

Appendix 1 - Plan of Mitigation Measures

This Appendix to the Environment Management Plan for the Odra-Vistula Flood Management Project – Contract 1C.1 *Extension and construction of flood embankments and Reconstruction of Czarny Kanał and Racza Struga* presents measures mitigating negative environment impacts which constitute guidelines for the Contractor as part of the Contract 1C.1.

No	Issue	Place	Mitigation measures	Responsible entity
01 - RULES CONNECTED WITH PROPERTY ACQUISITION				
1.	Land area and landscape protection	All work areas	It is required to ensure the efficient use of the terrain and minimal transformation of its surface.	Contractor – Site Manager
2.	Land area and landscape protection	All work areas	It is necessary to reduce the occupation of the terrain for the time of the works conducted.	Contractor – Site Manager
02 - MEASURES TO BE PERFORMED PRIOR TO WORKS COMMENCEMENT				
3.	Soil and grounds protection	All work areas	Prior to the earthworks, it is necessary to remove a humus layer at the level of 20-30 cm which will be re-used for subsequent land reclamation.	Contractor – Site Manager
4.	Soil, grounds and surface waters protection - Rules of procedure for sediments excavated from channel beds	Racza Struga Czarny Kanał	Prior to the construction works in the places of the planned dredging of channel beds and removing sediments from the channels, Contractor shall carry out control tests and examine sediments and define their quality in accordance with applicable law (pursuant to the Act of 14 December 2012 on waste and relevant executive acts). Such tests shall be implemented by an accredited laboratory.	Contractor – Site Manager
5.	General conditions concerning nature protection	All work areas	Before beginning of the works there should be carried out a single site survey of temporary and permanent seizures areas, intended for determining of an up-to-date positions of protected plant species and plant species placed on national and regional red lists of endangered species of plants, and designation of places of potential presence of these species.	Contractor – phytosociologist/botanist

No	Issue	Place	Mitigation measures	Responsible entity
6.	General conditions concerning nature protection	All work areas	Contractor (if necessary - in proportion to the results of the conducted site survey) shall obtain all necessary permits for derogations from prohibitions in relation to the protected plants species issued by RDOŚ/GDOŚ (Article 56 section 1 and 2 of the Act of 16 April 2004 on environmental protection or similar legal provisions applicable at the time of preparing and conducting works). If it is necessary to relocate such species, the Contractor is obliged to plan such action, obtain required permission, effectively conduct such actions and implement other activities required (e.g. drawing-up and submitting reports to the body issuing relevant permission).	Contractor – phytosociologist/botanist
7.	General conditions concerning nature protection	All work areas	Trees and shrubs not intended to be cut out, growing in the vicinity of the Task implementation area and at risk of being damaged due to vehicle traffic, equipment handling, etc. must be secured against damage, e.g. by putting coverings made of wooden strips around the trunks up to the minimum height of 1.5 m. Special attention shall be paid to proper securing and carefulness when preparing works close to the avenue of lindens occurring within the modernised embankment protecting Słubice city (ensuring lack of damages of the tree trunks and minimising possible interference with to tree's root system).	Contractor – phytosociologist/botanist
8.	Limiting losses in the habitats of Natura 2000 and nature reserve	km 26+000 - 32+700 of the Odra River embankment, km 582+500 - 588+000 of the Odra River course Ring embankment Słubice with the length of 5.896 km (km 26+563 of the Odra River embankment, km 587+400 of the Odra River course)	At the areas where construction works shall be carried out at areas under protection: SPA Dolina Środkowej Odry PLB080004, SCI Łęgi Słubickie PLH08001 and Łęgi koło Słubic Nature Reserve, the protected territories should be cordoned off from the construction areas. Fence should secure protected territories against unauthorized access of persons involved in construction works and unauthorized entering of construction vehicles and machines.	Contractor – Site Manager, phytosociologist/ botanist
9.	Protection of archaeological values	All work areas	Prior to the commencement of works, the Contractor shall enable the qualified person to carry out all necessary archeological survey in the places of discovered archeological sites. The above will ensure the protection and removal of valuable objects and other elements of historical value from the working site and will enable the performance of specific works.	Contractor - Contractor's archaeology team

