

Appendix 2 – Plan of Monitoring Measures

In this Appendix to Environmental 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 the monitoring actions are presented and they refer to monitoring of the Task’s impact on environment as well as the implementation of mitigation measures indicated in the Appendix 1. The data included in the tables below constitutes summary of monitoring measures, which in the course of the works will be performed by Contractor and Engineer within the Contract 1C.1.

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
01 - RULES CONNECTED WITH PROPERTY ACQUISITION						
1.	Land area and landscape protection	It is required to ensure the efficient use of the terrain and minimal transformation of its surface.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
2.	Land area and landscape protection	It is necessary to reduce the occupation of the terrain for the time of the works conducted.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
02 - MEASURES TO BE PERFORMED PRIOR TO WORKS COMMENCEMENT						
3.	Soil and grounds protection	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.	All work areas	Visual monitoring, photo documentation	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor – Site Manager
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
4.	Soil, grounds and surface waters protection - Rules of procedure for sediments excavated from channel beds	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.	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	Na etapie prac przygotowawczych jednorazowo, równomiernie na całym obszarze robót pogłębiarskich. Przewiduje się wykonanie badania w około 50 punktach monitoringowych. W rejonie stwierzonego występowania zanieczyszczeń lokalizacja punktów poboru prób będzie zagęszczona w celu określenia granicy zasięgu występowania osadów zanieczyszczonych.	Contractor – Site Manager
					Once - control of execution of research	Engineer
5.	General conditions concerning nature protection	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.	All work areas	Visual monitoring, photo documentation, the submission and review of the natural inventory results	At the stage of preparatory works	Contractor – phytosociologist/ botanist
					Once at the stage of preparatory works	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
6.	General conditions concerning nature protection	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 (in accordance with 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 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).	All work areas	Contractor's confirmation of the performance of activities in the annual Report on the Contract execution, attached with copies of potential motions (depending on the natural inventory results and data from Contractor's environmental team), reports prepared by experts in natural environment, etc.	At the stage of preparatory works	Contractor phytosociologist/botanist –
					Once at the stage of preparatory works	Engineer
7.	General conditions concerning nature protection	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 Slubice city (ensuring lack of damages of the tree trunks and minimising possible interference with to tree's root system).	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor phytosociologist/botanist –
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
8.	Limiting losses in the habitats of Natura 2000 and nature reserve	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.	km 26+000 - 32+700 of the Odra River embankment, km 582+500 - 588+000 of the Odra River course	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager, phytosociologist/botanist
			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)		On permanent basis during the whole period of works implementation, reporting once a month	Engineer
9.	Protection of archaeological values	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.	All work areas	Visual monitoring, photo documentation, reports	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Contractor's archaeology team
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
10.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
11.	General conditions concerning nature protection	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.	All work areas	Contractor's confirmation of the performance of activities in the annual Report on the Contract execution, attached with site inspection records, reports prepared by experts in natural environment, etc.	On permanent basis during the whole period of works implementation	Contractor – Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
12.	Sapper supervision	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.	All work areas	Visual monitoring, photo documentation, tests with a specialist equipment, sapper supervision report	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - authorised sapper unit

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month (Monitoring for implementation of EMP records in the range of sapper supervision)	Engineer
13.	General conditions concerning nature protection - prevent and elimination of invasive species	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.	All work areas	Visual monitoring, photo documentation, reports	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor – phytosociologist/ botanist
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer
03 - REQUIREMENTS CONCERNING ENSURE THE ACCESS ROUTES TO THE CONSTRUCTION SITES						
14.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
15.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
16.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
17.	Noise protection - sections of the embankment where	Paved surfaces (e.g. access roads) used for vehicle transportation of aggregate and building materials should be maintained in	6.700 km of the existing flood embankment and	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
	are located existing roads, which will be used by Contractor	good technical condition.	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)		On permanent basis during the whole period of works implementation, reporting once a month	Engineer
18.	Protection of tangible assets	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.	All work areas	Visual monitoring, photo documentation	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor – Site Manager
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
19.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
20.	Protection of tangible assets	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
21.	Protection of tangible assets	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.).	All work areas	Visual monitoring, photo documentation, obtained permissions and Contractor's correspondence	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
22.	Protection of tangible assets	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.	All work areas	Visual monitoring, photo documentation, obtained permissions and Contractor's correspondence	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
23.	Protection of tangible assets	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.	All work areas	Visual monitoring, photo documentation, obtained permissions and Contractor's correspondence	On permanent basis during the whole period of works implementation	Contractor – Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
04 - ORGANIZATION OF THE BACK-UP FACILITIES, WAREHOUSES AND STACKING YARDS						
24.	Land area and landscape protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager, Contractor’s environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
25.	General conditions concerning nature protection	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 Contractor’s environmental team, and if possible, outside the Odra River inter-embankment zone.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager, Contractor’s environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
26.	Human health and safety protection	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).	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
27.	Soil and surface water protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
28.	Soil and surface water protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
29.	General conditions concerning nature protection	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).	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
30.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
31.	Human health and safety protection	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 environmental team and other terrains not prepared for fulfilling the above functions, which pose a risk of polluting surface and ground waters.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager, Contractor’s environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
32.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
33.	General waste handling rules	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".	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
34.	Hazardous waste	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
35.	Hazardous waste	Hazardous waste storage sites must be allocated beyond flood waters area. (Q1% - so called water - once every hundred years).	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
36.	Handling of sewage	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
37.	Handling of sewage	It is essential to ensure the regular disposal of sewage, previously collected in tight contained tanks, to the nearest sewage treatment plant.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
05 - REQUIREMENTS FOR CUTTING OUT TREES AND SHRUBS						
38.	General conditions concerning nature protection	It is required to provide felling of only selected trees and shrubs, and leaving, if possible, natural bank vegetation within the channel sections.	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – phytosociologist/botanist
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
39.	General conditions concerning nature protection	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.	All work areas	Approval of the works performance technology by the Investor and Engineer	On permanent basis during the whole period of works implementation	Contractor – phytosociologist/botanist, ornithologist, entomologist

