

Environmental Management Plan

Contract 1B.2/1 – Modernisation works on boundary sections of Odra River, Stage I to provide Good Condition for Ice-breaking – Part 1

Appendix 1 – Mitigation Plan

This Appendix to the Environmental Management Plan for **Contract 1B.2/1 – Modernisation works on boundary sections of Odra River, Stage I to provide Good Condition for Ice-breaking – Part 1**, presents measures aimed at mitigating the adverse impact on the environment, which serve as guidance for the contractor within Contract 1B.2. The costs and implementation schedule of the measures should be included in the Proposal. The Contractor covers all costs of implementing this EMP, which shall be included in the Accepted Contract Amount. The requirement relating to the discussion over the implementation of the EMP at working meetings and at Site Meetings (item 141 of Appendix 1 to the EMP) refers also to the Engineer and the PIO.

The requirements set out in Appendix 1 to the EMP are divided into the following categories based on subject:

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Explanations regarding the table in Appendix 1 to the EMP:

- 1) Unless specified otherwise, the term **Task Site** means the site of any preparatory or main works (including Permanent Works and Temporary Works) as well as any works involving the removal of faults or defects or the performance of any uncompleted works listed in the Handover Certificate or revealed in the Defects Notification Period, including any sites of required temporary acquisition.
- 2) Unless specified otherwise, the term **Task Period** means the period of any preparatory or main works (including Permanent Works and Temporary Works) as well as any works involving the removal of faults or defects or the performance of any uncompleted works listed in the Handover Certificate or revealed in the Defects Notification Period.
- 3) Certain items clearly indicate that a mitigating measure must be participated by an expert from Contractor’s environmental supervision team, or generally require the participation of Contractor’s environmental supervision team (which should be understood as the duty to provide an expert or experts with a speciality required for the measure(s)). This does not imply that any other mitigating measure should be implemented without Contractor’s environmental supervision team.
- 4) Unless specified otherwise, the requirements for the Contractor defined in the EMP refer to the entire Task Site.
- 5) Where required, the Mitigation Plan shall be implemented with due regard to the World Bank Policy reflected in the Operating Manual for the Odra-Vistula Flood Management Project and with due regard to the Land Acquisition and Resettlement Action Plan, and in collaboration with the team implementing the Plan and the World Bank’s Operational Policy OP 4.12.
- 6) Item 49 of Appendix 1 to the EMP is covered by the Option in accordance with Sub-Clause 13.8 of the Particular Conditions of Contract (Part 3 of the Bidding Document).

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Requirements for work schedule (in particular):

Items 25, 32, 33, 36, 37, 38, 39, 40, 42, 43, 48, 49, 74, 86, 101, 100, 111.

Requirements for selected locations (specification of kilometres):

Items 2, 3, 26, 30, 31, 42, 43, 44, 46, 66, 86, 107.

List of natural habitats mentioned in the table in Appendices 1 and 2 to the EMP:

- 3270 – Rivers with muddy banks with *Chenopodium rubri p.p. and All. Bidention tripartite*
- 3150 – Oxbows and natural eutrophic lakes with *Nympheion, Potamion*.
- 6430 – Tall herbs of the montane level (*Adenostylion alliariae*) and of riversides (*Convolvuletalia sepium*)
- 91F0 – Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ficario-Ulmetum*)
- 6510 – Extensively managed hay meadows of the planar to submontane zones (*Arrhenatherion*)
- 6440 – Alluvial meadows of river valleys (*Cnidion dubii*)

Specification of measures in the table to be included in the Task implementation schedule

	Issue	Location	Mitigating measure	Entity responsible
01 RULES OF LAND ACQUISITION				
1.	Protection of earth surface and landscape	Task Site	<p>Limitation of land acquisition and earth surface transformation</p> <p>Land acquisition and earth surface transformation should be minimised during any works carried out as part of the Task.</p>	Contractor
2.	<p>Protection of earth surface and landscape</p> <p>General rules for the preservation of animated natural resources</p>	Task Site	<p>Locations excluded from works carried out from the land</p> <p>The Contractor shall not carry out works from the land at the following sections:</p> <ul style="list-style-type: none"> • km 581.0 – 583.2 (nature reserve and overflow areas); • km 585.3 – 585.7 (nature reserve area); • km 608 – 613, km 615.3 – 615.6 the areas where the levee-to-Odra bank distance exceeds 100 m. <p>When determining whether works may be carried out from the land, it is necessary to include the requirement in item 103 of Appendix 1 to the EMP.</p>	Contractor
3.	<p>Protection of earth surface and landscape</p> <p>General rules for the preservation of animated natural resources</p>	Task Site	<p>Sites where it is forbidden to locate materials storage areas</p> <p>The Contractor shall not locate materials storage areas within the following environmentally sensitive areas:</p> <ul style="list-style-type: none"> • at the kilometres indicated in item 2, • within the natural habitats near section 1: 3150 approx. km 581.0; 583.7; 6430 – approx. km 581.0; 582.1; 583.2; 584.5; 584.8; 91F0 approx. km 581.0 – 582.6; 585.4 – 585.7; 6510 approx. km 582.7 – 583.7. • km 616.4 (sites of the red-backed shrike <i>Lanius collurio</i>); • km 616.9 – 617.3, near Osinów Dolny (mouse garlic site in the area of alluvial meadows); • km 616.5 (the site of the spear-leaved skullcap in the meadows west of Kostrzyn); • km 608.6 – 609.4, near Kostrzyn (mouse garlic site in the area of alluvial meadows); 	Contractor