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10.	Human health and safety protection	All work areas	Before beginning of the works throughout of which there may occur vibrations, which shall constitute inconvenience for the neighbouring inhabitants and cause damage hazard to the buildings located near the works there should be carried out survey of existing buildings with particular focus on cracks and damages, and during the afore-mentioned works the condition of the buildings should be monitored. In case of stating damage, the Contractor shall be obliged, on the basis of the monitoring results, to restore the technical condition of the buildings.	Contractor – Site Manager
11.	General conditions concerning nature protection	All work areas	For the time of preparation and implementation of construction works, the Contractor will hire a team of naturalists, which will be responsible for constant environmental supervision of works. The Contractor's environmental team shall include the following experts: phytosociologist, herpetologist, ornithologist, chiropterologist, entomologist and water protection expert. The Contractor's environmental team will be responsible for the proper implementation of mitigation measures for the environment during works construction. Contractor's environmental team experts must be accepted by the Engineer before civil works execution.	Contractor – Contractor's environmental team
12.	Sapper supervision	All work areas	Prior to the commencement of works, the Contractor shall conduct a site inspection on the area of works in terms of the existence of unexploded shells.	Contractor - authorised sapper unit
13.	General conditions concerning nature protection - prevent and elimination of invasive species	All work areas	Prior to beginning of the construction works carry out field inspection of place of works with participation of phytosociologist in order to locate the presence and estimate population of invasive plants (except for <i>impatiens parviflora</i>). After locating and visibly marking in places where invasive plants grow take preventive actions during the implementation investment, which limit spreading of these plants, including, among others, removing topsoil layer along with invasive plants and transporting them from area of works to the composting plant or neutralizing in any other effective manner. It is unacceptable to mix this topsoil with topsoil overgrown with local native vegetation.	Contractor – phytosociologist/botanist
03 - REQUIREMENTS CONCERNING ENSURE THE ACCESS ROUTES TO THE CONSTRUCTION SITES				
14.	Human health and safety protection	All work areas	The Contractor shall ensure access routes for rescue teams (ambulance, fire brigade, etc.) for the entire time of the works carried out, marking out roads, exits, passages for pedestrians and parking for vehicles used in the building site.	Contractor – Site Manager

No	Issue	Place	Mitigation measures	Responsible entity
15.	Human health and safety protection	All work areas	Technological roads used for transportation of materials including machines and devices, as well as employees) shall be organised as far as possible on the basis of the existing road system, outside of the areas indicated by Contractor's environmental team, as the nature valuable areas.	Contractor Manager – Site
16.	Human health and safety protection	All work areas	It is required to ensure human protection against increased vehicle traffic along roads used during construction works. At the time of works performance, the Contractor shall supply, install and operate all temporary safety devices, ensuring the safety of vehicles and pedestrians.	Contractor Manager – Site
17.	Noise protection - sections of the embankment where are located existing roads, which will be used by Contractor	6.700 km of the existing flood embankment and 185 m of the existing side embankment (km 26+000 - 32+700 of the Odra River embankment, km 582+500 – 588+000 of the Odra River course), 5.896 km of the new ring embankment (km 26+563 of the Odra River embankment, km 587+400 km of the Odra River course)	Paved surfaces (e.g. access roads) used for vehicle transportation of aggregate and building materials should be maintained in good technical condition.	Contractor Manager – Site
18.	Protection of tangible assets	5.896 km of the new ring embankment (km 26+563 of the Odra River embankment, km 587+400 km of the Odra River course)	The Contractor is obliged to prepare photographic documentation of the entire area of conducting the works with particular focus on of the technical condition of roads and the buildings located in the areas close to roads used for transport of construction materials. Before beginning the works The Contractor shall carry out, in the presence of road Operator, site visit on the basis of which there shall be drawn up a roads condition protocol before construction related exploitation. Based on this document, the Contractor shall be obliged to restore roads technical condition.	Contractor Manager – Site
19.	Human health and safety protection	All work areas	Proper marking of access roads. According to valid laws and agreements with Operators of the roads the Contractor shall use the access routes shall be marked. These marking shall be regularly controlled, in the case of destruction or theft of marking the Contractor shall promptly reconstruct or complete it.	Contractor Manager – Site

