project (Chapter 1.1);
- Description of Works Contract 3A.4, to which this EMP refers to (Chapter 2);
- Institutional, legal and administrative conditions for implementation of the aforementioned Contract with specified binding state legal acts on environmental protection, main stages of the EIA procedure, and also the current course of EIA procedure for the aforementioned Contract (Chapter 3);
- Description of individual elements of the environment in the area of the aforementioned Contract (Chapter 4);
- Summary of the environmental impact assessment (Chapter 5);
- Description of mitigation measures to eliminate or limit the adverse impact of the aforementioned Contract on the environment (Chapter 6), including a tabulated summary of those measures (Appendix 1 – Plan of mitigation measures);
- Description of environmental monitoring measures for the aforementioned Contract (Chapter 7), including a tabulated summary of those measures (Appendix 2 – Plan of monitoring measures);
- Description of the course of public consultations on particular stages of environmental documentation development for the aforementioned Contract (Chapter 8);
- Description of the organizational structure for implementation of the EMP (Chapter 9);
- Implementation schedule and description of reporting procedures (Chapter 10).

Appendices to this EMP include: a tabulated summary for the plan of mitigation measures (Appendix 1) and for the plan of monitoring measures (Appendix 2), the list of national legal acts related to environmental protection (Appendix 3), copies of decisions, resolutions, permits and / or notes referring to the environmental protection (Appendix 4) and graphical appendices, including: a map presenting location of the Contract (Appendix 5), a map with location of the Contract in reference to protected areas (Appendix 6), a map with location of the Contract in reference to areas under potential flood threat (Appendix 7), a map with location of the Contract in reference to areas excluded from the potential flood threat (Appendix 8), a map presenting location of the Contract in reference to natural habitats and protected species occurrence sites (Appendix 9), and a map with location of the Contracts' elements (Appendix 10).

Characteristics of the Works Contract

The Works Contract 3A.4 concerns the construction, extension and reconstruction of the existing flood embankment on the right bank of the Vistula River upstream and downstream of the Płaszów port in Cracow, together with the construction of a flood gate on the inlet channel to the Płaszów port. The Contract will be executed in Małopolskie Province, within the District of the City of Cracow, in the Municipality of Cracow.

Scope of the Works Contract

The scope of Works Contract 3A.4 comprises the following elements:

- reconstruction and extension of the existing flood protection embankment on the right bank of the Vistula upstream and downstream the Płaszów port, with a total length of approx. 290 m (raising and widening of the embankment crest, construction of an anti-filtration screen, connection of the embankment with the proposed flood protection gate and adjacent facilities;
- reconstruction and extension of the existing embankment descent roads and crossings;
- demolition of the structures located on the body or in the immediate vicinity of the flood embankment;
- rip-rap revetment of the right section of the Vistula bank downstream of the hydroelectric power plant on the Dąbie barrage;
- construction of a flood gate in the outlet of the port channel in the Płaszów port;
- construction of a service footbridge over the flood protection gate;
- execution of guide vanes made of steel piling sections at the entrance and exit of the flood gate;
- construction of a berth on the right bank of the port channel downstream of the proposed flood gate;
- revetment of slopes and bottom of the port channel upstream and downstream of the proposed flood gate;
- reconstruction and construction of service yards and roads in the vicinity of the flood embankment and flood gate;
- redevelopment, protection, disassembly and construction of power networks and teletechnical network;
- site grading of the embanked area and the area beyond the embankment.

Need to implement the Works Contracts

The implementation of Works Contract 3A.4 results from the necessary improvement of flood protection of developed areas on the right bank of the Vistula River within the borders of the city of Cracow and the reduction of flood losses in the above-mentioned areas by improving flood protection on the right bank of the Vistula River in Cracow upstream and downstream of the Płaszów port (i.e. at the section between the Dąbie barrage and the start of the flood embankment planned for modernisation as part of the Works Contract 3A.1/2¹).

The works in question supplement a gap in the flood protection system of the Vistula river valley in Kraków, complementing the project titled “*Completion of the rehabilitation of the flood embankments of the Vistula River in Kraków*”, which have been included on List no. 1 under item “ID 1_670_W” (ordinal number: 996) in Appendix no. 2 titled “*Investments that do not affect reaching the good status of water adversely or that do not deteriorate the status of water*” to the MasterPlan for the Vistula river-basin (2014)².

Institutional, legal, and administrative conditions

Works Contract 3A.4 is implemented in accordance with relevant state regulations on the environmental protection and in conformity with proper policies of the World Bank, while considering its characteristics, expected potential impact on the environment, and location in reference to the protected sites.

Status of administrative procedures for the EIA

In case of the Works Contract in question, in year 2020 the following administrative decisions in the scope of environmental protection have been issued:

- Decision of the Regional Director for Environmental Protection in Cracow dated February 28, 2020 on environmental conditions (ref. no.: OO.420.4.1.2019.BM – Appendix 4a to this EMP).
- Decision of the Regional Director for Environmental Protection in Cracow dated July 02, 2020 allowing for departure from bans binding in reference to animals under protection (5 species of protected birds) (ref. no.: OP-I.6401.205.2020.GZ – Appendix 4b to this EMP).

Current condition of the environment surrounding the Works Contract

As a result of works done to identify values of the natural and cultural environment, it has been identified that the implementation area for Works Contract 3A.4 and its neighborhood are characterized by the following environmental conditions:

- Implementation area for the aforementioned Works Contract is located within the boundaries of one Body of Surface Water (BSW), i.e. PLRW2000192137759 *Wisła od Skawinki do Podłężanki*, and also within the boundaries of two Bodies of Groundwater (BGW), with codes PLGW2000148 and PLGW2000131.

¹ Works Contract 3A.1/2 *Modernization of Vistula embankments in Cracow – Section 3*, concerning the extension of the right embankment of the Vistula from the Dąbie barrage to the Przewóz barrage.

² See: description in the footnote in Chapter 1.

- Within the implementation area for the aforementioned Works Contract and in its close vicinity there are no Natura 2000 sites or other areas and objects under protection based upon the Act on the Nature Protection.
- Within the implementation area for the aforementioned Works Contract and in its close vicinity no protected natural habitats or protected species of plants and fungi were identified.
- Within the implementation area for the aforementioned Works Contract and in its close vicinity it was found that 2 common species of protected invertebrates, 5 protected species of fish, 3 common protected species of amphibians and reptiles, a dozen or so common protected species of birds, several protected species of bats and 1 protected species of non-flying mammals occur or may occur.
- No heritage protected based upon regulations on the protection of heritage and on the care for heritage is present within the implementation area for the aforementioned Works Contract. The implementation area for the aforementioned Works Contract is located within an archaeological supervision zone. At a distance of about 120-150 m from the borders of implementation area for the Works Contract (outside the zone of its potential impact) there are two archaeological sites.

Summary of the environmental impact assessment

Impact on land surface and landscape

Implementation of the planned Works Contract is associated with acquisition of land and with local logging of trees and shrubs, but those do not affect land surface and landscape adversely.

Impact on climate

Implementation of the planned Works Contract does not affect the condition of climate.

Impact on the quality of air

Impact of the planned Works Contract on the quality of air is limited in time to the construction stage and it is not significant.

Impact on soils and grounds

Implementation of the planned Works Contract is associated with a permanent transformation of land surface (including soils and grounds) for the development of particular hydro-technical facilities, as well as with a potential possibility of contamination of the subbase on the construction stage. At the operational stage, constructed hydrotechnical facilities shall not affect the condition of soils and grounds. If the conditions determined in Appendix 1 to this EMP would be met properly, the performance would not affect the condition of soils and grounds adversely.

Impact on surface water and groundwater

The planned extension and construction of hydrotechnical facilities on the right bank of the Vistula river upstream and downstream of the Płaszów port shall not affect the morphological continuity of the river, and shall also not affect water's hydromorphological, biological, and physical-chemical elements adversely. The performance is associated with a potential possibility of contaminating surface water and / or groundwater on the construction stage. At the operational stage, the operation of the constructed hydrotechnical facilities shall not affect the condition of surface water and groundwater adversely. If the conditions deter-

mined in Appendix 1 to this EMP would be met properly, the performance would not affect the condition of surface water and groundwater adversely.

Impact on acoustic climate

Impact of the planned Works Contract on the acoustic climate is limited in time to the construction stage, and it is not significant.

Impact on biotic nature

Implementation of the planned Works Contract is associated with the occurrence of local impacts on vegetation and on fauna in the area. Those impacts – resulting mainly from the necessary acquisition of land, traffic of vehicles and machines in the construction period, and logging of trees and shrubs – shall be partially reduced due to the planned mitigation measures (along with the currently developed replacement tree planting program for the whole Subcomponent 3A of the OVFMP, referred to in Chapter 6.8), and in total they shall not have a significant negative impact on the state of resources of protected habitats and species, neither on a local nor regional scale. Implementation of the planned Works Contract does not affect Natura 2000 sites or other protected areas.

Impact on cultural heritage and material goods

Implementation of the planned Works Contract does neither affect cultural heritage nor material goods adversely. The operational stage is associated with a positive impact on material goods, by improving the flood safety of areas located on the right bank of the Vistula, in particular along the section of the river between the Dąbie and Przewóz barrages.

Impact on health and safety of people

The Works Contract does not generate significant hazards to health and safety of people. They may emerge only in case of a failure, catastrophes, or other random events (such as e.g. leakage of pollutions, fire, finding of unexploded shells and misfires, flood). The EMP determines relevant conditions for prevention of such events and for mitigation of their potential effects. The operational stage is associated with a positive impact on health and safety of people, by improving the flood safety of areas located on the right bank of the Vistula, in particular along the section of the river between the Dąbie and Przewóz barrages.

Other ES hazards

Regardless of the ones listed above, other ES related types of issues or hazards as accidents and near misses, cases of sexual harassment or mobbing, cases of labour law violation, cases of sexually transmitted diseases (including HIV/AIDS) or other infectious diseases (including those caused by coronaviruses, e.g. COVID-19), and others, may occur during implementation of the Works Contract. This EMP determines relevant conditions to prevent hazards of those types and to efficiently react to the cases of their occurrence.

Mitigation measures and monitoring measures

Chapters 6 and 7 of and Appendixes 1 and 2 to this EMP described and present – in a tabular form – a set of mitigation measures and monitoring measures to eliminate or limit adverse impact of the planned Works Contract on the environment, and to assure efficient implementation of the EMP's conditions. Those measures contain conditions determined in the binding decision on environmental conditions, as well as additional conditions provided on the stage of works on the EMP.

Public consultations

Chapter 8 of the EMP provides a relation of public consultations held under the EIA procedure for the planned Works Contract, including the following:

- Public consultations on the document titled *Environmental and Social Management Framework (ESMF)* for the OVFM Project (2015).
- Public consultations held on the stage of issuing the environmental decision for the assignment comprising the planned Works Contract (2019-2020).
- Public consultations for this Environmental Management Plan (2020).

1 Introduction

This study presents the Environmental Management Plan (EMP) for the Works Contract 3A.4 *Extension of a section of the right embankment downstream of the Dąbie Barrage, including development of a flood gate in the area of a repair yard*.

Contract 3A.4 remains a part of Subcomponent 3A implemented within *Odra-Vistula Flood Management Project* (OVFMP), co-financed by the International Bank for Reconstruction and Development (World Bank), the Council of Europe Development Bank, by the European Union Cohesion Fund, and by the State Budget.

In reference to the environmental screening described in the Environmental and Social Management Framework for the OVFMP Project, the works in question supplement a gap in the flood protection system of the Vistula river valley in Kraków, complementing the project titled *“Completion of the rehabilitation of the flood embankments of the Vistula River in Kraków”*³, which have been included on List no. 1 under item “ID 1_670_W” (ordinal number: 996) in Appendix no. 2 titled *“Investments that do not affect reaching the good status of water adversely or that do not deteriorate the status of water”* to the MasterPlan for the Vistula river-basin (2014)⁴.

1.1 Odra-Vistula Flood Management Project

The main objective of the OVFMP Project is to protect people in flood plains within selected parts of river-basins of two of the greatest Polish Rivers – Vistula and Odra – against hazards caused by extreme floods. Implementation of the most urgent flood protection assignments was forecasted within the framework of the OVFMP.

The OVFMP Project consists of the following 5 Components:

- Component 1 – Flood Protection of the Middle and Lower Odra;
- Component 2 – Flood Protection of the Nysa Kłodzka Valley;
- Component 3 – Flood Protection of the Upper Vistula;
- Component 4 – Institutional Strengthening and Enhanced Forecasting;
- Component 5 – Project Management and Studies.

³ Full name of the project: *“Completion of the rehabilitation of the flood embankments of the Vistula River in Kraków: Section 1 – the left embankment of the Vistula from the Wandy bridge to the Przewóz barrage, together with the backwater embankments of the Dłubnia River; Section 2 - the left embankment of the Vistula from the Przewóz barrage to Suchy Jar, Section 3 – the right embankment of the Vistula from the Dąbie barrage to the Przewóz barrage”*.

⁴ The MasterPlans for the Vistula River Basin and for the Odra River Basin remain a result of establishments made with the European Committee, which led to implementation of *“Action Plan for Strategic Planning in Water Management”* by Poland (resolution of the Council of Ministers of July 2, 2013, ref. no.: 118/2013).

The MasterPlans remained an update to water management plans, since their previous update in 2015, and subsequently their results – in terms of investments, which affect or which may affect the status of water bodies – were transferred to the updated water management plans (adopted by the resolution of the Council of Ministers of October 18, 2016 [OJ item no. 1967]).

Component 3 is divided into the following Subcomponents:

- Subcomponent 3A – Flood Protection of Upper Vistula towns and Cracow;
- Subcomponent 3B – Protection of Sandomierz and Tarnobrzeg;
- Subcomponent 3C – Passive and Active Protection in Raba Sub-basin;
- Subcomponent 3D – Passive and Active Protection in San Basin.

Detailed information on the Project may also be found in the Environmental and Social Management Framework published at e.g. websites of the World Bank⁵ and of the Odra-Vistula Flood Management Project Coordination Unit⁶. A detailed description of the Project is also given in PAD⁷ and in the Project Operations Manual⁸.

⁵ <http://documents.worldbank.org/curated/en/717671468333613779/Poland-Odra-Vistula-Flood-Management-Project-environmental-and-social-management-framework>

⁶ http://odrapcu2019.odrapcu.pl/en/popdow_about_project/

⁷ <http://documents.worldbank.org/curated/en/320251467986305800/Poland-Odra-Vistula-Flood-Management-Project>

⁸ http://www.odrapcu.pl/doc/POM_PL.pdf

(a binding English version is available at: <http://www.odrapcu.pl/doc/POM/ENG.pdf>)

2 Contract Description

The Works Contract 3A.4 refers to the reconstruction and extension of the right-bank flood embankment on the of the Vistula River upstream and downstream of the inlet channel to the Płaszów port in Cracow (along the section from the Dąbie barrage to the flood gate in the Płaszów port and from the proposed flood gate to the existing flood embankment on the right bank of the Vistula river downstream of the Płaszów port – a total length of approx. 290 m of the embankment) and the construction of a flood gate on the inlet channel to the Płaszów port.

The Works Contract 3A.4 is a functional complement to the proposed Works Contract 3A.1/2⁹, ensuring the flood protection of urban areas located on the right bank of the Vistula River downstream of the Dąbie barrage. Together with other elements of Subcomponent 3A of the OVFMP Project (implemented or planned to be implemented under Contracts 3A.3¹⁰ and 3A.2¹¹, as well as 3A.6¹², 3A.1/1¹³ and 3A.5¹⁴), the planned projects will provide comprehensive protection of the areas located on the right and left bank of the Vistula in Cracow against flooding.

The Project Implementation Unit (PIU) for the Contract is the State Water Holding Polish Waters, represented by the Director of Regional Water Management Authority in Cracow with its office at 22. Marszałka J. Piłsudskiego Street, 31-109 Cracow.

According to the valid bidding documents, the planned Contract's implementation time is at least 15 months.

2.1 Location of the Works Contract

The planned Woks Contract 3A.4 is located in Poland, Małopolskie Province, in the area of the City of Cracow (District of the City of Cracow, Municipality of Cracow).

The area of the planned reconstruction of the flood embankment section and the construction of the flood gate is located in the central part of the area covered by the administrative borders of the city of Cracow (within approx. 3 km south-east of the Old Town Square), in the area limited by the Vistula riverbed (from the north-west) and Stoczniovców Street

⁹ Works Contract 3A.1/2 *Modernization of Vistula embankments in Cracow – Section 3*, concerning the extension of the right-bank flood embankment of the Vistula River from the Płaszów port to the Przewóz barrage.

¹⁰ Works Contract 3A.3 *Section 4 - Right embankment of the Vistula from the Skawinka estuary to the Kościuszko barrage*, concerning the extension of the right-bank flood embankment of the Vistula River upstream of the Kościuszko barrage.

¹¹ Contract 3A.2 *Flood protection in Serafa valley*, concerning the construction of four dry small retention reservoirs on the Malinówka stream and the Serafa river.

¹² Works Contract 3A.6 *Construction of a pumping station for mobile pumps to drain the Lesisko complex*, concerning the extension of the mobile pumps station on the left bank of the Vistula.

¹³ Works Contract 3A.1/1 *Modernization of Vistula embankments in Cracow – Section 1, Section 2*, concerning the extension of the left-bank flood embankment of the Vistula River from the Wandy bridge to Suchy Jar.

¹⁴ Works Contract 3A.5 *Development of a flood gate at the left flood embankment in the area of water intakes for the Sendzimira Steel Mill in Cracow*, concerning the construction of a flood gate on the inlet channel to the Kujawy port on the left bank of the Vistula.

(from the south-west), Nowohucka Street (from the south-east) and Na Zakolu Wisły Street (from the north-east) – see the map in Appendix 5. The planned construction of the power connection will be carried out in the area between Na Zakolu Wisły Street and the beginning of the right-bank flood embankment of the Vistula river below the Płaszów port. The planned construction of a teletechnical line enabling the monitoring and control of the flood gate from the facilities of the Dąbie barrage will be carried out on the western side of the road bridge over the Dąbie barrage (within Ofiar Dąbia Street).

Location of the Works Contract 3A.4 has been presented on the drawing presented below (Fig. 1) and in Appendix 5 to this EMP – Map with location of the Contract.



Fig. 1. Location of the Works Contract 3A.4 together with the location of other Works Contracts of Subcomponent 3A of the OVFMP (source: own materials)

2.2 Specificity of the Works Contract

The scope of Works Contract 3A.4 comprises the following elements¹⁵:

- reconstruction and extension of the existing flood protection embankment on the right bank of the Vistula, along the section from the Dąbie barrage to the proposed flood gate (approx. 245 m) and from the proposed flood gate to the existing flood embankment on the right bank of the Vistula river downstream of the Płaszów port (approx. 45 m) (raising and widening of the embankment crest, construction of an anti-filtration screen sealing the embankment body and the subsoil underneath the embankment, connection of the embankment with the proposed flood protection gate and adjacent facilities).