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			<ul style="list-style-type: none"> • km 608 – 613 and km 615.3 – 615.6 – bird and herpetofauna habitats (where the levee-to-Odra bank distance exceeds 100 m); • within the natural habitats near sections 2 i 3: 6430 – approx. km 602.5; 603.3; 606.3 – 606.5; 606.9; 6440 – approx. km 608.6 – 609.5; 615.7 – 615.8; 616.9 – 617.3; • within damp depressions where communities indicative for natural habitat 3270 could grow in summer, as it is necessary to restore the river bank to its properties allowing the formation of that habitat. 	
4.	<p>Protection of earth surface and landscape</p> <p>General rules for the preservation of animated natural resources</p>	Task Site	<p>Requirements for locating materials storage areas (storage yards)</p> <p>a) The Contractor shall arrange materials storage areas with the participation of Contractor’s environmental supervision team (verifying the location immediately before the works due to a dynamically changing water level and related variations in animal occupation), outside the natural habitat patches and environmentally sensitive areas specified in item 3,</p>	Contractor
5.	<p>Protection of earth surface and landscape</p> <p>General rules for the preservation of animated natural resources</p>	Task Site	<p>b) Materials storage areas will be located once the Project Engineer has approved the Method Statement and the Site Arrangement Plan,</p>	Contractor
6.	<p>Protection of earth surface and landscape</p> <p>General rules for the preservation of animated natural resources</p>	Task Site	<p>c) In the event of adverse weather conditions or dynamically changing water level, it is possible to arrange materials storage areas in a different location, having first checked it through Contractor’s environmental supervision team no later than 3 days before storing the materials; the team must confirm that the location does not include any valuable environmental compartment. The Contractor must submit the location of such areas in advance to the Engineer for approval.</p>	Contractor
7.	<p>Protection of earth surface and landscape</p>	Task Site	<p>Requirements regarding the location of onshore back-up facilities</p> <p>The Contractor shall arrange the site back-up facilities using watercraft.</p>	Contractor

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	General rules for the preservation of animated natural resources		Where onshore back-up facilities must be used, when selecting the location the Contractor shall be guided by requirements identical to those regarding materials storage areas (storage yards) (see items 3 to 6 of Appendix 1 to the EMP).	
8.	Protection of earth surface and landscape General rules for the preservation of animated natural resources	Task Site	Requirements concerning the location of haul roads Any access or haul roads must be set out based on the existing road network. If there are no existing roads, the new roads must be set out outside environmentally sensitive areas, i.e. outside forest areas and habitat sites. Such locations should be selected in collaboration with Contractor’s environmental supervision team. The areas of access roads should be limited to a necessary minimum. Requirements for traffic management at the task site are given particularly in items 56–67 of Appendix 1 to the EMP.	Contractor
9.	Protection of earth surface and landscape General rules for the preservation of animated natural resources	Task Site	Providing access to storage yards The locations selected for storage yards should be conveniently accessible by road in order to allow the delivery of light materials (e.g. fascine) by land transport and the access for workers and fire brigade in case of fire.	Contractor
10.	Protection of earth surface and landscape General rules for the preservation of animated natural resources	Task Site including access roads	Additional requirements for the location of access roads In the event of using the dirt road running along the embankment next to the overflow area south of Słubice, the road may only be used by lightweight equipment, under the supervision of Contractor’s environmental supervision team, and outside the breeding season (i.e. it is allowed from mid-October to the beginning of March).	Contractor
02 – REQUIREMENTS FOR SECURING PROTECTED NATURAL RESOURCES				

