

Appendix 1. Mitigation Measures Plan

This appendix to the Environmental Management Plan (EMP) for the Works Contract 3D.1 describes the conditions for implementing the Contract concerning the mitigation measures, which reduce its negative impacts on the environment. The costs of these measures and schedule of implementation should be included in the Offer. Conditions determined in this document in relation to the Contractor and its personnel (regardless of the legal cooperation form) are also valid – in the scope corresponding with the current case – for the Contractor’s subcontractors and their personnel and their subcontractors.

Table reference:

The conditions described in Appendix 1 of the EMP are grouped in the following categories:

- A. *General requirements* – items 1-4
- B. *Requirements for land occupation* – items 5-6
- C. *Measures to be implemented prior to works commencement* – items 7-20
- D. *Requirements for organization of construction site* – items 21-44
- E. *Requirements for the use of access roads and technological lanes* – items 45-51
- F. *Requirements for felling of trees and removing of shrubs* – items 52-53
- G. *Requirements for the performance of construction works* – items 54-96
- H. *Requirements for post-construction phase* – items 97-100
- I. *Other requirements related to ESHS* – items 101-109

Unless otherwise specified in an individual case, the term “construction site” used herein should be understood in accordance with the definition provided in the Construction Law, i.e. as the area on which construction works are carried out, including the area occupied by the elements of site facilities.

Unless otherwise stated in an individual case, the term *Contract implementation period* in column “Unit responsible” means the duration of any preparatory works, essential works execution (including the Permanent Works and Temporary Works), and any works related to the removal of defects and faults or execution of the unfinished works specified in the Takeover Certificate or revealed in the Defects Notification Period.

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
A. GENERAL REQUIREMENTS				
1	[-]	Legislation / The entire section of modernized embankment	<p><i>Obligation to comply with the law</i></p> <p>The Contractor is obliged during the construction phase and during defects notification period to comply with all national and EU regulations and law currently in force.</p> <p>None of the provisions contained in EMP shall exempt the Contractor from the obligation to comply with the law.</p>	The Contractor / Site Manager
2	[-]	EMP implementation and reporting on EMP implementation / The entire section of modernized embankment	<p><i>Training on the principles and conditions of the EMP</i></p> <p>The Contractor will be responsible for training of managers and technical staff supervising the construction works on the principles and conditions of the EMP and protection recommendations during the implementation of works. The training should be prepared with the help of the Environmental Team (see item 88).</p> <p>The Contractor's employees, who will be dealing with fuel and other petroleum substances, will be trained on the principles of protecting soil and water environment and the application of measures to protect it, including the use of sorbents.</p>	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
3	[-]	Human health and life protection / The entire section of modernized embankment	<p>Actions to prevent HIV-AIDS</p> <p>The Contractor will conduct training and implement an awareness raising program for spreading HIV-AIDS type of diseases, as well as will take any other precautions to reduce the risk of HIV transmission among the Contractor's staff and the local community.</p> <p>The Contractor will also promote early diagnosis and help for infected people. These activities will be carried out throughout the whole period of implementation of works, at least every 12 month.</p> <p>They will be carried out through information, education and awareness campaigns about the risk of transmission of HIV-AIDS.</p>	The Contractor / Site Manager / H&S Supervision
4	[-]	EMP implementation and reporting on EMP implementation / The entire section of modernized embankment	<p>Monthly meetings on the implementation of the conditions of the EMP</p> <p>Monthly meetings attended by the teams from PIU, the Engineer and the Contractor will take place during the implementation of the tasks resulting from the EMP, to discuss and check the implementation of mitigation and monitoring measures.</p>	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
B. REQUIREMENTS FOR LAND OCCUPATION				
5	[-]	Protection of land surface, limited occupation of the land / The entire section of modernized embankment	<p>Limiting of land occupation and transformation of ground surface</p> <p>The area of land occupation, temporary land occupation, and transformation of ground surface during construction works will be limited to the necessary minimum.</p>	The Contractor / Site Manager / Environmental Team
6	II.3	Protection of land surface, limited occupation of the land / The entire section of modernized embankment	<p>Acceptable extent of land occupation</p> <p>Permanent land occupation for the Contract and land occupation during the implementation phase is allowed only:</p> <ul style="list-style-type: none"> – in the section at km 0+000 – 2+960: in a strip of approx. 20-30 m from the axis of the existing embankment towards the area beyond the embankment, and approx. 4-5 m from the foot of the embankment's slope towards the embanked area, intended for the green road; – in the sections at km 2+960 – 3+130 and at km 3+210 – 3+440: in a strip of approx. 4-5 m from the foot of the existing embankment towards the embanked area, intended for landscaping; – in the section at km 3+440 – 4+445: in a strip of approx. 20-30 m from the axis of the existing embankment towards the embanked area; <p>excluding embankment crossings, where land occupation is greater.</p> <p>The proposed work area strip which will be occupied during the Contract implementation is the same as the area intended for the extension of the embankment.</p>	The Contractor / Site Manager / Environmental Team

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C. MEASURES TO BE IMPLEMENTED PRIOR TO WORKS COMMENCEMENT				
7	[-]	Natural resources protection / The entire section of modernized embankment	Adaptation of deadlines and locations of phases of works to the requirements of the Environmental Decision and the EMP The Contractor will provide such Programme of Works which will adapt deadlines and location of specific phases of construction works to the requirements of the Environmental Decision and the EMP, and will not affect protected species present on the construction site and its vicinity.	The Contractor / Site Manager / Environmental Team
8	[-]	Property protection / The entire section of modernized embankment	Inventory of the initial state of the construction site Prior to the commencement of construction works, the Contractor will prepare an inventory of the construction site and its surroundings, together with a photographic documentation, including access roads for the transportation, as well as buildings, fences and all kinds of private and public properties that could be exposed to unforeseen damages as a result of the Contract implementation.	The Contractor / Site Manager
9	[-]	Waste management / The entire section of modernized embankment	Removal of illegal landfills In the case of encountering illegal landfills prior to the commencement of construction works, such sites will be cleaned by removing the waste and transporting it to the disposal site.	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
10	[-]	Natural resources protection / The entire section of modernized embankment	<p><i>Natural inventory of places of temporary and permanent land occupations</i></p> <p>Prior to the commencement of works, a one-time inventory of the places intended for temporary and permanent land occupations will be carried out, aimed at determining the current distribution of natural habitats and sites of protected plant species and protected animal species, as well as at identifying places of their potential occurrence.</p> <p>Depending on the results of the inventory, the Contractor will take the necessary actions to secure the abovementioned natural resources, in accordance with the instructions of the Environmental Team.</p> <p>If protection of the abovementioned natural resources is not possible (in the case of immediate clash of discovered sites with works sites in accordance with the design documentation), the Contractor will obtain all the required administrative permits necessary for the liquidation of the sites of protected species and fulfil all the conditions included therein.</p>	The Contractor / Site Manager / Environmental Team
11	[-]	Natural resources protection / The entire section of modernized embankment	<p><i>Prevention of the spread of alien invasive plants</i></p> <p>Prior to the commencement of construction works, the Contract's area will be inspected for the possible appearance of alien invasive plant species.</p> <p>In the event of their occurrence, actions will be taken to effectively remove them permanently, after consultation with the botanist,</p>	The Contractor / Site Manager / Environmental Team – botanist or phytosociologist / Investor