No	Issue	Place	Mitigation measures	Responsible entity
20.	Protection of tangible assets	All work areas	The Contractor shall be responsible for all damage to the structures, buildings, roads, drainage ditches, culverts, water supply and gas pipe lines, power poles and lines, cables geodetic control network and any type of installations and other types of object such as vertical and horizontal markings, navigation markings, information boards, culture assets etc., caused by the Contractor or their Subcontractors during works performance. The Contractor is also responsible for restoring the flow capacity of drainage ditches and installations in the area of conducted works and used transportation roads, in case of damage caused by works performance and transportation related with works implementation. The Contractor shall immediately repair any occurred damage at their own expense and also, if necessary, shall perform other works ordered by the Engineer.	Contractor – Site Manager
21.	Protection of tangible assets	All work areas	The Contractor is obliged to agree with road managing authority, the traffic organisation and works securing plans. The Contractor is obliged to organise traffic in accordance with the agreed plans (marking and securing of the Works site and marking of de-tours and recommended, related with the traffic organisation change, markings of the roads, etc.).	Contractor – Site Manager
22.	Protection of tangible assets	All work areas	The Contractor shall respect the statutory limitations of loads per vehicle axle during transportation of materials and equipment to and from the construction site. The Contractor shall also obtain any necessary permits from authorities, for transportation of non-typical loads and shall constantly inform the Engineer about each case of such a transportation.	Contractor – Site Manager
23.	Protection of tangible assets	All work areas	Prior to Works commencement, the Contractor shall present to the Engineer for approval, traffic organisation and Works securing plans agreed with the managing authorities and the Schedule. Depending on the needs and Works progress, the traffic organisation plans shall be updated by the Contractor on on-going basis.	Contractor – Site Manager
04 - ORGANIZATION OF THE BACK-UP FACILITIES, WAREHOUSES AND STACKING YARDS				
24.	Land area and landscape protection	All work areas	Roads, sites and back-up facilities of the building site must be situated in the manner ensuring the preservation of trees and shrubs growing beyond the places necessary for occupation for works construction.	Contractor – Site Manager, Contractor's environmental team

No	Issue	Place	Mitigation measures	Responsible entity
25.	General conditions concerning nature protection	All work areas	Temporary occupation sites (technological roads, sites, building site back-up facilities, construction material deposits, parking, etc.) must be situated outside the areas of a natural values indicated by the Contractor's environmental team, and if possible, outside the Odra River inter-embankment zone.	Contractor – Site Manager, Contractor's environmental team
26.	Human health and safety protection	All work areas	Temporary occupation sites (technological roads, sites, building site back-up facilities, construction material deposits, parking, etc.) must be situated as far as possible, from areas under acoustic protection (built-up areas).	Contractor – Site Manager
27.	Soil and surface water protection	All work areas	Places assigned for construction cars and machines maintenance shall be, for the time of works performance, hardened and equipped with additional sorbents used for neutralisation pollutions coming from leaks and overflows, in case they occur. In case of occurrence of leaks and overflows, the pollution shall be also removed mechanically.	Contractor – Site Manager
28.	Soil and surface water protection	All work areas	In the neighbourhood of the places assigned for fuelling and parking construction vehicles and cars, a station with a sorbent used for neutralisation pollutions coming from leaks and overflows, in case they occur, shall be located. In case of occurrence of leaks and overflows, the pollution shall be also removed mechanically.	Contractor – Site Manager
29.	General conditions concerning nature protection	All work areas	Places of storage of construction materials, ground, construction equipment and vehicles parking etc. shall be located, if possible, beyond projection of tree crowns (which were not cut down in connection with construction works).	Contractor – Site Manager
30.	Human health and safety protection	All work areas	Storing materials used during construction works in the manner securing them against damage and in the manner not posing a risk to the human and property safety, excluding falling over, sliding down or falling down of products and devices.	Contractor – Site Manager
31.	Human health and safety protection	All work areas	It is necessary to exclude a possibility of locating a material and machine depot and waste deposition sites within the Odra inter-embankment zone on the terrains of natural environment value, indicated by the Contractor's environment team and other terrains not prepared for fulfilling the above functions, which pose a risk of polluting surface and ground waters.	Contractor – Site Manager, Contractor's environmental team
32.	Human health and safety protection	All work areas	If hazardous substances and materials are stored in the building site, they must be protected appropriately, preventing the access of unauthorised persons, and information on a hazard must be provided on warning boards.	Contractor – Site Manager

