Appendix 1. Plan of Mitigation Measures

NOTE:

This Appendix to the Environmental Management Plan (EMP) for Contract 1B.9 "Modernisation of flood embankment along the Ślęzoujście Street with road infrastructure" specifies the terms and conditions for the implementation of the Contract in terms of measures mitigating adverse impact on the environment. The costs and the schedule of implementation of these measures should be included in the total bid price. The Contractor shall cover all costs related to the implementation of the EMP, and the Accepted Contract Amount shall include these costs.

The plan of mitigation measures, where necessary, will be carried out taking into account the World Bank's Policy as expressed in the Operational Manual of the Odra-Vistula Flood Management Project, the World Bank's Operational Policy OP.4.12 in cooperation with the team implementing this Plan. The condition related to discussing the implementation of the EMP during working meetings and at Construction Site Meetings (item 91) also applies to the Engineer and PIU.

NOTE:

Due to the small technical and financial scope of the Contract and the extensive experience of the Supervision Inspectors employed in the Road and City Maintenance Authority in Wrocław, this unit may act as an Engineer if it obtains the relevant approval of the World Bank. In the event of such a deviation from the standard organization of the organizational structure of the EMP implementation, all activities assigned as the Engineer's duties will be performed by a team of Inspectors at ZDiUM.

Conditions described in Appendix 1 to the EMP are grouped in the following categories:

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Definitions of the table in Appendix 1 of the EMP:

- 1. Unless otherwise stated, the definition *Contract Area* refers to the area of performance of any preparatory works, main works (including Permanent and Temporary Works) and any other works related to removal of faults and defects or completion of unfinished works enlisted in the Take-over Certificate or reported in the Defects Liability Period, Guarantee and Warranty together with the area of necessary temporary acquisition.
- 2. Unless otherwise stated, the definition *Contract Implementation Period* refers to the period of performing any preparatory works, main works (including Permanent and Temporary Works) and any other works related to removal of faults and defects or completion of unfinished works enlisted in the Take-over Certificate or reported in the Defects Liability Period, Guarantee and Warranty.
- 3. The construction area / construction site means the places where the Permanent Works are to be carried out, including storage and working places to which the Equipment and Materials are to be supplied, as well as other places indicated in the Contract as forming part of the Construction Site. The terms "construction area" and "construction site" are terms used interchangeably and understood in the Terms and Conditions as "Construction Site".

No.	Issue	Place	Mitigation measures	Entity
1	Schedule of works	Contract area	EMP conditions on the schedule of works	Contractor
			When setting works schedule and at the stage of their implementation, the EMP conditions regarding the dates and time of conducting various types of work should be taken into account, described in detail in the consecutive items of the table, including, but not limited to:	
			a) acceptable hours of works (see item 61);	
			b) acceptable dates for removing (felling) trees and shrubs (see items 25 and 27);	
			c) dates of environmental inspection before the removal (felling) of trees (see item 27);	
			d) the optimal date for conducting works within the root mass of trees and shrubs (see item 31);	
			e) dates of inspections related to ensuring the protection of small animals on the site (see items 36 and 37);	
			f) agreeing deadlines for carrying out land reclamation works (see item 44);	
			g) deadlines for reporting the implementation of the EMP (see item 92).	
2	Schedule of works	Contract area	EMP conditions on activities to be carried out before or at the initial stage of works	Contractor
		with access roads and their neighborhood	Any work associated with reconstruction of the embankment shall be done only within boundaries of the Contract area. When setting works schedule and at the stage of their implementation, the EMP conditions should be taken into account regarding activities to be carried out before or at the initial stage of works, described in detail in the following items of the table, including among others:	
			 a) conditions for building and equipping the construction site facility, service roads and sites (see items 13, 14, 15, 36, 48, 50, 51, 52, 53, 54, 55, 56, 57, 58, 67, 68, 71, 72, 73, 78 and 79). b) conditions for the road access to the construction site (see items 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12); c) the condition for removing and securing the topsoil (see items 20, 21, 22, 23 and 24); d) the condition for securing trees and shrubs unintended for removal (felling) (see item 28); 	
			e) conditions for the implementation of environmental inventory (see item 34);	
			f) the condition for securing the construction site against the entry of small animals (see item	

No.	Issue	Place	Mitigation measures	Entity
			 36); g) the condition for obtaining decisions authorizing exceptions to the principles of species protection of plants, fungi and animals (see item 42); h) conditions for the development of documents related to the safety of people, property and the environment in the area of the Contract (see items 19, 70, 75, 77, 80, 83, 85, 88, 89, 90, 92); i) conditions for documentation of technical condition of buildings and infrastructure facilities (see items 8, 77); j) the condition for explosive ordnance survey of the site (see item 76); k) the condition for inventory of illegal landfills and waste disposal (see item 74); l) the condition for compliance with the opinion of the heritage conservator (see item 83); m) the condition for obtaining the Engineer's approval for the appointed person to be an EMP coordinator and the composition of the team of environmental experts, the team of archaeological experts, and the team of sappers (see items 87, 88, 89, 90); n) the condition for training on the guidelines of the EMP implementation (see item 86). 	
		В.	REQUIREMENTS ON ROAD ACCESS TO THE CONTRACT AREA	
3	Earth surface protection	Access roads to Contract area with their neighborhood	Conditions for using access roads to the Contract area The following conditions apply to the use of access roads to the Contract area: a) access to the Contract area should base on the existing roads; b) the Contractor shall ensure proper marking of all access roads to the Contract area, in accordance with applicable law and arrangements with relevant Road Managers. These markings will be regularly inspected, and in the event of their destruction or theft, the Contractor will immediately take action to restore or complement them.	Contractor
4	Health and safety protection, Protection of tangible assets	Access roads to Contract area with their neighborhood	Conditions for using access roads to the Contract area The Contractor shall ensure protection of people against increased traffic volume on roads used during construction works. During the Contract period, the Contractor will provide, install and operate all temporary safety devices (e.g. traffic lights, information boards, safety barriers), thus ensuring the safety of vehicles and pedestrians.	Contractor

No.	Issue	Place	Mitigation measures	Entity
5	Earth surface protection	Access roads to Contract area with their neighborhood	Conditions for using access roads to the Contract area Compacted surfaces used by the cars transporting construction materials and aggregate should be kept in a proper technical condition (including technological roads and access roads).	Contractor
6	Health and safety protection, Protection of tangible assets, earth surface protection	Access roads to Contract area with their neighborhood	Conditions for using access roads to the Contract area The Contractor shall comply with the statutory load limits on the axle when transporting materials and equipment to and from the Contract area. The Contractor shall obtain all necessary permits for the transport of non-standard loads and shall notify the Engineer of any such transport on a continuous basis.	Contractor
7	Health and safety protection, Protection of tangible assets, earth surface protection	Access roads to Contract area with their neighborhood	Conditions for using access roads to the Contract area The Contractor will be liable for any damage to civil structures and buildings, roads, drainage ditches, culverts, water and gas pipelines, power poles and lines, cables, geodetic control network spots and installations of any kind, and other types of objects such as vertical and horizontal markings, navigation markings, information boards, cultural heritage structure, etc., caused by it or its subcontractors, service providers and suppliers during implementation of the Contract. The Contractor is also responsible for restoring the flow of ditches and drainage systems in the area of works and used transport roads, in the event of damages caused by the performance of works and transport connected with the works. The Contractor shall immediately repair any damage at their own expense and, if necessary, carry out other work ordered by the Engineer.	Contractor

No.	Issue	Place	Mitigation measures	Entity
8	Earth surface protection	Access roads to Contract area with their neighborhood	 Conditions for using access roads to the Contract area a) the Contractor is obliged to provide photo documentation of the entire Contract area and of access roads, with particular reference to the technical condition of roads and buildings located in the vicinity of the roads for transporting construction materials; b) prior to the commencement of works, the Contractor shall carry out site inspections in the presence of Road Administrators, subsequently to which the protocols of the condition of access roads to the Contract area shall be developed. Based on the protocols, the Contractor will be obliged to restore the technical condition of the roads. 	Contractor
9	Health and safety protection, Protection of tangible assets, earth surface protection	Access roads to Contract area with their neighborhood	 a) the Contractor is obliged to agree with Road Administrators the plans of traffic organization and work security. The Contractor is obliged to carry out the traffic management according to agreed plans (marking and securing of the Contract area, marking of detours and recommended marking of roads, related to the change in traffic management etc.); b) prior to the commencement of works, the Contractor shall submit to the Engineer for approval the plan of traffic organization and work security as agreed upon with Road Administrators as well as the traffic management schedule. Depending on the needs and progress of works, traffic management plans should be updated by the Contractor on a regular basis. 	Contractor
10	Health and safety protection, Protection of tangible assets, earth surface protection	Access roads to Contract area with their neighborhood	Conditions for using access roads to the Contract area The Contractor is obliged to provide access routes for ambulances and fire brigades throughout the whole period of works, to designate roads, exits and pedestrian crossings and parking spaces for vehicles used on site.	Contractor