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
				Engineer's current operations	On permanent basis during the whole period of works implementation, reporting once a month	Engineer
40.	General conditions concerning nature protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor entomologist -
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
41.	General conditions concerning nature protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor chiropterologist -
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
42.	Limiting losses in the habitats of Natura 2000 and nature reserve	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 Śródkowej Odry PLB080004, SCI Łęgi Stubickie PLH080013 and Łęgi koło Słubic Nature Reserve.	km 26+000 - 32+700 of the Odra River embankment, km 582+500 - 588+000 of the Odra River course	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - phytosociologist
			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)		On permanent basis during the whole period of works implementation, reporting once a month	Engineer
06 - REQUIREMENTS AT THE IMPLEMENTATION OF WORKS STAGE						
43.	Land area and landscape protection	Vehicle traffic should take place along technological routes, preventing any damage to the near-by vegetation.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
44.	Soils, surface water and air protection	Construction equipment must be in working order which satisfies all legal conditions authorising it for putting such equipment into service.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
45.	Soils, surface water and air protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
46.	Soil and surface water protection	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).	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
47.	Soil and surface water protection	It is prohibited to store fuel within the Odra inter-embankment zone or in the vicinity of areas of natural value, indicated by Contractor’s environmental team.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager, Contractor’s environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
48.	Soil and surface water protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager, Contractor’s environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
49.	Air protection	It is necessary to apply required organisational and technical measures in order to maintain access routes in cleanliness.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager, Contractor’s environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
50.	Air protection	It is necessary to apply required organisational and technical measures in order to limit dust emission at the time of transporting construction materials.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
51.	Air protection	It is necessary to apply required organisational and technical measures in order to limit dust emission at the time of works construction.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
52.	Air protection (Protection against dusting)	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 powdery 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. 	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
53.	Air protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
54.	Air protection	It is necessary to reduce the work time of motor machines and vehicles.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
55.	Human health and safety protection	It is necessary to reduce speed limit of vehicles in the vicinity of the building areas.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
56.	Air protection	It is necessary to adhere to the rule of switching off machines and appliances during breaks at work.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor – Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
57.	Soil and grounds protection	The Contractor should choose a place for depositing humus which will secure it against damage, being driven through and being tamped down.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - phytosociologist/botanist
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
58.	Soil and grounds protection	Topsoil should be stored and protected in a way enabling its re-use.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
59.	Land area and landscape protection	Upon completing construction works, it is necessary to reinstate land (temporary occupation sites) to their previous condition (land reclamation). Humus must be planted and sown with grass mixtures whose composition will be determined by a phytosociologist/botanist.	All work areas	Visual monitoring, photo documentation	After reporting the works to take over	Contractor - Site Manager, phytosociologist/botanist
					After reporting the works to take over	Engineer
60.	Soil, grounds and surface waters protection - Rules of procedure for sediments excavated from channel beds	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.	Racza Czarny Kanał Struga	Visual monitoring, photo documentation, Contractor's reports	Once at the stage of preparatory works and on permanent basis during the whole period of deepening works implementation.	Contractor - Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Engineer
61.	Surface water protection	It is prohibited to pipe water coming from earthwork grounds drainage into the river and other surface waters e.g. old river beds.	All work areas	Visual monitoring, photo documentation , suspension amount monitoring by suspension analyser	At the stage of preparatory works and during works implementation. Monitoring the level of suspension in the waters of the channels once a day during implementation of deepening works.	Contractor - Site Manager, water protection expert
					Once a month – control of execution of research, on the basis of Contractor’s reports, note and opinion of the water protection expert	Engineer
62.	Surface water protection	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.	Racza Struga Czarny Kanał	Visual monitoring, photo documentation , suspension amount monitoring by suspension analyser	At the stage of preparatory works and during works implementation. Monitoring the level of suspension in the waters of the channels once a day during implementation of deepening works.	Contractor - Site Manager, water protection expert
					Once a month – control of execution of research, on the basis of Contractor’s reports, note and opinion of the water protection expert	Engineer
63.	Land area and landscape protection	Earthworks must be limited to a necessary minimum.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
64.	Surface water protection	Earth material used ought to be deposited as far as possible from the river, in the outer-embankment side of the Odra River embankment.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
65.	General conditions concerning nature protection	Carrying out works off the spawning season within the channel sections (March - June).	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager, water protection expert
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
66.	Surface water, soil and grounds protection	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.).	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
67.	General conditions concerning nature protection	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.	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - water protection expert
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
68.	Groundwater protection	It is forbidden to deposit earth masses in depressions and old river beds within the entire Task implementation area.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager, water protection expert, herpetologist
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
69.	Groundwater protection	It is forbidden to deposit earth masses in Odra River inter-embankment zone.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
70.	Groundwater protection	It is forbidden to deposit earth masses in areas of a natural value, indicated by the Contractor's environmental team.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager, Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
71.	Noise protection	Construction works in the areas under acoustic protection must be carried out only during the day (from 6 a.m. to 10 p.m.).	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
72.	Noise protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
73.	General conditions concerning nature protection	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.	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - water protection expert
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
74.	General conditions concerning nature protection	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.	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - water protection expert
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
75.	General conditions concerning nature protection	The term of works implementation within the channels shall be adjusted to the high activity period of animals (especially during their breeding period).	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - water protection expert, ornithologist, entomologist, herpetologist
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
76.	General conditions concerning nature protection	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.	Racza Struga Czarny Kanał	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager, herpetologist