No	Issue	Place	Mitigation measures	Responsible entity
33.	General waste handling rules	All work areas	Waste generated during the Task implementation must be segregated and collected in containers or dedicated places as well as it must be collected on the regular basis by authorized entities. Waste not generated directly by the construction works but occurring within the area of the implemented works (littering of the area by third persons) shall be collected on ongoing basis and included in the functioning system of construction site waste collection. The Contractor is obliged to carry out an inspection of construction site to detect any "illegal landfills". The Contractor should also protect the building site against formation of "illegal landfills".	Contractor – Site Manager
34.	Hazardous waste	All work areas	Hazardous waste must be collected by the authorized entities only. Until handing over of hazardous waste to the entities with permit for collecting, hazardous waste should be stored in a manner preventing release of hazardous substances to the environment, i.e. in tightly closed containers, in canopied areas with paved and impermeable ground, secured against third party access.	Contractor – Site Manager
35.	Hazardous waste	All work areas	Hazardous waste storage sites must be allocated beyond flood waters area. (Q1% - so called water - once every hundred years).	Contractor – Site Manager
36.	Handling of sewage	All work areas	It is necessary to equip all construction sites with a required number of portable toilets and provide training to all the employees with regard to maintaining appropriate hygienic conditions within the area of the construction site and its direct surrounding.	Contractor – Site Manager
37.	Handling of sewage	All work areas	It is essential to ensure the regular disposal of sewage, previously collected in tight contained tanks, to the nearest sewage treatment plant.	Contractor – Site Manager
05 - REQUIREMENTS FOR CUTTING OUT TREES AND SHRUBS				
38.	General conditions concerning nature protection	Racza Struga Czarny Kanał	It is required to provide felling of only selected trees and shrubs, and leaving, if possible, natural bank vegetation within the channel sections.	Contractor – phytosociologist/botanist
39.	General conditions concerning nature protection	All work areas	Trees and bushes felling within the scope indispensable for the Task implementation must be carried out from 16 October to the end of February, which shall ensure protection of birds breeding populations as well as migrating populations within the Odra valley.	Contractor – phytosociologist/botanist, ornithologist, entomologist

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40.	General conditions concerning nature protection	All work areas	In the planned tree felling sites due to the rebuilding and construction of embankments, it is necessary to assess if there are not any protected beetle species, including among others Cucujus cinnaberinus. If trees occupied by those species are found, it is necessary to secure the species and/or such beetles must be relocated to a different habitat of similar conditions. The works must be carried out under the supervision of an entomologist.	Contractor - entomologist
41.	General conditions concerning nature protection	All work areas	In order to reduce losses in the species of protected bats which may live in tree hollows, the clearance of trees of circumference exceeding 100 cm ought to be preceded with a chiropterologist inspection for the purpose of assessing the actual presence of bats in the vicinity of respective types of trees. Tree felling must be carried out under the supervision of a chiropterologist.	Contractor - chiropterologist
42.	Limiting losses in the habitats of Natura 2000 and nature reserve	km 26+000 - 32+700 of the Odra River embankment, km 582+500 - 588+000 of the Odra River course Ring embankment Słubice with the length of 5.896 km (km 26+563 of the Odra River embankment, km 587+400 of the Odra River course)	It is forbidden to cut out trees and shrubs within the distance exceeding 3 m from the foot of the flood embankment under extension and reinforcement works and ring-embankment under construction (on the embankment upstream and downstream face) within the sections running within the areas under protection: SPA Dolina Środkowej Odry PLB080004, SCI Łęgi Słubickie PLH080013 and Łęgi koło Słubic Nature Reserve.	Contractor - phytosociologist
06 - REQUIREMENTS AT THE IMPLEMENTATION OF WORKS STAGE				
43.	Land area and landscape protection	All work areas	Vehicle traffic should take place along technological routes, preventing any damage to the near-by vegetation.	Contractor - Site Manager
44.	Soils, surface water and air protection	All work areas	Construction equipment must be in working order which satisfies all legal conditions authorising it for putting such equipment into service.	Contractor - Site Manager
45.	Soils, surface water and air protection	All work areas	The type and working order of such equipment must ensure the protection of soil, surface waters and groundwaters against pollution, dust and gas emission to the air and noise emission.	Contractor - Site Manager
46.	Soil and surface water protection	All work areas	It is prohibited to repair equipment and machines as well as exchange oil and fuel up equipment and machines within the task implementation area (area covered by the investment).	Contractor - Site Manager
47.	Soil and surface water protection	All work areas	It is prohibited to store fuel within the Odra inter-embankment zone or in the vicinity of areas of natural value, indicated by the Contractor's environmental team.	Contractor - Site Manager, Contractor's environmental team