The basic parameters of the proposed embankment are presented below:

- class of the proposed flood embankment – I
 - base flow – $Q_{1\%}$
 - control flow – $Q_{0,2\%}$
 - embankment crest ordinate – 203.73-204.01 m a.s.l.
 - embankment height – 3.3-4.5 m
 - change in height (raising) in relation to the currently existing embankment – variable, max. up to 0.5 m
 - embankment length – approx. 290 m
 - embankment's crest width – 3.5-4.0 m
 - upstream slope inclination – 1:2.25-1:2.5
 - downstream slope inclination – 1:2.0
 - depth of the screen in the embankment body – up to 10 m below the embankment crest
 - slopes sown by a mixture of grasses
- reconstruction and extension of the existing embankment descent roads and crossings (raising, widening, changing the inclination and connection with existing roads);
 - demolition of the structures located on the body or in the immediate vicinity of the flood embankment (including 2 metal sheet garages on the downstream side of the embankment, 4 inactive reinforced concrete poles on the embankment body and a fence at the eastern end of the embankment);
 - rip-rap revetment of the right section of the Vistula bank downstream of the hydroelectric power plant on the Dąbie barrage (distance of approx. 40 m);

¹⁵ The characteristics of the Works Contract provided in this EMP are for reference only and do not replace the design documentation. The Contractor is obliged to perform the works in accordance with the design documentation and with Technical Specifications corresponding with particular branches.

- construction of a flood gate in the outlet of the port channel in the Płaszów port (executed with protection with steel sheet pile walls, protecting surface water against pollution at the construction stage).
The basic parameters of the proposed flood gate are presented below:
 - gate type – steel mitre gates
 - gate closure's width – 12 m
 - gate closure's height – 11 m
 - crest elevation for gate closure – 203,73 m a.s.l.
 - sill elevation for gate closure – 192,76 m a.s.l.
 - gate closure's drive – electro-mechanical (with possible manual drive at emergency)
 - possibility of controlled water transfer – gravitational or using pumps, through bypass channels located at the gate structure
 - maintenance gates – set of stop-log gates
- construction of a service footbridge over the flood protection gate, 3 m wide;
- execution of guide vanes made of steel piling sections at the entrance and exit of the flood gate, adapted to the bankline of the port channel);
- construction of a berth (47 m long) on the right bank of the port channel downstream of the proposed flood gate;
- revetment of slopes and bottom of the port channel approx. 25 m upstream and approx. 19 m downstream of the proposed flood gate;
- reconstruction and construction of service yards and roads in the vicinity of the flood embankment and flood gate;
- redevelopment, protection, disassembly and construction of power networks (in particular construction of a power connection supplying the flood gate mechanisms) and teletechnical network;
- site grading of the embanked area and the area beyond the embankment along the flood embankment and flood gate.

The location of components of Works Contract 3A.4 is shown in the map in Appendix 10 to this EMP – Map with location of the Contract's elements.

According to the current estimates, the volume of soil necessary for implementation of the Works Contract 3A.4 is about 10 K m³. The above-mentioned ground masses will be obtained from the building excavation for the flood gate (after performing appropriate tests confirming their usefulness for the purposes of the Contract), and in case of material shortage the missing part will be purchased and delivered from licensed external sources proposed by the Contractor and accepted by the Engineer (in compliance with the conditions for protection of environment, protection of material goods and protection of health and safety of people set out in Appendix 1 to the EMP).

3 Institutional, legal and administrative conditions

3.1 Institutions involved in implementation of the Contract

The investor for the Contract is the State Water Holding Polish Waters in Warsaw, represented by the Director of the Regional Water Management Authority in Cracow (PGW WP RZGW in Cracow).

Additionally, on the stage of performance and of operation, implementation of the Contract may require involvement of public administration units on central, regional, and local levels. An ongoing coordination of the OVFP Project implementation by particular PIUs is the task of the OVFP Project Coordination Unit (see Chapter 9.1).

3.2 Binding Polish law acts with regard to the environment

In accordance with the Polish Law the investment process related to the environmental protection remains a subject of several acts and regulations. A summary of selected, basic legal acts in that scope, which are binding for works on the EMP, has been presented in Appendix 3 to this EMP – List of national legal acts related to environmental protection. The number and contents of legal acts given there may be modified along with adjustments to environmental protection provisions valid in the territory of Poland. The Contractor is obliged – except for application of rules determined under this EMP – to apply valid provisions of the state law in the scope of environmental protection.

3.3 EIA procedure in Poland

The description of the environmental impact assessment procedure in Polish legislation is included in the *Environmental and Social Management Framework* (ESMF) published on the i.a. web pages of the World Bank (WB)¹⁶ and the Odra-Vistula Flood Management Project Coordination Unit¹⁷. Furthermore, in case of the EIA procedure legal regulations listed in Appendix 3 to this EMP – List of national legal acts related to environmental protection – are in force.

3.4 Guidelines of the World Bank

The Contract in question shall be co-funded by e.g. the International Bank for Reconstruction and Development (World Bank). As a consequence, the conditions for its implementation in the scope of environmental protection shall correspond with Operational Policies and Bank Procedures in the range of environmental protection, including the following policies and procedures, e.g.: *OP/BP 4.01* (on environmental impact assessment), *OP/BP 4.04* (on environmental habitats), and *OP/BP 4.11* (on cultural resources). A description of the aforementioned World Bank Policies is given in the *Environmental and Social Management Framework (ESMF)*, as published e.g. at websites of the World Bank¹⁶ and of the Odra-Vistula

¹⁶ At: <http://documents.worldbank.org/curated/en/717671468333613779/Poland-Odra-Vistula-Flood-Management-Project-environmental-and-social-management-framework>

¹⁷ At: http://odrapcu2019.odrapcu.pl/en/popdow_documents/

Flood Management Project Coordination Unit¹⁷. Original contents of the aforementioned policies and procedures may be found at websites of the World Bank¹⁸.

3.5 The current condition of EIA procedure for the Works Contract 3A.4

In accordance with a classification given in the EIA Regulation, the assignment forming the subject of Contract 3A.4 is qualified to the group of assignments, which may potentially significantly affect the environment (so-called Group II – Article 3 (1) item 65 of the the EIA Regulation), for which, prior to issuing a decision on environmental conditions, it may be required to conduct an environmental impact assessment.

A proceeding on the issuance of a decision on environmental conditions, conducted between June 2019 and February 2020, has been completed with the issuance of a decision by the Regional Director for Environmental Protection in Cracow dated February 28, 2020 on environmental conditions (ref. no.: OO.420.4.1.2019.BM – Appendix 4a to this EMP), stating that there is no need to perform an environmental impact assessment and laying down the conditions of environment use at the planning, implementation and operation phase.

Furthermore, due to the fact that during the planned works it shall be necessary to damage habitats or mainstays of protected bird species, a decision of the Regional Director for Environmental protection in Cracow dated July 02, 2020 has been issued prior to the commencement of Contract implementation, and it allows for departing from bans binding in reference to animals under protection (ref. no.: OP-I.6401.205.2020.GZ – Appendix 4b to this EMP) and provides consent for damaging habitats or mainstays of five species of protected birds.

Nonetheless, the Contractor shall be obliged to obtain any further administrative decision, if it would be necessary during implementation of the Contract.

Copies of the above-mentioned decisions are presented in Appendix 4 to this EMP – Decisions, resolutions, permits, notices.

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 Unit¹⁹.

¹⁸ At: <https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx#S3-2> (in the part titled *Investment Project Financing / Environmental and Social Safeguard Policies*).

¹⁹ At: http://odrapcu2019.odrapcu.pl/doc/POM_ENG.pdf.

4 Description of environmental elements

4.1 Land surface and landscape

According to the physical-geographical regionalization by Kondracki (2001), including following modifications to the aforementioned regionalization, the implementation site for the Works Contract 3A.4 is located within Nadwiślańska Lowland, near the border with the mesoregion Krakowski platform (Fig. 2):

- megaregion: Carpathian Region;
- province: Western Carpathian Mountains with Western and Northern Podkarpacie;
- subprovince: Northern Podkarpacie;
- macroregion: Sandomierska Valley;
- mezoregion: Nadwiślańska Lowland.

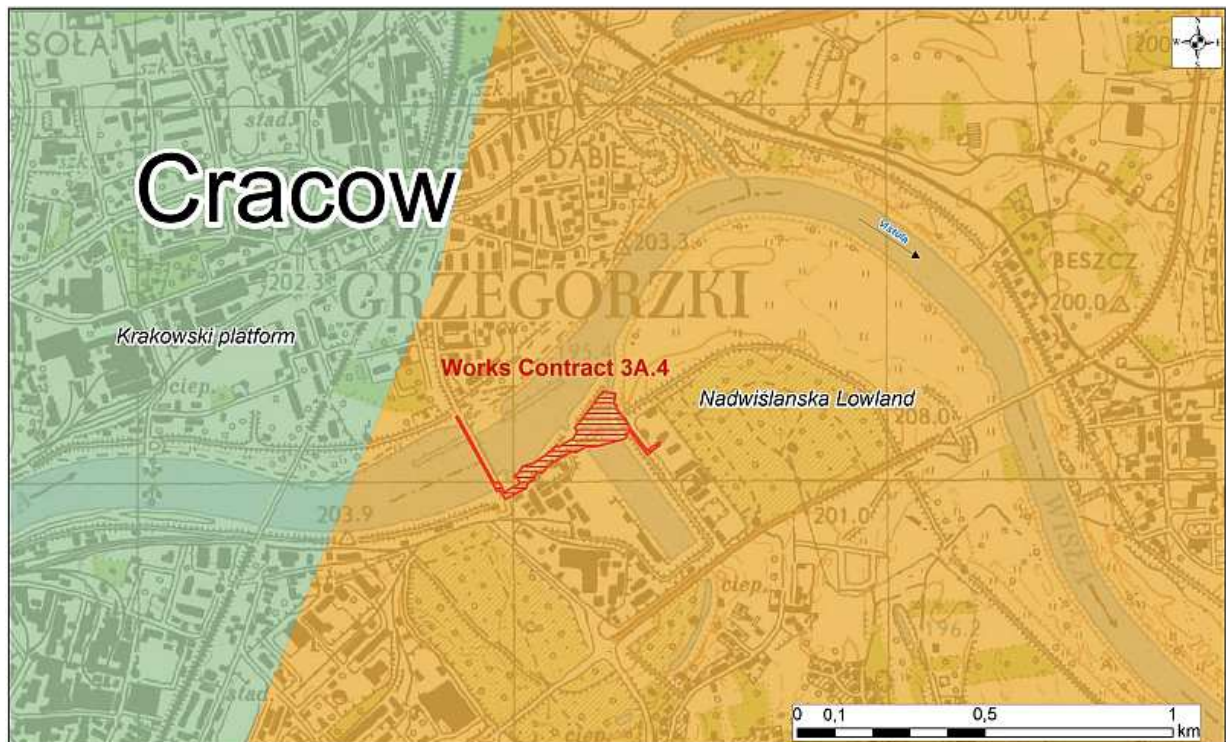


Fig. 2. Location of the Works Contract 3A.4 in reference to physical-geographical units (source: own materials)

4.2 Climate

The City of Cracow and its closest vicinity is located at the bottom boundary of a moderately warm climatic level of the Carpathian Mountains, which is a variety of valley climate. It is specified by high diversity of weather conditions resulting mainly from the inflow of various air masses to that area – polar-maritime mainly, and – to a lesser extent – warm within the entire year: tropical-maritime or continental, as well as cold and dry arctic air.

Meteorological conditions for the City of Cracow and its vicinity in 2018 (WIOŚ, Cracow 2018):

- Mean annual temperature: 10.6°C,
- Annual long-term precipitation rate in the area was from 500 mm at Małopolska Upland to 1200-1400 mm in the Carpathian Mountains.

4.3 Air quality

The quality of air within the City of Cracow and in its vicinity may be considered as bad. Acceptable levels determined for suspended particulates PM10 and PM2.5 (daily concentration, as well as alarm levels and mean annual rates) and target levels for benzo(a)pyrene (mean annual concentration) are highly exceeded. Those exceedances also refer to the acceptable level for nitrogen dioxide (mean annual concentration).

The main reason for exceedance – in case of suspended particulates PM10 and PM2.5 and benzo(a)pyrene – is low emission, i.e. emission generated by consumption of coal and its derivatives in individual heating sources, and sometimes of waste by household. Transportation, which is the main source of emission in case of nitrogen oxides and has the biggest share in emission of that pollution, has a smaller contribution in exceedance of the aforementioned substances in the air. Spot sources generally have a smaller impact on the quality of air in Cracow, but locally – in areas located in the industrial impact zone – their share may also raise.

4.4 Soils and grounds

Alluvial soils formed from river deposits are encountered preponderantly in the discussed area located in the region of current and historical floodplains of the Vistula River. A significant part of such soils has been degraded as a result of residential, industrial or hydrotechnical development due to its location within the boundaries of the densely populated Cracow agglomeration and in the immediate vicinity of industrial and port areas.

The soil-agricultural map of Małopolskie²⁰ Province provides that the areas where the Works Contract 3A.4 is planned to be implemented are classified to the following soil-agricultural complexes: land covered with water (embanked area of the Vistula) and land on built-up and developed areas (flood embankment and areas beyond the embankment of the Vistula).

As per the classification used in the Local Spatial Development Plan (Fig. 3), the particular areas located within the project implementation zone and in its immediate vicinity are marked as: 1WS – surface water areas, 1ZŁ – meadow and riparian greenery areas, 1ZP – cultivated

²⁰ https://miip.geomalopolska.pl/mapa/glebowo_rolnicza.html

greenery land with the park character, 2KDD – areas of public access roads, 1MWU – areas of residential, multi-family buildings and services and 2U – areas of commercial service buildings.

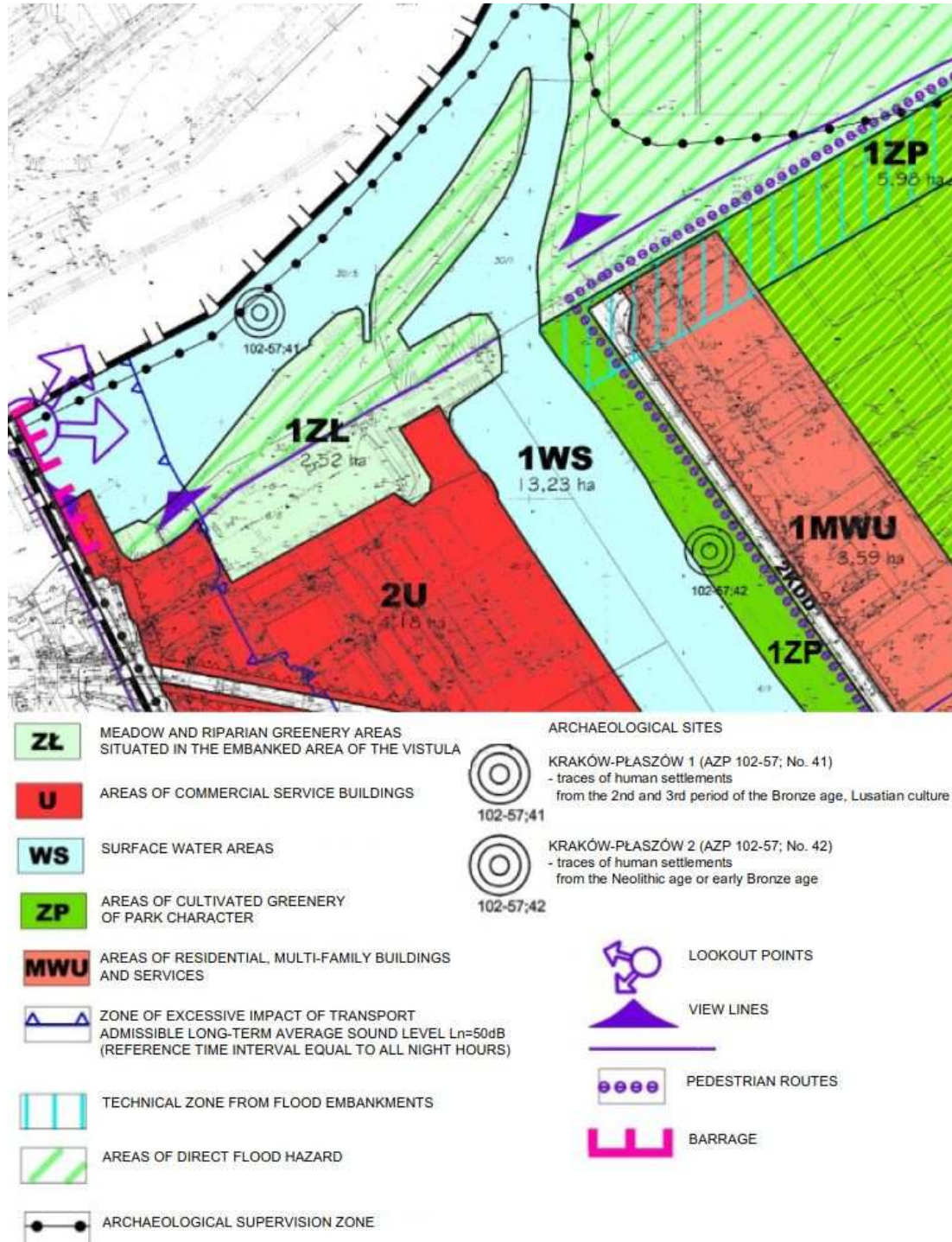


Fig. 3. Designation of the areas in the surrounding of the Works Contract 3A.4 in the Local Spatial Development Plan (LSDP).
 (source: Resolution no. CXIV/1540/10 of the Cracow City Council of October 20, 2010 on the adoption of the local spatial development plan for the “Myśliwska” area in Cracow).

4.5 Surface water

The Works Contract 3A.4 is located on the right bank of the Vistula River within the administrative boundaries of the city of Cracow, near the 81st kilometre of the river course, at a distance of 0 to 300 m downstream from the Dąbie barrage (i.e. at km 66+000 - 66+300 km of the Vistula navigation chainage). The project implementation site encompasses the areas located at 0 to approx. 250 m from the river bank, as well as a fragment of the port basin and inlet channel to the Płaszów port on the right bank of the Vistula river in Cracow.

The Vistula River, with a length of 1047 km and a catchment area of 194,424 km², is the longest river in Poland, as well as the longest river flowing into Baltic Sea. The sources of the river are located in southern Poland, at an altitude of 1107 m a.s.l. (Czarna Wisielka) and 1080 m a.s.l. (Biała Wisielka), on the western slope of the Barania Mountain in the Silesian Beskids. The river flows into the Baltic Sea, through the Gdańsk Bay, at a distance of several kilometres east of Gdańsk. The average annual river flow rate in the estuary section is 1046 m³/s.