No.	Issue	Place	Mitigation measures	Entity
11	Protection of tangible assets, earth surface protection, water protection, Protection of animate nature	Access roads to Contract area with their neighborhood	Additional conditions regarding access roads to the Contract area Delivery of materials and traffic of vehicles, machines and equipment servicing the construction site should be carried out on existing hardened public roads in the first place.	Contractor
12	Protection of tangible assets, earth surface protection, water protection, Protection of animate nature	Access roads to Contract area with their neighborhood	Setting out new access roads to the Contract implementation area When necessary to make an additional access road to the Contract area, it should be outlined as the shortest possible section, outside the areas of high natural value. Planned locations of access roads should be agreed with the team of environmental experts (including, among others, a phytosociologist) and submitted along with the abovementioned agreements, for the approval by the Engineer. MENTS ON LOCATIONS OF SITE FACILITY AND SERVICE ROADS AND YARDS	Contractor
13	Water and soil protection, Protection of animate nature	Contract area	Obligation to build site facility, service roads and yards Construction site facility, service roads and yards must be completed prior to the commencement of construction works. Construction site's facility is used to store construction materials, for garaging, refueling and repairing vehicles, machines and equipment, and to provide location of social facilities (locker rooms, office, workshop, portable sanitary cabins) and waste containers. The area of construction site's facility, where machines and vehicles shall move, shall be protected. The subbase side sealed on using insulation materials assuring protection for the soil shall be separated for service and refueling of machines. Equipment for site facility should meet, among others, conditions provided for in items 36, 48, 50, 51, 52, 53, 54, 55, 56, 57, 58, 67, 68, 71, 72, 73, 78, 79. When planning the abovementioned facilities of the construction site their space should be limited to the necessary minimum.	Contractor

No.	Issue	Place	Mitigation measures	Entity
14	Earth surface protection, habitat protection, protection of the soil and water environment, protection of acoustic climate	Contract area with its neighborhood	 Conditions for the location of construction site facility, yards, storage/disposal sites, etc. Materials storage place, social facility and parking space for machines and equipment should be located: a) in the areas with the lowest natural values, taking into account the principle of minimizing land acquisition and transformation of its area and the obligation of land reclamation after completion of works, b) outside the immediate vicinity of flood waters of the river and outside the areas where water may be contaminated, c) at a distance of not less than 100 m from existing watercourses, water reservoirs and wetlands; d) in the areas ensuring no impact of noise on acoustically protected areas; e) construction site's facility shall be located beyond valuable habitats, outside the areas of medium and high ornithological value and beyond habitats of amphibians and reptiles. The locations intended for site facility and the abovementioned components of the construction site should be agreed with a team of environmental experts (including a phytosociologist and a zoologists), and presented for the Engineer's approval together with establishments. 	Contractor
15	Protection of animate nature, water protection, earth surface protection	Contract area	Conditions for the location of service roads Service roads should be located: a) at setting the roads out beyond the areas of the highest environmental value one shall observe a rule of acquiring the minimum required area of the aforementioned land; b) at the maximum extent possible outside the embanked area; c) at the maximum possible distance from existing watercourses, water reservoirs and wetlands; d) new transport roads should not be set within 1 m off of tree trunks and shrubs; e) in the first place on existing roads. The locations intended for service roads should be agreed with a team of environmental experts (including a phytosociologist) and presented for the Engineer's approval together with expert agreements.	Contractor

No.	Issue	Place	Mitigation measures	Entity
16	Earth surface protection, water and soil protection	Contract area	Economical use of the site and limitation of works within the embanked area In the whole Contract area, economical use of the site should be ensured as well as a minimum transformation of its area.	Contractor
17	Earth surface protection, water and soil protection	Contract area	Economical use of the site - materials' storage places When outlining storage spaces, their number and area should be limited to the extent necessary for the current works or activities. In the case the areas intended for storage of materials become empty, such areas should be reused as far as possible for further storage of materials.	Contractor

No.	Issue	Place	Mitigation measures	Entity
18	Land acquisition among others for the purpose of temporary acquisition	Contract area	Payment of compensations and Grievance Redressal Mechanism The Investor / Substitute Investor's obligation will be to pay compensations related to the permanent occupation of the property. The Contractor shall be responsible for obtainment of consents from owners/holders for the temporary acquisition (e.g. at the construction site facility, machinery park, storage of earth masses and storage of other construction materials, and other necessary for the Contractor to implement the technological process). The scope and the target location of temporary acquisition will be determined by the Contractor. Such properties shall be obtained by the Contractor on its own and at its own cost. Temporary acquisition of properties, made by the Contractor for the purposes of the Contract, is feasible only based upon a written, voluntary consent of the property owner, and based upon the rules determined in the agreement providing that consent. Temporary acquisition shall – as a rule – be compensated in cash through payment of amounts corresponding to market prices of lease or tenancy of properties, and the acquisition conditions shall be determined under the agreement concluded in writing. The Contractor shall submit to the Engineer and PIU a copy of the confirmation of obtaining the consent of the land owner and compensation for the occupation of the land. Mechanism for submitting complaints and proposals Reservations and comments regarding the implementation of the Contract in accordance with Polish law are classified as Grievance Redressal Mechanisms. This mechanism covers the submission and management of any complaints that may be made by persons and entities subject to any influence during the Contract implementation (regarding, inter alia, land acquisition, temporary occupation of plots and compensation). This issue was discussed in detail in the POM for the OVFM Project ¹ .	PIU/Contractor's Team/Engineer

¹ http://odrapcu2019.odrapcu.pl/en/documents

No.	Issue	Place	Mitigation measures	Entity
			D. REQUIREMENTS ON THE QUALITY AND MANAGEMENT OF SOILS	
19	Water and soil protection	Contract area	Management of the soils from within the construction site Soils located on the construction site (including earth masses) should first be used on the construction site. The remaining excess of soil should be managed in accordance with the design documentation. The procedure for dealing with soil constituting waste should be presented in the Waste Management Plan prepared by the Contractor and submitted to the Engineer for approval prior to the commencement of works (in accordance with item 70 – Preparation of a Waste Management Plan (WMP)).	Contractor
		E. I	REQUIREMENTS ON PROCEEDING WITH TOPSOIL/MINERAL SOIL	
20	Soil protection, Protection of animate nature	Contract area	 Collecting the top layer of soil In order to protect the layer of topsoil from the Contract area: a) prior to the commencement of earthworks, it should be inspected for the presence of protected species; b) prior to the commencement of construction works, a layer of fertile soil (i.e. topsoil) should be removed, with a thickness of about 0.15 m (this condition applies to all locations in the Contract area where the existing topsoil layer could be degraded in relation to conducting the works, traffic and operating the vehicles, machinery and equipment, storing the materials, etc.). 	Contractor

No.	Issue	Place	Mitigation measures	Entity
21	Soil protection, Protection of animate nature	Contract area	 Storing of topsoil The collected top-soil shall be stored as follows: a) The removed layer of top-soil shall be stored in piles beyond the area of earthworks; b) A precise location of top-soil piles shall be priorly agreed with an expert of the Environmental Team (including phytosociologist and zoologist) to avoid degradation of natural habitats and stands of protected species, and affecting the health of trees and shrubs adversely, by storage of top-soil; c) Stored top-soil piles shall be protected against pollutions, passing-over, condensation, storage of construction materials, etc.; d) Stored top-soil piles shall be kept – until their re-use for the final shaping of the embankment and adjacent land – in proper humidity in a way allowing for re-embedding. 	Contractor
22	Soil protection, Protection of animate nature	Contract area	Use of topsoil Upon the completion of construction works the topsoil should be used to restore the fertile soil layer.	Contractor
23	Earth surface protection, soil protection	Contract area	Collecting the mineral soil layer After removing the topsoil, the existing embankment shall be demolished avoiding mixing mineral soil with humus. This ground should be managed, depending on its parameters, for reuse or transported and managed in accordance with applicable regulations, including the Act on waste.	Contractor

No.	Issue	Place	Mitigation measures	Entity
24	Soil protection, Protection of animate nature	Contract area	 Storing the mineral soil The collected mineral soil, in the part intended for re-use, shall be stored as follows: a) The removed layer of mineral soil shall be stored in piles beyond the area of earthworks; b) A precise location of mineral soil piles shall be priorly agreed with an expert of the Environmental Team (including phytosociologist and zoologist) to avoid degradation of natural habitats and stands of protected species, and affecting the health of trees and shrubs adversely, by storage of mineral soil; c) Stored soil piles shall be protected against pollutions, passing-over, condensation, storage of construction materials, etc. 	Contractor
	F. REC	QUIREMENTS ON	I REMOVING (FELLING) TREES AND SHRUBS AS WELL AS REPLACEMENT PLANTINGS	
25	Protection of animate nature	Contract area	Permissible date of removing (felling) trees and shrubs Removal (felling) of trees and shrubs should be scheduled for the period from the 16th of October to the end of February. In case it would be necessary to perform felling within the hatching period, the works may be performed provided that an ornithological inspection would be done (inspection by an expert ornithologist), which would verify that the birds' nests or breeding sites will not be destroyed due to the removal (felling). Any measures of the Contractor regarding the removing (felling) of trees and shrubs must be in accordance with the provisions of Regulation No. 1217/19 of the President of Wrocław of June 28, 2019 on the protection of trees and the development of green areas in Wrocław².	Contractor
26	Protection of animate nature	Contract area	Implementation of replacement plantings (in accordance with the Replacement Greenery Design on plot 25/3, AM-12, Złotniki precinct, volume PW06 / 02) Replacement plantings will be made on the land plot no. 25/3, Map Sheet 12, Złotniki precinct. The scope of works includes:	Contractor