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
12	II.10	Habitat protection / The entire section of modernized embankment	<p><i>Protection of natural habitats and habitats of species</i></p> <p>Habitats indicated in Appendix I of the Directive 92/43/EEG dated 21 May 1992 on the protection of natural habitat and wild flora and fauna (Habitat Directive) with code numbers 6440, 6510 and 91E0, as well as another valuable natural habitats (in particular water reservoirs and wetlands) or habitats of particular species indicated by the Environmental Team, will be effectively protected against damage, defect and devastation, etc., for the duration of construction works in their area, e.g. by provision of fence made of timber, wire mesh or chevron tape or permanent fencing.</p> <p>Works carried out in the vicinity of the aforementioned natural habitats and habitats of protected species will be carried out under the supervision of the Environmental Team in a way that does not pose the risk of damage, defect or devastation (except for the places where parts of natural habitats and habitats of species are intended for liquidation, according to design documentation of the Contract).</p>	The Contractor / Environmental Team – botanist or phytosociologist

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
13	III.2, III.3	Fauna protection / Sections of the embankment indicated by the Environmental Team	<p><i>Protective fences for amphibians</i></p> <p>Amphibian (herpetological) fences will be provided prior to the commencement of construction works in sections indicated by the Environmental Team, to protect the construction site from possible entry by the amphibians.</p> <p>Fencing will cover the sections of the construction site where routes of amphibian migration were identified, and including zones of at least 200 m before and behind the specific section.</p> <p>The final 5 m long section of the fence will run at the right angle to the embankment and to the boundary of the construction site.</p> <p>The fence will have a solid surface (e.g. foil) or mesh (size of mesh max 4.5 by 4.5 mm) and will be buried in the ground to the depth of at least 15-20 m.</p> <p>The height above the ground along the entire length will be at least 50 cm. The upper edge of the fence to be flexible, bent to the outside, for the entire length of the fence, at the angle of 45-90°, forming a canopy with a width of at least 10 cm.</p> <p>During the amphibian active period, amphibian fence will be checked on a regular basis, at least once a week, for possible faults.</p> <p>The meadow vegetation (grass, weeds) along the fence will be regularly mowed, and any defects will be removed on an ongoing basis.</p>	The Contractor / Site Manager / Environmental Team – herpetologist

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
14	II.9	Tree and shrub protection / The entire section of modernized embankment	<p><i>Protection of trees and shrubs not intended for felling</i></p> <p>Trees and shrubs which are not intended for felling, and in the vicinity of which construction works will take place, will be adequately protected against possible damage, using permanent timber fence, placed along the outline of the tree crown.</p> <p>If this solution is not technically possible, tree trunk protection will be provided, i.e. made of shuttering boards tied with a wire, supported on ground and covered with soil, or straw mats, without the use of nails or other elements which could damage tree trunk. The lower end of the board will be supported on the ground, not on the tree roots, covered with soil or additionally secured with wire.</p>	The Contractor / Environmental Team – botanist or phytosociologist
15	II.24	Recommended technical solutions, noise protection / Embankment section at km 3+440 – 4+445	<p><i>Protection of residential buildings against noise</i></p> <p>In the section of the embankment, in the vicinity of which residential buildings are located, i.e. at km 3+340 – 4+445, along the provincial road no. 854, temporary acoustic screens 2.5 m high, protecting residential areas against excessive noise, will be provided.</p>	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
16	II.4, II.5	Land protection, natural resources protection / The entire section of modernized embankment	<p><i>Proceeding with the topsoil layer</i></p> <p>Prior to the commencement of construction works a layer of topsoil will be stripped, at least 20 - 30 cm thick, temporarily stored in piles in the area beyond the embankment, and used for land reclamation on completion of works.</p> <p>Removal of a layer of topsoil will take place from 1 August to the end of February (i.e. outside the period from 1 March to 31 July).</p> <p>In the sections of wetlands, within which the Environmental Team will determine the presence of amphibians, works on the removal of topsoil will take place from 1 August to 15 October. (i.e. outside the period from 16 October to 31 July)</p> <p>If for technical reasons it will be necessary to remove topsoil outside the permitted periods, the works will be carried out taking extreme precautions and under Environmental Team's constant supervision.</p> <p>In the period between the takeover of the site by the Contractor and the removal of the layer of topsoil, the Contractor is obliged to ensure proper maintenance of the flood embankment within boundaries of the construction site, including its periodic mowing (a detailed list of the aforementioned works together with the dates of their implementation will be included in the works schedule).</p>	The Contractor / Site Manager / Environmental Team – botanist or phytosociologist and herpetologist
17	[-]	Human health and life protection / The entire section	<p><i>Development of the BIOZ Plan</i></p> <p>Prior to the commencement of construction works, the Contractor will develop, obtain the Engineer's approval and implement the BIOZ Plan, which</p>	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
		of modernized embankment	<p>will remain in force until the completion of construction works.</p> <p>The BIOZ plan should contain such elements as e.g.:</p> <ul style="list-style-type: none"> – an indication of plot or land development elements, which may create a risk to health and safety of people; – information concerning expected hazards, that could occur during performance of construction works, 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 employees prior to the commencement of particularly hazardous works; – determining the method of storing and transport of hazardous materials, products, substances, and preparations at the construction site; – an indication of technical and organizational means of safeguarding against hazards connected with construction works in increased health risk zones, or in their immediate vicinity, including means of safe and efficient communication, allowing quick evacuation in the case of fire, failure, and other hazards; – an indication of the storage location of the construction site’s documentation and documents necessary for proper operation of machines and other technical devices. <p>Fire protection requirements contained in the BIOZ Plan will include a ban on fires, burning flammable materials within the construction site.</p>	