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<p>11. X</p>	<p>General rules for the preservation of animated natural resources</p>	<p>Task Site</p>	<p>Activities by Contractor’s environmental supervision team</p> <p>Contractor’s environmental supervision team shall monitor the Task Site on an ongoing basis, including any storage areas for construction materials, parking areas for machinery, and the method of implementing the Task. It is required to introduce the monitoring of hydro-biological and hydro-morphological components during any works that interfere in water environment and bank area, as well as ornithological, chiropterological and herpetological supervision.</p> <p>Contractor’s environmental supervision team shall cover, without limitation:</p> <ul style="list-style-type: none"> a) prior to the construction works, the environmental supervisors shall verify the site for the presence of any habitats of protected animal species, the ornithological supervisors shall verify the work site, including for the presence of bird nests, and the herpetological supervisors shall check the site to identify any habitats of amphibians. The hydro-biological and hydro-morphological supervisors shall define the range of presence of aquatic organisms (patches of plants, including the fringed water lily and unionids), and the plants and bivalves shall be relocated according to their instructions. Where it is required to obtain a derogation from a prohibition applicable to a certain species, before starting their activities the environmental supervisors shall obtain such derogation on behalf of the Investor; b) prior to the construction works, the environmental supervisors shall inspect the work sites with the participation of a phytosociologist/botanist in order to identify the sites and population of invasive plants. Specific requirements for handling invasive species are presented in items 109 to 113 of Appendix 1 to the EMP; c) direct supervision over the preparatory works before construction: clearing of any colliding trees and bushes, mowing the site at the planned work areas (reed stands, vegetated covers on groynes); d) indicating any additional measures to mitigate the impact of earthworks on animals, particularly on invertebrates; e) training for the works Contractor on the rules and conditions for implementing the Environmental Management Plan. In addition, the Contractor’s employees who handle fuels, other oil derivatives or any other substance harmful to health and environment shall be trained in the rules of preserving groundwater environment and using measures for its preservation, including the use of sorbents; 	<p>Contractor</p>
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			<ul style="list-style-type: none"> f) prior to the works, given the dynamic changes in water level and, consequently, variations in land occupation by plants and animals – consultation and approval of the selected locations of access roads and storage areas for construction materials; g) day-to-day instructions for the methods of work including the need to preserve natural assets and protected plant and animal species, with a particular focus on amphibians, reptiles, birds, bats and fish, in such a way to minimise the impact of works on the species and natural habitats for which the Natura 2000 areas and national forms of nature conservation have been established; h) where necessary, formulating recommendations for taking measures required to mitigate the effects of the Task on the natural habitats, species and their sites being of Community interest and protected by law, which could not have been foreseen when setting the requirements included in the permit; i) formulating instructions regarding protection during the works; j) formulating recommendations to take measures aimed at preventing the spread of invasive species; k) preparing reports for environmental protection authorities as required by the administrative decisions issued for the Task; l) conducting works regarding environmental supervision according to B.I.1. of the environmental permit set out in Appendix 4 to the EMP. 	
12.	General rules for the preservation of animated natural resources	Task Site	<p><i>Implementing the environmental monitoring plan at the execution stage</i></p> <p>Contractor's environmental supervision team shall carry out a programme for monitoring the preservation status of natural habitats and the population and distribution of protected species, as well as the degree of using the created/founded breeding isles (mitigating measure stated in item 49 of Appendix 1 to the EMP) at the execution stage, which programme must be agreed with the Regional Director for Environmental Protection in Szczecin according to the environmental permit (see Appendix 4a to the EMP and the monitoring measure in items 156–158 of Appendix 2 to the EMP).</p>	Contractor
13.	General rules for the preservation of animated natural resources	Task Site	<p><i>Obtaining necessary derogations from the bans applicable to protected species</i></p> <ul style="list-style-type: none"> a) The Contractor (if necessary) shall, adequately to the results of environmental survey conducted by Contractor's environmental supervision team prior to the works and according to ongoing environmental supervision, obtain any required 	Contractor

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			permits for derogations from the bans applicable to the protected species of plants, fungi and animals, issued under the Nature Conservation Act of 16 April 2004.	
14.	General rules for the preservation of animated natural resources	Task Site	<p>b) upon obtaining relevant permits,* the Contractor shall carry out the actions specified in the administrative decisions and prepare related reports prescribed therein. The reports shall be delivered to the Engineer no later than 30 days before the date when they must be submitted to the authority issuing the permit. The measures listed in (a) and (b) shall be participated by Contractor’s environmental supervision team.</p> <p>* This also applies to decisions allowing for derogations from bans concerning the protected species of plants and animals or wild game, issued for the Task before implementing the Contract (see Appendix 4b,4c,4d to the EMP).</p>	Contractor
15.	General rules for the preservation of animated natural resources	Task Site	<p>Relocation of protected species outside the work site and areas acquired temporarily</p> <p>Where it is required to relocate any protected species outside the Task site or areas acquired temporarily, the Contractor shall:</p> <p>a) plan such measures and obtain relevant permits,</p>	Contractor
16.	General rules for the preservation of animated natural resources	Task Site	<p>b) effectively carry out the measures and implement any other measures specified in the permits (e.g. prepare reports on implementing the permits).</p> <p>The measures listed in (a) and (b) shall be participated by Contractor’s environmental supervision team.</p>	Contractor
17.	General rules for the preservation of animated natural resources	Task Site	<p>Adopting an appropriate work schedule</p> <p>The Contractor shall ensure such a work schedule to adjust the periods and locations of each work stage to the requirements stated in the environmental permit and the EMP, and to limit as far as possible any adverse impact on the protected species existing at or around the Task Site.</p>	Contractor