Hydrological characteristics of the Vistula River in Cracow are presented in the table below:

Designation	Kościuszko barrage	Bielany water gauge	Dąbie barrage	Przewóz barrage
Chainage of Vistula course	63+450	69+280	80+910	92+200
Catchment area [km ²]	7 529	7 634	8 109	8 620
Characteristic flow rates from the period of 1951 to 1980 [m ³ /s]:				
• lowest flow rate (NNQ)	19	19	20	–
• av. low flow rate (SNQ)	30	31	33	–
• av. annual flow rate (SSQ)	92	93	98	–
• av. high flow rate (SWQ)	760	768	790	–
• max. obs. (WW1970)	2 260	2 300	2 350	–
Probable high flow rates from the period of 1931 to 2000 [m ³ /s]:				
• Q _{50%}	570	580	600	630
• Q _{10%}	1 320	1 330	1 370	1 415
• Q _{5%}	1 650	1 660	1 720	1 755
• Q _{2%}	2 070	2 080	2 150	2 190
• Q _{1%}	2 400	2 410	2 480	2 520
• Q _{0.5%}	2 680	2 690	2 760	2 800
• Q _{0.3%}	2 960	2 970	3 040	3 060
• Q _{0.1%}	3 490	3 500	3 560	3 600

Source: Own study based on IMGWM data.

The Works Contract 3A.4 is located in the region of the Upper Vistula River of the Vistula River Basin, for which the Water Management Plan was established, adopted with the *Regulation of the Council of Ministers of October 18, 2016 on Water Management Plan for waters within the Vistula River Basin* (OJ of 2016, item no. 1911). The above-mentioned document states that the planned project is located within the Body of Surface Water (BSW) **Wisła od Skawinki do Podłężanki (PLRW2000192137759)**. The said BSW is classified as type no. 19 – a sandy and clayey lowland river, the length of watercourses in the catchment area of BSW is 35.5 km, and the catchment area covers 127.0 km².

BSW *Wisła od Skawinki do Podłężanki* is a highly modified body of water, the condition of which is evaluated as poor. An environmental objective for this BSW is to obtain the good status of waters by achieving the good ecological potential and good chemical status, and also to ensure the possibility of migration of aquatic organisms in the Vistula section within the BSW.

BSW *Wisła od Skawinki do Podłężanki* is at risk of failure to reach the environmental objectives of the Water Framework Directive, hence derogation was determined for it - a less stringent environmental objective was set (for reasons of technical feasibility or disproportionately high costs,) and extension of the date of reaching the environmental objective (until 2021).

Specific environmental objectives also exist on the area of BSW *Wisła od Skawinki do Podłężanki*, established due to the existence of protected areas, such as:

- areas sensitive to eutrophication caused by contaminations coming from municipal sources (the territory of the whole Poland);
- areas designated for the protection of natural habitats or species where the maintenance or improvement of the water status is an important factor in their protection (Natura 2000 sites: *Dębnicko-Tyniecki obszar łąkowy* [PLH120065], *Łąki Nowohuckie* [PLH120069]; Landscape Parks: *Bielańsko-Tyniecki Park Krajobrazowy* [PK3], *Tenczyński Park Krajobrazowy* [PK56]).

The condition of surface waters within the boundaries of the surface water body covering the area of the planned project is monitored on an ongoing basis as part of the state environmental monitoring and its results are published periodically on the websites of the²¹ Chief Inspectorate for Environmental Protection.

Location of the Works Contract in reference to the BSW is given on a figure below (Fig. 4).

²¹ <http://www.gios.gov.pl/pl/stan-srodowiska/monitoring-wod> and
http://www.gios.gov.pl/pl/stan-srodowiska/monitoring-wod#mon_wod_pow

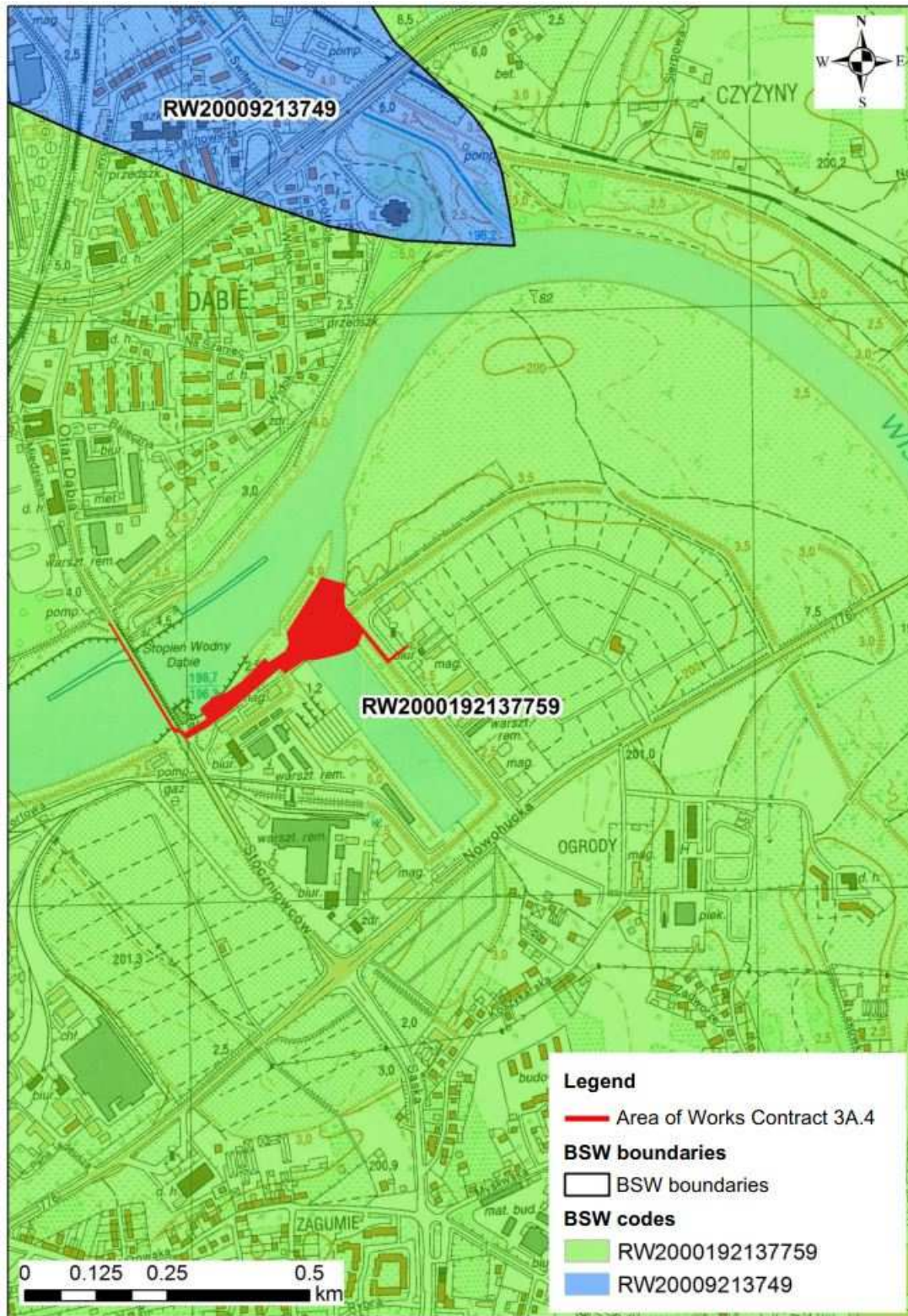


Fig. 4. Location of the Works Contract 3A.4 in reference to the BSW
(source: own materials)

4.6 Groundwater

In the implementation area of Works Contract 3A.4 there is one aquifer connected with quaternary formations, developed in the form of gravels and sands. It is a continuous aquifer, and the water table is both, unconfined and confined. The tensioning layer consists of cohesive, mud-type soils. The drilled groundwater horizon depth is varied and generally ranges from 1.5 to 5.5 m b.g.l. The aquifer is fed by the atmospheric rainfall infiltration. Groundwater has a direct hydraulic relationship with surface waters in the Vistula River, and thus the groundwater level is determined by the state of water in the river, depending, among others, on the operation of the Przewóz and Dąbie barrages. The planned project is situated outside the limits of the major groundwater basins (MGB).

The major part of the Works Contract 3A.4 implementation area is within the boundaries of the Body of Groundwater (BGW) with the code **PLGW2000148**, covering the area of 698.0 km². The evaluation of quantitative and chemical status of BGW waters is good. The environmental objective of this BGW is to maintain the good quantitative and chemical status of the waters and the achievement of this objective is considered as not at risk.

A small part of the implementation area of the above-mentioned Contract is located within the borders of BGW with code **PLGW2000131**, covering the area of 834.5 km². The evaluation of quantitative and chemical status of BGW waters is good. The environmental objective of this BGW is to maintain the good quantitative and chemical status of the waters and the achievement of this objective is considered as not at risk.

The quantitative and qualitative status of groundwater within the boundaries of the groundwater body covering the area of the planned project is monitored on an ongoing basis as part of the state environmental monitoring and its results are published periodically on the websites of the²² Polish Geological Institute and the National Research Institute.

Location of the Contract in reference to the BGW was presented on the drawing given below (Fig. 5).

²² <https://www.pgi.gov.pl/psh/psh-2/monitoring-wod-podziemnych.html> and <http://mjwp.gios.gov.pl/raporty-art/2017.html>

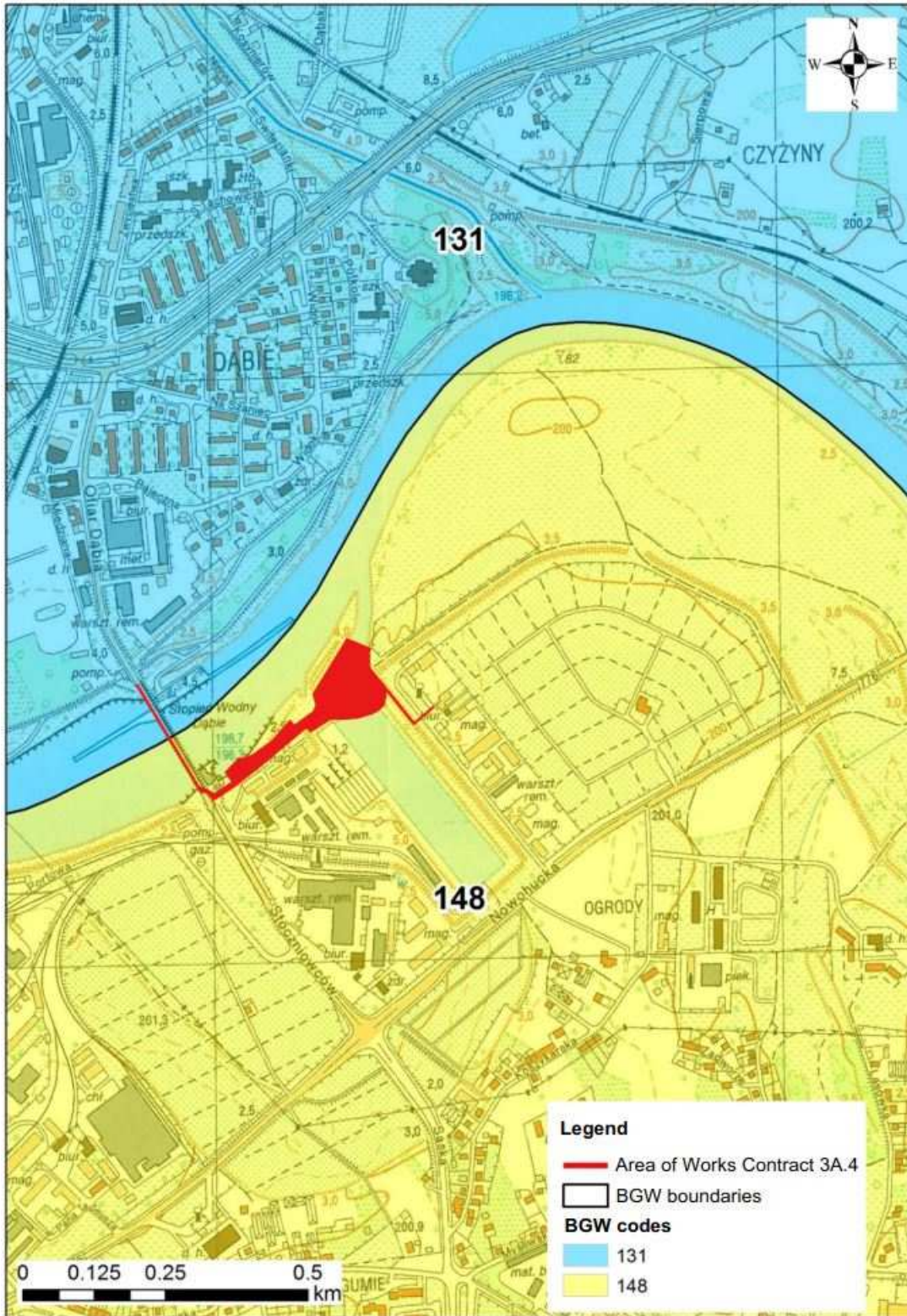


Fig. 5. Location of the Works Contract 3A.4 in reference to the BGW (source: own materials)

4.7 Acoustic climate

The Works Contract 3A.4 will be executed within the administrative borders of the city of Cracow, at a distance of approx. 3 km from the Market Square and in the vicinity of busy traffic arteries (provincial road No. 776 [Nowohucka Street] and district road No. 2250K [Stoczniewców Street]). Therefore, the acoustic climate of the Contract implementation site is shaped mainly by transport facilities and traffic related to the functioning of a large city, as well as, to a lesser extent, by industrial, service and port development facilities located in the direct or close vicinity of the project.

The provisions of the valid Local Spatial Development Plan (LSDP - see mainly Fig. 3 in Chapter 4.4) set out that the major part of the Works Contract 3A.4 implementation area and its direct neighbourhood is outside areas subject to acoustic protection²³ (i.e. on areas designated in the LSDP as 1WS – surface water areas, 1ZŁ – meadow and riparian greenery areas, 1ZP – cultivated greenery land with the park character, 2KDD – areas of public access roads and 2U – areas of commercial service buildings). A small scope of works will be carried out only in the areas subject to acoustic protection (i.e. on areas designated in the LSDP as 1MWU – areas of residential, multi-family buildings and services), related to the construction of the power connection to the flood gate, on the eastern side of Na Zakolu Wisły Street.

4.8 Nature

4.8.1 Protected natural habitats and protected species

Natural habitats from Appendix I of the Habitat Directive

The phytosociological inventory and the review of available literature data carried out at the stage of obtaining decisions on environmental conditions have revealed that:

- no natural habitats listed in Appendix 1 of the Habitat Directive have been found in the Works Contract 3A.4 implementation area and its direct neighbourhood.

Protected species of plants and fungi

The botanical inventory and the review of available literature data carried out at the stage of obtaining decisions on environmental conditions have revealed that:

- no protected species of plants and fungi were confirmed in the Works Contract 3A.4 implementation area and its direct neighbourhood.

Protected species of animals²⁴

The zoological inventory and the review of available literature data carried out at the stage of obtaining decisions on environmental conditions have revealed that:

²³ In accordance with the Regulation of the Minister of Environment of June 14, 2007 on admissible noise levels in the environment.

²⁴ The species protection status is given in the superscripts after the name of each species, according to the scheme:
SP – a strictly protected species in Poland; **(PP)** – a partially protected species in Poland;
HDII,IV,V – species from Annex II, IV and/or V of the Habitat Directive;
LC – a species included on the IUCN Red List, in the category: LC – a least-concern species.

- no protected species of invertebrates were found in the Works Contract 3A.4 implementation area. Two common species of protected invertebrates were found in the surroundings of the above-mentioned area, i.e. Buff-tailed Bumblebee *Bombus terrestris*^{(PP),LC} and Roman Snail *Helix pomatia*^{(PP),LC}.
- in the Works Contract 3A.4 implementation area and its close neighbourhood, five species of protected fish are likely to occur: Weatherfish *Misgurnus fossilis*^{(PP),HDII,LC}, Stone loach *Barbatula barbatula*^{(PP),LC}, Bitterling *Rhodeus sericeus*^{(PP),HDII,LC}, Whitefin Gudgeon *Romanogobio alpinus*^{(PP),HDII,LC} and Kessler's Gudgeon *Romanogobio kesslerii*^{(PP),LC} (these species are listed in the Vistula River literature on the sections located upstream and downstream of the Płaszów port, so they may potentially also occur in the Vistula riverbed near the Płaszów port and in the port basin itself).
- three common species of protected amphibians and reptiles are likely to occur in the Works Contract 3A.4 implementation area. The presence of few specimens of green frogs (the type of Water Frog *Pelophylax esculentus*^{(PP),HDV,LC} and Pool Frog *Pelophylax lessonae*^{(PP),HDIV,LC}) was found in the basin of the Płaszów port (mostly outside the Contract implementation boundaries). Several specimens of Sand Lizard *Lacerta agilis*^{(PP),HDIV,LC} were found on the bank slopes in the southern part of the port basin (outside the Contract implementation area).
- the presence of more than ten common species of protected birds was confirmed in trees and bushes of the Works Contract 3A.4 implementation area and its close neighbourhood. These are species with low anthropophobia, adapted to colonise this type of habitat near human settlements (e.g.: Great Tit *Parus major*^{SP,LC}, European Greenfinch *Carduelis chloris*^{SP,LC}, Garden Warbler *Sylvia borin*^{SP,LC}, Blackcap *Sylvia atricapilla*^{SP,LC}, Cuckoo *Cuculus canorus*^{SP,LC}, Common Chiffchaff *Phylloscopus collybita*^{SP,LC}, Grey Wagtail *Motacilla alba*^{SP,LC}, Common Nightingale *Luscinia megarhynchos*^{SP,LC}, Eurasian Magpie *Pica pica*^{(PP),LC}, Common Starling *Sturnus vulgaris*^{SP,LC}). The Vistula riverbed at the height of the planned works area (outside the Contract area) is a potential site of periodic occurrence of migratory water bird species, including at least several protected species (such as Mute Swan *Cygnus olor*^{SP,LC}, Black-Headed Gull *Larus ridibundus*^{SP,LC}, Common Gull *Larus canus*^{SP,LC}, Goosander *Mergus merganser*^{SP,LC}, Great Crested Grebe *Podiceps cristatus*^{SP,LC}, Little Grebe *Tachybaptus ruficollis*^{SP,LC} and others).
- the presence of flying and/or feeding bats, including, among others, Common Noctule *Nyctalus noctula*^{SP,HDIV,LC}, Serotine Bat *Eptesicus serotinus*^{SP,HDIV,LC}, Barbastella *Myotis daubentonii*^{SP,HDIV,LC}, Common Pipistrelle *Pipistrellus pipistrellus*^{SP,HDIV,LC}, Nathusius' Pipistrelle *Pipistrellus nathusii*^{SP,HDIV,LC} and unidentified species of bats of genus *Plecotus sp.* and *Myotis sp.* was confirmed in the Works Contract 3A.4 implementation area and its close surrounding. No daily resting places or bat hibernation sites were found.
- occasional presence of European Beaver *Castor fiber*^{(PP),HDII,IV,LC} was confirmed in the Works Contract 3A.4 implementation area and its close surrounding (traces of feeding in trees on the slopes of the port basin, within and outside of the Contract implementation area; no beaver dams or permanently inhabited burrows were found; the Vistula riverbed and banks are a natural migration corridor of this species).