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
18	[-]	Quality assurance / The entire section of modernized embankment	<p><i>Development of the Quality Assurance Plan</i></p> <p>Prior to the commencement of construction works, the Contractor will develop, obtain the Engineer's approval and implement the Quality Assurance Plan.</p> <p>The Quality Assurance Plan should contain such elements as e.g.:</p> <ul style="list-style-type: none"> - organization of works; - organization of traffic at the construction site with marking of the works; - H&S and environmental protection; - list of working teams; - the scope of duties of the key personnel; - quality control; - laboratory tests. 	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
19	[-]	Flood protection of the construction site / The entire section of modernized embankment	<p><i>Development of the Flood Management Plan for the construction site</i></p> <p>Prior to the commencement of construction works, the Contractor will develop, obtain the Engineer’s approval and implement the Flood Management Plan for the construction site for the duration of construction works.</p> <p>The Plan should determine e.g.:</p> <ul style="list-style-type: none"> – the way of monitoring of hydrological and meteorological conditions; – conditions for accommodation of flood flows during execution of the works; – dependence between the time of commencement of evacuation or security of construction equipment and the occurrence of a specific hydrological and meteorological conditions; – 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. <p>The Contractor will be obliged to establish communication with IMGW-PIB to receive current information on the meteorological conditions.</p> <p>In case of any warning about high water, the Contractor shall immediately notify the Engineer and the Employer and shall take appropriate actions according to the procedures described by the Flood Management Plan.</p>	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
20	[-]	Waste management / The entire section of modernized embankment	<p><i>Development of the Waste Management Plan</i></p> <p>Prior to the commencement of construction works, the Contractor will develop and submit for the Engineer's approval the Waste Management Plan which will describe the methodology of management of waste gathered during the works.</p> <p>The waste management plan should contain such elements as e.g.:</p> <ul style="list-style-type: none"> - encountered and predicted types and volumes of waste; - means of preventing adverse impact of the waste on the environment; - means of waste management considering collection, transportation; recovery and treatment of waste; - type of generated waste and method of its storage. 	The Contractor / Site Manager / Environmental Team
D. REQUIREMENTS FOR ORGANIZATION OF CONSTRUCTION SITE				
21	[-]	Site establishment / The entire section of modernized embankment	<p><i>Development of the Site establishment Plan</i></p> <p>The Contractor will develop, obtain the Engineer's approval and implement the Site establishment Plan which should contain such elements as e.g.:</p> <ul style="list-style-type: none"> - location and development conditions of the site facilities; - locations of parking lots for construction equipment and other vehicles; - way to secure site facilities against contamination with substances harmful to the environment; - route of technological lanes; - way to rain water discharge; - location of building materials stores; - location of municipal waste and hazardous waste storage sites. 	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
22	II.3	Protection of land surface, limited occupation of the land / The entire section of modernized embankment	Marking of the boundaries of construction site Boundaries of the area allocated to construction works will be clearly marked (i.e. using chevron tape).	The Contractor / Site Manager / Environmental Team
23	[-]	Site establishment, human health, and life protection / The entire section of modernized embankment	Marking of the construction site The Contractor's H&S inspector will be responsible for proper marking of the construction site, in accordance with relevant regulations. Markings will be checked on a regular basis and replaced or fixed by the Contractor immediately in case of theft or damage.	The Contractor / Site Manager / H&S Supervision
24	[-]	Site establishment, human health and life protection / The entire section of modernized embankment	Ensuring constant visibility of barriers and signs The Contractor will ensure constant visibility, during the day and at night, for barriers and signs for which it is necessary from the safety point of view.	The Contractor / Site Manager / H&S Supervision
25	[-]	Human health and life protection / The entire section of modernized embankment	Designation of access routes for emergency services, access routes and parking places for vehicles The Contractor will be obliged to provide access routes for ambulance and fire brigade for the duration of works, and to designate access routes (e.g. pedestrian routes, entries, and crossings), as well as parking places for vehicles used on site.	The Contractor / Site Manager / H&S Supervision

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
26	[-]	Site establishment, human health and life protection / The entire section of modernized embankment	<i>Development and approval of the access (evacuation) plan for the construction site in case of emergency</i> The Contractor will provide the access (evacuation) plan for the site in case of emergency (fire, accident, breakdown, etc.), which will be approved by the Engineer prior to the commencement of works.	The Contractor / Site Manager / H&S Supervision
27	[-]	Human health and life protection / The entire section of modernized embankment	<i>Designation and marking of dangerous zones</i> The Contractor will indicate dangerous areas posing threat to human health and life, and will ensure proper information boards and secure them from unauthorized entry.	The Contractor / Site Manager / H&S Supervision
28	II.6, [-]	Land surface protection, water protection, natural resources protection, noise protection / The entire section of modernized embankment	<i>Location of site facilities elements outside the embanked area</i> Site facilities elements, such as yards, building materials warehouses, technological lanes, staff facilities, parking lots etc. can be located only within the area beyond the embankment (including technological lanes only on the area intended for the extension of the embankment.	The Contractor / Site Manager / Environmental Team
29	[-]	Land surface protection, soil, and water environment protection, natural resources protection, noise protection / The entire section of modernized embankment	<i>Additional requirements for the location of site facilities elements</i> Site facilities elements, such as yards, building materials warehouses, technological lanes, staff facilities, parking lots etc. will be located outside valuable natural areas indicated by the Contractor's Environmental Team, including wetlands and at the furthest possible distance from noise protected areas and with a safe distance from watercourses. The aforementioned site facilities elements will be located and organized in accordance with indications of the Contractor's Environmental Team, approved by the Engineer.	The Contractor / Site Manager / Environmental Team

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30	II.6	Land surface protection, natural resources protection / The entire section of modernized embankment	<i>Location of waste, soil and material storages</i> No waste, soil or materials storages will be located in the embanked area, or within the natural habitats located in the area beyond the embankment, as indicated by the Environmental Team.	The Contractor / Site Manager / Environmental Team
31	II.9	Land surface protection, soil and water environment protection, natural resources protection / The entire section of modernized embankment	<i>Protection of the areas in the vicinity of trees</i> Places of storage of building materials, soil , waste and parking lots for construction vehicles and equipment, etc. will be located at the distance exceeding 2 m from the boundary of tree crown projection, whose removal was not required for construction purposes.	The Contractor / Site Manager
32	[-]	Land surface protection / The entire section of modernized embankment	<i>Location of topsoil storage</i> The location of topsoil storage will be selected by the Contractor in a way that protects it from contamination, being driven upon, and compaction.	The Contractor / Site Manager
33	[-]	Land surface protection / The entire section of modernized embankment	<i>Storage of topsoil in a way allowing its re-use</i> Topsoil will be stored and protected in a way that allows its re-use.	The Contractor / Site Manager
34	[-]	Land surface protection, water protection, natural resources protection, noise protection / The entire section of modernized embankment	<i>Provision of site facilities elements with sorbents</i> Site facilities elements, such as technological yards, site facilities, building materials warehouses, parking lots, will be provided with sorbents for quick elimination of effects of possible fuel or petroleum leakage.	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
35	[-]	Land surface protection, soil and water environment protection / The entire section of modernized embankment	<i>Equipping and operating of places for storage of lubricants and fuel</i> Lubricants and fuel will be placed in adequately prepared stations, with the appropriate level of sealing, provided with sorbents for neutralization of petroleum substance.	The Contractor / Site Manager
36	[-]	Land surface protection, soil and water environment protection / The entire section of modernized embankment	<i>Designation, equipping and operating of parking lots for equipment, machines and vehicles</i> Equipment, machines, and vehicles used for construction works will have permanent designated parking lots, protected against penetration of petroleum substance to soil and water environment. When not in use, they will be parked/stored in these designated places.	The Contractor / Site Manager
37	II.17	Land surface protection, soil and water environment protection, natural resources protection / The entire section of modernized embankment	<i>Repair, maintenance and refueling stations for vehicles and machines</i> Any used equipment's repairs and maintenance work, and refueling of vehicles and construction machines will take place outside the areas of construction works (in the area of site facilities) in places adopted to it, marked, compacted and equipped with a sufficient number of sorbents.	The Contractor / Site Manager
38	[-]	Land surface protection, soil and water environment protection, natural resources protection / The entire section of modernized embankment	<i>Equipment of refueling and garaging stations for vehicles and machines</i> A place with sorbent for the elimination of possible leaks and spills will be located in the vicinity of refueling and garaging stations for vehicles and construction machines.	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
39	[-]	Property protection, human health and life protection / The entire section of modernized embankment	Requirements for safe storage of building materials Materials used for construction will be stored in a way that protects them from damage, in a way which does not jeopardize the safety of people and property, preventing falling over, sliding or dropping of products, equipment, machines, etc.	The Contractor / Site Manager
40	II.16	Air protection, land surface protection / The entire section of modernized embankment	Protection of the places of loose material storage against blowing and washing away Storage of loose materials will be protected against blowing and washing away (i.e. by covering with tilts).	The Contractor / Site Manager
41	[-]	Land surface protection, soil, and water environment protection, natural resources protection, human health and life protection / The entire section of modernized embankment	Requirements for storing of hazardous substance and materials In case of storage of hazardous substance and materials on construction site, they will be adequately protected, inaccessible to unauthorized persons, and danger sign will be placed on warning boards.	The Contractor / Site Manager
42	[-]	Waste management / The entire section of modernized embankment	Storage of hazardous waste out of reach of flood water Hazardous waste storage will be designated out of reach of flood water with Q1% probability (the so-called a hundred year water).	The Contractor / Site Manager / Environmental Team