² https://www.zzm.wroc.pl/pl/dzialania_zzm,366.html

No.	Issue	Place	Mitigation measures	Entity
			a) planting of 273 deciduous trees;	
			b) planting of 7221 shrubs;	
			c) forming 1312 m² of lawns based on meadow sowing and 5013 m² of other lawns;	
			 mowing, tidying and clearing the area by removing young self-seeded trees and shrubs and removing concrete slabs and asphalt pavement remnants (about 20 m2); collection of debris and construction waste within the entire planting area. 	
			The sequence of works: - cleaning the area of residues and contamination, - macro-leveling, terrain modeling, - spreading the fertile layer, - mechanical and manual cultivation of the area intended for greenery, - planting plants according to detailed solutions included in the Design Documentation in consultation with a phytosociologist / dendrologist, - forming lawns according to the detailed solutions included in the Design Documentation in consultation with a phytosociologist, - maintenance of greenery. The aforementioned works should commence simultaneously with the commencement of the works. It is best to plant the plants in the spring or autumn period, in the case of other periods, watering the plants should be made at an intensity depending on weather conditions. Plantings should be made in accordance with the designed species trees and shrubs as well as gardening practice. Supervision over the performance of the above-mentioned works will be performed by the Contractor's environmental supervision.	
			The Contractor will be obliged to perform maintenance treatments of these areas until the end of the Defect Notification Period, Guarantee and Warranty.	
			Any measures of the Contractor regarding the implementation of replacement plantings must also be in accordance with the provisions of Regulation No. 1217/19 of the President of Wrocław of June 28, 2019 on the protection of trees and the development of green areas in Wrocław ³ .	

³ https://www.zzm.wroc.pl/pl/dzialania_zzm,366.html

No.	Issue	Place	Mitigation measures	Entity
27	Protection of animate nature	Contract area	Environmental supervision before and during the removal (felling) of trees with diameter over 50 cm	Contractor
				Contractor
			should be obtained to allow for exceptions to the prohibitions applicable to protected animal species (if required in a given case).	

No.	Issue	Place	Mitigation measures	Entity
	G.	REQUIREME	ENTS ON PROTECTING TREES AND SHRUBS NOT INTENDED FOR REMOVAL (FELLING)	
28	Protection of animate nature	Contract area	Protection of tree trunks not intended for removal (felling) Prior to the commencement of construction works, tree trunks exposed to mechanical damage should be wrapped in wood at least to the height of 1.5 m from the ground level (the bottom part of the boards should be supported on the ground). A flexible material (e.g. thick straw mats) should be placed between the cloaking and the tree trunk surface, in order to secure the trunk against scratching. The wooden cloaking should be attached to the trunk (e.g. with wire bands or steel tape) in a way that does not harm the tree. During the Contract implementation period, the condition of tree trunks exposed to damage should be monitored on an ongoing basis and the protection should be maintained in a proper condition. After the completion of works trunk protection should be removed. Works near root systems and trunks should be done by hand. It is not allowed to leave the root blocks uncovered for a long time to prevent them from drying out. In case of damaging a tree one shall immediately implement necessary curing measures, which would limit the effects of the damage. Those works shall be performed under supervision of a naturalist.	Contractor

No.	Issue	Place	Mitigation measures	Entity
29	Protection of	Contract area	Protection of the areas under crowns of trees and shrubs	Contractor
	animate nature		Construction works should be carried out in a way that does not harm trees and shrubs that have not been intended for removal (felling).	
			At a distance of less than 1 m from the edge of the protrusion of the crown of trees and shrubs not intended for removal (felling), it is forbidden to:	
			 a) outline roads and service yards, parking spaces and other elements that may influence the increase in tamping and changes in soil aeration; b) allow for traffic, stopover and parking of vehicles, machines and equipment; c) store earth masses (including topsoil) and construction materials (in particular bulk materials); d) smoke or use fire, use devices or machines generating high temperature, which may cause drying of tree crowns 	
			The storage of cement, aggregates, oils, fuels and binders is prohibited at a distance of less than 10 m from trunks of trees and shrubs not intended for removal.	
			The method of forming and compacting for the embankments in the vicinity of trees and shrubs not intended for removal shall be agreed with an expert dendrologist, and the results of the findings should be submitted to the Engineer for approval.	Contractor
30	Protection of	Contract area	Preventive cutting of branches of trees exposed to damage	Contractor
	animate nature		In the case of exposure of tree boughs and branches to mechanical damage by working or moving vehicles, machines and equipment, preventive cutting of tree branches exposed to damage should be carried out.	
			These pruning cuts - under the supervision of an expert dendrologist - cannot disturb the natural structure of trees (they cannot cover more than 1/3 of the green mass), they should ensure stability and statics of trees (pruning must be even on each side of the crown).	Contractor

No.	Issue	Place	Mitigation measures	Entity
31	Protection of	Contract area	Carrying out works within root blocks of trees and shrubs	Contractor
	animate nature		Works in the vicinity of root blocks of trees and shrubs not intended for removal (felling) should only be carried out manually, subject to the following conditions:	
			 a) skeletal roots (with a diameter of over 4 cm) should not be cut off; b) excavations should be carried out not closer than 2 m from the trunk; c) the time of root exposure to drying should be shortened to the minimum; d) the suitable period for carrying out the work in question is from October to April, e) it is prohibited to store any materials, soil or construction waste near tree trunks. 	
32	Protection of	Contract area	Securing of exposed roots of trees and shrubs	Contractor
	animate nature		Exposed roots of trees and shrubs not intended for removal (felling) should be covered with straw or jute mats. At positive temperatures, these mats should be abundantly moistened with water (to prevent drying of the roots), while at negative temperatures these mats should be dry (to avoid freezing of the roots).	
33	Protection of	Contract area	Securing of damaged trees and shrubs	Contractor
	animate nature		In case aboveground parts of trees and shrubs not intended for removal have been damaged, the necessary care measures should be carried out immediately, relevant for the place and type of damage.	
			In case of root damage, the ends should be trimmed off and the roots secured with a fungicide.	
			The abovementioned activities should be performed in consultation with the team of environmental experts (expert dendrologist), and after they have been completed, the Engineer should be provided with an opinion on the aforementioned team regarding the assessment of the activities.	
		Н. Р	REQUIREMENTS ON SECURING PROTECTED NATURAL RESOURCES	
34	Protection of animate nature	Contract area	One-time nature inventory of the area of works before the commencement of works Prior to the commencement of works, a one-time nature inventory of the Contract area, performed by a team of environmental experts, referred to in item 88 - Providing a team of environmental experts.	Contractor

No.	Issue	Place	Mitigation measures	Entity
			The purpose of the inventory is to determine the current distribution of natural habitats and habitats and sites of protected species of flora and fauna.	
			If the presence of natural habitats and habitats or protected sites of plant and animal species in the Contract area has been confirmed, it is necessary to perform as follows:	
			 a) in the case of natural habitats - further actions should be agreed with a competent environmental team's expert, and the results of the findings should be submitted to the Engineer for approval; b) in the case of habitats or sites of protected species - perform the actions referred to in item 42 - Obtaining a decision allowing for exceptions to the principles of species protection of plants, fungi and animals for the habitats and sites of protected species shall obtain from the RDOŚ in Wrocław; c) identified representatives of protected species (e.g. amphibians, reptiles, birds) should be relocated outside the Contract site to a place with similar habitat conditions, sufficiently far away from the Contract site, so that animals cannot return to this area until the work has been completed. All work will require an appropriate administrative decision. Before 	
			relocating amphibians, one must obtain the permit of the owner or administrator of the reservoir, watercourse or terrain to which they will be transferred to; d) potential works connected with the removal of amphibians' breeding habitats shall be performed only from the beginning of November till the end of February.	
35	Protection of animate nature	Contract area	Limiting the time of the Contract completion The Contractor should ensure such organization of works as to shorten the duration of the Contract as much as possible and in this way minimize the adverse impact of works on animals living in the area of the Contract and in its neighborhood.	Contractor

No.	Issue	Place	Mitigation measures	Entity
36	Protection of	Contract area	Securing the Contract area against small animals entering the site	Contractor
	animate nature		a) Works should be performed in such a way as to avoid killing animals;	
			b) Works shall be performed in a way avoiding provision of water pits;	
			c) Any work providing risk for amphibians – performed in vicinity of amphibians' breeding habitats currently identified by the environmental supervision – may be done only at application of temporary herpetological fences protecting the works site against the occurrence of amphibians;	
		d) If amphibians are found within the construction site, they should be caught and moved to a replacement habitat, sufficiently far away from the site. The list of such habitats shall be indicated by the Contractor in the application for derogation from prohibited activities against the protected species;		
			e) During the migration amphibians gathering at the fencing shall be caught and transferred to the area beyond the site, i.e. to a side opposite to the one, where amphibians were identified. One shall allow the animal to move in the selected direction;	
			f) After completing the works the temporary fencing shall be removed;	
			g) In case of performing the works in locations, where amphibians are present from March to October, adult specimens of amphibians, their eggs and larvae shall be caught and moved based upon the decision of RDOŚ in Wrocław on derogation from prohibited activities against the protected species of amphibians. Potential filling of habitats in shall be done in autumn and winter (November – February).	