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			<p>The Contractor shall keep the schedule up to date in terms of the periods of work according to the results of day-to-day monitoring conducted by Contractor’s environmental supervision team.</p> <p>Requirements for the periods of work are also stated, without limitation, in items 25, 32, 33, 36, 37, 38, 39, 40, 42, 43, 48, 74, 86 and 101 of Appendix 1 to the EMP.</p>	
18.	General rules for the preservation of animated natural resources	Task Site	<p>Use of substances and materials hazardous to fauna</p> <p>The Contractor shall not conduct the works using any substance or material that could be lethal to the animal species existing at or around the Task site.</p>	Contractor
19.	General rules for the preservation of animated natural resources	Task Site	<p>Inclusion of the conditions related to the presence of protected areas</p> <p>During construction works, the Contractor shall comply with any norms, prohibitions or indications, and respect any restrictions related to the presence of areas and objects established under the Nature Conservation Act of 16 April 2004.</p>	Contractor
20.	General rules for the preservation of animated natural resources – protection of natural habitat 3270	Task Site	<p>Measures to protect natural habitat 3270 – Rivers with muddy banks with <i>Chenopodium rubri p.p. and All. Bidention tripartite</i> and the characteristic species: strapwort (<i>Corrigiola litoralis L.</i>)</p> <p>a) to strengthen the population of the strapwort, the Contractor shall protect any stands of that plant against accidental destruction, and acquire seeds to preserve the species under conservatory cultivation for the duration of works (according to Appendix 7c to the EMP),</p>	Contractor
21.	General rules for the preservation of animated natural resources – protection of natural habitat 3270	Task Site	<p>b) The Contractor shall not locate any materials storage areas in damp depressions where the communities indicative for that habitat could grow in summer,</p>	Contractor
22.	General rules for the preservation of animated natural resources – protection of natural habitat 3270	Task Site	<p>c) when implementing the Task, the Contractor shall not interfere in any fascine situated in the inter-groyne spaces, except any locations which directly collide with the designed facilities (e.g. wingwalls),</p>	Contractor

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23.	<p>General rules for the preservation of animated natural resources – protection of natural habitat 3270</p> <p>Protection of earth surface and landscape</p>	Task Site	<p>d) the Contractor shall work on the construction of wingwalls from the furthest point of the wingwall towards the groyne to allow the circulation of construction equipment along the shoreline which will be finally taken by the wingwall structure.</p>	Contractor
24.	<p>General rules for the preservation of animated natural resources – protection of natural habitat 3270</p>	Task Site	<p>e) when reinforcing the bases of slopes and groynes, the Contractor shall not carry out turfing or seeding and shall give preference to openwork solutions (rip-raps), which are easily covered by sludge and vegetation;</p>	Contractor
25.	<p>General rules for the preservation of animated natural resources – protection of natural habitat 3270</p>	Task Site	<p>f) the works on the reconstruction of groynes, the construction of approach wall and dam, and bank reinforcement, carried out in areas where Contractor’s environmental supervision team discovered natural habitat 3270 and the strapwort, must be conducted outside the habitat shaping season, i.e. from October to the end of February.</p> <p>The measures listed in (a) to (f) shall be participated by Contractor’s environmental supervision team.</p>	Contractor
26.	<p>General rules for the preservation of animated natural resources: biological and hydro-morphological elements of water habitat and protected species</p>	Task Site	<p>Measures aimed to differentiate the habitats existing in the bank zone in order to accelerate natural occupation of the river sections under works by the characteristic groups of aquatic organisms</p> <p>1. The Contractor must introduce habitat-generating elements, i.e. oversized boulders:</p> <p>a) on the riverbed in the inter-groyne areas (sets of 4 to 5 boulders, 0.8 to 1.5 m wide and 1.2 to 1.5 m high, on the downstream side of the new or modernised groyne), in those inter-groyne areas whose depth exceeds 1.5 m below the medium-low water (MLW) level, at the deepest point, in such a way that they do not slide down,</p> <p>b) on the riverbed in the spaces behind the longitudinal dam, a set of 4 to 5 boulders, 0.8 to 1.5 m wide and 1.2 to 1.5 m high, at approx. 50 m intervals.</p> <ul style="list-style-type: none"> In total, around 33 boulder sets will be installed. Total minimum quantity of rocks planned is 132 pieces. – at km 581.0–585.7 	Contractor