Location of the Contract in reference to the protected resources of the natural environment was presented on a map reproduced under Appendix 9 to the EMP – Map with location of the Contract in reference to natural habitats and protected species occurrence sites.

4.8.2 Protected areas

There are no areas and facilities protected under the Act of April 16, 2004 on nature protection in the implementation area of the Works Contract 3A.4 and in its immediate surrounding (up to 100 m from the borders).

The following protected sites and facilities exist in the zone from 100 m to 1.0 km from the borders of the Works Contract 3A.4 implementation area:

- ecological site “Dąbski Pond”
(on the opposite bank of the Vistula River, at a distance of about 950 m to the north-east from the borders of the Works Contract 3A.4 implementation zone).
- 4 specimens of old trees under protection as natural monuments (on the opposite bank of the Vistula River, at a distance of about 300 to about 750 m to the north of the boundaries of Works Contract 3A.4 implementation zone).

The closest Natura 2000 site (Łąki Nowohuckie – PLH120069) is situated approx. 3.7 km to the north-east from the borders of the Works Contract implementation zone.

Location of the Contract in reference to the protected areas was presented on a map in Appendix 6 to the EMP – Map with location of the Contract in reference to natural habitats and places of presence of protected species.

4.9 Cultural landscape and monuments

The area of Works Contract 3A.4 implementation is located entirely within the area of conservatory protection, presented on the map in Fig. 3 (in Chapter 4.4). This area is:

- archaeological supervision zone,
covering the area of two identified archaeological sites (*Kraków Płaszów 1* and *Kraków Płaszów 2*, see below) together with the areas delimited by the extent of the appearance of monuments and traces of settlements.

The following sites of cultural values are encountered in the close vicinity of the Works Contract 3A.4 execution area, presented on the map in Fig. 3 (in Chapter 4.4):

- archaeological site called *Kraków Płaszów 1* (AZP 102-57 no. 41)
– traces of human settlements from the 2nd and 3rd period of the Bronze age, Lusatian culture,
located in the Vistula riverbed, approx. 120 m to the north of the flood embankment reconstruction area;
- archaeological site called *Kraków Płaszów 2* (AZP 102-57 no. 42)
– traces of human settlements from the Neolithic age and early Bronze age,
located on the eastern bank of the port basin, about 150 m south-east of the construction site of the flood gate.

4.10 Population

The planned Works Contract 3A.4 is a line project located in the area of the poviast City of Cracow, in the district XIII Podgórze.

According to data valid for December 31, 2018²⁵ the City of Cracow is inhabited by 771 069 people, and the population density is 2 355 people/km². PIB data for the City of Cracow²⁶ state that teren prawobrzeżnej dzielnicy XIII Pogórze is inhabited by 36 885 citizens (the population density is 1 437 people/km²).

Based on the information contained in the Feasibility Study (SWECO, 2018), the implementation of the works covered by the Works Contract 3A.4, together with the functionally connected reconstruction of the right-bank flood embankment of the Vistula River in the downstream section of the Płaszów port (Works Contract 3A.1/2, so-called Section 3)²⁷, will provide flood protection for at least 31 thousand people living in an area directly at risk of flooding with a probability of occurring once every 100 years (Q1%).

Issues associated with the social context of the planned Contract 3A.4 is described in details in the *Land Acquisition and Resettlement Action Plan* (LA&RAP) for the Contract in question.

4.11 Remaining ES issues

ES related issues (i.e. the ones related to environmental, social and health and safety aspects) are regulated in Poland by several provision given in binding legal acts, including e.g. the Act of April 27, 2001 Environmental Protection Law, the Act of October 3, 2008 on access to information on the environment and its protection, public participation in environment protection and environmental impact assessments, the Act of April 16, 2004 on the nature protection, the Act of April 13, 2007 on preventing of damages to the environment and on repairing them, the Act of December 14, 2012 on waste, the Act of July 20, 1991 on Environmental Protection Inspectorate, the Act of March 14, 1985 on the State Sanitary Inspectorate, the Act of December 5, 2008 on preventing and combating infections and infectious diseases in humans, the Act of July 7, 1994 Construction Law, the Act of July 20, 2017 Water Law, the Act of June 26, 1974 Labour Code, the Act of April 13, 2007 on the State Labour Inspectorate, the Regulation of the Council of Ministers of August 24, 2004 on the list of prohibited work for juveniles and the conditions for their employment in some of these work, the Act of December 3, 2010 on implementation of some provisions of the European Union in reference to equal treatment, the Act of April 23, 1964 Civil Code, the Act of June 6, 1997 Penal Code, and others.

Legal regulations included in those acts are to e.g.:

- assure proper condition for abiotic environment and for biotic environment on site and in the areas surrounding the implemented construction investments;

²⁵ CSO – Demography Base: Results of Current Studies: Status and Structure of Population: Population: 2018: Status on 06/30: Population according to sex and cities: Małopolskie.

²⁶ At: https://www.bjp.krakow.pl/?dok_id=105105

²⁷ Feasibility Study for the project "Completion of the rehabilitation of the flood embankments of the Vistula River in Cracow: section 3 - the right embankment of the River Vistula from the Dąbie Barrage to the Przewóz Barrage". SWECO 2018.

- assure safety and health of people in reference to implementation of construction investments;
- prevent cases of sexual harassment and mobbing on work sites;
- assure proper social and labour conditions, and payment for the personnel.

Supervision over observing of provisions included in the aforementioned legal acts is performed by e.g. such numerous institutions and state authorities as the: General Directorate for Environmental Protection, Regional Directorates for Environmental Protection, Environmental Protection Inspectorate, State Sanitary Inspectorate, Construction Supervision Authorities (including Provincial Construction Inspectorates and District Construction Inspectorates), State Labour Inspectorate, Ombudsman, Governmental Proxy for Equal Treatment, Governmental Proxy for Rights of the Disabled, Police, and others.

Nonetheless, considering the importance of ES issues and the requirements of international institutions financing the OVFMP Project (including the World Bank), this Environmental Management Plan and other documents of the Contract contain numerous detailed conditions to assure the proper implementation of any valid provisions and to keep high proceeding standards in the aforementioned scope.

5 Summary of the Environmental Impact Assessment

5.1 Land surface and landscape

Impacts on the ground surface will be associated with temporary and permanent land occupation.

The area of permanent occupation related to the execution of the Works Contract 3A.4 covers about 3.0 ha.

In the construction phase, the temporary exclusion of land from the existing use will be connected, in particular, with construction of an operating backyard, storage yards and technological roads – in total not more than 0.5 ha. After completion of the construction phase, the operating backyard and storage yards will be dismantled and the land reclaimed.

More detailed information on the planned site activities is presented in the *Land Acquisition and Resettlement Action Plan (LA&RAP)*, available on the website of the OVFMP Project Coordination Unit (www.odrapcu.pl).

In terms of landscape values, the impact of the project will be local and mostly limited in time to the stage of construction works (after completion of the works the construction site will be reclaimed and developed in accordance with the design documentation). The most significant permanent change in the landscape related to the planned works will be the construction of a new hydrotechnical facility in the form of a flood gate in the Płaszów port, as well as the necessary cutting of trees and bushes on the body and in the immediate vicinity of the reconstructed flood embankment and on the flood gate construction site (see also information in Chapter 5.8.1). Considering the small spatial scope of the planned works and the relatively small scope of the necessary cutting of trees and bushes²⁸ (spatially limited only to places where the presence of trees and bushes would prevent the performance of construction works and/or safe operation of the constructed facilities²⁹), the execution of the Works Contract will not cause significant negative impacts on the landscape values.

Mitigation measures planned to limit the Works Contract implementation impact on the surface of land and on the landscape were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.1. See also information on the planned replacement tree planting program for the whole Subcomponent 3A of the OVFMP, given in Chapter 6.8.

²⁸ A total of approx. 200 trees and accompanying bushes, on a total area of approx. 0.25 ha, mostly growing on the body and on immediate surroundings of the reconstruction flood embankment, is planned for cutting (see also description in Chapter 5.8.1).

²⁹ In accordance with 176(1)(2) of the Water Law Act, in order to ensure the tightness and stability of flood embankments, it is prohibited, inter alia, to plant trees or bushes on flood embankments and within less than 3 m from the embankment foot.

5.2 Climate

Modification of climatic conditions

The execution of the planned project, consisting on the one hand in modernisation and re-construction of the existing and long-established flood protection structures on the right bank of the Vistula below the Dąbie barrage, and on the other hand in construction of a relatively small new hydrotechnical facility (flood gate) to protect the Płaszów port basin against the swelled waters of the Vistula, is not linked to the emergence of factors which could have a significant impact on the modification of climate conditions, either on a regional or local scale (project implementation does not cause significant changes in the terrain, water conditions, or the current manner of using the area in question).

Emission of greenhouse gases

Due to combustion of fuel by vehicles and construction machines on the performance stage combustion gases shall be emitted, including carbon dioxide accounted as a greenhouse gas. Furthermore, there shall be a need for electric power due to the use of site facilities, operations of machines and devices and provision of lighting for the construction site (the use of electric power is connected with the emission of greenhouse gases during its production in power plants). In view of the small scale of construction works planned to be carried out under Contract 3A.4, as well as the periodic and transient nature of emissions during the construction phase, the above-mentioned impacts can be considered to be completely insignificant in terms of their impact on climate change.

At the operation stage of the constructed hydrotechnical facilities, low demand for electricity will be associated mainly with lighting and periodic operation of the flood gate (during the periods of flood swellings).

Adaptation of the Contract to adverse phenomena associated with climate change

The modernised and newly built flood control facilities on the right bank of the Vistula River have been designed in accordance with binding hydraulic regulations, which include extreme events occurring in the environment due to the changes of climate (it is regulated by relevant regulations on designing, construction, and use of hydrotechnical facilities). On the other hand, Contract performance shall improve flood protection for numerous localities located on the right-bank area beyond the embankment in Cracow; thus, it would contribute to the reduction of effects of adverse phenomena accompanying the changes of climate (sudden downpours causing sudden swells in the Vistula River basin).

5.3 Air quality

The impact of the planned project on the sanitary condition of the atmospheric air will take place mainly at the construction stage, as a result of non-organised emission of gases (exhaust gases from engines of construction vehicles and machines) and dust (dustiness connected with carrying out earthworks and during transport of construction materials) accompanying the construction works. Due to the planned actions limiting the risk and effects of the above-mentioned emissions, the execution of construction works within the scope of the Contract will not cause a significant negative impact on the sanitary condition of air.

At the operational stage, the impact on the condition of the atmospheric air will be limited to occasional exhaust emissions associated with the transport of workers operating the flood gate and periodic maintenance works (including mowing) and flood embankment condition checks.

Mitigation measures planned to limit the Works Contract implementation impact on the quality of air were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.3.

5.4 Soil and grounds

Impact on soils on the construction stage shall mainly be associated with direct transformations of the land surface (excavations), modification of soil structure at temporarily acquired land (technological roads, construction sites), as well as with the potential possibility of polluting the soil due to a leakage of diesel derivatives. Those impacts may be local.

After completing the construction works and after the properly done ground reinstatement one shall expect significant changes to soil and water conditions and to soil productivity within temporary acquisition sites.

Except for the listed impact forms there shall be no interference in the soil layer.

At keeping the environmental protection and H&S standards there shall be no significant impact on and deterioration of the quality of soil in connection with the performance of construction works under the Contract.

Mitigation measures planned to limit the Works Contract implementation impact on the quality of soils and grounds were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.4. Information on the amount of ground masses necessary for the Contract implementation and on the planned sources of their origin is given in Chapter 2.2.

5.5 Surface water

The execution of the Works Contract 3A.4 does not involve any interference with the channels of flowing water (with the exception of the rip-rap revetment of a short section of the right bank of the Vistula just below the hydroelectric power plant on the Dąbie barrage, approx. 40 m long), therefore it will not affect the morphological continuity of the river, nor will it result in a significant impact on the hydromorphological, biological and physicochemical elements of the river. The planned works do not change the magnitude and dynamics of water flows in the river, nor do they affect the frequency and extent of flooding of river waters into the areas of the current embanked area.

In the case of standing waters, the execution of the Works Contract involves local interference in the bank zone and the bottom of the inlet channel to the Płaszów port (in connection with the construction of a flood gate, revetment of slopes and the channel bottom above and below the flood gate, the execution of guide vanes made of steel piling sections at the entrance and exit of the flood gate), but due to the nature and relatively small spatial scope of the above-mentioned works (the planned works encompass only an approx. 100-metre long section of the eastern bank of the channel and an approx. 50-metre long section of the western bank of the channel), the anthropogenic origin of the water reservoir in question (an artificial channel leading to the port basin, of industrial character) as well as the planned mitigation measures (e.g. conducting the construction of the flood gate with protection with steel sheet pile walls preventing contamination of surface waters at the works stage, ongoing monitoring of water pollution during works in channels of flowing and stagnant waters, etc.), the planned project will not result in a significant impact on hydromorphological, biological and physicochemical elements of standing waters. The planned manner of flood gate operation (closed only occasionally, during periods of increased flood hazard) does not cause a risk of fragmentation of water habitats or disturbances in the migration of water organisms. The execution of the Works Contract will not involve the consumption of water or the discharge of sewage into the soil and water, and therefore will not affect the quantitative and qualitative status of surface waters.

The performance of construction works is associated with the potential contamination of the soil and water environment as a result of e.g. breakdown of construction machinery or vehicles causing leakage of oil derivatives, etc. The prevention of such incidents is achieved both by the adopted technology of works (e.g. construction of a flood gate with the protection of sheet pile walls) and by an array of mitigation measures specified in this EMP, related to the prevention and reduction of the effects of possible emissions of pollutants to the soil and water environment. In the case of works performed in riverbeds or in channels, the Contractor is required to conduct ongoing monitoring of water quality in order to prevent the possibility of exceeding the permissible levels of pollution. Notwithstanding the foregoing, carrying out works in riverbeds or channels, as well as on the banks of waters must comply with World Bank guidelines contained in the document *“Environmental, Health and Safety Guidelines for Ports, Harbours, and Terminals”*³⁰

³⁰ Document available on the website:
https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_policy_ehs-portsharborsterminals

At the operation stage, in order to reduce the risk of events that may result in a negative impact on the environment, it is planned to carry out regular inspections and assessments of the technical condition of the flood gate and flood embankment and, if necessary, to carry out necessary maintenance works and procedures. The operation of the above-mentioned hydrotechnical facilities will not change the quantitative and qualitative parameters of surface waters.

In consideration of the above circumstances, it was concluded that the performance of the Contract in question will not pose a threat to the achievement of the environmental objectives set for BSW *Wisła from Skawina to Podłężanka* (PLRW2000192137759), in the catchment area of which it will be performed.

Mitigation measures planned to limit the Works Contract implementation impact on the quality of surface water were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.6.

5.6 Groundwater

The execution of the Works Contract 3A.4 does not affect the status of quantitative and qualitative parameters of groundwater. The reconstruction of the existing flood embankment will not break the hydraulic connection between river water and groundwater on the right bank between the Vistula's embanked area and the area beyond the embankment, because the proposed anti-filtration screens in the flood embankment will be "suspended" in the layer of sands and will not reach the impermeable subsoil layer (therefore the flow of groundwater in the subsoil layers below the screen will still be possible). The execution of the Works Contract will not involve the consumption of water and the discharge of sewage into the soil and water, and therefore will not affect the quantitative and qualitative status of groundwaters.

The operation of the constructed hydrotechnical facilities will not change the quantitative and qualitative parameters of groundwaters.

In consideration of the above circumstances, it was concluded that the performance of the Contract in question will not pose a threat to the achievement of the environmental objectives set for BGW PLGW2000148 and BGW PLGW2000131, in the limits of which it will be performed.

Mitigation measures planned to limit the Works Contract implementation impact on the quality of groundwater were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.6.

5.7 Acoustic climate

The execution of the Works Contract 3A.4 is connected with periodical noise emission during the performance of construction works. The sources of noise will be the work of individual construction machines and vehicle traffic (including, among others, trucks). The acoustic nuisance resulting from the operation of construction machines and vehicles will be limited, both in time (only the period of works) and space (the area of works with its surroundings and access roads to the area of works). The Contract implementation area is located in the vicinity of areas under acoustic protection (built-up areas on the eastern side of Na Zakolu Wisły Street - see description in chapter 4.7), and in a small part (construction of a power connection to the flood gate) even within the boundaries of the above-mentioned areas. Periodic nuisances connected with noise emission may occur during the construction phase in these areas. The reduction of such impacts will be facilitated by limiting the performance of works to the daytime hours and by the Contractor's care for the technical condition of machines and equipment working on the site.

After the completion of the construction stage, the operation of the constructed facilities does not involve significant noise emissions.

Mitigation measures planned to limit the Works Contract implementation impact on the acoustic climate were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.7.

5.8 Nature

5.8.1 Impact on the protected natural habitats and on the protected species of plants, fungi, and animals

Impact of the Works Contract 3A.4 on the protected elements of the natural environment shall be related to:

- The removal of about 200 trees and accompanying bushes (only non-protected species and specimens) directly colliding with the planned works³¹, which are the habitat for the occurrence and breeding of several common protected species of birds and a feeding ground for several protected species of bats (as described in Chapter 4.8.1).
- Scaring of 5 protected species of fish that may be present in the inlet channel to the Płaszów port and in the port basin (as described in Chapter 4.8.1),
- Scaring of 3 protected species of amphibians and reptiles – frogs from the group of water frogs present in the Płaszów port basin and single individuals of lizards that may inhabit the slopes of the Płaszów port basin (see description in Chapter 4.8.1),
- Scaring of several protected species of birds inhabiting trees and bushes in the vicinity of the works site and at least a few protected species of waterfowl that may occur during the flight and wintering periods in the port basin and in the Vistula riverbed at the height of the works site (see description in Chapter 4.8.1),

³¹ The total area of the site subject to cutting is approx. 0.25 ha (the scope of cutting is determined on the basis of the current state of project documentation). Most of the trees to be cut are young specimens, no more than 15 cm in diameter. See also information on the planned replacement tree planting program, in Chapter 6.8.