No.	Issue	Place	Mitigation measures	Entity
37	Protection of	Contract area	Inspection of places that could be traps for small animals	Contractor
	animate nature		Every day in the morning inspect excavations and other places that can be traps for animals: amphibians, reptiles, small mammals.	
			In the periods from March 1 to May 15 and from the September 15 to October 15, a second inspection should also be carried out every day in the late afternoon.	
			Trapped animals should be collected and released outside the Contract implementation area, to the place appropriate for a given species, which should be determined with the environmental team's expert.	
			The last inspection for the presence of animals in the excavations should be carried out immediately before backfilling the excavations.	
			Inspections should be carried out under the guidance and in accordance with the guidelines of an expert herpetologist and/or an expert zoologist, who will also coordinate and indicate the places of release of trapped animal species.	
			All wells, excavations and other anthropogenic structures which may be a trap for amphibians and small mammals should be secured according to the guidelines and under the guidance of the abovementioned expert herpetologist and the expert zoologist.	
38	Protection of	Contract area	Ongoing liquidation of marginal water deposits in the Contract area	Contractor
	animate nature		During the Contract performance, it is necessary to permanently eliminate marginal water deposits in places which may interfere with ongoing or scheduled works as well as in places where ongoing or scheduled traffic of vehicles, machines and equipment is to be run.	
			This measure aims to prevent the settlement of protected amphibian species in the Contract area during the performance of works. This activity should be carried out in consultation with a herpetologist, who will also supervise if the procedures are followed.	

No.	Issue	Place	Mitigation measures	Entity
39		Contract area	Trapping and relocating small animals from the Contract area	Contractor
	animate nature		If small animals are reported to inhabit the Contract area (amphibians, reptiles, small non-flying mammals, bats), in places where works may pose a threat to their life or health, they should be trapped and relocated from the Contract area to the appropriate habitats, located beyond the impact of the works.	
			These actions should be performed under the supervision of a competent environmental expert (herpetologist, zoologist and/or chiropterologist).	
40	Protection of	Contract area	Fighting alien invasive plant species	Contractor
	animate nature		During the works, alien invasive plant species should be removed (at least twice a year, in the entire Contract area), until they disappear and are replaced with local vegetation.	
			Removal of alien invasive plant species should be done by pulling out the plants (along with the root ball), transporting and then disposing of them.	
			The actions should be carried out in accordance with detailed instructions specified by the expert phytosociologist.	
41	Protection of animate nature	Contract area	Ongoing inspections of the team of environmental experts during the Contract implementation period	Contractor
			The works and other works performed during the Contract implementation period should be carried out under the ongoing supervision of a team of environmental experts (referred to in item 88 - Providing a team of environmental experts).	
			These experts should, among others, carry out regular inspections of the entire area of the Contract (at least once a month) and submit their comments and recommendations to the Contractor's staff responsible for carrying out works in accordance with the EMP conditions.	
			The notes from the inspections should be made in writing, attached to the monthly reports on the implementation of the EMP conditions (referred to in item 92 - Reporting the implementation status of the EMP).	

No.	Issue	Place	Mitigation measures	Entity		
42	Protection of animate nature	Contract area	Obtaining a decision allowing for exceptions to the principles of species protection of plants, fungi and animals for the habitats and sites of protected species	Contractor		
			In respect of the resources of protected plant fungi and animals species, which can be found during a one-time inventory carried out before the commencement of construction works and during the execution of works, the following actions should be performed before the commencement of construction works:			
			 a) The Contractor shall obtain and submit to the Engineer for approval a written opinion of the team of environmental experts including the specification of: the extent of the possible impact of the works on the identified natural resources, and the need to obtain the decision referred to in item b herein, and then, if it proves necessary in the light of the abovementioned opinion, the Contractor shall carry out the activities referred to in items b-d (hereunder); b) before taking any actions that may lead to the destruction of habitats and sites or flushing out the representatives of protected species, the Contractor is required to obtain the administrative decision required by law, allowing for exceptions to the binding prohibitions regarding protected species of plants, fungi and animals; c) the Engineer should be notified of the decision obtained; d) the Contractor is obliged to precisely and timely implement the conditions contained in the abovementioned decision. 			
43	Protection of animate nature	Contract area	Relocation of protected species Prepare a report and photo documentation on the activities related to the relocation/destruction of existing plant or animal species. The report should be consistent with the guidelines indicated in the administrative decisions obtained. The report should state at least the type and quantity of relocated species, indicate the places from which and to which they will be relocated, the manner of relocation and the time.	Contractor		
	I. REQUIREMENTS ON REINSTATEMENT OF THE SITE AFTER THE COMPLETION OF CONSTRUCTION WORKS					
44	Protection of animate nature	Contract area	Reinstatement of topsoil layer and green areas and tidying up the site after completion of works After completion of works:	Contractor		

No.	Issue	Place	Mitigation measures	Entity
			 construction facility, service roads and sites should be dismantled, whilst road slabs and sand collected from ballast should be transported away from the Contract area to the place specified beforehand (accepted by the Engineer); in the areas occupied in connection with the implementation of the Contract (within the boundaries of the Contract area), appropriate agro-technical measures should be taken (soil loosening, fertilization, etc.), in order to prepare the reinstatement of the fertile soil layer; in the areas acquired in connection with the implementation of the Contract (within the boundaries of the Contract area) the fertile soil layer should be reinstated (including the use of the topsoil collected from the area of works); treatments facilitating the restoration of green areas should be performed (including seeding), using only native plant species, compatible with local habitat conditions; proper care of the reinstated green areas should be ensured (until the end of the Defect, Guarantee and Warranty Period); tidy up the Contract area; the area of works and the adjacent land shall be restored to its initial condition, as a result of the traffic of machines and means of transport. 	
			Activities described in items 2, 3, 4, and 5 (above) should be performed under the supervision of expert phytosociologist, including:	
			 a) agreement of the exact dates of works; b) agreement of the composition and quantitative proportions of seed mixtures planned for sowing; c) agreement of conditions for preparation of soil; d) agreement of the principles of caring for the recreated green areas; e) submission of the results of the above agreements to the Engineer for approval; f) supervision over the implementation of activities supporting the recreation of green areas and supervision over the care of these areas (until the end of the Defects Notification Period, Guarantee and Warranty). 	
			Activities related to the recreation of the topsoil layer and the restoration of green areas referred to in this item of the EMP should be commenced as soon as their implementation is possible.	

No.	Issue	Place	Mitigation measures	Entity
45	Protection of animate nature	Contract area	Caring for grasslands (in accordance with the Replacement Greenery Design on plot 25/3, AM- 12, Złotniki precinct, volume PW06 / 02) Caring for grasslands in the first growing season after planting consists in; • fertilizing, lawns should be supplied with mineral fertilizers as needed (no more than 3-5 kg NPK/are/year). Mixtures of fertilizers should be prepared in such a way as to supply the grass with ingredients required in particular seasons: o in spring, the lawn requires a mixture with dominating nitrogen, o from the middle of summer nitrogen should be reduced, increasing the dose of potassium and phosphorus, o the final fertilization should not contain nitrogen, but potassium and phosphorus. seeding, mowing: o the first mowing should be carried out according to the Design indications, subsequent mowing should take place at such intervals so that the grass does not exceed 15 cm in height, o the last pre-winter mowing should be carried out 1 month before the expected cold weather (for the climate of Poland the first half of October may be adopted), after each mowing, cut grass should be removed from all surfaces and harvested hay should be stored outside the construction site, it is necessary to maintain adequate soil moisture. Mowing of grasslands in subsequent growing seasons should be carried out twice a year. Any measures of the Contractor regarding the restoration / establishment of green areas must also be in accordance with the provisions of Regulation No. 1217/19 of the President of Wrocław of June 28, 2019 on the protection of trees and the development of green areas in Wrocław of June 28, 2019 on the protection of trees and the development of green areas in Wrocław of June 28, 2019 on the protection of trees and the development of green areas in Wrocław of June 28, 2019 on the protection of trees and the development of green areas in Wrocław of June 28, 2019 on the protection of trees and the development of green areas in Wrocław of June 28, 2019 on the protection of trees and the develop	Contractor