No	Issue	Place	Mitigation measures	Responsible entity
48.	Soil and surface water protection	All work areas	It is prohibited to park machines within the Odra inter-embankment zone or in the vicinity of areas of natural value, indicated by Contractor's environmental team.	Contractor – Site Manager, Contractor's environmental team
49.	Air protection	All work areas	It is necessary to apply required organisational and technical measures in order to maintain access routes in cleanliness.	Contractor – Site Manager, Contractor's environmental team
50.	Air protection	All work areas	It is necessary to apply required organisational and technical measures in order to limit dust emission at the time of transporting construction materials.	Contractor – Site Manager
51.	Air protection	All work areas	It is necessary to apply required organisational and technical measures in order to limit dust emission at the time of works construction.	Contractor – Site Manager
52.	Air protection (Protection against dusting)	All work areas	Limit dust generation caused by the means of transport by: <ul style="list-style-type: none"> • cleaning vehicle wheels before entering the public roads, • cleaning technological internal roads surface, • using of vehicles with tilts for transportation of dusty materials or transportation of powdery materials in packagings, • prevention of contamination of local roads with sand and other material transported by vehicles, • sprinkling of surfaces of internal technological roads. 	Contractor – Site Manager
53.	Air protection	All work areas	Bulk materials and aggregates to be used during the construction stage shall be secured against their blowing or excessive dusting from their surface both during transportation and storage and when using them to build the embankments, as well as during preparation of concrete mix and loading the mix used for building the anti-filtration screen in the flood embankment.	Contractor – Site Manager
54.	Air protection	All work areas	It is necessary to reduce the work time of motor machines and vehicles.	Contractor – Site Manager
55.	Human health and safety protection	All work areas	It is necessary to reduce speed limit of vehicles in the vicinity of the building areas.	Contractor – Site Manager
56.	Air protection	All work areas	It is necessary to adhere to the rule of switching off machines and appliances during breaks at work.	Contractor – Site Manager
57.	Soil and grounds protection	All work areas	The Contractor should choose a place for depositing humus which will secure it against damage, being driven through and being tamped down.	Contractor – phytosociologist/botanist
58.	Soil and grounds protection	All work areas	Topsoil should be stored and protected in a way enabling its re-use.	Contractor – Site Manager

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59.	Land area and landscape protection	All work areas	Upon completing construction works, it is necessary to reinstate land (temporary occupation sites) to its previous condition (land reclamation). Humus must be planted and sown with grass mixtures whose composition will be determined by a phytosociologist/botanist.	Contractor – Site Manager, phytosociologist/botanist
60.	Soil, grounds and surface waters protection - Rules of procedure for sediments excavated from channel beds	Racza Struga Czarny Kanał	It is necessary to examine the quality of the excavated bottom deposits. If contaminated sediments are discovered (with exceeded values of permissible substance concentrations), they must be removed and handed over to entities holding adequate permissions for their further management, If uncontaminated sediments are discovered it is possible to restore them and hand over to natural person or to organization who are not contractors in terms of applicable rules.	Contractor – Site Manager
61.	Surface water protection	All work areas	It is prohibited to pipe water coming from earthwork grounds drainage into the river and other surface waters e.g. old river beds.	Contractor - Site Manager, water protection expert
62.	Surface water protection	Racza Struga Czarny Kanał	It is necessary to monitor concentration of suspended solids in channels Racza Struga and Czarny Kanał – if permissible concentration values are exceeded, it is required to undertake relevant measures such limiting works range or temporary suspending construction works.	Contractor - Site Manager, water protection expert
63.	Land area and landscape protection	All work areas	Earthworks must be limited to a necessary minimum.	Contractor – Site Manager
64.	Surface water protection	All work areas	Earth material used ought to be deposited as far as possible from the river, in the outer-embankment side of the Odra River embankment.	Contractor – Site Manager
65.	General conditions concerning nature protection	Racza Struga Czarny Kanał	Carrying out works off the spawning season within the channel sections (March - June).	Contractor - Site Manager, water protection expert
66.	Surface water, soil and grounds protection	All work areas	Only construction materials not harmful for the environment (natural, environment friendly or neutral) shall be used for the implementation of the Task. Used materials, raw materials, fuels, fertilizers, cement and concrete mixes shall have relevant attestations and be allowed for use. Additionally, during performance of works in the channel beds natural, environment friendly materials shall be used (fascine, wood, natural stone etc.).	Contractor – Site Manager
67.	General conditions concerning nature protection	Racza Struga Czarny Kanał	During works leaving thick wood debris or rootstocks in some points of the channel bed for the purpose of preserving habitats and shelters of fish and macroinvertebrates.	Contractor - water protection expert