- Scaring of several protected species of bats feeding on the edges of trees and bushes and above the water table in the port basin in the vicinity of the works site (see description in Chapter 4.8.1),
- Scaring of specimens of 1 protected species of mammals (beaver) which may occasionally appear in the vicinity of the works site during nomadic periods (see description in Chapter 4.8.1),

The above mentioned impacts – resulting mainly from the necessary acquisition of land, traffic of vehicles and machines in the construction period, and logging of trees and shrubs – shall be partially reduced due to the planned mitigation measures (along with the currently developed replacement tree planting program for the whole Subcomponent 3A of the OVFMP, referred to in Chapter 6.8) and in total they shall not have a significant negative impact on the state of resources of protected habitats and species, neither on a local nor regional scale. At the operational stage, the planned project does not have any negative impact on the protected resources of the natural environment (among others, it does not affect the conditions of migration of aquatic organisms – the flood gate on the port channel will be closed for a short period only during large floods of the Vistula and will remain open for the rest of the year).

In accordance with the binding provisions, removal of habitats and disturbance of protected species shall require a prior obtainment of relevant administrative decisions allowing for exceptions from bans related to the protected species (according to conditions described under item 38 of Appendix 1 to the EMP).

Mitigation measures planned to limit the Works Contract implementation impact on the protected elements of natural environment were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.8.

5.8.2 Impact on protected areas

Implementation of the planned Works Contract 3A.4 – both: on the performance stage, as well as on the use stage – shall not cause adverse impact on protected areas and objects located in its wide neighborhood. According to the information presented in Chapter 4.8.2, the nearest protected areas and sites are located on the opposite left bank of the Vistula, at a distance of not less than approx. 300 m (in case of natural monuments) and not less than approx. 950 m (in case of protected areas) from the borders of the zone where the Works Contract is executed. The scope of works planned to be carried out under the Works Contract does not cause any environmental impact beyond the boundaries of the works area and its immediate surroundings.

5.9 Cultural landscape and monuments

The Works Contract 3A.4 implementation area is located within the archaeological supervision zone (see description in Chapter 4.9 and Fig. 3 in Chapter 4.4). The expected earthworks may potentially result in discovering new archaeological heritage; however, for now no archaeological sites were identified within the area in question (two archaeological sites are located at a distance of approx. 120-150 m from the boundaries of the Contract implementation zone – see description in Chapter 4.9 and Fig. 3 in Chapter 4.4). As a consequence, there is no basis at the moment to forecast adverse impact of the planned works on the cultural landscape and on monuments.

Mitigation measures planned to limit the potential impact of Works Contract implementation on the cultural environment were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.9.

5.10 Material goods

As regards the protection of tangible assets, the execution of the Works Contract 3A.4 will improve the flood safety of the city of Cracow (city districts located on the right bank of the Vistula River, especially at the level of the river section between the Dąbie and Przewóz barges). An impact on the buildings located nearby is possible in the neighbourhood of the construction sites and transport roads. No adverse impacts on tangible assets were found.

Issues associated with the social context of the Works Contract 3A.4, including expropriation of properties, restriction of the previous use method, or access to properties, are described in details in the *Land Acquisition and Resettlement Action Plan (LA&RAP)* for the Contract in question.

5.11 Health and safety of people

The designed construction works performed under Contract 3A.4 may temporarily deteriorate the quality and standard of living of residents, but that impact shall be temporary and reversible. Due to the performance there will be increased emission of noise in vicinity of the works and dusting shall increase locally, and – due to the increased traffic of trucks – emission of combustion gases shall raise. However it shall be emphasized that those impacts would be temporary and limited, and they would cease at the completion.

The operational stage is associated with a positive impact on the people and their properties. The main objective of the Contract is to protect people and their material goods against flooding during high water levels. Operations of the developed hydrotechnical facilities shall increase the feeling of safety among people living in the areas located on the right bank of the Vistula within the city limits of Cracow.

Mitigation measures planned to limit the Works Contract implementation impact on the health and safety of people were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.11.

5.12 Exceptional hazards to the environment

Implementation of the planned Works Contract is associated with a possibility of occurrence of the following crisis or emergency situations, which may cause exceptional hazard to the environment:

- Uncontrolled emission (leakage) of diesel substances
There may be an emergency situation on the performance stage, what would result in a leakage of diesel derivatives from vehicles, construction machines, tanks, etc., polluting surface water of land surface (including soil). Limitation of the risk and effects of such events takes place based upon proper organization of the site facilities and care for the proper technical conditions of vehicles, and machines and equipment applied on site, and – in case of their occurrence – based upon application of procedures referring to crisis and emergence situations described in the EMP.

- Fire or explosion of flammable substances
There may be an emergency situation on the performance stage associated with fire (e.g. due to equipment failure, negligence by the personnel, explosion of flammable substances, lightning strike, etc.). Limitation of the risk and effects of such events takes place based upon strict observance of H&S rules, proper organization of the site facilities and care for the proper technical conditions of vehicles, and machines and equipment applied on site, and – in case of their occurrence – based upon application of procedures referring to crisis and emergence situations described in the EMP.
- Identification of unexploded shells or ordnance
Dangerous military materials, e.g. unexploded shells and ordnance, may be found on the performance stage. Limitation of a potential hazard associated with such events takes place based upon provision of an ongoing sapper supervision over the works, and – in case of identifying such materials – upon strict observance of procedures referring to cases of identifying presence of unexploded shells and ordnance described in the EMP.
- Immediate water raise, flood
Water level may raise immediately in water-courses within the construction site or a flood may occur on the performance stage, what would pose risk to health and life of the personnel and cause material damage on site. In order to minimize potential effects of such events the Contractor shall consider flood threat at organizing the site facilities and the remaining part of the construction site, and shall develop a *Flood Protection Plan for the Construction Site* and shall strictly apply conditions contained therein.
- Possible failure of the flood embankment and flood gate at the operational stage
Flood embankment operation is associated with a potential risk of water overflow through the embankment crest or of breaking the embankment due to the occurrence of an exceptionally strong and long-lasting impoundment of river water causing long-term flooding of the embanked areas or exceptional increase of water level in the embanked area. In the case of the flood gate, it is theoretically also possible that the gate equipment fails (e.g. failure of the closures) during the flooding period. Limitation of risk in case of such catastrophes takes place based upon particular design and technical solutions applied for the planned flood embankments and flood gate, in accordance with the guidelines binding for designing of hydraulic objects (e.g. particular dimensions of hydrotechnical structures, proper selection of materials to construct embankments, application of required membranes, works technology including necessary sufficient compaction of embankments, appropriate construction of closures and flood gate equipment with control and measurement apparatus, etc.). Considering that protection and the fact that the said hydrotechnical facilities have been designed including hydrological data defining the scale of flows in rivers within the discussed area in computational periods, it may be stated that the discussed hazard is highly potential and the probability of its occurrence is minor. At the operational stage, the constructed floodgate shall be applied in accordance with the use manual, including any formal and legal requirements on both: environmental and technical aspects, as well as safety of the structure.

Mitigation measures planned to limit the effects of potential crisis situations, which may emerge due to or in the time of Works Contract implementation were tabulated in Appendix 1 to this EMP – Plan of mitigation measures – and described in Chapter 6.12.

5.13 Other hazards related to ES

Implementation of the Works Contract 3A.4 may relate to numerous impacts related to ES issues (i.e. environmental, social and health and safety aspects). Except for the issues discussed above in Chapters 5.1-5.12, the following additional issues or hazards related to that subject may occur during implementation of the Contract, e.g.:

- Accidents and near misses, including participation of people associated with implementation of the Contract and/or of third parties;
- Cases of such unacceptable behavior on work sites as sexual harassment or mobbing;
- Cases of intentional or unintentional violation of labour law's provisions, including the ones associated with social conditions and labour conditions, and with payment to the personnel;
- Cases of infections with sexually transmitted diseases (including HIV/AIDS) or other infectious diseases (including those caused by coronaviruses, e.g. COVID-19), resulting from the lack of knowledge or from non-compliance with applicable rules on preventing and controlling infections of that type.

Due to significant social effects of those hazards, this Environmental Management Plan and other documents of the Contract contain numerous detailed conditions to prevent and efficiently react in case such events occur, and to assure proper implementation of any provisions of national legislation in that scope (see e.g.: Chapter 6.13).

5.14 Cumulative impact

The Works Contract 3A.4, which is the subject of the EMP, will be executed in the immediate adjacency of the execution area of another project, i.e. Works Contract 3A.1/2 titled *Construction of Vistula embankments in Cracow – Section 3*, falling within the scope of Subcomponent 3A of the OVFMP Project (Works Contract 3A.4 is a functional complement to the Works Contract 3A.1/2, and the eastern end of the flood embankment rebuilt under this Contract connects directly to the western end of the flood embankment reconstructed under Contract 3A.1/2 – see Fig. 1 and map in Appendix 5 to this EMP). The information presented, inter alia, in the Environmental Management Plans for Contracts 3A.4 and 3A.1/2 as well as in the environmental decisions issued for the aforementioned projects, provides that the execution of none of the aforementioned Contracts involves the occurrence of significant emissions or other significant impacts on the environment, the scale of which would result in the possibility of occurrence of significant threats to the abiotic or biotic environment, even if construction works for both Contracts are conducted at the same time. It can be concluded by analysing the mitigation actions described in the EMP documents for the above-mentioned Contracts that if construction works are carried out in accordance with the conditions contained therein, there is no risk of significant cumulative negative impacts, even if both Contracts are implemented at the same time. Similarly, at the operation stage of the constructed hydrotechnical facilities on the right bank of the Vistula river in Cracow, no negative environmental impacts are expected to occur as a result of possible accumulation of potential impacts of each of them. Apart from the aforementioned Works Contract 3A.1/2, the authors of this EMP are not aware of any other planned projects that could lead to the occurrence of cumulative environmental impacts with the effects of Works Contract 3A.4.

6 Description of mitigation measures

In order to limit potential adverse impact of the planned Contract onto particular elements of the environment, Appendix 1 to this EMP provides a list of mitigation measures binding for the Contractor of Works Contract 3A.4. The measures have been developed based upon the conditions included in the binding decision on environmental conditions, including a supplementation with additional conditions determined at the development of the EMP. A summary of main mitigation measures' categories has been presented in the following parts of this chapter, with a breakdown into particular components of the environment discussed in Chapters 4 and 5 of the EMP.

Notwithstanding the above (in accordance with the condition in item no. 89 in Appendix 1 to the EMP), the Contractor shall be obliged to apply and observe all ES policies' requirements and conditions (i.e. the ones related to environmental, social and health and safety issues) as determined in the Contract documents, in the Operational Policies and Procedures of the World Bank³² concerning protection of health and environment, as well as safeguard policies, in the WBG's Environmental, Health and Safety (EHS) Guidelines³³, in the ES Code of Conduct (developed on the stage of filing a bid³⁴), in documents of the Contractor listed in Chapter 6.14 and in item no. 69 in Appendix 1 to the EMP, and as results from the legislation valid in Poland (including the Labour Code, the Construction Law, and others).

Temporary and permanent land acquisitions in connection with the implementation of the Contract will take place according to the rules specified in the Land Acquisition and Resettlement Action Plan (LA&RAP).

6.1 Land surface and landscape

Basic forms of the potential adverse impact of the planned implementation of Works Contract 3A.4 on the surface of land and on the landscape were provided in Chapter 5.1.

In order to limit those impacts Appendix 1 to the EMP implements mitigation measures to e.g.:

- Limit the impact on the condition of land surface and landscape associated with land acquisition (e.g. items no. 5, 6, 9, 13, 14, 15, 25, 26, 35, 39, 41, 43, 44);
- Limit the damage to landscape values associated with the removal of or damages to trees and shrubs (e.g. items no. 16, 18, 19, 20, 21, 22, 23, 24, 41).

³² Available on e.g. a website:

<https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx#S3-2>
(in part titled *Investment Project Financing / Environmental and Social Safeguard Policies*).

³³ The guidelines are published on the World Bank's internet service at:

https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/EHS-Guidelines/ and
<https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=jOWim3p>

³⁴ In accordance with conditions given in the bidding documents in part ITB 11.1 (h).

6.2 Climate

Due to the absence of adverse impact on the climate (see: description under Chapter 5.2), it was not stated necessary to implement mitigation measures for that environmental component. Some mitigation measures – listed in Chapter 6.3 – are indirectly connected to the protection of climate, and they refer to the protection of air against contamination with combustion gas.

6.3 Air quality

Basic forms of potential adverse impact of the planned Works Contract 3A.4 on the air were presented in Chapter 5.3.

For the purpose of limiting those impacts Appendix 1 to the EMP implements mitigation measures to e.g.:

- Limit the contamination of air with combustion gas (e.g. items no. 47, 57);
- Limit the contamination of air due to emission of dust (e.g. items no. 58, 59, 65).

6.4 Soils and grounds

Basic forms of potential adverse impact of the planned Works Contract 3A.4 on soils and grounds were presented in Chapter 5.4.

For the purpose of limiting those impacts Appendix 1 to the EMP implements mitigation measures to e.g.:

- Limit the damage to soil due to land acquisition (e.g. items no. 5, 6, 13, 14, 15, 25, 26, 35, 39);
- Limit the loss of top-soil layer (e.g. items no. 40, 41, 42, 43, 44);
- Limit the risk of polluting the ground on the performance stage (e.g. items no. 45, 46, 47, 50, 51, 52, 53, 54, 55, 56, 64, 65, 66, 67, 68).

6.5 Surface water

Basic forms of potential adverse impact of the planned Works Contract 3A.4 on surface water were presented in Chapter 5.5.

For the purpose of limiting those impacts Appendix 1 to the EMP implements mitigation measures to e.g.:

- Limit the risk of polluting the water on the performance stage (e.g. items no. 5, 6, 13, 14, 15, 25, 26, 35, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 64, 65, 66, 67, 68);
- Limit the risk of polluting the water on the operational stage (e.g. items no. 46);
- Limit the risk of adverse impact on biological elements of the water quality (e.g. items no. 35, 36, 37, 48, 83).

6.6 Groundwater

Due to the fact that the potential implementation impact of Works Contract 3A.4 on groundwater (as described in Chapter 5.6) essentially overlaps impacts on the ground environment and on the surface water (described in Chapters 5.4 and 5.5), it was not stated necessary to implement additional mitigating measures in that scope, i.e. other than mitigation measures for the ground environment (see: description in Chapter 6.4) and mitigation measures for the surface water (see: description in Chapter 6.5).

6.7 Acoustic climate

Basic forms of potential adverse impact of the planned Works Contract 3A.4 on the acoustic climate were presented in Chapter 5.7.

For the purpose of limiting those impacts Appendix 1 to the EMP implements mitigation measures to e.g.:

- Limit noise generated on the performance stage and to limit the impact of that noise on acoustically protected sites (e.g. items no. 14, 15, 57, 60, 61, 62, 63).

6.8 Nature

Basic forms of potential adverse impact of the planned Works Contract 3A.4 on the abiotic nature's resources were presented in Chapter 5.8.

For the purpose of limiting those impacts Appendix 1 to the EMP implements mitigation measures to e.g.:

- Limit losses in environmental resources associated with land acquisition, including acquisition of environmental habitats and habitats of plants and animals (e.g. items no. 5, 6, 13, 14, 15, 26, 27, 35, 37, 40, 41, 42, 43, 44, 83);
- Limit losses in environmental resources associated with logging of or damages to trees and shrubs (e.g. items no. 16, 17, 18, 19, 20, 21, 22, 23, 24, 34, 37, 38, 41, 83);
- Eliminate or limit losses in environmental resources associated with accidental mortality of specimens of protected species on site (e.g. items no. 17, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35, 37, 40, 48, 83);
- Eliminate or limit the performance impact on the results of breeding and migration of protected animal species (e.g. items no. 25, 26, 27, 30, 33, 35, 36, 37, 38, 45, 46, 48, 49, 60, 83);
- Eliminate or limit the performance impact on the spread of invasive plant species of foreign origin (e.g. items no. 28, 37, 83);
- Limit a risk of adverse impact on biological elements of the water quality (e.g. items no. 35, 36, 37, 83).

Notwithstanding the abovementioned mitigation measures introduced in Appendix 1 to the EMP (resulting i.a. from the conditions set out in the applicable environmental decision for the Works Contract 3A.4), in order to limit the impact of the implementation of all the Works Contracts included in Subcomponent 3A of the OVFMP on the state of woody greenness resources within and around the city of Krakow, in spring 2020 PGW WP RZGW in Cracow

started work to develop an additional replacement tree planting program for the whole subcomponent. The program, planned to implementation in cooperation with local authorities, would compensate for the loss of tree resources caused by the necessary felling of trees carried out under the aforementioned contracts within and around the city of Cracow. Currently (as of the third quarter of 2020), consultations and working meetings of the Directorate PGW WP RZGW in Cracow with representatives of the Cracow City Council and representatives of local ecological organizations are held to establish the detailed assumptions and rules for the implementation of the planned replacement tree planting program.

6.9 Cultural landscape and monuments

In accordance with a description given in Chapter 5.9, the planned implementation of Works Contract 3A.4 does not provide adverse impact on known cultural assets. In order to eliminate the potential adverse impact on yet undiscovered cultural objects, Appendix 1 to the EMP implements mitigation measures to assure the performance of works under current archaeological supervision and the implementation of relevant procedures in case of discovering mobile heritage or archaeological sites on the performance stage (items no. 80, 81, 84).

6.10 Material goods

In accordance with a description given in Chapter 5.10, the planned implementation of Works Contract 3A.4 does not provide significant adverse impact on the condition of material goods. In order to eliminate the potential adverse impact of the works on material goods, Appendix 1 to the EMP implements mitigation measures to provide protection for buildings, roads, and other infrastructural elements against unfavorable impact of the works and / or transportation associated with implementation of the Contract (items no. 5, 6, 7, 8, 9, 11, 12, 71). Some mitigation measures listed under Chapter 6.1, as well as measures listed under items no. 3 and 4 in Appendix 1 to the EMP – in reference to the purchase and to the compensation due to implementation of the Contract, are indirectly associated with the protection of material goods, and those are to limit the impact of land acquisition during the works (according to the rules specified in the Land Acquisition and Resettlement Action Plan).

6.11 Health and safety of people

Basic forms of potential adverse impact of the planned Works Contract 3A.4 on the health and safety of people were presented in Chapter 5.11.

For the purpose of limiting those impacts Appendix 1 to the EMP implements mitigation measures to e.g.:

- Limit the impact of the planned works on the sanitary condition of air (listed under Chapter 6.3);
- Limit the impact of the planned works on the acoustic climate (listed under Chapter 6.7);
- Eliminate or limit the risk of chemical contamination of water and ground on the performance stage (listed under Chapters 6.4, 6.5, and 6.6);
- Secure safety on site and in its vicinity (items no. 7, 8, 10, 11, 12, 45, 46, 69, 70, 71, 72, 73, 74, 75, 85, 89, 97, 98, 99);

- Assure proper reaction in case of exceptional hazards (items no. 76, 78, 79, 97).