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43	II.19	Soil and water environment protection / The entire section of modernized embankment	Ensuring portable toilets and training the employees on maintaining hygienic conditions A necessary number of portable toilets will be provided on the construction site. All employees should be trained in maintaining appropriate hygiene on construction site and in its vicinity. The Contractor's employees who need to use a toilet should do it only in the places specially designated for this purpose.	The Contractor / Site Manager
44	II.19, [-]	Soil and water environment protection / The entire section of modernized embankment	Collection of waste from the construction site During the construction period the Contractor will ensure regular wastewater disposal, including household sewage, as well as industrial wastewater resulting from the process of the production of slurry for anti-filtration membrane, by companies with appropriate equipment and authorized to provide such type of service.	The Contractor / Site Manager
E. REQUIREMENTS FOR THE USE OF ACCESS ROADS AND TECHNOLOGICAL LANES				
45	II.7	Land surface protection, natural resources protection / The entire section of modernized embankment	Requirements for transportation of building materials and waste Transportation of building materials and waste will take place on existing public road network, or on designated temporary roads, if necessary. Temporary roads will be routed in a way which prevents interference in natural habitat indicated by the Environmental Team.	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
46	II.20	Land surface protection, soil and water environment protection / The entire section of modernized embankment	<p>Requirements for the access roads</p> <p>Access to the site shall be provided, if possible, based on the existing road network. If new temporary roads are required, they will be made of reinforced concrete slabs.</p> <p>These roads should be dismantled on completion of works and the area will be reinstated.</p> <p>Any damage to existing roads used as access roads to the Site and resulting from their use for the Contract will be repaired.</p> <p>Demolition works, cleaning and land reclamation will take place under the Environmental Team's supervision.</p>	The Contractor / Site Manager
47	II.9	Land surface protection, natural resources protection / The entire section of modernized embankment	<p>Location and equipment of temporary roads</p> <p>If temporary roads are to be used, they will be set out as far as possible from the reach of crowns and root systems of trees not allocated for felling, and if this is not possible, the road will be paved/insulated with a layer of coarse gravel.</p>	The Contractor / Site Manager / Environmental Team
48	II.22	Land surface protection, soil and water environment protection / The entire section of modernized embankment	<p>Maintenance of technical conditions of compacted areas on which transport is carried out</p> <p>Technological lanes and access roads and all improved road surface where construction traffic will take place will be maintained in good condition, to minimize the risk of accidents, damage to equipment and other events.</p>	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
49	[-]	Land surface protection, human health and life protection / The entire section of modernized embankment	<p><i>Signage and marking of access roads</i></p> <p>Access roads used by the Contractor will be marked in accordance with applicable law and arrangements with the Road Administration.</p> <p>Signage and marking will be checked by the Contractor on regular basis and replaced or repaired immediately in case of damage or theft.</p>	The Contractor / Site Manager / H&S Supervision
50	[-]	Land surface protection, human health and life protection / The entire section of modernized embankment	<p><i>Approval of the Roads Administration of the traffic management and works protection plans</i></p> <p>The Contractor will be obliged to obtain approval of the Roads Administration of the traffic management and works protection plans as well as to ensure traffic management in accordance with the approved design (signage and construction site protection, marking of detours, marking of roads in accordance with changed roads' management, etc.).</p>	The Contractor / Site Manager / H&S Supervision
51	[-]	Land surface protection, human health and life protection / The entire section of modernized embankment	<p><i>Approval of the Engineer and ongoing updating of traffic management and works protection plans and the Programme of Works</i></p> <p>Prior to the commencement of construction works the Contractor will submit for the Engineer's approval the traffic management and works protection plan and the Programme of Works, as agreed with the Road Administration and Traffic Management.</p> <p>Depending on the needs and progress of works, the traffic management plans will be updated by the Contractor on the ongoing basis.</p>	The Contractor / Site Manager / H&S Supervision

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
F. REQUIREMENTS FOR FELLING OF TREES AND REMOVING OF SHRUBS				
52	II.8	Tree and shrub protection / The entire section of modernized embankment	<p><i>Spatial extent, deadlines and requirements for felling trees and shrubs</i></p> <p>Felling of trees and shrubs will be limited to specimens growing at the foot of the embankment, on the embankment' crest and slopes, in sections planned for renovation and in the proposed technological strip.</p> <p>The necessary removal of trees and shrubs will take place from 16 October to the last day of February.</p> <p>Felling of trees shall be carried out under the supervision of the entomologist and chiropterologist.</p>	The Contractor / Site Manager / Environmental Team – botanist or phytosociologist; ornithologist; entomologist; chiropterologist.
53	[-]	Natural resource protection / The entire section of modernized embankment	<p><i>Protection of species of beetles and bats inhabiting trees intended for felling</i></p> <p>The assessment of occupation of trees by protected species of beetles and bats will take place in the areas of planned removal of trees due to renovation and construction of the embankments.</p> <p>In case of finding trees occupied by protected species, they will be moved to another place of similar habitat conditions, after obtaining and in accordance with the conditions set out in the decision of RDOŚ or GDOŚ authorizing the performance of activities prohibited in relation to protected species.</p> <p>Relocating of protected species to be carried out under the supervision of entomologist and chiropterologist.</p>	The Contractor / Site Manager / Environmental Team – entomologist; chiropterologist.