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68.	Groundwater protection	All work areas	It is forbidden to deposit earth masses in depressions and old river beds within the entire Task implementation area.	Contractor - Site Manager, protection expert, herpetologist
69.	Groundwater protection	All work areas	It is forbidden to deposit earth masses in Odra River inter-embankment zone.	Contractor - Site Manager
70.	Groundwater protection	All work areas	It is forbidden to deposit earth masses in areas of a natural value, indicated by the Contractor's environmental team.	Contractor - Site Manager, Contractor's environmental team
71.	Noise protection	All work areas	Construction works in the areas under acoustic protection must be carried out only during the day (from 6 a.m. to 10 p.m.).	Contractor - Site Manager
72.	Noise protection	All work areas	In order to reduce vibration and acoustic impact connected with the installation of sheet piles within the Odra embankment to be rebuilt, it is required to apply a static method for the installation of sheet piles.	Contractor - Site Manager
73.	General conditions concerning nature protection	Racza Struga Czarny Kanał	When performing works within the channels beds, ensure inspection of particular works by an expert on the waters protection and, if they are considered necessary, implement the mitigating measures such as flushing out of fish or harvest of fish in agreement with fishermen organization.	Contractor - water protection expert
74.	General conditions concerning nature protection	Racza Struga Czarny Kanał	During the works on deepening the channel, it is necessary to conduct a visual inspection of the material excavated and if necessary relocate water life forms to habitats of similar conditions beyond the impact zone of the works construction.	Contractor - water protection expert
75.	General conditions concerning nature protection	Racza Struga Czarny Kanał	The term of works implementation within the channels shall be adjusted to the high activity period of animals (especially during their breeding period.	Contractor - water protection expert, ornithologist, entomologist, herpetologist
76.	General conditions concerning nature protection	Racza Struga Czarny Kanał	The area of works implementation shall be secured (in the period of amphibians seasonal migration) against access of such animals, in a manner preventing them from entering into area that is dangerous for them.	Contractor - Site Manager, herpetologist

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77.	General conditions concerning nature protection	All work areas	All the excavations must be protected against animal access. In addition, according to the recommendations of herpetologist, if necessary, it is recommended to protect the migration routes of amphibians to water bodies, in order to limit a death rate among amphibians connected with vehicle traffic. It is also necessary to protect all hollows formed in the location of works and within the building sites which are filled with water against amphibian access and breeding in this area – works must be carried out according to the recommendations of a herpetologist.	Contractor - Site Manager, herpetologist
78.	General conditions concerning nature protection	All work areas	The Contractor will obtain required permits for departures from prohibitions in relation to protected species of animals and fungi, issued by RDOŚ/GDOŚ (Article 56 section 1 and 2 of the Act of 16 April 2004 on environmental protection or similar legal provisions applicable at the time of preparing and conducting works) - if this will be necessary according to the results of site survey carried out by Contractor's environmental team.	Contractor - Contractor's environmental team
79.	Limitation of impacts on the areas Natura 2000	The section of the Odra Rvier embankment running between km 582+500, and km 588+000 of the course of the Odra River.	Construction works must be performed outside a bird breeding season (i.e. excluding the period from 1 March to 31 July).	Contractor - ornithologist
80.	Limitation of impacts on the areas Natura 2000	The section of the Odra Rvier embankment running between km 582+500, and km 588+000 of the course of the Odra River.	During works performance special carefulness shall be exercises when performing works close to old river beds and periodic reservoirs, preventing their pollution, physical damage to the bank/shore line or flora.	Contractor - Contractor's environmental team
81.	Limitation of impacts on the protected areas and facilities	All work areas	During the works construction, the Contractor shall observe standards, prohibitions and recommendations as well as respect limitations arising from the existence of areas and facilities formed under the Act of 16 April 2004 on environmental protection.	Contractor - Site Manager, Contractor's environmental team
82.	General findings concerning cultural heritage and monuments protection	All work areas	If during construction works or earthworks the Contractor discovers an object likely to be a historical object, he/she is obliged to suspend all the works which could damage or destroy discovered object; furthermore, such a person is obliged to secure the object with available protective measures as well as a discovery site; in addition, this person is obliged to notify the Voivodeship Conservator of Historical Monuments, and if not possible, the Mayor of Słubice. The Contractor shall also inform the Engineer about the case.	Contractor - Contractor's archaeology team