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			<ul style="list-style-type: none"> In total, around 8 rock sets will be installed. Total minimum quantity of rocks planned is 32 pieces. – at km 604.0–605.0 In total, around 18 boulder sets will be installed behind the longitudinal dam, and 3 boulder sets at groynes 16/615, 18/615 and 20/615. Total minimum quantity of boulders planned is 128 pcs. and 12 pcs., respectively – at km 613.1–614.7 <p>The approximate locations of the planned rock sets are shown on the location plans (Appendix 7a to the EMP).</p> <p>The measure shall be participated by Contractor’s environmental supervision team, who will be consulted on the precise location and quantity of the boulders as assumed in points 1a and 1b.</p>	
27.	General rules for the preservation of animated natural resources: biological and hydro-morphological elements of water habitat and protected species	Task Site	<p>2. Within the inter-groyne areas, the Contractor shall leave any oversized rocks and thick tree waste in areas which do not collide with the planned facilities.</p> <p>The measure shall be participated by the experts from Contractor’s environmental supervision team.</p>	Contractor
28.	General rules for the preservation of animated natural resources: biological and hydro-morphological elements of water habitat and protected species	Task Site	<p>3. During works on groyne reconstruction conducted outside the immediate work area, the Contractor shall preserve any structures that differentiate natural habitats and species habitats which exist within the river channel, such as stones from any washed away groynes, tree trunks, outwashes and the like.</p> <p>The measure shall be participated by the experts from Contractor’s environmental supervision team.</p>	Contractor
29.	General rules for the preservation of animated natural resources: biological and hydro-morphological elements of water habitat and protected species	Task Site	<p>4. In the groyne slope and foot structure, on the stream side of each modernised groyne, the Contractor shall restore the rapids using loose stones of various granulations (5–45 cm) to complement the stone structure of each modernised groyne.</p> <p>The measure shall be implemented according to the instructions of Contractor’s environmental supervision team.</p>	Contractor
30.			<p>5. <i>In the following locations: No. 1 at km 582.4 and No. 2 at km 585.7, the Contractor shall create 2 replacement habitats in the form of oxbows made as bays cutting into</i></p>	

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	<p>General rules for the preservation of animated natural resources: biological and hydro-morphological elements of water habitat and protected species</p>	<p>Task Site</p>	<p>shore, having an irregular oval shape and effectively linked to the main corridor (channel/weir) supplying water to each bay.</p> <p>a) Bay 1 at km 582.4 Basic technical and operational parameters of bay no. 1: - location of the bay: 582.4 km of the river Odra - bay area: ~1031 m² - bay length: ~62 m - bay width: ~21 m - bottom elevation: +16.99m Kr - bay slope inclination: max. 1:2 - bay slope revetment: revetment made from the elevation as in the figure: stakes Ø10 cm L=1.5m 3pcs/1m with fascine 3 x Ø25 cm, geogrid h=100 mm minimum width 0.8 mm filled with humus, laid on geotextile. - inlet channel length: ~116 m - channel width in the bottom: ~6 m - elevation of the bottom in the overflow axis: +17.89 m Kr - inclination of channel slopes: max. 1:3</p> <p>Geotextile with the following parameters should be used under the geogrid: - permeability (with 20 kPa load) min. 1 l/s - surface density min. 600 g/m² - tensile strength min. 27.0 kN/m - CBR test min. 4.5 kN</p>	<p>Contractor</p>
<p>31.</p>			<p>b) Bay 2 at km 585.7 Basic technical and operational parameters of bay no. 2: - location of the bay: 582.4 km of the river Odra - bay area: ~931 m² - bay length: ~47 m - bay width: ~25 m - bottom elevation: +16.35m Kr - bay slope inclination: max. 1:2 - bay slope revetment: revetment made from the elevation as in the figure: stakes Ø10 cm L=1.5m 3pcs/1m with fascine 3 x Ø25 cm, geogrid h=100mm minimum width 0.8 mm filled with humus, laid on geotextile. - inlet channel length: ~22 m</p>	