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
G. REQUIREMENTS FOR THE PERFORMANCE OF CONSTRUCTION WORKS				
54	[-]	Land surface protection / The entire section of modernized embankment	Protection of the land's form It is not allowed to execute earthworks in a way which will cause permanent distortion to the land's form, except for the works planned as part of the Contract.	The Contractor / Site Manager
55	II.1	Land surface protection / The entire section of modernized embankment	Prohibition of soil excavation from the embanked area Soil will not be excavated from the embanked area.	The Contractor / Site Manager
56	II.2	Surface water protection, natural resource protection / The entire section of modernized embankment	Prohibition of the interference with the riverbed and riverside zone of watercourses and reservoirs During the Contract implementation phase, none of the works will interfere with the riverbed of the San River, its riverside vegetation, reservoirs and ponds, or other watercourses and ditches.	The Contractor / Site Manager / Environmental Team
57	[-]	Natural resources protection / The entire section of modernized embankment	Prohibition of destroying vegetation outside the construction site During the execution of works, there will be no damage caused to vegetation outside the construction site.	The Contractor / Site Manager / Environmental Team
58	[-]	Natural resources protection / The entire section of modernized embankment	Removal of alien invasive plant species During the phase of the project performance, the construction site will be inspected for the possible presence of alien invasive plant species. If case of their occurrence, after consultation with the botanist, actions will be taken to effectively permanently remove them from the site.	The Contractor / Site Manager / Environmental Team – botanist or phytosociologist / Investor

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
59	II.9	Tree and shrub protection / The entire section of modernized embankment	<p>Protection of the root system of trees and shrubs during excavations</p> <p>All works within the root system of trees will be performed manually.</p> <p>It is not allowed to leave uncovered root system without any protection for a length of time when irreversible drying or freezing of roots could take place.</p> <p>In case of deep excavations, special protection screens will be provided within the root area, using biologically active base, allowing for fast root regeneration.</p>	The Contractor / Site Manager / Environmental Team – botanist or phytosociologist
60	[-]	Tree and shrub protection / The entire section of modernized embankment	<p>Care treatment in case of damage to trees</p> <p>In case of damage to a tree, the necessary care will be taken under the supervision of the botanist/phytosociologist from the Environmental Team to limit effects of the damage.</p>	The Contractor / Site Manager / Environmental Team – botanist or phytosociologist
61	[-]	Fauna protection / The entire section of modernized embankment	<p>Prevention of animal mortality</p> <p>The works will be executed in such a way as not to cause any death of animals.</p>	The Contractor / Site Manager / Environmental Team
62	[-]	Fauna protection / The entire section of modernized embankment	<p>Prohibition of the use of lethal substances</p> <p>A substance which could cause the death of animals will not be used for execution of works, except for substance necessary for proper operation of construction equipment.</p>	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
63	II.11	Fauna protection / The entire section of modernized embankment	<p><i>Prevention of the creation and the methods of liquidation of stillwater pits which can be the habitat of amphibians on the construction site</i></p> <p>The ruts and pits created during the construction works which allow for the accumulation of water will be immediately removed in order to prevent the squawking and settling of the amphibians.</p> <p>In the case stillwater pits appear in the depression of the site (e.g. in deep ruts, excavations, etc.), they will be immediately removed by draining water and backfilling the space, after prior inspection of the herpetologist from the Environmental Team for the presence of amphibians.</p> <p>In the case the amphibians are found, water will be pumped up from the pit, and then all amphibians removed and relocated to another suitable habitat outside of the construction site.</p> <p>Backfilling of dry pits will take place directly after amphibians are removed.</p> <p>All works related to finding, removing and relocating amphibians, as well as the liquidation of stillwater pits, will take place under the herpetologist supervision and according to the instructions.</p>	The Contractor / Site Manager / Environmental Team – herpetologist

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
64	II.12	Fauna protection / The entire section of modernized embankment	<p><i>Prevention of mortality of small animals in excavations</i></p> <p>Excavations and structures which can be a trap for small animals, mainly amphibians, will be adequately protected, i.e. with a sealed cover, immediately after each working day of completion of works.</p> <p>These structures will be inspected every day by the members of the Environmental Team delegated by the Co-ordinator of the Team.</p> <p>If animals are trapped there, they will be removed and relocated to another suitable habitat outside the construction site.</p> <p>All works related to finding, removing and relocating amphibians, as well as the protection of the excavations against the access of amphibians, will be carried out under the supervision and according to the instructions of the herpetologist from the Environmental Team.</p>	The Contractor / Site Manager / Environmental Team – herpetologist
65	II.13	Recommended technical solutions / Embankment section at km 3+440 – 4+445	<p><i>Protection of the embankment against animals digging burrows</i></p> <p>In the section of the embankment approx. at km 3+440 – 4+445 protection against animals digging burrows will be provided in a form of special mesh.</p> <p>According to the technical specification, a steel fence mesh with mesh size 5 x 5 cm and PVC coated wire thickness 3 mm should be installed.</p>	The Contractor / Site Manager / Environmental Team – mammalogist

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
66	[-]	Natural resources protection / The entire section of modernized embankment	<p><i>Obtaining and implementing derogation decisions of RDOŚ/GDOŚ</i></p> <p>In the case of threat to the sites of mouse garlic or possibly other protected species of plants, animals or fungi, the Contractor's Environmental Team will prepare the necessary materials and applications for obtaining permits for deviation from prohibition due to the protection of species under the terms described in the Act of 16 April 2004 on nature environment protection.</p> <p>Applications for issuing the above permits will be submitted for the Engineer's acceptance before submission to the intended recipient.</p> <p>It will be the Contractor's obligation to implement the provisions of obtained decisions for derogations from the protection of species of plants, fungi or animals issued by the General or Regional Director for Environmental Protection.</p>	The Contractor / Site Manager / Environmental Team
67	II.25	General principles for execution of construction works, noise protection / The embankment sections in the vicinity of noise protection areas	<p><i>Time restriction for carrying our works in the vicinity of noise protection areas</i></p> <p>On sections of the embankment which are close to the area being a subject to acoustic protection construction works, and transport will be carried out only from 6:00 am to 10:00 pm (daytime).</p>	The Contractor / Site Manager
68	II.23	General principles for execution of construction works, noise protection / The embankment sections in the vicinity of noise protection areas	<p><i>Restriction of the number of machines working in the vicinity of residential buildings</i></p> <p>On sections of the embankment which are close to residential buildings, to reduce noise nuisance the construction works will be conducted in the embanked area, and only one construction machine being the source of such noise, will be working at a time.</p>	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
69	[-]	Human health and life protection / The entire section of modernized embankment	<i>Keeping nuisance to road users to the minimum in the vicinity of works</i> During execution of works, the Contractor will make every effort to minimize the nuisance to road users in the vicinity of the site (i.e. by the protection of residential driveways, access to public places, etc.).	The Contractor / Site Manager
70	[-]	Land surface protection, human health and life protection / The entire section of modernized embankment	<i>Observing load limits in transport. Requirements for transportation of unusual cargoes</i> The Contractor will comply with the statutory load limits when transporting materials and equipment to and from the site. The Contractor will obtain all necessary permits from the relevant authorities for transportation of unusual cargoes and will always keep the Engineer informed of any such transport.	The Contractor / Site Manager
71	[-]	Natural resource protection / The entire section of modernized embankment	<i>Protection of vegetation along technological lanes and keeping the use of heavy machinery and equipment to the minimum</i> Traffic on technological lanes will take place in such way that will prevent damage to the nearby vegetation. The use of heavy machinery and equipment will be limited to the necessary minimum.	The Contractor / Site Manager
72	[-]	Human health and life protection / The entire section of modernized embankment	<i>Speed limit</i> The speed of traffic near the construction area will be limited accordingly, so the road traffic would not to cause a significant threat to the environment, as well as to health and life of people.	The Contractor / Site Manager