6.12 Extraordinary hazards to the environment

Basic types of exceptional hazards (crisis situations), which may potentially occur due to the implementation of Works Contract 3A.4 were presented in Chapter 5.12.

In order to limit potential effects of crisis situations Appendix 1 to the EMP implements mitigation measures to e.g.:

- Eliminate or limit the risk of chemical contamination of water and ground on the performance stage (listed under Chapters 6.4, 6.5, and 6.6);
- Secure safety in case of fire (e.g. item no. 69);
- Secure safety in case of identifying unexploded shells and ordnance (e.g. items no. 69, 70, 79, 85);
- Secure safety in case of flood (e.g. items no. 76, 77);
- Assure proper reaction in case of exceptional hazards (items no. 76, 78, 79, 97).

6.13 Other ES hazards

Exemplary forms of additional hazards associated with ES issues (other than the ones discussed previously in Chapters 5.1-5.12) were presented in Chapter 5.13.

In order to prevent hazards of that type, except for the measures listed in Chapters 6.1-6.13, Appendix 1 to this EMP implements additional mitigation measures to e.g.:

- prevent accidents and near misses on work site and in other places related to the implementation of the Contract (e.g. items no. 89, 90, 91, 92, 97 and others listed in Chapters 6.11 and 6.12);
- combat such unacceptable behavior on work site as cases of sexual harassment or mobbing (e.g. items no. 93, 94, 97);
- assure proper social conditions, and labour conditions and payment to the personnel engaged in implementation of the Contract, in compliance with the law (e.g. items no. 95, 96, 97);
- assure proper procedures for ongoing information provision on issues and hazards associated with the aforementioned subject (e.g. item no. 97);
- reduce the risk of spreading infectious diseases, especially sexually transmitted diseases (including HIV/AIDS) and diseases caused by coronaviruses (e.g. COVID-19) (e.g. items no. 98, 99).

6.14 Requirements for implementation of action plans in the construction phase

For the purpose of providing proper performance organization, as well as for the proper implementation of conditions determined under Appendices 1 and 2 to the Environmental Management Plan, the Contractor is obliged to develop and obtain the Engineer's acceptance for the following documents, which shall subsequently be implemented (see also item no. 69 in Appendix 1 to the EMP):

- Construction site organization plan, which should contain such elements as e.g.:
 - location of the site facilities,
 - development of the site facilities,
 - protection of the site facilities,
 - service roads,
 - environmental protection on the site facilities, technological roads, and yards.
- Waste management plan, which should contain such elements as e.g.:
 - encountered and predicted types and volumes of waste,
 - means of preventing adverse impact of waste on the environment,
 - means of waste management considering collection, transportation, recovery and treatment of waste,
 - type of generated waste and method for its storage.
- Quality assurance plans (general one and detailed ones), which should contain such elements as e.g.:
 - works performance organization,
 - organization of traffic at the construction site, including marking of the works,
 - H&S and environmental protection,
 - list of working teams,
 - scope of duties of the key personnel,
 - quality control,
 - methods for controlling the level of noise emissions as well as air, soil and water pollution (to the extent relevant to the type of works),
 - laboratory tests.
- Flood protection plan for the site for the performance time, which shall contain the following:
 - monitoring of hydrological and meteorological conditions,
 - conditions for accommodation of flood flows during the performance,
 - the rules of work for the Contractor's team in the period of flood risk,
 - basic duties of the managing staff during the flood risk,
 - list of managing staff in the period of flood risk,
 - list of equipment and transport means needed to conduct rescue actions.

- Health and safety plan (BIOZ Plan), which should contain such elements as e.g.:
 - indication of plot or land development elements, which may create a risk to safety and health of people,
 - information concerning expected hazards that could occur during the performance, defining the scale and types of hazards and the place and time of occurrence, including reference to the natural environment,
 - information on designation and marking for construction work sites, according to the type of hazard,
 - information on the method of training for the employees prior to the commencement of particularly hazardous works,
 - determining the method of storing and transport of hazardous materials, goods, substances and preparations at the construction site,
 - indication of technical and organizational means of safeguarding against hazards connected with the construction works in increased health risk zones, or in their immediate vicinity, including means of safe and efficient communication allowing for quick evacuation in the case of fire, failure, and other hazards,
 - indication of the storage location for construction site's documentation and documents necessary for proper operation of machines and other technical devices,
 - information related to the current rules of conduct in case of an epidemic state or an epidemic risk state being announced (including conditions given in item no. 99 in Appendix 1 to the EMP).

At developing the aforementioned documents the Contractor shall include e.g. provisions of the decision on environmental conditions (and of other administrative decisions related to the environmental protection, if applicable), conditions determined in the EMP, the appropriate Operational Policies and Procedures of the World Bank³⁵ concerning protection of health and environment, as well as safeguard policies, the WBG's Environmental, Health and Safety (EHS) Guidelines³⁶, the ES Code of Conduct (developed on the stage of filing a bid³⁷) and binding provisions of the state law (including the Labour Code, the Construction Law, and others).

³⁵ Available on e.g. a website:
<https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx#S3-2>
(in part titled *Investment Project Financing / Environmental and Social Safeguard Policies*).

³⁶ The guidelines are published on the World Bank's internet service at:
https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/EHS-Guidelines/ and
<https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=jOWim3p>

³⁷ In accordance with conditions given in the bidding documents in part ITB 11.1 (h).

7 Description of measures related to environmental monitoring

Appendix 2 to this EMP provides a summary of monitoring measures binding for the Contractor for the Works Contract 3A.4. Those measures have been developed based upon the conditions included in the valid decision on environmental conditions, along with additional conditions established on the stage of EMP development.

Monitoring measures listed in Appendix 2 to the EMP belong to one category:

- Monitoring for implementation of mitigation measures from Appendix 1 to the EMP (items no. 1-99 in Appendix 2 to the EMP).

8 Public consultations

8.1 Public consultations on Environmental and Social Management Framework (2015)

The draft ESMF was subject to public consultations conducted in accordance with the World Bank's operational policy OP 4.01. Their purpose was to allow the society to acknowledge contents of that document and to assure the possibility of filing potential remarks, enquiries, and applications to its contents.

Documentation on the public consultations process for the ESMF is available on a website of the Odra-Vistula Flood Management Project Coordination Unit^{38,39}.

8.2 Public consultations on the EIA stage (2019-2020)

In accordance with the Polish EIA procedure, on the stage of issuing a decision on environmental decision, the planned project falling within the scope of the Works Contract 3A.4 shall be subject to obligatory public consultations. On the EIA procedure stage the consultations with the public were done by the unit issuing the ED, i.e. RDOŚ in Cracow.

The description of individual stages of the EIA proceedings conducted at the stage of issuing the decision on environmental conditions, together with the description of public consultations conducted by RDOŚ in Cracow within the framework of the aforementioned proceedings, is presented in the text of the decision of the Regional Director for Environmental Protection in Cracow dated February 28, 2020 on environmental conditions (ref. no.: OO.420.4.1.2019.BM – Appendix 4a to this EMP).

8.3 Public consultations on EMP (2020)

The draft of this EMP was subject to the procedure of public consultations conducted in accordance with the operational policies of the World Bank (OP 4.01). Due to the threats associated with coronavirus epidemic causing COVID-19 disease, the action plan related to publication of the EMP took into account guidelines under the Technical Note of the World Bank *“Public Consultation and Stakeholder Engagement in World Bank Supported Activities, in the event of restrictions on public meeting”*⁴⁰.

After preparing the draft EMP and obtaining – upon its basis – the World Bank's acceptance (so-called “OK”) for commencing the publication procedure, on August 17, 2020 a digital version of the draft EMP was published at the following publicly accessible websites: on the website of PGW WP RZGW in Cracow – <http://krakow.wody.gov.pl> (Fig. 6), OVFM Project

³⁸ http://www.odrapcu.pl/doc/OVFMP/RPZSiS_Zalacznik_08_Raporty_z_procedury_upublicznienia_projektu_EMAF.pdf

³⁹ http://www.odrapcu.pl/doc/OVFMP/RPZSiS_Zalacznik_09_Raporty_z_konsultacji_spoecznych_RAF.pdf

⁴⁰ In case of procedures applied prior to the occurrence of coronavirus pandemic, one has resigned of providing a hard copy of the draft EMP for review in offices and in public offices, the publication period has been extended (up to 15 working days), and an open public debate in the end of the publication period for the draft EMP was cancelled. Instead of the aforementioned debate, a teleconference (webinar) was organized on the last day of consultations, and it consisted of a presentation of the draft EMP and a Q&A session.

Coordination Unit – www.odrapcu2019.odrapcu.pl (Fig. 7) and City Office of Cracow – www.bip.krakow.pl (Fig. 8).

Detailed information on the access to that document and on the possibility of informing conclusions and comments (along with indication of detailed contact data: snail mail addresses, e-mail address, telephone number) were publicly informed in the Announcement (Fig. 9) available between 08/17/2020 and 09/07/2020 in the following locations:

- website of PGW WP RZGW in Cracow – <http://krakow.wody.gov.pl> (Fig. 6), website of OVFP Project Coordination Unit – www.odrapcu2019.odrapcu.pl (Fig. 7) and website of the City Office of Cracow – www.bip.krakow.pl (Fig. 8);
- notice boards in offices of the institutions mentioned above;
- websites of local press, at <https://dziennikpolski24.pl> and <https://gazetakrakowska.pl> (Fig. 10 and 11);
- printed local press – in *Dziennik Polski* (Fig. 12).

The aforementioned announcement also included information on the possibility of taking part in a publicly accessible teleconference (webinar), which was planned for September 7, 2020 (including information on date and time of the teleconference), and information on a link allowing for downloading “*Step by step manual*” and a link allowing for accessing the teleconference.

Information on the commenced publication procedure for the draft EMP and on the possibility of notifying motions and remarks has also been e-mailed to the following persons, institutions, and organizations:

- Mayor of Cracow;
- Environmental Development Department in Cracow;
- City Council of Cracow;
- Environmental Development Committee at the City Council of Cracow;
- Siostry Rzeki [Sisters of the River];
- Strajk dla Ziemi Kraków [Strike for Earth Cracow];
- Towarzystwo na rzecz Ziemi [Society for Earth];
- Akcja Ratunkowa dla Krakowa [Emergency for Cracow];
- Towarzystwo na Rzecz Ochrony Przyrody [Society for Protection of Nature];
- Fundacja Ekorozwoju [Eco-development Foundation];
- Koalicja Ratujmy Rzeki [Save the Rivers Coalition];
- Stowarzyszenie Kraków dla Mieszkańców [Cracow for Citizens Association].

The publication of the draft EMP, officially launched on August 18, 2020, was completed after 15 working days, i.e. on September 7, 2020. During that period, until the commencement of the publicly available teleconference (webinar), neither remarks nor questions were provided in relation to contents of the draft EMP (neither as a hard copy nor by e-mail or phone).

On the last day of the publication period – September 7, 2020, from 5:00 pm to 7:00 pm – the publicly accessible teleconference (webinar) was organized for interested people, organizations, and institutions, and it consisted of a presentation on the draft EMP for the Works Contract 3A.4 and of a Q&A session (Fig. 13 and 14). At least 10 people attended the tele-

conference (according to anonymous data available from Microsoft Teams software). During the teleconference the attendees asked five questions (using an on-line form available to all persons attending the webinar). Particular questions are discussed below, including the answers provided:

- 1) *Will closing and opening of the flood gate in the Płaszów Port be automatic, depending on the level of water in Vistula, or will it be operated manually?*

As an answer it was informed that the flood gate at the inlet channel to the Płaszów Port will mainly be operated automatically, while using measuring probes placed in the port channel. Regardless of that, the flood gate shall also have a system allowing for manual control, which would be applied depending on the needs.

- 2) *What is the purpose of constructing a pier on the right bank of the channel downstream of the flood gate?*

As an answer it was clarified that an element of the investment defined as “construction of a pier on the right bank of the channel” refers to proper shaping of the right bank of the channel downstream of the flood gate, for the purpose of providing legally required parameters for a water way (radius of the channel’s curve) allowing for the access of vessels to the Płaszów Port through the flood gate’s opening.

- 3) *Will the construction of the flood gate be implemented in the same time as the redevelopment of the embankment on the right bank of the River Vistula under Contract 3A.1/2?*

As an answer it was informed that the time of implementing the Works Contract 3A.4 does not depend on the time of implementing Contract 3A.1/2 (both contracts may be implemented in the same time, or independently). The exact time for implementation of both Contracts depends on e.g. duration of procedures related to selection of Contractors, and time of concluding contracts with Contractors.

- 4) *Is it expected to allow the pedestrians to pass through a footbridge over the flood gate?*

As an answer it was clarified that a decision on availability of the technological footbridge over the flood gate for third parties shall be made by the Investor on the stage of developing a manual on servicing and maintaining the flood gate.

- 5) *What conditions were imposed in the derogation decision issued by RDOŚ in Cracow in July 2020?*

As an answer it was informed that the derogation decision mentioned in the question was issued by RDOŚ in Cracow on 07/02/2020⁴¹, i.e. just after the World Bank provided consent for commencing the public consultations for the draft EMP for Contract 3A.4. RDOŚ in Cracow allowed in that decision for damaging habitats or mainstays of 5 protected bird species within the Contract implementation area, provided that those actions would be done under ornithological supervision and after prior inspection of the site, where logging of trees and shrubs is planned, by the environmental inspectors, for the purpose of identifying presence of protected bird species and nests inhabited by them. In case of identifying active hatches of birds the measures associated with damaging habitats of the aforementioned species will be feasible just after young specimens leave the nests.

⁴¹ A copy of the decision is attached to this EMP (Appendix 4b).

After answering all of the questions the teleconference was over.

After completing the public consultations period, the Report on public consultations of the draft EMP and the Final version of the EMP for the Works Contract 3A.4 were prepared. Subsequently, both of these documents were submitted to the World Bank for the final approval clause, the so-called "No objection".

Environmental Management Plan for the OVFMP – Subcomponent 3A – Works Contract 3A.4:
*Extension of a section of the right embankment downstream of the Dąbie Barrage,
including development of a flood gate in the area of a repair yard*

Regionalny Zarząd Gospodarki Wodnej w Krakowie **Zbiornik Świnna Poręba** Kontrast Układ Czcionki

Państwowe Gospodarstwo Wodne Wody Polskie O Wodach Polskich Aktualności Nasze działania Zamówienia publiczne Media Kontakt

Wody Polskie / Aktualności / Konsultacje społeczne Planu Zarządzania Środowiskiem

Konsultacje społeczne Planu Zarządzania Środowiskiem

Utworzono: 17 sierpień 2020

CEB THE WORLD BANK Państwowe Gospodarstwo Wodne Wody Polskie AECOM

OBWIESZCZENIE

podaje się do publicznej wiadomości, co następuje:

Państwowe Gospodarstwo Wodne Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Krakowie (PGW Wody Polskie RZGW w Krakowie), Jednostka Realizująca Projekt Ochrony Przeciwpowodziowej w Dorzeczu Odry i Wisły (JRP OPDOW) udostępniła zainteresowanym osobom i instytucjom **PROJEKT PLANU ZARZĄDZANIA ŚRODOWISKIEM** dla Kontraktu 3A.4 *Rozbudowa odcinka prawego wału poniżej stopnia Dąbie wraz z budową wrót przeciwpowodziowych w rejonie stoczni remontowej* (nazywany dalej **PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM**) sporządzony w ramach Komponentu 3 Projektu OPDOW – *Ochrona przed powodzią Górnej Wisły*, Podkomponentu 3A – *Ochrona przed powodzią Krakowa i Wieliczki*.

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

Każdy zainteresowany może:

A) zapoznać się z **PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM** od dnia **18 sierpnia 2020 r.** do dnia **7 września 2020 r.** włącznie (15 dni roboczych) poprzez strony internetowe:

- Państwowego Gospodarstwa Wodnego Wody Polskie Regionalnego Zarządu Gospodarki Wodnej w Krakowie, pod adresem – <http://krakow.wody.gov.pl>;
- Biura Koordynacji Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły, pod adresem – www.odrapcu2019.odrapcu.pl;
- Urzędu Miasta Krakowa, pod adresem – bip.krakow.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 Krakowie, ul. Marsz. J. Piłsudskiego 22, 31-109 Kraków;
- w formie elektronicznej na adres e-mail: jrp.krakow@wody.gov.pl;
- telefonicznie każdego dnia roboczego trwania upublicznienia pod nr telefonu **+48 664 084 039** w godzinach **9:00-14:00** w dniach od **18 sierpnia 2020 r.** do **7 września 2020 r.** włącznie.

Instytucją właściwą do rozpatrzenia uwag i wniosków jest PGW Wody Polskie RZGW w Krakowie. Adres e-mail: jrp.krakow@wody.gov.pl.

W 15 dniu roboczym udostępnienia dokumentu, tj. w dniu **7 września 2020 r.**, w godz. **od 17:00 do 19:00** odbędzie się elektroniczne spotkanie konsultacyjne w formie webinarium, otwarte dla wszystkich zainteresowanych, na którym przedstawione zostaną informacje o **PROJEKcie PLANU ZARZĄDZANIA ŚRODOWISKIEM**, umożliwiające również zadawanie pytań i składanie wniosków.

Aby wziąć udział w ww. webinarium, należy wejść na stronę <https://krakow.wody.gov.pl/aktualnosci> gdzie we wpisie poświęconym spotkaniu konsultacyjnemu projektu Planu Zarządzania Środowiskiem dla Kontraktu 3A.4 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 (*Dziennik Polski* oraz w wersji elektronicznej na stronach: <https://dziennikpolski24.pl/>, <https://gazetakrakowska.pl/>), wywieszenie na tablicy ogłoszeń Urzędu Miasta w Krakowie, tablicy PGW WP RZGW w Krakowie, a także na stronach internetowych Instytucji wskazanych powyżej.