⁴ https://www.zzm.wroc.pl/pl/dzialania_zzm,366.html

No.	Issue	Place	Mitigation measures	Entity		
	J. REQUIREMENTS ON THE PRVENTION OF THE ENVIRONMENTAL POLLUTION					
46	Water and soil protection, health and safety protection, Protection of animate nature	Contract area	The use of construction materials in accordance with regulations and standards, and harmless to the environment Only construction materials that are not harmful to the environment (natural, environmentally friendly or neutral) should be used for the implementation of the Contract. One shall not apply substances that may be lethal to the present animals, except for substances necessary for proper operations of construction machines. The materials, raw materials, fuels, fertilizers, cement-concrete mixes used should be certified and approved for use. Earth structures should be made of natural materials, without the use of hazardous materials or harmful to health. Mineral materials, possibly geotextiles, should be used for the construction/extension of embankments, but only those that are not a source of emission of harmful substances to the soil and water environment.	Contractor		
47	Water and soil protection	Contract area	Technical efficiency and inspections of vehicles, machines and equipment In order to prevent contamination of soil and water, only technically efficient vehicles, machines and equipment should be used to carry out the works. The Contractor should carry out ongoing inspections of the efficiency of vehicles, machines and equipment and eliminate with any resources available any permeating of contamination to soil and water, including in particular spilling of fuel, hydraulic oils and petroleum substances, both during operating, refueling, transport, as well as the work of vehicles, machines and equipment.	Contractor		

No.	Issue	Place	Mitigation measures	Entity
48	Water and soil protection	Contract area	Conditions on the location of the sites for collection and production of construction materials Construction materials, in particular bulk materials, should be collected only on compacted surfaces within the construction site. These materials cannot be collected at a distance of less than 100 m from existing watercourses. Analogous conditions apply to the places of production of construction materials (cement mixes, prefabricates, aggregates, etc.).	Contractor
49	Water protection	Contract area	Reducing time and number of drainage and the ban to dispose of water from excavations directly to watercourses The time for carrying out drainage should be reduced to the minimum and such methods should be applied to reduce the amount of pumped water and ensure its protection against contamination. The water pumped out form the excavations cannot be directly disposed to watercourses due to high content of suspension. Before disposing to watercourses the water should be purified of suspension, through the use of sedimentation tanks. Suspensions produced during the treatment shall be managed in a way compliant with their classification; thus eliminating the possibility of transferring them to the water-course or storing them in places, where submerging or flooding is possible.	Contractor
50	Protection of animate nature, earth surface protection	Contract area	Conditions for movement of vehicles, machines and equipment in the Contract area Movement of vehicles, machines and equipment shall be carried out only: a) within the site area; b) on existing roads; c) on service roads and yards; d) on internal roads (after they have been built).	Contractor

No.	Issue	Place	Mitigation measures	Entity
51	Water and soil	d soil Contract area	Parking place for machines and vehicles after finishing work	Contractor
	protection		Machines and vehicles shall be parked, every day after finishing work, in places intended for parking in the site facility area.	
			After parking periods of machines during their stoppage for works, prior to their start-up and use, one shall inspect the parking site to control potential leakage of operating fluids.	
52	Water and soil protection	Contract area	Sealing of the ground intended for movement of vehicles, machines and equipment on the construction site	Contractor
			The site area intended for movement of vehicles, machines and equipment shall be sealed from the ground.	
53	Water and soil protection	coil Contract area	The ban to carry out maintenance activities and repairs of vehicles, machines and equipment beyond the construction site	Contractor
			Maintenance of vehicles, machines and equipment (including exchange of oils, liquids, etc.) may be carried out only in designated places on the construction site, meeting the conditions specified in item 54 - Designation and sealing of garages and maintenance of vehicles, machines and equipment.	
54	Water and soil	Contract area	Designation and sealing of garages and maintenance of vehicles, machines and equipment	Contractor
	protection		Places intended for maintenance of vehicles, machines and equipment (including garaging, refueling and technical service yards, etc.) should be designated and properly marked on the construction site.	
		should be periodically (until completion of the construction) lined with impermeable	The above-mentioned places intended for maintenance of vehicles, machines and equipment should be periodically (until completion of the construction) lined with impermeable insulating materials, protecting the substrate against penetration of solid or liquid contaminants.	
			When determining the location, safe distance from flowing and standing water tanks should be taken into account, among others.	
			The detailed location of the above places should be agreed in advance with a team of environmental experts (including an expert phytosociologist and an expert zoologist).	

No.	Issue	Place	Mitigation measures	Entity
55	Water and soil protection	Contract area	Ensuring the discharge of water from parking yards and roads to sewage systems Parking yards for equipment and access roads should be made with a slope ensuring discharge of rainwater and snowmelt and wastewater to sewage devices or other receivers, to avoid penetration of any contaminants into the ground or surface water.	Contractor
56	Water and soil protection	Contract area	A stand with a sorbent near the service and parking yards for vehicles, machines and equipment In the vicinity of the places intended for servicing vehicles, machines and equipment (including garaging, refueling and technical service yards, etc.) it is necessary to ensure adequate quantities of sorbents, used for liquidation of oil leaks and outflows of petroleum derivatives.	Contractor
57	Water and soil protection	Contract area	Guidelines for refueling vehicles, machines and equipment Refueling should be carried out using mobile or stationary fuel distribution points, with appropriate safeguards, such as a stand with a sorbent used for liquidation of leaks and outflows of petroleum derivatives.	Contractor
58	Water and soil protection	Contract area	Guidelines for washing and cleaning of vehicles, machines and equipment It is forbidden to mark places or wash vehicles near watercourses, i.e. at a distance of less than 100 m, water reservoirs, as well as places where water stagnation has formed (conditions specified in items 14 - Conditions for the location of construction site facility, yards, storage/disposal sites, etc.).	Contractor
59	Water and soil protection	Contract area	Prevention of leaks from vehicles, machines and equipment Maintenance of vehicles, machines and equipment used in the Contract area (including, among others, cleaning of the equipment after concreting works) are allowed only in designated places on the construction site, adequately secured against the possibility of contamination of the ground and waters and equipped in such way as to enable the immediate removal of any contamination.	Contractor

No.	Issue	Place	Mitigation measures	Entity
60	Water and soil protection	Contract area	Proceedings in the case of emission of petroleum derivatives In the event of the emission of petroleum derivatives into the environment (including soil and water) the following measures should be taken: a) take immediate action to prevent the spread of contamination, by means of available resources (e.g. sorbents); b) immediately remove the soil contaminated as a result, in accordance with applicable regulations; c) in case of major failures, use the procedures described in item 81 – Emergency notification rules.	Contractor
61	Acoustic climate protection	Contract area	Reducing time of works to daytime Construction works should be carried out in a daytime, i.e. from 6:00 am to 10:00 pm.	Contractor
62	Acoustic climate protection	Contract area	Reducing noise of vehicles, machines and equipment During implementation of the Contract only technically efficient vehicles, machines and equipment shall be used, with noise emission (acoustic power) compliant with the binding regulations and which does not result in exceeding the environmental quality standards in the scope of permissible noise levels. In case any inefficient vehicles, machines and equipment, which can generate a higher noise level in their neighborhood, are found, they should be immediately replaced with the efficient ones.	Contractor
63	Acoustic climate protection	Contract area	Reducing noise of pump sets In the case of carrying out works in the acoustically protected areas or in their vicinity, in order to reduce their inconvenience to residents, only such pump sets shall be used which are equipped with soundproof housing which ensures the reduction of the noise levels to be compliant with the applicable regulations and standards (regarding permissible noise levels in the environment).	Contractor

No.	Issue	Place	Mitigation measures	Entity
64	Acoustic climate protection	Contract area	Control of noise level in acoustically protected areas In the case of works carried out in acoustically protected areas or in their vicinity, the noise level shall be constantly monitored and, depending on the needs, appropriate technical and organizational measures ensuring noise reduction to be compliant with applicable regulations and standards (regarding permissible noise levels in the environment) should be applied.	Contractor
65	Air protection, Acoustic climate protection	Contract area	Limiting the power consumption of vehicles, machines and equipment Vehicles, machines and equipment shall be used with low power consumption and switch off power/engines during the break in operation. Operating time of vehicles, machines and equipment shall be reduced to the necessary minimum.	Contractor
66	Air protection	Contract area	 Limiting air pollution with exhaust fumes In order to reduce the negative impact on the condition of the air: a) only technically efficient vehicles, machines and equipment should be used, with the required approvals to reduce the emission of gaseous and particulate substances into the atmosphere; b) a place should be provided for free maneuvers of vehicles, such as yards; c) it is necessary to limit the movement of vehicles, machines and devices to the necessary minimum, as well as to limit the speed of traffic on the construction site; d) it is necessary to minimize the idling time of engines and to follow the instructions on shutting down the machines and equipment during breaks in operation; e) vehicles should be parked with the engine turned off 	Contractor
67	Air protection	Contract area	 Limiting dusting from the construction site When carrying out construction works, the effects of secondary dusting should be limited by maintaining a high work culture, in particular by: a) regular cleaning of the construction site; b) applying the necessary technical and organizational measures to limit the emission of dust from the construction site, including storage places for construction materials causing dusting; c) spraying dusty site surfaces in dry periods, during transportation. 	Contractor