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
73	II.21	General principles for execution of construction works / The entire section of modernized embankment	Water supply to the site in watercarts Water for staff facilities and spraying of uncovered ground surface in dry periods will be delivered to the site in watercarts.	The Contractor / Site Manager
74	II.22	General principles for execution of construction works, air protection / The entire section of modernized embankment	Spraying of dusting areas on site The construction site areas, where construction works are being carried out and where the risk of dusting appears during rainless periods, will be sprayed with water from watercarts to eliminate or reduce dusting.	The Contractor / Site Manager
75	II.22	General principles for execution of construction works, air protection / The entire section of modernized embankment	Prevention of dusting during transportation of building materials To reduce dusting of loose building materials during their transport tilts on vehicles will be used to avoid dusting.	The Contractor / Site Manager
76	[-]	Works organization / The entire section of modernized embankment	Keeping the construction site clean and proper works organization The construction site will be kept clean and tidy and proper works' organization will be ensured.	The Contractor / Site Manager / H&S Supervision
77	[-]	Site establishment, human health, and life protection / The entire section of modernized embankment	Ensuring safety of works The Contractor will be obliged to ensure and maintain the safety of conducted works, e.g. through the application of machines and tools according to their purpose of use.	The Contractor / Site Manager / H&S Supervision

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
78	[-]	Land surface protection, soil and water environment protection, air protection, noise protection / The entire section of modernized embankment	<i>Vehicles, equipment etc. authorized to operate on site</i> Only vehicles, machines and equipment related to the execution of work within the Contract will be present on the construction site.	The Contractor / Site Manager
79	II.18	General principles for execution of construction works, soil protection, water protection / The entire section of modernized embankment	<i>Inspection of technical conditions of vehicles and equipment and provision of sorbents on the construction site</i> In order to limit the risk of contamination of soil, ground, groundwater and surface waters during the implementation phase, regular inspection of the technical condition of equipment (vehicles and machines) will be carried out, and construction site will be provided with sorbents for quick elimination of effects of possible fuel or oil leakage.	The Contractor / Site Manager
80	II.22	General principles for execution of construction works, air protection / The entire section of modernized embankment	<i>Switching off combustion engines during breaks in operation</i> To limit the emission of pollutants into the air during the construction phase, during breaks in operation combustion engines of vehicles and equipment will always be switched off so they do not operate idle.	The Contractor / Site Manager
81	[-]	Land surface protection, soil and water environment protection / The entire section of modernized embankment	<i>Liquidation of the effects of leaks of petroleum substance</i> In the event of a leak of petroleum substance, its source and side effects will be removed immediately using sorbents and contaminated soil layers will properly be treated in an environmentally safe manner.	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
82	[-]	Waste management / The entire section of modernized embankment	<p>Waste treatment procedures</p> <p>Waste management will be carried out in accordance with the provisions of the Act of 14 December 2012 on Waste.</p> <p>The principle of minimizing the amount of generated waste will apply.</p> <p>The waste generated during the Contract implementation will be segregated and collected in containers or designated places, ensuring conditions preventing the harmful substance from polluting the environment.</p> <p>The Containers used for waste collection will be resistant to the waste contained therein.</p> <p>The surfaces where wastes will be stored will be sealed.</p> <p>The proposed solutions for the storage of waste will not cause a threat to the soil and water environment and protect the waste against spreading to the environment.</p>	The Contractor / Site Manager / Environmental Team
83	[-]	Waste management / The entire section of modernized embankment	<p>Waste collection</p> <p>Successive waste collection will be provided by authorized services.</p> <p>Waste will be collected only by authorized services.</p> <p>Until the waste is passed over to the Collector, it will be stored in a way which prevents pollution of the environment, i.e. in sealed containers, under the roof, on the paved and impermeable surface, protected from access by third parties.</p>	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
84	[-]	Property protection / The entire section of modernized embankment	<p>Repairing damage to buildings and infrastructure elements. Restoring of flow capacity of drainage facilities</p> <p>The Contractor will be responsible for any damage to the buildings and structures, roads, drainage ditches, culverts, water pipes and gas pipes, power posts and power lines, cables, control network spots and installations of any kind, and other objects such as vertical and horizontal signage, navigation marking, information boards, cultural objects, etc., caused by the Contractor or his subcontractors during execution of works.</p> <p>The Contractor will also be responsible for restoring the flow of ditches and drainage systems in the area of construction works and roads used for transport, in the event of damage caused by execution of works and transport related to works.</p> <p>The Contractor will immediately repair any damage at its own expense and if necessary, will carry out other works ordered by the Engineer.</p>	The Contractor / Site Manager
85	[-]	Sapper supervision / The entire section of the modernized embankment, the area of earthworks	<p>Sapper supervision for earthworks</p> <p>The Contractor is obliged to provide constant sapper supervision during the performance of earthworks, which will involve ongoing inspections for the presence and, if necessary, removal of unexploded ordnance and its utilization.</p>	The Contractor / Site Manager / Environmental Team – a sapper
86	[-]	Sapper supervision / The entire section of the modernized embankment, the area of earthworks	<p>Proceeding in case of encountering unexploded ordnance</p> <p>If any unexploded ordnance is encountered the Contractor will immediately stop the works in such place, provide the evacuation of workers from the danger zone and notify the Police and licensed sapper unit.</p>	The Contractor / Site Manager / Environmental Team – a sapper

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
87	[-]	Archaeological supervision / The entire section of the modernized embankment, the area of earthworks	<p>Archaeological supervision of works</p> <p>The Contractor will be obliged to provide constant archaeological supervision for the duration of earthworks, which will comprise of ongoing inspection for the presence of objects of historic value which are under legal protection.</p> <p>If any objects that might be monuments or archaeological artifacts are discovered during the construction works, according to the Act of 23 July 2003 on Historical Monuments Law, the Contractor is obliged to stop the works in the place of finding, secure the place and report it to the Provincial Conservator of Monuments in Rzeszów, notifying the Employer and the Engineer at the same time. Further works in this area will resume and then will be carried out strictly in accordance with the provisions of the relevant decision issued by the Conservator.</p>	The Contractor / Site Manager / Environmental Team – archaeologist