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
77.	General conditions concerning nature protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager, herpetologist
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
78.	General conditions concerning nature protection	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.	All work areas	Contractor's periodical reports	On permanent basis during the whole period of works implementation	Contractor - Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
79.	Limitation of impacts on the areas Natura 2000	Construction works must be performed outside a bird breeding season (i.e. excluding the period from 1 March to 31 July).	The section of the Odra River embankment running between km 582+500, and km 588+000 of the course of the Odra River.	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - ornithologist
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
80.	Limitation of impacts on the areas Natura 2000	During works performance special carefulness shall be exercised when performing works close to old river beds and periodic reservoirs, preventing their pollution, physical damage to the bank/shore line or flora.	The section of the Odra River embankment running between km 582+500, and km 588+000 of the course of the Odra River.	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
81.	Limitation of impacts on the protected areas and facilities	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.	All work areas	Naturalists reports, notes from the field vision	On permanent basis during the whole period of works implementation	Contractor - Site Manager, Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
82.	General findings concerning cultural heritage and monuments protection	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 Stubice. The Contractor shall also inform the Engineer about the case.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Contractor's archaeology team
					On permanent basis during the whole period of works implementation	Engineer
83.	General findings concerning cultural heritage and monuments protection	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.	All work areas	Contractor's periodical reports	On permanent basis during the whole period of works implementation	Contractor - Contractor's archaeology team
					On permanent basis during the whole period of works implementation	Engineer
84.	General findings concerning coming across graves with human skeletons during works construction	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.	All work areas	Contractor's periodical reports	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
85.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation, reports	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation	Engineer
86.	Human health and safety protection	The Contractor shall ensuring the preparation, implementation after the approval by the Engineer of Building site organisation design.	All work areas	Visual monitoring, photo documentation	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer
87.	Human health and safety protection	The Contractor shall ensuring the preparation, implementation after the approval by the Engineer of Quality Assurance Plan.	All work areas	Visual monitoring, photo documentation	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer
88.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer
89.	Human health and safety protection	Allocating dangerous zones which pose a risk to human health and life, and marking, with their use, warning boards, securing against unauthorised access.	All work areas	Visual monitoring, photo documentation	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer
90.	Human health and safety protection	Ensuring health and safety in terms of organisation - The Contractor shall ensure and maintain the safety of the works conducted.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
91.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
92.	Human health and safety protection	The Contractor shall secure and provide marking in the building site.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
93.	Human health and safety protection	The Contractor shall mark traffic routes in the building site.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
94.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer
95.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
96.	Human health and safety protection	Protection of health and safety in relation to applied technical measures by the use of machines and tools according to their intended use.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
97.	Human health and safety protection	Activities connected with machine maintenance and filling up the fuel must be carried out in designated sites, hardened, and equipped with sorbents.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
98.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
99.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
100.	Human health and safety protection	(Clause 6.7 of the General Contract Conditions) 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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
101.	Soil masses handling and management	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
102.	Developing Waste management plan	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
103.	Contractor's environmental team	The Contractor's environmental team supervision over the Task must be conducted throughout the whole works construction	All work areas	Contractor's confirmation of the performance of activities	On permanent basis during the whole period of works implementation	Contractor - Contractor's environmental team