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			<ul style="list-style-type: none"> - channel width in the bottom: ~6 m - elevation of the bottom in the overflow axis: +17.25 m Kr - inclination of channel slopes: max. 1:3 <p>Geotextile with the following parameters should be used under the geogrid:</p> <ul style="list-style-type: none"> - permeability (with 20 kPa load) min. 1 l/s - surface density min. 600 g/m² - tensile strength min. 27.0 kN/m - CBR test min. 4.5 kN <p>Measure stated in items 5 (a) and (b) shall be participated by Contractor's environmental supervision team.</p> <p>The location of the planned bays listed in items 5 (a) and (b) is shown on the site plans (Appendix 7b to the EMP).</p>	
32.	General rules for the preservation of animated natural resources – protective metaplantation of the fringed water lily (<i>Nymphoides peltata</i>)	Task Site	<p>6. Before starting the works, the Contractor shall relocate any patches of immersed plants with floating leaves (having an area of over 10 m²) and fragments of patches (up to a half of their area) of rush plants covering the bed of Odra (in particular nymphaeids, including all identified endangered stands of the fringed water lily), from the work area to a possibly close location with similar site conditions (with a particular focus on the areas at the groyne root and inter-groyne spaces between the modernised groynes and sections cut off by a dam). The Contractor shall relocate the plants with a method that enables relocation along with the accompanying invertebrates and the collection of unionids (see Appendix 7d to the EMP and items 34-35 of Appendix 1), by transporting them in adequately moist conditions. The Contractor shall carry out the replanting in compliance with the following rules:</p> <ul style="list-style-type: none"> a) the works shall be performed during possibly low water levels, which will allow a quick process; b) when plants are put into their ecosystem foundation, water depth should not exceed 0.7 m, as the works must be carried out with precision; c) any new position shall be located in the downstream part of the river current, since the fringed water lily is very sensitive to water stream; d) the position should not be located in the immediate zone of rush plants, since one of the reasons for the extinction of previous patches of fringed water lily was that its phytocoenosis had been eliminated by expansive rush communities, which 	Contractor

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			<p>caused the extinction of open and quickly heating water surfaces; additionally, the position must be located in a place covered by rush and protecting against strong wind that causes water waves;</p> <p>e) the river bed at that position must be sandy with minimum share of gravel fractions and a small layer of organic deposits, in order to allow the plant to take roots;</p> <p>f) the works shall be carried out in an optimum period, i.e. at the turn of June and July, which will provide an adequately long period for the relocated plants to grow in new conditions, taking into account the ecological conditions in each year.</p> <p>The measures specified in point 6 (a) to (f) shall be participated by Contractor's environmental supervision team, which must in particular conduct a survey of the positions of fringed water lily, develop a meta-plantation scheme in the form of a Quality Assurance Plan that must be approved by the Engineer, make appropriate arrangements with environmental protection services, and carry out direct environmental supervision over the works.</p>	
33.	General rules for the preservation of animated natural resources – protection of the fringed water lily (<i>Nymphoides peltata</i>)	Task Site	7. Works on the groynes neighbouring the sites of the fringed water lily may only be carried out after the growing season, on October and November.	Contractor
34.	General rules for the preservation of animated natural resources – protection of water mollucs and ichtiofauna	Task Site	8. Before the works, the Contractor shall relocate any bivalves from the <i>Unionidae</i> family from the site to safe locations situated upstream of the current work site, in order to preserve the protected species of that group (such as the swan mussel <i>Anodonta cygnea</i> or depressed river mussel <i>Pseudanodonta complanata</i>), in the following manner: <p>a) no later than one week prior to the commencement of works that imply the taking of riverbed for the modernisation of groynes and their wingwalls, the construction of bank, lead-in pier or longitudinal dam revetment, it is required to collect any unionids from the riverbed by wading (walking with waders put on) using manual net dippers with 5 mm mesh, through shallow waters along the groyne (sandy and silty areas, among loose plants or stones coming from damaged rip-rap), and in areas being more than 0.7 m deep, by repetitive drawing of a dredger along the groyne sides down to 3–5 m from the edge of the existing rip-rap at the groyne</p>	Contractor