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
88	II.26	Environmental supervision, natural resource protection / The entire section of modernized embankment	<p><i>Environmental supervision of works</i></p> <p>All works during Contract implementation phase will be executed under the supervision of the Environmental Team which will comprise of qualified and experienced specialists in the following disciplines:</p> <ul style="list-style-type: none"> – botanist or phytosociologist; – entomologist; – herpetologist; – ornithologist; – mammologist; – chiropterologist. <p>Each specialist will have a degree in biology, forestry or environmental protection and experience of performing at least two natural supervision services, carried out within the Natura 2000 Sites.</p> <p>It is allowed for one team member to merge up to two of the above-mentioned specializations to carry out their supervision</p>	The Contractor / Site Manager / Environmental Team
89	II.26	Environmental supervision, natural resource protection / The entire section of modernized embankment	<p><i>The scope of duties of the Environmental Team</i></p> <p>During the entire implementation phase, Environmental Team will be obliged to monitor the proper course of the works, it will be also responsible for correct location of the site facilities elements, taking into account the location of natural habitats and habitats of protected species, as well as detection of the presence of animal species in the construction area where works are carried out.</p>	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
90	[-]	Environmental supervision / The entire section of modernized embankment	<p><i>The scope of duties of the Co-ordinator of the Environmental Team</i></p> <p>The Co-ordinator of the Environmental Team will be appointed.</p> <p>The duties of the Co-ordinator will include:</p> <ul style="list-style-type: none"> – planning, organizing and co-ordination, as well as supervision of the implementation of mitigation measures specified in the EMP; – ongoing monitoring of the implementation of particular provisions of Appendix No. 1 and No. 2 to the EMP; – ongoing information of the Contractor’s management team of the obligation imposed by the EMP at the current phase of works, and of problems in the implementation of the EMP; – co-operation with other members of the Contractor’s team, including environmental experts team, to ensure implementation of the EMP; – co-operation with people responsible for implementation of the EMP in the Engineer’s and the Employer’s team. <p>The Environmental Team will monitor the implementation of the EMP and the Environmental Decision conditions throughout the Contract implementation phase.</p>	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
91	II.26	Environmental supervision / The entire section of modernized embankment	<p><i>Principles of work of the Environmental Team</i></p> <p>The Environmental Team will carry out at least eight site visits each month (or more, depending on the requirements of the Employer).</p> <p>During spring and autumn migration of amphibians, the herpetologist's supervision will be provided every day.</p> <p>After each site visit, a description of carried out activities will be provided, including the photographs, in the form of the Environmental Supervision Sheet, which will also include possible recommendations for the Contractor. These documents shall be submitted each time to the Engineer.</p>	The Contractor / Site Manager / Environmental Team - herpetologist
92	II.26	Environmental supervision, natural resource protection / The entire section of modernized embankment	<p><i>The duties of the Environmental Team regarding the protection of amphibians</i></p> <p>The Environmental Team, including the herpetologist, will be responsible for:</p> <ul style="list-style-type: none"> - inspecting the construction site for the presence of amphibians; - undertaking measures to protect, remove and relocate the amphibians; - identifying presence of the amphibians on the construction site and in its vicinity, and eliminating possible threats; - undertaking and co-ordinating of activities related to active protection of amphibians; - checking the effectiveness and quality of work carried out in this area; - setting out and controlling conditions of protection of the construction site in the form of amphibian fences. <p>Caught amphibians will be relocated to the habitat suitable for their species indicated by the herpetologist, away from the construction site.</p>	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
93	II.26	Environmental supervision, natural resource protection / The entire section of modernized embankment	<p><i>The duties of the Environmental Team regarding the protection of trees and shrubs</i></p> <p>The Environmental Team will ensure compliance with the requirements provided in the EMP on:</p> <ul style="list-style-type: none"> – the scope and conditions of felling trees and shrubs; – the scope and conditions of the protection of trees and shrubs not intended for removal; – the scope and methods of the protection of valuable natural habitats near the area of construction works. <p>In case there is a clash of conducted works with the sites of protected plant species, if technical conditions allow, such plants will be replanted to appropriate places. Replanting shall be carried out under the supervision and in accordance with the instructions of the botanist from the Environmental Team</p> <p>Prior to replanting the Contractor will obtain all permits required by law to carry out the abovementioned activities (including relevant RDOŚ or GDOŚ decisions).</p> <p>Applications for issuing the above permits will be submitted for the Engineer’s acceptance before submission to the intended recipient.</p>	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
94	II.26	Environmental supervision, natural resource protection / The entire section of modernized embankment	<i>The duties of the Environmental Team regarding topsoiling and sowing of grass on the embankment</i> The Environmental Team will carry out inspections of topsoiling and sowing of grass on the embankment with the native plant mix.	The Contractor / Site Manager / Environmental Team
95	II.26	Environmental supervision / The entire section of modernized embankment	<i>Monthly and quarterly reports of the Environmental Team</i> Monthly and quarterly reports will be provided from the actions taken by the Environmental Team as a part of the environmental supervision, and each time those reports will be submitted to the Engineer.	The Contractor / Site Manager / Environmental Team
96	II.26	Environmental supervision / The entire section of modernized embankment	<i>Final report of the Environmental Team to be submitted to RDOŚ</i> Within 6 months after completion of works the Contractor will submit the Report on environmental supervision, including an appendix containing photo documentation, to the Engineer first, and then after the acceptance, to RDOŚ in Rzeszów.	The Contractor / Site Manager / Environmental Team

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
H. REQUIREMENTS FOR POST-CONSTRUCTION PHASE				
97	II.14	Embankment's maintenance, soil protection, surface water protection / The entire section of modernized embankment	Topsoiling and sowing of grass on the embankment surface After completion of works the embankment will be covered with a layer of topsoil and the ground will be sown with a properly selected mixture of native plants (and especially of grass) accepted by the Engineer, in a way that will minimize surface erosion and prevent fine solids forming suspension from penetrating into the water.	The Contractor / Site Manager / Environmental Team – botanist or phytosociologist
98	[-]	Soil protection, natural resource protection / The entire section of modernized embankment	Reinstating and cleaning up the construction site after completion of works After completion of the construction works the areas of temporary occupation will be reinstated to its former condition (original form of use) unless the area proprietor decides otherwise. The places from where topsoil was stripped will be re-covered and native grass mix will be sown. The mix will be agreed with the phytosociologist/botanist. After completion of works, the site will be cleaned up and left in the condition as similar as possible to the natural one.	The Contractor / Site Manager / Environmental Team – botanist or phytosociologist

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
99	[-]	Embankment's maintenance, natural resource protection / The entire section of modernized embankment	<p><i>Maintenance of the areas sown with grass</i></p> <p>Maintenance of the areas sown with grass mix will include mowing of slopes twice a year (in June and September) and removal of seedlings of trees and shrubs.</p> <p>This activity also covers the defect notification period.</p>	<p>In the <i>Contract implementation period</i> – The Contractor / Site Manager / Environmental Team – botanist or phytosociologist</p> <p>After completion of the <i>Contract implementation period</i> – Investor</p>
100	II.15	Embankment's maintenance, natural resource protection / The entire section of modernized embankment	<p><i>Fighting alien invasive plant species in the operation phase</i></p> <p>After completion of the construction works and on the use stage (in the period of five years after completion of construction works), the area of the Contract will be inspected for the possible presence of alien invasive plant species.</p> <p>If regular maintenance works (mainly mowing) will not be sufficient for removing these plants, after consulting the botanist other measures will be taken to effectively remove the plant permanently.</p>	<p>In the <i>Contract implementation period</i> – The Contractor / Site Manager / Environmental Team – botanist or phytosociologist</p> <p>After completion of the <i>Contract implementation period</i> – Investor</p>