No.	Issue	Place	Mitigation measures	Entity
68	Health and safety protection, Air protection – dust emission	Contract area	 Keeping the roads clean In order to keep the roads clean and prevent dusting on the roads the following steps should be taken: a) the Contractor shall apply all available technical means and organize works to minimize the dusting and pollution of access roads to the Contract area; b) the Contractor shall apply protection on trucks delivering loose materials that may dust during the delivery (tarpaulins, sheets or covers of other type_; c) at entrances to the construction site for heavy equipment the Contractor shall assemble stations, where soil or mud shall be initially removed from wheels of the vehicles; d) the Contractor shall clear lanes of public roads off of pollutions coming from the construction site due to the traffic of vehicles, machines and devices associated with implementation of the Contract in order to prevent secondary dusting by soil brought by wheels of vehicles providing services to the site. 	Contractor
69	Air protection – emission of hazardous volatile compounds	Contract area	Ban to burn fires and burn down materials, waste, litter, etc. In order to prevent the emission of hazardous volatile substances, it is forbidden to burn fires and burn down materials, waste and litter, etc. in the Contract area.	Contractor
			K. REQUIREMENTS ON WASTE MANAGEMENT	
70	Water and soil protection	Contract area	Development of a Waste Management Plan (WMP) Prior to the commencement of works the Contractor shall develop and submit a Waste Management Plan for the Engineer's approval, specifying the way of handling waste expected to be generated during the works and taking into account, among others, conditions for waste management included in the EMP.	Contractor

No.	Issue	Place	Mitigation measures	Entity
71	Water and soil protection, Air protection	Contract area	 Guidelines for waste management Waste generated during the performance of the Contract shall be: a) segregated and stored selectively in sealed containers or in separate and adapted places, in conditions preventing dusting and dispersing of light fractions and their negative impact on the environment; b) ensure gradual waste reception by entities authorized to handle it; c) it is prohibited to store any materials, soil and construction waste near tree trunks. 	Contractor
72	Water and soil protection	Contract area	Guidelines for handling of hazardous waste Hazardous waste should be segregated and stored separately in special sealed containers placed in the sealed, paved area that is marked and secured against access by third parties, until it is handed over to entities authorized to handle it.	Contractor
73	Water and soil protection	Contract area	Guidelines for handling of domestic waste Domestic waste should be collected on the compacted (paved) area on the site in sealed septic tanks, content of which will be handed over to entities authorized to handle it.	Contractor
74	Water and soil protection	Contract area	Preventing illegal dumping of litter and waste Prior to the commencement of works the Contractor shall investigate the Contract area for possible places of illegal waste collection. In case of identifying illegal landfills of litter and waste, the Contractor shall clear such areas through the removal of waste and delivering it to the treatment site. During the performance of the Contract the Contractor shall secure the Contract area against possible formation of such landfills.	Contractor

No.	Issue	Place	Mitigation measures	Entity		
	L. REQUIREMENTS ON HEALTH AND SAFETY PROTECTION					
75	Health and safety protection	Contract area	Development of documents related to safety of people, property and the environment in the Contract area In the Contract area it is necessary to maintain order and ensure proper organization of works. Prior to the commencement of works, the Contractor will develop and then obtain the Engineer's approval for the following documents related to safety on the construction site (description in Chapter 6.15 of the EMP): a) Construction site organization plan; b) Traffic organization plan for the duration of the works; c) Waste management plan (Waste MP); d) Quality assurance plan (general and detailed ones for particular types of works); e) Flood protection plan for the site for the performance time; f) Health and safety plan (BIOZ Plan); g) Plan for dealing with uncontrolled emission (leakage) of petroleum substances. These documents, after development, before implementation, must be approved by the Engineer, who then also monitors their correct implementation. In the Monthly Reports, the Contractor will present the implementation status and compliance	Contractor		

No.	Issue	Place	Mitigation measures	Entity
76	Health and safety protection	Contract area	 Sapper recognition and supervision in the Contract area In order to minimize the risk related to the possible occurrence of dangerous objects of military origin in the area of the Contract, the Contractor shall ensure: a) Prior to commencement of the works – recognition in the Contract area in terms of occurrence of unexploded shells and misfires (a report with results of the aforementioned sapper recognition shall be submitted for the Engineer's acceptance); b) during the works – sapper supervision of works (carried out by the team of sappers), consisting in the ongoing checking and clearing of the Contract area of dangerous objects of military origin along with their utilization; c) in the case of finding dangerous objects of military origin in the Contract area - implementation of procedures described in item 82 - Conditions for handling unexploded ordnance or misfires. 	Contractor
77	Health and safety protection, Protection of tangible assets	Contract area	Documentation and monitoring of the technical condition of buildings exposed to tremor and vibrations Before starting works during which tremors and vibrations threatening the local residents as well as nearby buildings and infrastructure facilities may occur, the Contractor will carry out an inventory of the existing buildings and facilities, with particular reference to cracks and damages. During the performance of the aforementioned works, the Contractor will monitor the condition of these buildings and facilities on a regular basis.	Contractor

No.	Issue	Place	Mitigation measures	Entity
78	Health and safety	Contract area	Implementation of guidelines on work safety requirements	Contractor
	protection		The Contractor will ensure the implementation of detailed guidelines on work safety requirements, including in terms of:	
			a) development of the construction site, including hazardous areas;b) storage and transport;c) electrical installations and devices;	
			d) machines and technical equipment; e) work at heights; f) earthworks; g) selected renovation and demolition works,	
			contained in applicable legal regulations.	
79	Health and safety protection	Contract area	Ensuring hygienic conditions In the Contract area, it is necessary to ensure the necessary number of portable toilets and ensure their use by employees, as well as ensure the training of all employees in maintaining appropriate hygiene conditions within the construction site and its immediate neighborhood.	Contractor
		M. REC	QUIREMENTS ON EXTRAORDINARY THREATS TO THE ENVIRONMENT	
80	Health and safety	Contract area	Proceeding rules related to the flood risk	Contractor
	protection		In connection with the flood risk, the Contractor will prepare and submit to the Engineer's approval a document entitled: "Flood protection plan for the construction site, taking into account local hydrological and meteorological conditions in the vicinity of the construction site".	
			In the event of a flood, the Contractor will follow the procedures described in the above mentioned document.	

No.	Issue	Place	Mitigation measures	Entity
81	Health and safety protection	Contract area	Guidelines on notifying of emergency In the event of emergency (other than a flood), accident, breakdown, etc., the Contractor is obliged to take the following actions:	Contractor
			 a) immediately notify relevant services (Fire Brigade, Ambulance Service, Police, etc.); b) until the arrival of the relevant services, take the necessary actions to reduce the risk of loss of personnel, property and environment (as agreed with the relevant services if possible); c) notify the Engineer and the Employer; d) after the arrival of the relevant services, act strictly according to their guidelines and instructions. The procedure of cooperation and informing the parties of the Contract will be described in the Instructions for the Contractor, provided by the Engineer to the Contractor prior to the commencement of the works. The indicated instruction will include contact details (including e-mail), taking into account the personal status of the Structure of the Engineer, the Contractor and the PIU assigned to the implementation of the Contract. 	
82	Health and safety protection	Contract area	Guidelines for handling unexploded ordnance or misfires In the case of finding unexploded ordnance or misfires to the Contractor shall: a) immediately stop the works in a given site; b) assure evacuation of employees from the explosion risk zone; c) immediately notify the sapper supervision team and the Police, and then follow the guidelines obtained from them; d) notify the Engineer and the Employer. Under no circumstances can unexploded ordnance or misfires be picked up, dug out, buried, relocated, thrown to fire or water, etc.	Contractor

No.	Issue	Place	Mitigation measures	Entity			
	N. REQUIREMENTS ON PROTECTION OF CULTURAL HERITAGE						
83	Conservation of heritage	Contract area	The Opinion of the heritage conservator The Contract is located within intensive prehistoric, medieval and modern settlement, in the area of archaeological site no. 10/9/79-28 AZP (settlement of the Przeworsk culture population, a trace of settlement of the Lusatian culture, a trace of prehistory settlement, a trace of late-medieval settlement). This area is treated as a monument pursuant to Article 3 Item 4, 12 in connection with Article 6 Clause 1 Item 3 of the Act dated 23 July 2003 on the protection and care of historical monuments, thus it is required to conduct rescue archaeological research. In connection with the above, it is required to carry out rescue archaeological research, as indicated by the Provincial Conservator of Monuments in the opinion, letter of March 22, 2019 (reference number WZA.5183.1240.2019.AWZ, rkp 7090-2019). Before the commencement of the archaeological rescue research, the Contractor will obtain a relevant decision for carrying out the said activities.	Contractor			
84	Conservation of heritage	Contract area	Providing archaeological supervision The Contractor shall be obliged to assure an ongoing archaeological supervision for the time of earthworks. To this end, the Contractor shall: a) prepare a relevant action plan in this regard; b) ensure the participation of a team of archaeologists who conduct ongoing supervision of earthworks; c) if necessary, obtain the permission required by law to conduct archaeological research from the competent heritage conservator.	Contractor			

No.	Issue	Place	Mitigation measures	Entity
85	Conservation of heritage	Contract area	Guidelines on the conduct in the case of uncovering mobile monuments or archaeological sites If during the works an object is uncovered which may be or certainly is a historic monument or has a historical value, the Contractor is obliged to: a) immediately stop any work in a given site that may damage or destroy uncovered objects; b) secure (by means of available sources) uncovered objects and the place where they were found against being destroyed, damaged or stolen; c) immediately notify the team of archaeologists and the Engineer; d) take further security measures, agreed with the team of archaeologists and the Engineer; e) facilitate and ensure carrying out documentary activities, archaeological research and other necessary activities indicated by an expert team of archaeologists and/or administrative authorities responsible for preserving the historic substance; f) after completing the activities and research listed in items d) and e) uncovered mobile monuments should be relocated to appropriate institutions indicated by a team of archaeological experts and/or administrative authorities responsible for protecting the historic substance (in accordance with the applicable regulations and the content of the Permit referred to in item 84 c) – Providing archaeological supervision; g) in the case of immobile monuments, after completing the activities and research listed in items d) and e) the guidelines should be implemented regarding further treatment of the uncovered historic substance, established by a team of archaeological experts and/or administrative authorities responsible for protecting the historic substance (in accordance with applicable regulations and the content of the Permit referred to in item 84 c) - Providing archaeological supervision).	Contractor