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			<p>side (deeper areas with sandy or silty bed and in small clumps of immersed plants); the dredger will be handled from a boat and have a 5 mm mesh, inlet dimensions of approx. 100 x 30 cm and a net length of approx. 80 cm;</p> <p>b) the bivalves shall be placed in water tanks and immediately moved to safe locations situated upstream of the current place of work (depth: approx. 1 m, free current or stagnant water, sandy or silty riverbed, preferably close to plants) and released into water,</p>	
35.	General rules for the preservation of animated natural resources – protection of water mollucs and ichtiofauna	Task Site	<p>c) when relocating the plant patches (see items 32-33 of Appendix 1 to the EMP), any unionids noticed in the spoil shall also be collected and relocated to the target area together with the mass of replanted vegetation (transport in containers with plants and water, transport time not longer than 12–24 hours).</p> <p>The measures listed in point 8 (a) to (c) shall be participated by Contractor’s environmental supervision team.</p>	Contractor
36.	General rules for the preservation of animated natural resources – protection of ichtiofauna	Task Site	<p>Measures to protect ichtiofauna</p> <p>a) The earthworks conducted in the river channel on the modernisation and construction of groynes must be carried out from July 16th to the end of February, which takes into account the periods of spawning, growth and hatching of fish such as the spined loach <i>Cobitis taenia</i>, European bitterling <i>Rhodeus amarus</i>, white-finned gudgeon <i>Romanogobio bellingi</i>, asp <i>Aspius aspius</i>, <i>Sabanajewia aurata</i>, common barbel <i>Barbus barbus</i>, stone loach <i>Barbatula barbatula</i>, and the spring migration of the Atlantic sturgeon <i>Acipenser oxyrinchus</i> and river lamprey <i>Lamptera fluviatilis</i>,</p>	Contractor
37.	General rules for the preservation of animated natural resources – protection of ichtiofauna	Task Site	<p>b) during the works involving the demolition of groynes and the placement of new structures in the riverbed, performed between October and December, i.e. during the migration of bi-environmental salmonids and the river lamprey, the Contractor shall use curtains restricting the work site to approx. 10 m around the facilities under works,</p>	Contractor
38.	General rules for the preservation of animated	Task Site	<p>c) any construction works carried out from October to December, which interfere in the river bed (such as the demolition of damaged groynes or the placement of new structures in the bed), shall be conducted by the Contractor according to the</p>	Contractor

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	natural resources – protection of ichtiofauna		<p>following rules, based on the results of monitoring of suspended matter concentration and water oxygenation (see item 152 of Appendix 2 to the EMP):</p> <ul style="list-style-type: none"> - the monitoring of suspended matter concentration must be conducted on a daily basis by taking measurement after work that lasted for at least 2 hours (at a normal rate). Measurements of dissolved oxygen concentration will be carried out in parallel with the measurement of suspended matter concentration. The oxygenation shall be measured in the centre of water column, approx. 1.0 m under water table, - if the measured suspended matter concentration exceeds 200 mg/l or the dissolved oxygen concentration is < 5 mg/l of O₂ (at monitoring points located approx. 200 m downstream of the work area), the works shall be suspended for 2 hours, and then the measurement must be repeated. The works shall be resumed if the values indicated in such repeated measurement drop below 200 mg/l, - if the concentrations are >400 mg/l for suspended matter or <5 mg/l for O₂, the works must be suspended for min. 2 hours, and in case of <3 mg/l of O₂ the works must be immediately stopped for at least 24 hours until the concentration drops below 200 mg/l, which must be confirmed by an additional measurement; - marks shall be made at monitoring points located approx. 200 m downstream of the work area. <p>Resumption of works after each break caused by the excess of suspended matter concentration will depend on the results of the next survey carried out as part of the investment monitoring.</p> <p>The monitoring of suspended matter and oxygen concentrations in water must be carried out as required in item 152 of Appendix 2 to the EMP.</p>	
39.	General rules for the preservation of animated natural resources – protection of ichtiofauna	Task Site	d) The Contractor shall carry out works during the day in order not to disturb any activities, including the migration of nocturnal species (e.g. eel).	Contractor
40.	General rules for the preservation of animated natural resources: biological	Task Site	<p>Supplementary restocks with the burbot (<i>Lota lota</i>) as a measure to compensate for the losses in the spawning season (winter).</p> <p>Restocks:</p>	Contractor, throughout the term of the Contract (including the Defects Notification Period)

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	elements of water habitat – ichtiofauna		<p>1. burbot (<i>Lota lota</i>)</p> <p>a) every year for the period of works and for 3 years thereafter*, the Contractor in coordination with fishery users shall introduce restocking material derived from spawner coming from Odra river basin in a quantity of 250,000 specimens of burbot into the body of surface water “Odra from Nysa Łużycka to Warta”;</p> <p>b) the areas of restocking must be located at least 3 km from the work site, so that the spawners are not introduced into the river sections where conditions are disturbed by the works,</p> <p>c) the place and period of restocking shall be agreed each time with a fishery user and environmental supervision body (during the period of works),</p> <p>d) each restocking shall be reported to the State Water Holding Polish Waters Regional Water Management Authority in Szczecin, and shall be supervised by an ichtiologist.</p> <p>* The measure shall be carried out by the Contractor throughout the term of the Contract (including the Defects Notification Period), the remaining part shall be under the responsibility of the Investor (see column “Entity responsible”).</p>	Investor, after the term of the Contract
41.	General rules for the preservation of animated natural resources – protection of ichtiofauna	Task Site	<p>Catching protected fish species</p> <p>If any protected fish species are found in the bank area of the work site, such as the spined loach, European bitterling or white-finned gudgeon, which live in the submerged and flowing hydrophytes, the Contractor shall catch them and release to the river upstream of the area of works.</p> <p>To carry out the measure, three* electrical fishing cycles (at 1-hour intervals) from a boat must be conducted along the banks and the top of the existing groyne or at the section running along the planned bank revetment, as well as within the planned lead-in pier and dam, 1 day prior to the works, according to the following requirements:</p> <ul style="list-style-type: none"> • the fishing shall be carried out according to standard PN-EN14011, with a validated power generator, and supervised by an ichtiologist; • the fishing crew manager shall hold a qualification certificate for the operation of electrical fishing equipment; • common species of fish (such as the roach, bleak, white bream or perch) shall be released to the river; • specimens under various protection statuses: spined loach, <i>Sabanejewia aurata</i>, European bitterling and white-finned gudgeon (all gudgeons must be caught and relocated, as the identification of that species in field conditions is difficult), stone 	Contractor