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83.	General findings concerning cultural heritage and monuments protection	All work areas	For the purpose of implementing the above EMP conditions related with protection of cultural landscape and monuments, the Contractor will also obtain the permit issued by the Voivodeship Conservator of Historical Monuments (VCHM) for the performance of archaeological rescue survey.	Contractor - Contractor's archaeology team
84.	General findings concerning coming across graves with human skeletons during works construction	All work areas	In case of coming across human remains (graves with human skeletons), the Contractor is obliged to inform archaeological supervision and the Engineer. Archaeological supervision makes a decision if there is a need, on the part of the Contractor, to inform the Police.	Contractor - Site Manager
85.	Human health and safety protection	All work areas	Protect health and safety of people, including fire protection - development of HASP (Health and Safety Plan), obtaining acceptance of Engineer for and implementation of HASP plan, which will remain in force until construction works completion. Requirements with regard to fire protection included in HASP should include also prohibition on bonfires and combustion of flammable materials within the construction site area.	Contractor - Site Manager
86.	Human health and safety protection	All work areas	The Contractor shall ensuring the preparation, implementation after the approval by the Engineer of Building site organisation design.	Contractor - Site Manager
87.	Human health and safety protection	All work areas	The Contractor shall ensuring the preparation, implementation after the approval by the Engineer of Quality Assurance Plan.	Contractor - Site Manager
88.	Human health and safety protection	All work areas	The Contractor shall ensuring the preparation, implementation after the approval by the Engineer of The construction site's flood management plan for the time of the works.	Contractor - Site Manager
89.	Human health and safety protection	All work areas	Allocating dangerous zones which pose a risk to human health and life, and marking, with their use, warning boards, securing against unauthorised access.	Contractor - Site Manager
90.	Human health and safety protection	All work areas	Ensuring health and safety in terms of organisation - The Contractor shall ensure and maintain the safety of the works conducted.	Contractor - Site Manager
91.	Human health and safety protection	All work areas	Ensuring health and safety in terms of organisation - The Contractor shall assign the construction area, as far as possible from the residential development areas in order to eliminate excessive noise and vibration emission at the time of the Task implementation.	Contractor - Site Manager
92.	Human health and safety protection	All work areas	The Contractor shall secure and provide marking in the building site.	Contractor - Site Manager
93.	Human health and safety protection	All work areas	The Contractor shall mark traffic routes in the building site.	Contractor - Site Manager

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94.	Human health and safety protection	All work areas	The Contractor shall prepare a traffic plan (evacuation plan) for the building terrain and site in emergency (fire, accident, technical failure, etc.), which will be approved by the Engineer prior to the commencement of works.	Contractor - Site Manager
95.	Human health and safety protection	All work areas	Protection health and safety in relation to applied technical measures by the use of efficient machines and tools subject to periodic service in accordance with the manufacturer's requirements.	Contractor - Site Manager
96.	Human health and safety protection	All work areas	Protection of health and safety in relation to applied technical measures by the use of machines and tools according to their intended use.	Contractor - Site Manager
97.	Human health and safety protection	All work areas	Activities connected with machine maintenance and filling up the fuel must be carried out in designated sites, hardened, and equipped with sorbents.	Contractor - Site Manager
98.	Human health and safety protection	All work areas	It is required to ensure ongoing monitoring of a technical condition of machines, correct performance of works and strict adherence to the Occupational Health and Safety regulations in order to eliminate an increased noise level within the works zone and in its immediate vicinity.	Contractor - Site Manager
99.	Human health and safety protection	All work areas	The Contractor shall ensure constant visibility conditions during the day and at night of such structures and signs for which it is obligatory for safety reasons.	Contractor - Site Manager
100.	Human health and safety protection	All work areas	HIV-AIDS prevention. The Contractor shall implement training and programme of raising awareness of spreading HIV-AIDS through an approved service provider and shall take all other measures outlined in the Agreement (General Conditions, Clause 6.7) in order to reduce a risk of HIV transfer among the Contractor's personnel and local population and it shall promote early diagnostics and support for infected people.	Contractor - Site Manager
101.	Soil masses handling and management	All work areas	Earth masses formed at the stage of Task implementation must be managed according to their intended purpose in compliance with applicable regulations, with consideration of a possibility of their re-use in reinforcing and rebuilding the Odra River embankment and in constructing the by-pass embankment in Stubice.	Contractor - Site Manager

No	Issue	Place	Mitigation measures	Responsible entity
102.	Developing Waste management plan	All work areas	Within 42 days of the date of commencing works, the Contractor shall prepare and submit for the Engineer's approval Waste Management Programme, specifying management method for waste generated during works, considering, among others, guidelines and procedures of waste handling, included in EMP and taking into account the possibility of coming across, during works implementation, hazardous substances, such as crop protection chemicals, oils, lubricates, fuels and others (in both language versions of the document) and the need to inform the police in case of finding other unidentified items and objects potentially hazardous for human health and safety as well as environment condition.	Contractor - Contractor's environmental team
103.	Contractor's environmental team	All work areas	The Contractor's environmental team supervision over the Task must be conducted throughout the whole works construction period.	Contractor - Contractor's environmental team
104.	Tasks of the Contractor's environmental team within the Task implementation period	All work areas	The Contractor's environmental team conducts the inspection of the area of works construction prior to their implementation and during such works.	Contractor - Contractor's environmental team
105.	Tasks of the Contractor's environmental team within the Task implementation period	All work areas	Contractor's environmental team, responsibilities are: <ul style="list-style-type: none"> • inspection and current inspection of area covered by construction and tailing works prior to their commencement and inspections during construction along with preparing relevant reports, constituting documentation of proper performance of environmental team and at the same time informing about due implementation of minimising measures, • formulating and reporting to the Engineer requests with regard to the need of minimizing actions (along with their execution) necessary to alleviate unfavourable effects of Task on natural habitats and species being the object of interest of the Community and subject to national legal protection (species protection) that were unforeseeable and/or impossible to disclose at the stage of agreeing on implementation terms of the concerned Task under the procedure aimed at issuance of the decision on environmental conditions, the activities may be implemented only after the Engineer's acceptance. 	Contractor - Contractor's environmental team