No.	Issue	Place	Mitigation measures	Entity
	O. R	REQUIREMENTS	ON THE CONTRACTOR'S STAFF ENGAGED IN THE IMPLEMENTATION OF THE EMP	
86	Implementation and reporting of the EMP	Contract area	Training of the Contractor's staff in the scope of the EMP implementation Before the commencement of the Works, and then periodically, e.g. once a quarter, the Contractor is obliged to train their managerial and engineering and technical staff on the rules and methods of implementation of these EMP terms which, in accordance with Appendix 1 and Appendix 2 to the EMP, are assigned to the Contractor. These trainings should be completed with a test of participants' knowledge. In the monthly reports submitted to the Engineer, the Contractor shall provide information on the state of training of the Contractor's staff in the scope of the EMP terms of the in the current reporting period.	Contractor
87	Implementation and reporting of the EMP	Contract area	 Appointment of the EMP coordinator in the Contractor's team In the Contactor's team, a person shall be appointed to coordinate and supervise actions related to the implementation of the EMP. The responsibilities of the person shall include: a) supervising the implementation of individual EMP terms in the subsequent stages of the Contract implementation; b) ongoing monitoring of the status of implementation of individual terms of Appendix 1 and Appendix 2 to the EMP in the Contract area; c) ongoing informing of the Contractor's management team on the obligations arising from the EMP at the particular stage of works, as well as on the issues arising during the implementation of the EMP; d) cooperation with the rest of the Contractor's team (including a team of environmental experts, a team of archaeologists and a sapper supervision team) in the scope of ensuring the implementation of the EMP; e) preparation of statements and reports (kick-off, monthly, quarterly, ad-hoc, final report, reports to the RDOŚ in Wrocław - only to the extent resulting from the decisions obtained at the implementation stage, e.g. exceptions, if they result in the need to make the report to the authorities; f) cooperation with people responsible for the implementation of the EMP from the Engineer's 	Contractor

No.	Issue	Place	Mitigation measures	Entity
			team and from the Employer's team.	
			The person appointed to perform the abovementioned role shall require the Engineer's approval.	
88	Implementation	Contract area	Providing of a team of environmental experts	Contractor
	and reporting of the EMP		The works during the Contract implementation shall be performed under a environmental supervision.	
			Throughout the whole Contract implementation period the Contractor shall provide the team of environmental experts, composed of the representatives of the following specializations:	
			 a) botanist - phytosociologist (natural habitats and protected plant species); b) dendrologist (rule for tree care and protection); c) zoologist - an expert in the field of invertebrates; d) zoologist - herpetologist (amphibians and reptiles); e) zoologist - ornithologist (birds); f) zoologist - chiropterologist (bats); g) zoologist - theriologist (non-flying mammals). 	
			Each specialist shall have carried out at least two natural supervisions in their professional carrier. Additionally, the dendrologist will have the qualifications indicated in Appendix 2 to the Regulation No. 1217/19 of the President of Wrocław of June 28, 2019 ⁵ .	
			Monthly and quarterly reports shall be prepared on the activities performed by the Environmental Team of the Contractor as a part of their environmental supervision.	
			The Environmental Team of the Contractor will be required over the entire duration of the implementation phase to supervise the proper performance of works in the context of their potential adverse impact on protected natural habitats and protected species, the proper place of conducting the works with the view of protected habitats and species, proper implementation of preventive measures to fauna (trapping, relocation) and all other activities in the field of environmental protection.	
			These experts will be involved in the implementation of selected mitigation and monitoring measures specified in the EMP.	

⁵ https://www.zzm.wroc.pl/pl/dzialania_zzm,366.html

No.	Issue	Place	Mitigation measures	Entity
			The members of the team of environmental experts requires the Engineer's approval.	
			One member of the team of environmental experts may it can represent several different specializations simultaneously listed above in items a-g (e.g. 3, if he has relevant professional experience in these 3 specializations).	
			Before the commencement of works, the Contractor will submit a Quality Assurance Plan regarding the activities of the team of environmental experts for the Engineer's approval.	
89	Implementation	Contract area	Providing a team of archaeological experts	Contractor
	and reporting of the EMP		Throughout the whole Contract implementation period the Contractor shall provide the team of archaeological experts.	
		These experts will be involved in the implementation of selected mitigation measures specified in the EMP.		
			Depending on the needs, the team of archaeological experts can consist of one or more people with the appropriate professional licenses. The personnel composition of the team of archaeologists requires the approval of the Engineer.	
			Before the commencement of works, the Contractor will submit a Quality Assurance Plan regarding the activities of the team of archaeological experts for the Engineer's approval.	
90	Implementation	Contract area	Providing of a sapper supervision team	Contractor
	and reporting of the EMP	I Infoligabilit the whole Contract implementation period the	Throughout the whole Contract implementation period the Contractor shall provide the sapper supervision team.	
			This team will be involved in the implementation of selected mitigation measures specified in the EMP.	Contractor
			Depending on the needs, the team of sappers can consist of one or more people with the appropriate professional licenses. The personnel composition of the team of sappers requires the approval of the Engineer.	
			Prior to the commencement of works, the Contractor will submit to the Engineer for approval a Quality Assurance Plan for the sapper supervision team.	

No.	Issue	Place	Mitigation measures	Entity
91	Implementation and reporting of the EMP	Contract area	Discussing the implementation of the EMP during working meetings and Site Meetings During the performance of the Contract monthly meetings of the representatives of the PIU, the Engineer and the Contractor will be held to discuss and control the implementation of mitigation and monitoring measures specified in the EMP. Notwithstanding the above, updated requirements and problems related to the implementation of the EMP will be discussed at all Site Meetings.	Contractor
			P. REQUIREMENTS ON REPORTING	
92	Implementation and reporting of the EMP	Contract area	Reporting the implementation status of the EMP During implementation of the Contract, the Contractor will submit monthly reports on implementation of the conditions specified in the EMP (in the form of a checklist together with the necessary attachments, including reports on the implementation of environmental supervision) to the Engineer. A template of the above-mentioned report (checklist) will be developed by the Contractor and submitted to the Engineer for approval. Depending on the circumstances, the Engineer may request the Contractor to submit additional reports regarding, among others, emerging critical situations, including accidents, and implementation of selected EMP items, etc. In addition, the Contractor is obliged to make a kick-off report, quarterly, ad-hoc, final reports and reports to the RDOŚ in Wrocław - only to the extent resulting from the decisions obtained at the implementation stage, e.g. exceptions, if they result in the need to make the report to the authorities.	Contractor
			Q. REQUIREMENTS AFTER THE COMPLETION OF WORKS	
93	Protection of soils and earth surface	Contract area	Cleaning works, reinstatement of the area to the initial state The area covered by the works due to the movement of machines and vehicles as well as the areas adjacent thereto should be cleaned and reinstated to its initial state.	Contractor

No.	Issue	Place	Mitigation measures	Entity
94	Protection of soils and earth surface, Protection of animate nature	Contract area	Top-soiling, sowing, mowing the grass After completing the construction works, all of the earth surface will be top-soiled and sown with grass in accordance with the activities detailed in item 44 - Reinstatement of a topsoil layer and green areas and tidying up the site after completion of works and in item 45 - Caring for grasslands.	Contractor
			<u>During the performance and the use of the Contract</u> one shall provide curing measures within sites sown with grass mix, which include e.g. mowing twice a year, and removal of hard lichens. This measure covers the performance period, as well as the Defects Notification Period and the Warranty Period.	
95	Protection of soils and earth surface	Contract area	Management, maintenance, repairs of roads The Contractor is obliged to remove defects/damages to roads used under this Contract during the Contract Implementation Period. During the operating period, roads and technological lanes must be properly maintained/managed through appropriate winter care for the road in accordance with the existing weather conditions. Gravel/dirt roads - unevenness should be levelled, if necessary.	Contractor
96	Protection of waters	Contract area	Requirements for the operation of rainwater sewage system The amount of sediment that accumulates in the sedimentation tanks of collecting wells and in the suspension tank, which will be located at the outlet of the rainwater sewage system, should be regularly checked. If 2/3 of the volume of the sedimentation tanks or the collecting wells are full - the sediment should be removed. This sediment is a waste, the disposal of which must be carried out in accordance with the Act on waste.	Road manager / Authorized service provider