Poniżej zamieszczono linki do instrukcji „*krok po kroku*” dołączenia do webinarium oraz link do webinarium:
Instrukcja „*krok po kroku*” dołączenia do webinarium – [LINK \[otwórz dokument\]](#)
Webinarium – [LINK \[LINK\]](#)

Dokumenty do pobrania

POLECANE ARTYKUŁY
Zmiana numeru telefonu Zarządu Zlewni w Sandomierzu

NASZE JEDNOSTKI
Wody Polskie

Fig. 6. Announcement on public consultations for the draft EMP with a link for downloading the documents and to a webinar, as published at the website of the PGW WP RZGW in Cracow

Environmental Management Plan for the OVFMP – Subcomponent 3A – Works Contract 3A.4:
*Extension of a section of the right embankment downstream of the Dąbie Barrage,
including development of a flood gate in the area of a repair yard*

The screenshot shows the website of the Odra Vistula Flood Management Project Coordination Unit. The header includes the logo of Państwowe Gospodarstwo Wodne Wody Polskie and the title 'Biuro Koordynacji Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły'. The navigation menu contains links for 'Strona główna', 'POPDO', 'POPDOW', 'KPDEE', 'Ogłoszenia', 'Kontakt', 'RODO', 'BIP', 'Skróty', and flags for Poland and the UK. The main content area features a heading 'Projekt PZŚ dla Kontraktu 3A.4 Rozbudowa odcinka prawego wału poniżej stopnia Dąbie wraz z budową wrót przeciwpowodziowych w rejonie stoczni remontowej'. Below this, there is a list of documents (Załącznik 1-10) and a download button 'Pobierz komplet dokumentów (ZIP)'. A 'Obwieszczenie' (announcement) link is also present.

Fig. 7. Digital version of the draft EMP and announcement on public consultations for the draft EMP published at the website of the OVFMP PCU

The screenshot shows the website of the City Office of Cracow. The header includes the logo of 'bip biuletyn informacji publicznej' and the title 'Miasto Kraków'. The navigation menu contains links for 'mapa strony', 'o serwisie', 'kontakt', 'pomoc', and 'zaloguj'. The main content area features a heading 'OBWIESZCZENIE Państwowego Gospodarstwa Wodnego Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Krakowie'. Below this, there is a section 'OBWIESZCZENIE' with a sub-heading 'podaje się do publicznej wiadomości, co następuje:'. The text describes the project and provides information on public consultations, including a link to download documents. The announcement is dated 2020-08-17.

Fig. 8. Announcement on public consultations for the draft EMP with a link for downloading the documents, as published at the website of the City Office of Cracow

ANNOUNCEMENT

It is hereby made known to the public that:

State Water Holding Polish Waters, Regional Water Management Authority in Cracow (PGW WP RZGW in Cracow), Project Implementation Unit for the Odra-Vistula Flood Management Project (PIU) have made it available for the interested individuals and institutions **THE DRAFT TO THE ENVIRONMENTAL MANAGEMENT PLAN** for 3A.4 Contract *Extension of a section of the right embankment downstream of the Dąbie Barrage, including development of a flood gate in the area of a repair yard* (hereinafter referred to as the DRAFT ENVIRONMENTAL MANAGEMENT PLAN) implemented within Component 3 of the OVFMP - Flood Protection of the Upper Vistula, Sub-component 3A – Flood Protection of Upper Vistula Towns and Cracow.

Owing to the state of epidemic threat in Poland, bearing in mind your health safety, the form of conducting the public consultations within the EMP document has been changed. In connection with the situation, the consultations will be conducted in electronic form, taking advantage of the available (safe) electronic communication channels.

Everyone interested in it can:

A) get to know the DRAFT ENVIRONMENTAL MANAGEMENT PLAN, starting from **August 18th 2020** until **September 7th 2020** (15 business days, in total) through the following websites:

- State Water Holding Polish Waters, Regional Water Management Authority in Cracow at <http://krakow.wody.gov.pl>;
- Odra – Vistula Flood Management Project Coordination Unit, at www.odrapcu2019.odrapcu.pl;
- City Office of Cracow, at www.bjp.krakow.pl.

B) remarks and conclusions concerning the DRAFT ENVIRONMENTAL MANAGEMENT PLAN can be submitted:

- in writing, addressed to: State Water Holding Polish Waters, Regional Water Management Authority in Cracow, 22. Piłsudskiego Str., 30-110 Cracow;
- in electronic form to the e-mail address: jrp.krakow@wody.gov.pl;
- by calling, each business day when the document is available to the public, at the telephone no **+48 664 084 039**, between **9.00 and 14.00**;

from **August 18th 2020** to **September 7th 2020**, inclusive.

The institution competent to consider the remarks and applications is State Water Holding Polish Waters, Regional Water Management Authority in Cracow. E-mail address: jrp.krakow@wody.gov.pl.

On the 15th day when the document is available to the public, i.e. **September 7th 2020, from 17.00 to 19.00**, an electronic consultation meeting will be held in a form of a webinar - open to all the interested parties, during which information about the DRAFT ENVIRONMENTAL MANAGEMENT PLAN will be presented and it will also be possible to ask questions and submit motions.

To participate in the webinar, please enter the website <https://krakow.wody.gov.pl/aktualnosci> and, in the part devoted to the consultation meeting for DRAFT ENVIRONMENTAL MANAGEMENT PLAN for 3A.4 Contract, a link to the webinar will be published. It will be held based on Microsoft Teams software. The link and "step by step" instructions will be published on the website at least 10 days before the planned electronic consultation meeting.

The announcement has been made available to the public by being published in the local press (newspaper Dziennik Polski and in electronic versions on the websites: <https://dziennikpolski24.pl/>, <https://gazetakrakowska.pl/>), announced in the information board of the City Office of Cracow, PGW WP RZGW in Cracow, as well as the websites of the institutions listed hereinabove.



Fig. 9. Announcement on public consultations for the draft EMP submitted to the local press and published on the web sites and on the notice boards

Environmental Management Plan for the OVFMP – Subcomponent 3A – Works Contract 3A.4:
*Extension of a section of the right embankment downstream of the Dąbie Barrage,
including development of a flood gate in the area of a repair yard*

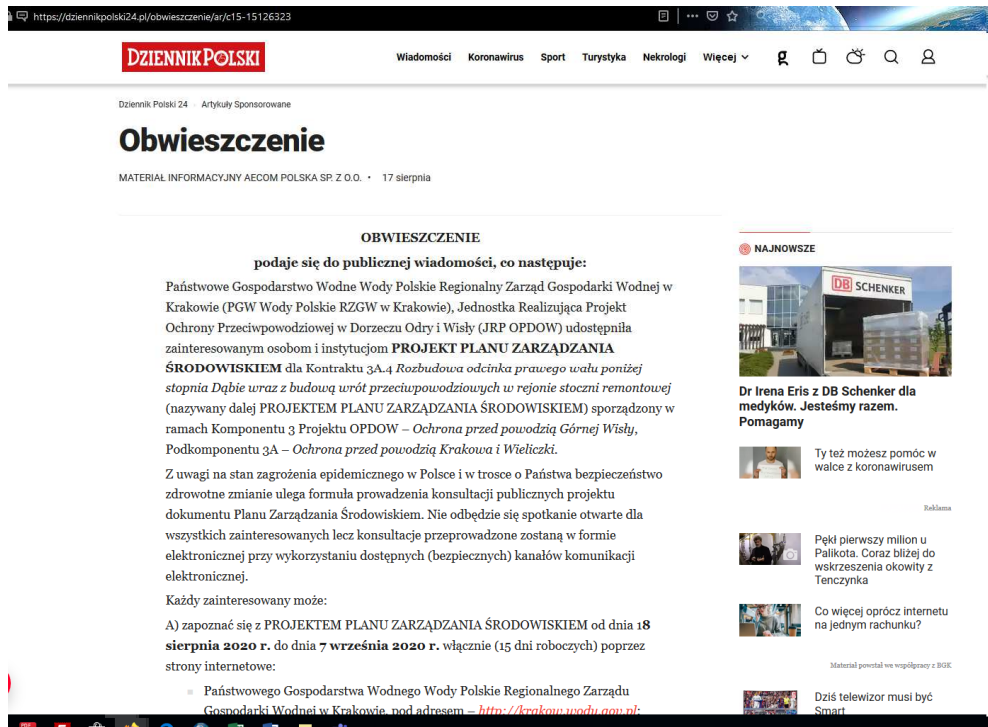


Fig. 10. Announcement on public consultations for the draft EMP published in the local press (*Dziennik Polski* – internet issue)

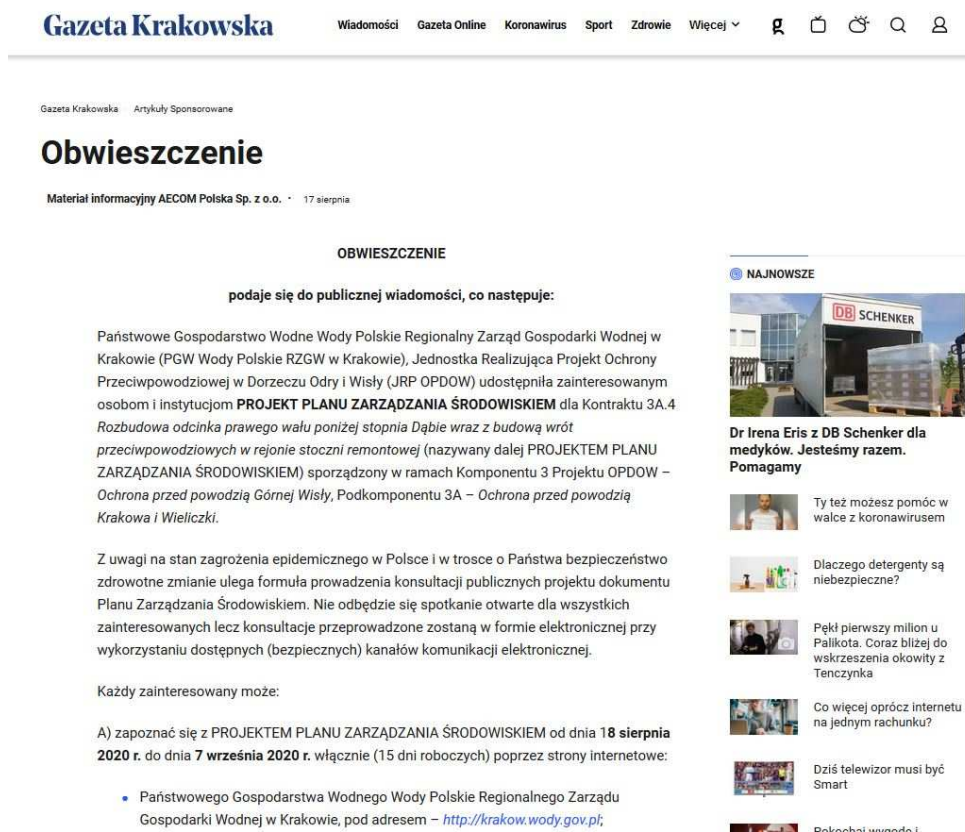


Fig. 11. Announcement on public consultations for the draft EMP published in the local press (*Gazeta Krakowska* – internet issue)

Dziennik Polski
 Poniedziałek, 17.08.2020

Kronika Krakowska

03

Reporter dyżurny od 7 do 20, tel.: 697 730 318
 email: redakcja.krakow@polskapress.pl, sekretariat: 12 688 85 06
 Ogłoszenia: 12 422 20 12 Reklama: 12 6 88 84 06

A w sanepidzie nikt nie odbiera telefonów...

Kontrowersje

Bartosz Dybala
 karbo.d@polskapress.pl

Pan Artur mieszka pod jednym dachem z córką, żoną i przysiężym zięciem. Ten ostatni pracuje w kopalni na Śląsku, gdzie miał kontakt z osobą zakażoną koronawirusem. Przez kilka dni nie mogliśmy się skontaktować z sanepidem. Nie wiemy, czy robimy w tym, co mamy robić - mówi nam pan Artur, zrytowany jego zdaniem opieszalą pracą sanepidu. - Moim zdaniem zachowaliśmy się bardzo rozsądnie: nie chodzimy do pracy, zostaliśmy w domu, aby nikogo nie narażać. Brak informacji jest najgorszy. Przecież każdy z nas pracuje, szefostwo dopytuje, kiedy będziemy mogli znów wykonywać swoje obowiązki. A my, co mamy powiedzieć, że od kilku dni nie wiemy, co robić, bo wszystkie linie w sanepidzie są zajęte? - dopytuje mężczyzna.

Do naszej redakcji napływają kolejne zgłoszenia od Czytelników,

którzy mają bardzo duże problemy w skontaktowaniu się z krakowskim sanepidem. Kolejną historię opowiedział nam pan Artur, mieszkaniec powiatu krakowskiego, który mieszka pod jednym dachem z żoną, córką i przysiężym zięciem - ten ostatni pracuje w jednej z kopalni na Śląsku.

- W sobotę (6 sierpnia) okazało się, że jego kolega z pracy jest zakażony koronawirusem - test wyszedł pozytywny. Mój przysiężony zięć miał z nim kontakt, dlatego szefostwo zdecydowało o skierowaniu go do domu na kwarantannę. Powiedzieli, że z niego nie wychodził i czekał na kontakt ze strony sanepidu - opowiada nam pan Artur. W tym miejscu zaczęły się ogromne kłopoty.

- Nikt się z nami nie skontaktował, dlatego podjęliśmy własne próby kontaktu z sanepidem. Konkretnie z Powiatową Stacją Sanitarno-Epidemiologiczną przy ulicy Korneła Makuszyńskiego w Krakowie. Dziennie cała rodzina wykonywała na zmianę wiele tele-



Epidemia koronawirusa to wyzwanie organizacyjne dla kierownictwa sanepidu

fonów na podane w internecie numery, tj. 12 644 91 33, 12 684 40 99, 12 644 93 72, 12 644 99 64, 12 684 41 83. Niestety, linie ciągle nie są tam obsługiwane, nikt nie podnosi słuchawki. Dopiero po kilku dniach udało nam się dozwonić do sekretariatu dyrektora, odebrała bardzo kompetentna pani, dzięki której udało

się zrobić krok do przodu - wspomina pan Artur. Sanepid w końcu skontaktował się z rodziną mężczyzny. Teraz wspólnie czekają na decyzję odnośnie kwarantanny. Pan Artur nie wie jednak, czy wszystkie osoby z rodziny, które mieszkają pod jednym dachem, będą miały robione testy na obecność

koronawirusa, a jeśli tak, to kiedy. W piątek wyznaczono termin testów dla przyszłego zięcia pana Artura.

- Straciłem wiarę w sanepid. Moim zdaniem zachowaliśmy się bardzo rozsądnie: nie chodzimy do pracy, zostaliśmy w domu, aby nikogo nie narażać. Przyszły zięć, co prawda nie ma objawów, i ja i ona też nie, ale lepiej dmuchać na zimne. Ale to brak informacji jest najgorszy. Przecież każdy z nas pracuje, szefostwo dopytuje, kiedy będziemy mogli znów wykonywać swoje obowiązki. A my co mamy powiedzieć: że od kilku dni nie wiemy, co robić, bo wszystkie linie w sanepidzie są zajęte? - zastanawia się mężczyzna.

- W PSSE w Krakowie zatrudnionych jest 40 osób w Oddziale Epidemiologii, czyli komórce organizacyjnej, realizującej między innymi zadania przeciwepidemiczne (kierunkowo wykształcony, wykwalifikowany personel). Oczywiście od miesiąca marca 2020 r. zadania mające na celu ograniczenie roz-

przestrzeniania się koronawirusa SARS-CoV-2 realizowane są przez wszystkich pracowników Stacji, w tym pracowników merytorycznych, nieposiadających kierunkowego wykształcenia, jak również pracowników administracji, Sekcji Finansowo-Księgowej oraz Sekcji ds. Pracowniczych i Humaczy nam Adam Jędrzejczyk, państwowy powiatowy inspektor sanitarny w Krakowie.

Praca prowadzona jest w systemie dwuzmianowym od godz. 7 do 22,30 siedem dni w tygodniu. - W związku z powyższym uprzejmie informuję, iż pomimo ofiarnej, rzetelnej, niejednokrotnej pracy zespołu zatrudnionego personelu, moją zdaniem się zdarzają się sytuacje opisane w niniejszym e-mail (w którym opisałem historię pana Artura - red.), ale nie wynikają one z niedbalstwa, lekceważenia należonych obowiązków, braku odpowiedzialności czy złej organizacji pracy, a z nadmiaru obowiązków - tłumaczy inspektor.

OBWIESZCZENIE
 Podaje się do publicznej wiadomości, co następuje:

Państwowe Gospodarstwo Wodne Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Krakowie (PGW Wody Polskie RZGW w Krakowie), Jednostka Realizująca Projekt Ochrony Przeciwpowodziowej w Dorzeczu Odry i Wisły (JRP OPDOW) ubiega się o zainteresowanych osobach i instytucjach PROJEKT PLANU ZARZĄDZANIA ŚRODOWISKIEM dla Kontraktu 3A.4 Rozbudowa odcinka prawego wąwłu poniżej stacji Dąbie oraz z budową mostu przeciwpowodziowych w rejonie stacji remonowej (nazywany dalej PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM) sporządzony w ramach Komponentu 3 Projektu OPDOW - Ochrona przed powodzią Górnej Wisły, Podkomponentu 3A - Ochrona przed powodzią Kraków i Wieliczka.

Z uwagi na stan zagrożenia epidemicznego w Polsce i w trosce o Państwa bezpieczeństwo zdrowotne zmianie ulega forma prowadzenia konsultacji publicznych projektu dokumentu Planu Zarządzania Środowiskiem. Nie odbędzie się spotkanie offline dla wszystkich zainteresowanych, lecz konsultacje przeprowadzone zostaną w formie elektronicznej przy wykorzystaniu dostępnych (bezpiecznych) kanałów komunikacji elektronicznej.

Każdy zainteresowany może:

- A) zapoznać się z PROJEKTEM PLANU ZARZĄDZANIA ŚRODOWISKIEM od dnia 18 sierpnia 2020 r. do dnia 7 września 2020 r. włącznie (15 dni roboczych) poprzez strony internetowe:
- Państwowego Gospodarstwa Wodnego Wody Polskie Regionalnego Zarządu Gospodarki Wodnej w Krakowie, pod adresem - <https://krakow.wody.gov.pl>
- Biura Koordynacji Projektu Ochrony Przeciwpowodziowej Dorzecza Odry i Wisły, pod adresem - <https://wpow.wplis.wloclawek.pl>
- Urzędu Miasta Kraków, pod adresem - www.bis.krakow.pl

A) składać uwagi i wnioski odnośnie PROJEKTU PLANU ZARZĄDZANIA ŚRODOWISKIEM:

- w formie pisemnej na adres Państwowego Gospodarstwa Wodnego Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Krakowie, ul. Marsz. J. Piłsudskiego 22, 31-109 Kraków,
- w formie elektronicznej na adres e-mail: pa.krakow@wody.gov.pl
- telefonicznie każdego dnia roboczego Inwenta upublicznienia pod nr telefonu +48 664 084 039 w godzinach 9.00-14.00, w dniach od 18 sierpnia 2020 r. do 7 września 2020 r. włącznie.

Instytucja właściwa do rozpatrzenia uwag i wniosków jest PGW Wody Polskie RZGW w Krakowie. Adres e-mail: pa.krakow@wody.gov.pl.