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
I. OTHER REQUIREMENTS RELATED TO ESHS				
101	[-]	ESHS issues / The entire section of modernized embankment	<p><i>Obligation to abide the requirements and conditions related to ESHS</i></p> <p>The Contractor is obliged to apply and abide all of the requirements and conditions in the ESHS scope (i.e. ones related to environmental, social, and health and safety aspects), as determined in the Contract documents and in the ESHS Code of Conduct (developed by the Contractor in accordance with provision under the <i>Agreement on Construction Works</i>), and also resulting from legal acts binding in Poland (including the Civil Code, the Construction Law, and others).</p> <p>ESHS requirements and conditions determined in the aforementioned sources for the Contractor and its personnel (regardless of the legal cooperation form) are also valid – in the scope corresponding with the current case – for the Contractor’s subcontractors and their personnel and their subcontractors.</p>	The Contractor / Site Manager / H&S Supervision

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
102	[-]	ESHS issues / The entire section of modernized embankment	<p>Assurance of safety in case of accidents at work</p> <p>The Contractor is obliged to assure such conditions of Contract implementation (including performance conditions) to avoid accidents with participation of any persons associated with Contract implementation (including personnel of e.g.: the Contractor, the Engineer, the Investor, the PCU, subcontractors, suppliers, and others) and outsiders.</p> <p>In case of an accident the Contractor shall immediately assure proper treatment for injured people, notify and provide the access for relevant services, and protect the site in a way securing safety for the aforementioned services and for other people, who may be present on site.</p> <p>Regardless of the aforementioned actions the Contractor shall immediately inform the Engineer about any accidents and near misses associated with implementation of the Contractor (both: on the construction site, as well as in any other location), in accordance with binding procedures determined in the Contract documents (also see: item 109).</p>	The Contractor / Site Manager / H&S Supervision
103	[-]	ESHS issues / The entire section of modernized embankment	<p>Assurance of H&S expert in the Contractor's Team</p> <p>Within the entire Contract implementation period the Contractor shall be obliged to assure constant H&S supervision, which is to take care for abiding of the H&S rules determined in the Contract documents and in binding provisions of the state law. Members and qualifications of the H&S supervising team shall meet the Polish labour law regulations.</p>	The Contractor / Site Manager / H&S Supervision

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
104	[-]	ESHS issues / The entire section of modernized embankment	<p><i>Educational measures on H&S rules and regulations</i></p> <p>The H&S supervising team shall implement training and an awareness programme for the Contractor’s personnel on the H&S rules and regulations on the construction site.</p> <p>Those measures shall be implemented within the entire performance period for the construction works, at least every 12 months.</p> <p>They shall take form of informational, educational, and awareness rising campaign on H&S issues in the scope corresponding with the current Contract implementation stage.</p>	The Contractor / Site Manager / H&S Supervision
105	[-]	ESHS issues / The entire section of modernized embankment	<p><i>Assurance of safety for people in case of sexual harassment and mobbing</i></p> <p>The Contractor is obliged to assure such Contract implementation conditions to disable cases of sexual harassment or mobbing toward the Contractor’s personnel and subcontractors, any other people associated with implementation of the Contract, as well as any outsiders.</p> <p>In case sexual harassment or mobbing occur, the Contractor shall undertake actions to immediately stop such behavior, and subsequently shall immediately draw all consequences resulting from the law and from internal business standards in case of violators, and shall provide victims of such actions with any necessary help and support, in the scope corresponding with the case.</p> <p>Regardless of the aforementioned actions the Contractor shall immediately inform the Engineer about any cases and suspicions of sexual harassment or mobbing, in accordance with binding procedures determined in the Contract documents (also see: item 109).</p>	The Contractor / Site Manager / Sexual Harassment and Mobbing Prevention Expert

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
106	[-]	ESHS issues / The entire section of modernized embankment	<p><i>Educational measures to prevent cases of sexual harassment and/or mobbing</i></p> <p>The Contractor shall implement training and an awareness programme for the Contractor's personnel on prevention in case of sexual harassment and mobbing.</p> <p>Those measures shall be implemented within the entire performance period for the construction works, at least every 12 months.</p> <p>They shall take form of informational, educational, and awareness rising campaign on sexual harassment and mobbing. As part of these campaigns, the Contractor effectively inform staff and subcontractors about the person and/or external institution to whom they should complain about the above subject.</p> <p>Those measures shall be implemented by an expert having relevant substantial qualifications in that scope, who should be assigned in the Contractor's team.</p>	The Contractor / Site Manager / Sexual Harassment and Mobbing Prevention Expert

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
107	[-]	ESHS issues / The entire section of modernized embankment	<p><i>Assurance of proper work and payment conditions</i></p> <p>The Contractor is obliged to secure work and payment conditions for the personnel associated with implementation of the Contract in conformity with provisions of the Labour Law binding in Poland (and especially with the Labour Act), including e.g.:</p> <ul style="list-style-type: none"> – the Contractor shall assure equal rights in case of remuneration for employees performing the same work, without consideration of sex, sexual orientation, and age; – people employed at the Contract shall not be persecuted or discriminated due to sex, sexual orientation, and age; – the Contractor may employ only such a young employee, who finished 15 years of age and completed at least 8 years of primary school, and provided a doctor’s statement confirming that a work of a given type does not pose risk to his/hers health; – the Contractor – in reference to the possibilities and the conditions, and rules under the Polish Civil Code – shall meet work and social conditions on site; – the Contractor is obliged to facilitate the employees in improving their professional qualifications. 	The Contractor / Site Manager / H&S Supervision

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No.	Item of the Environmental Decision	Issue / Area	Mitigation measure	Unit responsible
108	[-]	ESHS issues / The entire section of modernized embankment	<p><i>Educational measures on submission of claims related to the conditions of work and payment</i></p> <p>The Contractor shall inform all people employed due to implementation of the Contract about a possibility of filing claims on the conditions of work and payment, and shall develop and provide those people with a leaflet containing data necessary for submission of claims and applications, in which it would e.g. assure about the lack of negative consequences for the person notifying about an issue.</p> <p>Contents of the aforementioned leaflet shall be agreed with the Engineer</p>	The Contractor / Site Manager / H&S Supervision
109	[-]	ESHS issues / The entire section of modernized embankment	<p><i>Development and implementation of procedures on on-going provision of information on ESHS issues</i></p> <p>In time not longer than 30 days from the Contract commencement date the Engineer shall develop and provide the Contractor with a set of procedures on the on-going provision of information related to:</p> <ul style="list-style-type: none"> - extraordinary hazards (i.e. emergency and crisis situations discussed in chapter 5.12 of the EMP); - accidents and near misses; - cases of sexual harassment and mobbing; - claims of the personnel related to the work and payment conditions. <p>The Contractor shall immediately inform the Engineer on any issues in that scope, in accordance with the conditions determined in the valid contractual procedures.</p>	The Contractor / Site Manager / H&S Supervision