	R. DETAILED REQUIREMENTS OF THE WORLD BANK'S ES POLICIES					
97	ES issues	Contract area	ES Code of Conduct	Contractor		
			The Contractor shall be obliged to apply and observe all ES policy requirements and conditions (the ones related to environmental, social and health and safety issues) as determined in the Contract documents, in the WB's Environmental, Health and Safety (EHS) Guidelines (see: description in Chapter 6.14 of the EMP), in documents of the Contractor listed in item 75 (above); and as results from the legal acts binding in the territory of Poland (including the Labour Code, the Construction Law, and others).			
			The ES requirements and conditions determined in reference to the Contractor and its personnel in the aforementioned sources (regardless of the legal cooperation form) are also valid in the scope relevant for a given case for Contractor's subcontractors and their personnel and their subcontractors.			
			The Contractor will hire or select an employee among its Personnel who will be the person to whom all employees and external persons will submit complaints and requests related to ES issues. Contact details of this person will be indicated in the information leaflet (prepared in accordance with item 104) and placed on the information board of the construction site.			
98	ES issues	Contract area	Ensuring accident-free working conditions	Contractor		
			The Contractor shall be obliged to assure such conditions for implementation of the Contract (including performance conditions) to avoid accidents engaging any people associated with implementation of the Contract (including the staff of e.g.: the Contractor, the Engineer, the PIU, the PCU, subcontractors, suppliers, and others) and third parties.			
			In case an accident occurs the Contractor shall immediately assure proper treatment for injured people, notify relevant services and provide them with access to the site, and secure the place in a way assuring safety to the aforementioned services and other people, who may be present in the area of the event.			
			Regardless of the aforementioned actions the Contractor shall immediately inform the Engineer about all accidents and near misses related to implementation of the Contract (both: on site, as well as in any other location), in accordance with binding procedures determined in the Contract documents (see: item no. 105).			
99	ES issues	Contract area	Provision of H&S Expert in the Contractor's team	Contractor		
			The Contractor shall be obliged to assure a permanent H&S supervision throughout the performance, and the supervisor shall take care for observing the H&S rules determined in the Contract documents and in the binding provisions of national law. Members and qualifications of the H&S supervising team need to be in compliance with Polish provisions of the labour law.			

100	ES issues	Contract area	Educational actions related to H&S rules and regulations	Contractor
			The H&S Supervising team shall implement trainings and an awareness programme for the Contractor's staff in reference to the H&S rules and regulations on site.	
			Those actions shall be implemented throughout the performance period, at least once per 12 months.	
			They shall take a form of informational, educational and awareness campaigns related to H&S issues in the scope corresponding with the current stage of Contract implementation.	
101	ES issues	Contract area	Prevention of sexual harassment and mobbing, reporting of sexual harassment and mobbing cases	Contractor
			The Contractor shall be obliged to assure such conditions of Contract implementation to avoid cases of sexual harassment or mobbing towards the Contractor's personnel and subcontractors, any other people associated with implementation of the Contract, and any third parties.	
			If cases of sexual harassment or mobbing occur, the Contractor shall undertake measures to immediately stop the aforementioned behavior, and subsequently it shall immediately take disciplinary measures determined by the law and internal regulations of the company in relation to perpetrators, and shall provide the victims of such behavior with any necessary help and support in the scope corresponding with the case.	
			Regardless of the aforementioned actions the Contractor shall immediately inform the Engineer about any cases of sexual harassment or mobbing, in accordance with binding procedures determined in the Contract documents (see: item no. 105).	
			All reported and suspected cases of sexual harassment and mobbing should be entered in the register of complaints and requests kept by the Contractor.	
102	ES issues	Contract area	Educational actions to prevent cases of sexual harassment and/or mobbing	Contractor
			The Contractor shall implement trainings and an awareness programme for the Contractor's Staff in reference to the prevention of cases of sexual harassment and mobbing.	
			Those actions shall be implemented throughout the performance period, at least once per quarter.	
			They shall take a form of informational, educational and awareness campaigns related to sexual harassment and mobbing.	
			The measures shall be implemented by an expert having proper substantial qualifications in that scope.	

103	ES issues	Contract area	Assurance of lawful conditions of work and payment for the personnel	Contractor
	20 .00 400		The Contractor shall be obliged to secure proper conditions of works and payment for the personnel associated with implementation of the Contract, fully in accordance with provisions of the labour law binding in Poland (and especially with the Labour Code), including the following, e.g.:	
			- the Contractor shall assure equal treatment in case of payment for the employees performing the same work, without consideration of sex, sexual orientation, and age;	
			– people employed at the Contract shall not be harassed due to sex, sexual orientation and age;	
			– the Contractor may employ only such an employee, who is 18 years old, completed at least 8-years of primary school, and provided a doctor's statement confirming that a work of a given type is not risky for his/hers health; the minimum age for an employee involved in construction and other activities that pose a risk to human health and safety is 18 years.	
			 the Contractor – adequately to the potential and conditions, and in accordance with Polish provisions of the Labour Code – shall secure the living and social needs of the employees on the work site; 	
			- the Contractor shall be obliged to facilitate the employees in improving their professional qualifications.	
104	ES issues	Contract area	Providing the possibility of submitting complaints and claims by employees referring to the conditions of work and payment	Contractor
			The Contractor shall inform all people employed due to implementation of the Contract about a possibility of providing claims related to the conditions of work and payment, and shall develop an information leaflet with necessary data on provision of claims and applications, in which it would assure about e.g. the absence of repercussion for a person notifying about an issue; and that leaflet would be provided to those people.	
			Contents of the aforementioned leaflet shall be agreed with the Engineer.	
105	ES issues	Contract area	Development and implementation of procedures related to the ongoing provision of information on ES issues	Engineer/Contractor
			In the period not longer than 30 days from the commencement date of the Contract, the Contractor shall develop and provide for the Engineer's approval a set of procedures related to the ongoing provision of information related to the following:	
			- exceptional hazards (i.e. emergency and crisis situations discussed in section 5.12 of the EMP);	
			– accidents and near misses;	

			– cases of sexual harassment and mobbing;	
			– claims of the personnel related to the conditions of work and payment.	
			The Contractor shall immediately inform the Engineer about any issues in that scope, in accordance with the conditions determined under the valid contractual procedures.	
106	ES issues	Contract area	Guidelines of prevention of HIV-AIDS, diseases caused by coronaviruses The Contractor shall, via an approved service provider, implement a program to raise awareness of HIV-AIDS, diseases caused by coronaviruses type diseases (including appropriate training) and will take all other measures to reduce the risk of HIV and coronaviruses spreading among the Contractor's personnel and the local community. These activities should be performed in accordance with the detailed guidelines set out in the Contract Bidding Documents.	Contractor
S. GUIDELINES FOR DEALING WITH THE SITUATION IN THE EVENT OF AN EPIDEMIC OR STATE OF EPIDEMIC RISK DURING THE EXECUTION OF WORKS				
107	Protection	Contract area	Guidelines for dealing with the situation of an epidemic or state of epidemic risk	Contractor
	of human health and safety		In the event than epidemic or epidemic emergency state is in force during the execution of works, the Contractor is obliged to:	
			a) to provide the persons on the Construction Site with all necessary precautions to maintain the health and safety of workers, Contractor's Personnel, to the extent described in the Terms and Conditions of the Contract, in particular to introduce appropriate measures to avoid or minimise the spread of diseases, including measures aimed at avoiding or minimising the transmission of infectious diseases that may be associated with the inflow of temporary or permanent labour, related to the execution of the Contract, in the manner specified in the applicable Law, e.g. in regulations issued pursuant to the Article 46a of the Act of 5 December 2008 on preventing and combating infections and infectious diseases in humans (i.e. Journal of Laws of 2020, item 1845 as amended) on establishing certain restrictions, orders and prohibitions in connection with the occurrence of an epidemic state,	
			b) designate a person responsible under the Contract for matters relating to the health and safety at work during an epidemic or epidemic emergency state,	
			c) implement relevant recommendations of the World Bank and sanitary services in the Republic of Poland, d) cooperate with the Employer and the Engineer, in particular, provide current information on the	

precautions taken or planned, including the appropriate protection of the Construction Site against unauthorised access, the procedures introduced and the appropriate updating of the documents described in item 6.13, in particular the Health and Safety Protection Plan, Waste Management Plan, Construction Site Organisation Design, e) organise information action (e.g. in the form of posters and instructions on the Site) on the symptoms and signs of infection, virus spread, protection measures (including regular hand washing) organise, in a safe sanitary form, training for workers, Contractor's personnel at least in the scope of: i. updated procedures and documents, ii. symptoms and signs of diseases caused by coronaviruses (or any other infectious disease in connection with an established epidemic/ epidemic emergency situation), including self-monitoring of symptoms, spread of the virus, available protection measures,

- iii. procedures in case of noticing symptoms of the disease in oneself and others,
- iv. regulations in force concerning the quarantine of workers and their families, remuneration for the period of illness, isolation or quarantine, the provision of health care, including sanitary transport, carried out in connection with the prevention of infection,
- v. applicable procedures for signalling infringements or reporting complaints by employees,
- vi. waste handling -e.g. masks, gloves, disinfectants and cleaning products.

In the course of an epidemic emergency or epidemic state, within the scope of the law, training should be provided by electronic means of communication or in the form of self-education. The above rules should be applied in an appropriate manner in the event of declaring an epidemic state or epidemic emergency state in connection with another infectious disease in the Republic of Poland.