W 15 dniu roboczym od ogłoszenia dokumentu, tj. w dniu 7 września 2020 r., w godz. od 17.00 do 19.00 odbędzie się elektroniczne spotkanie konsultacyjne w formie webinarium, owartha dla wszystkich zainteresowanych, na którym przedstawione zostaną informacje o PROJEKcie PLANU ZARZĄDZANIA ŚRODOWISKIEM, umocznione zostanie również zadawanie pytań i składanie wniosków.

Aby wziąć udział w ww. webinarium, należy wejść na stronę <https://krakow.wody.gov.pl/plikustatystyki> gdzie we wpisanym poleconym miejscu konsultacyjnym projektu Planu Zarządzania Środowiskiem dla Kontraktu 3A.4 zamieszczony będzie bezpośredni link do webinarium. Zostanie ono przeprowadzone w oparciu o program Microsoft Teams. Link oraz instrukcja „Jak po kroku” zostaną umieszczone na ww. stronie co najmniej 10 dni przed planowanym elektronicznym spotkaniem konsultacyjnym.

Dowiedzieć się to można poprzez wiadomości poprzez ogłoszenie w lokalnej prasie (Dziennik Polski) oraz w wersji elektronicznej na stronach: <https://dziennikpolski24.pl>, <https://gazetakrakowska.pl/>, wywieszenie na tablicy ogłoszeń Urzędu Miasta w Krakowie, tablicy PGW WP RZGW w Krakowie, a także na stronach internetowych instytucji współpracujących powiaty:

AECOM **THE WORLD BANK** **CEB** **Państwowe Gospodarstwo Wodne Wody Polskie**

Czy mamy wyrób medyczny na koronawirusa?

Firma z województwa kujawsko-pomorskiego opracowała i wdrożyła technologię produkcji Colostrum immunozowanego na wskazane przeciwciała. Colostrum zawiera przeciwciała na koronawirusy, rotawirusy i E. Coli.

Pytamy dyrektora firmy Pana Włodzimierza Łusiaka czy produkt jest skutecznym wyrobem medycznym?

- Produkt najprawdopodobniej nigdy nie zostanie zarejestrowany jako wyrób medyczny, ponieważ wyroby medyczne są z reguły jednokomórkowe, natomiast nasz produkt zawiera ok. 500 różnych składników. Produkt o nazwie handlowej VIRBLOCK - RKE to siera bydlęca pozyskana od krów, które zostały zaszczepione na określony patogen. My wybraliśmy 3 patogeny: koronawirusy, rotawirusy i E. Coli. Wielu malkontentów twierdziło, że produkt ten podany drogą pokarmową zostanie strawiony. Wiemy, że tak nie jest, ponieważ przeciwciała odpowiedzialne za odporność, zawarte w produkcie, trafiają do ludzkiego krwiobiegu i utrzymują się do 7 dni po podaniu. Istnieją silne podstawy naukowe, że o ile w naszym produkcie są typowe antyciała zwierzęce, to na zasadzie odporności krzyżowej wywołują skuteczną reakcję organizmu ludzkiego. Pierwsze partie produktu nazwanego przez nas VIR BLOCK - RKE uzyskaliśmy już w lutym tego roku, natomiast sama technologia rozwijana jest cały czas i pozwoli nam na walkę z inną grupą rodzajów patogenami. W chwili obecnej czekamy na potwierdzenie poprzez badania kliniczne skuteczności produktu i spodziewamy się wysokiej skuteczności. Na dzień dzisiejszy produkt spożywa niewielka ilość osób w grupie ryzyka 65+ i żadna z nich nie zachorowała na koronawirusa, ale ze względu na niewielką grupę nie można wyciągać żadnych wniosków. Produkt jest całkowicie bezpieczny i nie istnieje możliwość jakiegokolwiek powikłań po spożyciu. Liczymy na to, że po badaniach klinicznych potwierdzających jego przydatność produkt będzie szeroko dostępny i może całkowicie rozwiązać problem pandemii na Covid - 19. Projekt takich badań przygotował Prof. dr hab. n. med. Maciej Świętychowski i jeżeli zostanie wytypowana jednostka, będzie nadzorował badania.

www.sklep.shn.pl

Fig. 12. Announcement on public consultations for the draft EMP published in the local press (Dziennik Polski – printed version)



Fig. 13. Presentation on the draft EMP for the Works Contract 3A.4 presented during the teleconference (webinar) of September 7, 2020 – first slide



Fig. 14. Presentation on the draft EMP for the Works Contract 3A.4 presented during the teleconference (webinar) of September 7, 2020 – penultimate slide

9 Organizational structure of EMP implementation

Contract 3A.4 is a part of the Odra-Vistula Flood Management Project co-financed from the funds of the World Bank, the Council of Europe Development Bank, the European Union Cohesion Fund, and the State budget. Therefore, the structure of supervision over implementation of the EMP must correspond to both: regulations of the Polish law, as well as the requirements of the World Bank.

9.1 Odra-Vistula Flood Management Project Coordination Unit

The overall coordination of the implementation of the individual 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 (KZGW), which is an organisational unit of the State Water Holding Polish Waters (PGW WP).

The PCU assignments are as follows:

- management of tasks of Project Implementation Units (PIU/JRP) and Project Implementation Units (PIU/JWP), within the scope of tasks included in the Project;
- technical assistance and support to the PIU/JRP and PIU/JWP in the implementation of the tasks of the Project, including the application of World Bank procedures on procurement, environmental protection and social issues;
- preparation of annual work programmes for the Project and evaluation of their progress;
- supervise the work of the Project and evaluate their progress;
- ongoing control and monitoring of funds allocated for the implementation of the Project and participation in the management of funds of the Project;
- reporting, including preparation and submission of quarterly reports on the implementation of the Project to the World Bank, the CEB and the Steering Committee.

9.2 Project Implementation Unit

An entity which is directly responsible for implementation of the EMP for the Contract and for monitoring of the progress of its implementation is the Project Implementation Unit (PIU), i.e. State Water Holding Polish Waters, Regional Water Management Authority in Cracow.

Due to implementation of the OVFP Project, the Project Implementation Office (PIO) was assigned within the PIU structure, which is a separate structure supervised by the President of State Water Holding Polish Waters. This structure is transparent and has a high decisive level, which increases the effectiveness of the Contract implementation.

As a part of EMP implementation supervision, the PIO fulfils the following assignments:

- monitoring of the EMP implementation progress;
- financial management and bookkeeping;
- preparation of required reports for the needs of EMP implementation monitoring and coordination of its execution by all services engaged in the EMP implementation.

The scope of PIO employees' duties connected with the fulfilment of supervision over EMP implementation⁴² is as follows:

- managing, coordinating, and supervising the EMP implemented by the Designer, the Consultant, and the Contractor;
- direct supervision over the correct Contract implementation;
- cooperation with the PCU;
- conducting an administrative and legal supervision over EMP implementation;
- verifying the Reports and studies on EMP implementation, as prepared by the Consultant and by the Contractor;
- conducting a financial supervision over EMP implementation;
- supervising the proper application of formal procedures during implementation of the EMP, as required by the Works Contract, the Building Law, the Environmental Protection Law, and others.

9.3 Engineer - Consultant

The role of the Engineer is to support the PIU (PGW WP RZGW in Cracow) in an effective conduction of the whole Works Contract process (from preparation of the Contract to its settlement).

The Consultant/Engineer shall be selected using QCBS method (quality and cost based selection), in accordance with the "Guidelines: Selection and Employment of Consultants by World Bank Borrowers".

In accordance with the scope specified in the Contract Engineer Agreement, the Engineer/Consultant shall be obliged to perform e.g. the supervision over EMP implementation⁴³, comprising the following:

- monitoring of EMP implementation, as done by the Contractor;
- monitoring of the Contractor's activities;
- checking the quality of construction works performed by the Contractor and built-in construction products, and especially preventing the usage of building materials which are defective and not accepted for use in the construction industry;
- representing the Investor on site by performing the control of the compliance of the construction process with the design and with the construction permit/investment project implementation permit, and with regulations related to the environmental protection and technical know-how;
- supervision over all issues related to the environmental protection by specialists experienced in the field of environmental protection (including a key environmental management expert) and by other Engineer's personnel;
- constant monitoring over proper implementation of measures mitigating the adverse environmental impact;

⁴² This supervision is carried out mainly by the Environmental Specialist in the PIU team.

⁴³ This supervision is carried out mainly by the Environmental Management Expert, OH&S Specialist, Supervision Inspectors and Resident Engineer

- conduction of additional tests, if it would be necessary to verify the reports of the Contractor;
- identifying problems resulting from harmful environmental impact caused by the construction works, and presentation of solutions to those problems;
- verifying and accepting construction works being covered or of concealed works, participation in tests and technical commissioning of technical installations and devices, as well as preparation of and participation in performing the commissioning activities for finished engineering objects and handing them over for use;
- confirmation of the works factually completed and of the removal of defects, as well as, at the request of the Investor, verification of site's settlements.

9.4 Contractor

A Contractor shall be selected for the purpose of performance, and it shall be responsible for implementation of individual EMPs. The Contractor's liabilities in that scope are as follows:

- conducting construction works according to the rules specified in the EMP, in accordance with contract conditions and design documentation, pursuant to applicable legal provisions and requirements of administrative decisions issued for this Contract;
- appointment of the EMP Coordinator, mentioned in item no. 82 of Appendix 1 to the EMP;
- ensuring permanent nature supervision (including a team of experts-naturalists listed in item no. 83 of Appendix 1 to the EMP), sapper supervision (according to item no. 85 of Appendix 1 to the EMP) and archaeological supervision (according to item no. 84 of Appendix 1 to the EMP);
- ensuring the permanent H&S supervision, referred to in item no. 91 of Appendix 1 to the EMP;
- ensuring the Sexual Harassment and Mobbing Prevention Specialist, referred to in items no. 93 and 94 of Appendix 1 to the EMP;
- implementation of the Engineer's recommendations (including environmental supervising experts and the Investor's supervising inspector) concerning implementation of the EMP;
- ensuring – prior to the commencement of works – the preparation of: BIOZ Plan, Waste Management Plan, Quality Assurance Plan/Plans, Flood Protection Plan for the site for the performance time, and Construction Site Organization Plan;
- if it will be necessary, the Contractor's environmental team would develop necessary materials and applications for the obtainment of permits/decisions for departures from bans to protect species of plants, fungi or animals based upon the rules of and in the mode specified by the NP Act (of April 16, 2004). The above-mentioned decisions issued by RDOŚ/GDOŚ are to be requested for by the Contractor. The Contractor's duty is to implement the provisions of obtained decisions for departure from the protection of species of plants, fungi or animals;
- keeping the construction site records;
- drafting the reports (e.g. monthly report and final report, report to the RDOŚ and/or to the GDOŚ [the latter only in the scope resulting from decisions obtained from those authorities on the implementation stage, if the Contract would need to obtain such decisions]);

- preparing memos and reports concerning the environmental protection;
- applying to the Investor for modification of design solutions, if it is justified by a necessity of increasing safety for performance of the construction works or improving the construction process related to implementation of the EMP;
- repairing the potential faults/defects, which would be notified by the Engineer and/or by the Investor (in case the notification period for defects, guarantee, and warranty would be supported by the Engineer) during the works and during the defects, guarantee, and warranty notification period. The Contractor is obliged to report any actions implemented to remove the faults/defects. The report shall be filed to the Engineer/Investor.

10 EMP implementation schedule and reporting procedures

Implementation of the EMP shall allow the parties involved in the preparation, performance and supervision of the Works Contract, for:

- identifying different environmental aspects which have a considerable impact on the state of the environment, and therefore allow for controlling, correcting, and reducing them, but which consequently generate economic effects;
- rectifying adverse consequences of the works conducted during the implementation to the benefit of the environment and financial results;
- determining the aims and measures performed within the adopted environmental policy, covered by the EMP, which require expenditures and bring tangible effects;
- identifying and eliminating prospective hazards and failures, preventing and removing the environmental effects, which may be connected with them and which may entail losses disproportional to the preventive costs;
- using the natural resources reasonably, with minimum environmental loss and optimum generation of costs.

Furthermore, implementation of recommendations and measures required under the EMP may reduce or even eliminate a risk of occurrence of adverse social, environmental and economic events and phenomena related to the Contract, and in particular:

- a risk to ignore the environmental protection issues during the process of implementation of measures by the Contractor;
- a risk of escalation of the local community protests as a result of a failure of the Contractor to adhere to technologies for conducting the works and environmental procedures approved by the Engineer;
- a risk of additional environmental penalties;
- a risk of additional damage to the environment.

Taking into account the significance of the aspects specifying the environmental conditions and community conditions, the following EMP implementation procedures are anticipated:

- prior to the selection of the Contractor, the Employer shall submit a draft of this EMP to the World Bank in order to obtain its opinion;
- after obtaining a positive opinion of the World Bank, the draft EMP shall be consecutively subject to public consultations;
- after the public consultations (and supplementing the document with the consultations report), the EMP shall be updated and submitted in its final version for the approval by the World Bank;
- upon the approval of EMP by the World Bank, the final document shall be attached to the Bidding Documents for selection of the Contractor;
- all activities of the Contractor shall be systematically reported (once a month), in Polish and, if required, in English, in paper and in electronic versions, with reference to the obligations required by the EMP and other contractual documents. Those reports shall be subject to the approval of the Engineer and the Employer.

Furthermore, relevant units involved in implementation of the Contract shall be obliged to fulfil additional obligations related to monitoring and reporting of issues associated with the environmental protection, as determined in administrative decisions issued for the subject Contract (see: Chapter 3.5) and given in Appendix 1 and Appendix 2 to this EMP (Plan of mitigation measures, Plan of monitoring measures).

Monitoring at the works execution stage involves the preparation of summary reports on monitoring of nature by the Contractor, confirmed by the experts of the Contractor's environmental team, approved by the Engineer's environmental team, and submitted to RDOŚ by the PIU. Detailed contents of the report shall be defined by the Engineer (commencement report, periodical reports – monthly, ad-hoc, closure); it shall also determine the due dates.

The progress reporting system under the Project shall also base on monthly reports submitted by Contractors to the PIO through the Engineer, and upon Engineer's monthly and quarterly reports. Monthly and quarterly reports on the EMP implementation (Contractor's and Engineer's) shall be prepared as a part of monthly reports or as a separate document.

The PIU shall supply the PCU with quarterly reports in the part referring to measures implemented by them. They shall contain a required set of information and descriptions allowing for the preparation of the Project's quarterly report by the PCU. Furthermore, especially in the case of problems with the Works Contract implementation, the PCU shall expect the PIU to submit summaries and data in the monthly periods.

The following reporting procedures were established:

1. Reporting:

- a) Reports (monthly, quarterly, ad-hoc, final) shall be developed by the Contractor;
- b) Report review by the Engineer;
- c) Submission of the report to the Employer (for information);
- d) Provision of a report to RDOŚ and / or GDOŚ (only in a range resulting from administrative decisions issued on the performance stage, if they would require reporting of measures in question);
- e) Submission of a PIU's quarterly report to the PCU;
- f) Final report on implementation of the EMP prepared by the Engineer (after verification by the PIU and by the PCU, submitted to the World Bank not later than 3 months after the completion of works).

2. Filing system:

- a) the Contractor: 1 copy of each report in an electronic version for 5 years from the date of the Works Contract completion;
- b) the Engineer: 1 copy of each report in an electronic version for 5 years from the date of the Works Contract completion;
- c) the Employer: 1 copy of each report in an electronic version for 5 years from the date of the Works Contract completion.

3. Evaluation:

- a) ongoing assessment of the outcomes of the planned measures implementation which arise from the EMP;
- b) ongoing analysis of documentation (Reports of the Contractor) by the Engineer;
- c) providing the Employer with reliable information on the course of the construction process, with special consideration of implementation of the measures limiting the adverse impact on the environment, and recommendations arising from environmental decisions;
- d) development and provision of quarterly reports to the World Bank by the PCU.

The following is planned:

- *ex-ante* evaluation: Report prior to the commencement of the Works Contract implementation (Engineer's Report);
- ongoing evaluation: Engineer's quarterly reports;
- *ex-post* evaluation:
 - Report upon the completion of the works (final reports on implementation of the EMP developed by the Contractor and by the Engineer);
 - EMP Report upon expiry of the Defects, Guarantee and Warranty Notification Period drawn up by the Contractor.

11 Source materials

1. Project Information Sheet for the contract titled "Redevelopment of the right embankment between the Dąbie Barrage and the Płaszów Port, construction of a flood gate with necessary facilities", Cracow, June and July 2019.
2. Decision on environmental conditions dated February 28, 2020 (ref. no.: OO.420.4.1.2019.BM) for the contract titled "Extension of a section of the right embankment downstream of the Dąbie Barrage, including development of a flood gate in the area of a repair yard".
3. MasterPlan for the Vistula River Basin. National Water Management Authority, Warsaw 2014.
4. Aquatic legal survey for the Contract 3A.4, Cracow 2020.
5. Feasibility Study for the project "Completion of the rehabilitation of the flood embankments of the Vistula River in Cracow: section 3 - the right embankment of the River Vistula from the Dąbie Barrage to the Przewóz Barrage". SWECO 2018.
6. Report on the environment for Małopolskie Province in 2017, Provincial Inspectorate for Environmental Protection in Cracow, Cracow 2018.
7. Environmental Protection Program and Waste Management Plan for the City of Cracow remaining its element – plan for the years 2005-2007, including tasks done in 2004 and perspective for the years 2008-2011 – Volume I Environmental Protection Program.
8. World Bank Operational Policy OP 4.01 – Environmental Impact Assessment (<https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx#S3-2> [in the part titled: *Investment Project Financing / Environmental and Social Safeguard Policies*]).
9. Environmental and Social Management Framework, final document, April 2015 (http://odrapcu2019.odrapcu.pl/en/popdow_documents/).
10. Poland – Odra-Vistula Flood Management Project: environmental and social management framework (<http://documents.worldbank.org/curated/en/2015/04/24502899/poland-odra-vistula-flood-management-project-environmental-social-management-framework>).
11. Odra-Vistula Flood Management Project – Project Operations Manual, Wrocław 2015 (http://www.odrapcu.pl/doc/POM_PL.pdf)
12. Website: http://odrapcu2019.odrapcu.pl/en/popdow_documents/
13. Website: www.isok.gov.pl/
14. Acoustic maps for the City of Cracow (https://www.krakow.pl/encyklopedia_krakowa/13140,artykul,mapa_akustyczna_miasta_krakowa.html)
15. Geo-service GDOŚ <http://geoserwis.gdos.gov.pl/mapy/>

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13 Appendices

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Appendix 4. Decisions, resolutions, permits, notices

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Appendix 4b. Decision of the Regional Director for Environmental Protection in Cracow dated July 02, 2020 allowing for departure from bans binding in reference to 5 animal species under protection

Appendix 5. Map with location of the Contract

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Appendix 7. Map with location of the Contract in reference to areas under potential flood threat

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