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
		period.		in the annual Report on the Contract execution, attached with site inspection records, reports prepared by experts in natural environment, etc.	On permanent basis during the whole period of works implementation, reporting once a month	Engineer
104.	Tasks of the Contractor's environmental team within the Task implementation period	The Contractor's environmental team conducts the inspection of the area of works construction prior to their implementation and during such works.	All work areas	Potwierdzenie Inżyniera Kontraktu w comiesięcznym Raporcie Inżyniera, wsparte protokołami (notatkami z narad i spotkań) oraz wizji terenowych. Inżynier będzie odpowiedzialny za ocenę monitoringu, co będzie potwierdzone w raportach okresowych Inżyniera. W strukturze Inżyniera osoba odpowiedzialna – ekspert ds. środowiska.	On permanent basis during the whole period of works implementation	Contractor - Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
105.	Tasks of the Contractor's environmental team within the Task implementation period	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. 	All work areas	Contractor's confirmation of the performance of activities in the annual Report on the Contract execution, attached with site inspection records, reports prepared by experts in natural environment, etc.	On permanent basis during the whole period of works implementation	Contractor Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
106.	Tasks of the Contractor's environmental team	The Contractor's environmental team prepares required materials and motions for obtaining permission for departure from the prohibitions	All work areas	Contractor's confirmation of the performance of activities	On permanent basis during the whole period of works implementation	Contractor Contractor's environmental team

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
	within the Task implementation period	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.		in the annual Report on the Contract execution, attached with site inspection records, reports prepared by experts in natural environment, etc.	On permanent basis during the whole period of works implementation, reporting once a month	Engineer
107.	Tasks of the Contractor's environmental team within the Task implementation period	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.	All work areas	Contractor's confirmation of the performance of activities in the annual Report on the Contract execution, attached with site inspection records, reports prepared by experts in natural environment, etc.	On permanent basis during the whole period of works implementation	Contractor - Contractor's environmental team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
108.	Sapper supervision	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.	All work areas	Visual monitoring, photo documentation, tests with a specialist equipment, sapper supervision report	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager, constant Contractor's sapper supervision
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month (Monitoring for implementation of EMP records in the range of sapper supervision)	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
109.	Sapper supervision	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.	All work areas	Visual monitoring, photo documentation, tests with a specialist equipment, sapper supervision report	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager, constant Contractor's sapper supervision
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month (Monitoring for implementation of EMP records in the range of sapper supervision)	Engineer
110.	Land area and landscape protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - phytosociologist/ botanist
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
111.	Protection of archaeological values	During the works, continuous archaeological supervision will be ensured.	All work areas	Contractor's confirmation of the performance of activities in the annual Report on the Contract execution, attached with site inspection records, reports prepared by experts in natural environment, etc.	On permanent basis during the whole period of works implementation	Contractor - Contractor's archaeology team
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
112.	Human health and safety protection	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.	All work areas	Visual monitoring, photo documentation	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer
113.	Environment, human health and safety protection	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	All work areas	Verification of the Contractor's documents	Once at the stage of preparatory works and on permanent basis during the whole period of works implementation	Contractor - Site Manager, Contractor's environmental team
					Once at the stage of preparatory works and on permanent basis during the whole period of works implementation, reporting once a month	Engineer
114.	Periodic meetings on implementation of mitigation and monitoring measures	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.	All work areas	Minutes of meetings	On permanent basis during the whole period of works implementation and Period for Reporting Defects	PIO

No.	Issue	Monitoring subject	Place of monitoring	Manner of monitoring	Period and frequency of monitoring	Responsible entity
					On permanent basis during the whole period of works implementation and Period for Reporting Defects, reporting once a month	Engineer
115.	Noise protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the whole period of works implementation	Contractor - Site Manager
					On permanent basis during the whole period of works implementation, reporting once a month	Engineer
07 - REQUIREMENTS AFTER COMPLETION OF WORKS						
116.	Land area and landscape protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the Period for Reporting Defects	Contractor - Site Manager,
					On permanent basis during the Period for Reporting Defects	Engineer
117.	Land area and landscape protection	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.	All work areas	Visual monitoring, photo documentation	On permanent basis during the operational period	PIU/Investor (and during the Defects Notification Period, the Contractor)