No	Issue	Place	Mitigation measures	Responsible entity
106.	Tasks of the Contractor's environmental team within the Task implementation period	All work areas	The Contractor's environmental team prepares required materials and motions for obtaining permission for departure from the prohibitions connected with protected species of plants, fungi and animals under conditions and procedure specified in the Article 56 section 1 and 2 of the Act of 16 April 2004 on environmental protection (or similar legal provisions applicable at the time of preparing and conducting works). The Contractor obtains on their basis necessary permits.	Contractor - Contractor's environmental team
107.	Tasks of the Contractor's environmental team within the Task implementation period	All work areas	The Contractor's environmental team performs reporting in the form of periodic reports. The reports are submitted to the Regional Director for Environmental Protection in Gorzów Wielkopolski, within the term till 30th November each year, when works are conducted). Contractor prepares also monthly, quarterly and final reports submitted to the Engineer.	Contractor - Contractor's environmental team
108.	Sapper supervision	All work areas	In the event of discovering unexploded shells the Contractor shall immediately stop the works and evacuate workers as well as notify the police and a licensed sapper unit.	Contractor - Site Manager, Contractor's sapper team
109.	Sapper supervision	All work areas	The Contractor shall ensure sapper supervision throughout the performance of earthworks, which will consist in on-going inspection and clearance of the terrain, including the terrains of former military ranges, from hazardous objects of a military origin and their disposal.	Contractor - Site Manager, Contractor's sapper team
110.	Land area and landscape protection	All work areas	Scarps and crowns of expanded and constructed flood embankment, after the end of construction works, sow with grass mixes composition of which shall be agreed on with expert – phytosociologist/botanist.	Contractor - phytosociologist/ botanist
111.	Protection of archaeological values	All work areas	During the works, continuous archaeological supervision will be ensured.	Contractor - Contractor's archaeology team
112.	Human health and safety protection	All work areas	Contractor OHS supervision shall be responsible for adequate marking of building site according to applicable laws. This marking shall be regularly controlled, in the case of destruction or theft of marking the Contractor shall promptly reconstruct or supplement it.	Contractor - Site Manager

No	Issue	Place	Mitigation measures	Responsible entity
113.	Environment, human health and safety protection	All work areas	The Contractor is responsible for providing training (completed with a test verifying the knowledge of participants) within EMP rules and conditions and protective indications at the time of construction for its managing personnel and engineering–technical personnel supervising the construction works, which must be prepared with the help of Contractor’s environmental team. The Contractor’s employees who will handle fuels and other oil derivative substances should receive training within the protection of soil and water environment and applicable protective measures, including the use of sorbents.	Contractor - Site Manager, Contractor’s environmental team
114.	Periodic meetings on implementation of mitigation and monitoring measures	All work areas	During the implementation of the tasks arising from the EMP monthly team meetings of PIO, Engineer and Contractor, will take place, to discuss and monitor the implementation of mitigating and monitoring measures.	PIO, Engineer and Contractor
115.	Noise protection	All work areas	In the areas under acoustic protection and the working sites adjacent to these areas, in order to mitigate the nuisance for inhabitants and environment, it is allowed to use only pumping engines equipped with soundproof housing.	Contractor - Site Manager
07 - REQUIREMENTS AFTER COMPLETION OF WORKS				
116.	Land area and landscape protection	All work areas	Places sowed with grass mixes should be taken care of by means of, among others, twofold mowing of flood embankments (in June and September) and removal of hard growth. This activity includes also notifying on defects.	Contractor - Site Manager
117.	Land area and landscape protection	All work areas	After the period of notifying on defects and handing over investment for operations, during the whole operational period an ongoing and regular maintenance of the embankments shall be conducted.	PIU/Investor (and during the Defects Notification Period, the Contractor)