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			<p>loach, European weatherfish, lampreys, asp and common barbel, shall be placed into containers with oxygenated water and relocated to similar habitats outside the site of works (upstream the river);</p> <ul style="list-style-type: none"> any foreign species caught, in particular the round goby and other invasive species from the Gobiidae family, as well as the Chinese sleeper and stone moroko, may not be legally released to water but must be annihilated in a humanitarian manner. <p>* If no species under various protection statuses are found, it is allowed to carry out one electrical fishing procedure if approved by the ichtiologist from Contractor’s and Engineer’s environmental supervision team.</p> <p>The measure shall be participated by Contractor’s environmental supervision team, who must obtain all relevant permits required to carry out the measure.</p>	
42.	General rules for the preservation of animated natural resources – protection of chiropterofauna	Task Site	<p>Time limitations arising from the protection of bats</p> <p>a) To minimise the impact of the Task on bats, any works carried out at a site of high concentration of bats (km 585.5–586, 604.0, 604.5–605.0, 614.0–615.0) must be conducted in the period of reduced activity and wintering of bats, i.e. from August 15th to April 30th.</p>	Contractor
43.	General rules for the preservation of animated natural resources – protection of chiropterofauna	Task Site	<p>b) The clearing of cavity trees (discovered at the following sites: English oak: 1 specimen at km 585.68; white willow: 3 specimens; European white elm: 1 specimen at km 606.15–614.52) must be obligatorily carried out in the period of reduced activity and wintering of bats, i.e. from August 15th to April 30th, taking into account the nesting season of birds.</p>	Contractor
44.	General rules for the preservation of animated natural resources	Task Site	<p>Habitat-forming measures – creation of a replacement habitat (oxbow) in the area behind the dam</p> <p>Construction of a longitudinal dam (at section 3: km 613.1–614.5) shall be carried out along with the installation of two pipes with a diameter of 1000 mm in the dam structure on each groyne field, removal of some groynes (on approx. 30 m) in the middle part of the dam and the creation of an open connection of the area behind the dam with the downstream side in order to improve the oxygen conditions in the reservoir, allowing for the migration of fauna (invertebrates and fish), reducing the tendency of the reservoir to silt and overgrow,</p>	Contractor

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			<p>and to prevent the death of benthofauna taxa and the loss of fish. In order to diversify the habitat structure, groups of 4-5 oversized boulders will be introduced into the spaces behind the dam, approx. every 50 m in the existing depressions.</p> <p>The measure shall be participated by Contractor’s environmental supervision team.</p> <p>The location of the measure is shown on the site plan in Appendix 7a (Figure 2) to the EMP.</p>	
45.	<p>General rules for the preservation of animated natural resources – protection of herpetofauna</p>	Access roads	<p>Limiting the mortality of animals when using land roads</p> <p>If land roads are used during significant migration of amphibians, then in the migration season it is required to secure the roads with fences. Amphibians shall be relocated to the other side of the fences. Once the Contractor determines the work scheme, Contractor’s environmental supervision team shall decide whether it is necessary to leave the fences by the roads.</p> <p>The measure shall be participated by Contractor’s environmental supervision team.</p>	Contractor
46.	<p>General rules for the preservation of animated natural resources</p> <p>Protection of earth surface and landscape</p>	Task Site	<p>Protection of natural habitats and the habitats of protected animal and plant species</p> <p>a) In order to protect various environmental compartments against the adverse effect of the Task, during the works (involving earthworks, materials storage and machinery circulation) the Contractor shall take into account the locations of natural habitats and the habitats of protected animal and plant species by fencing such locations (e.g. with forest netting) or by Contractor’s environmental supervisors clearly signing those locations in the field (e.g. with an information board) at the following kilometres*:</p> <p>- within natural habitats:</p> <ul style="list-style-type: none"> • section 1: 3150 – approx. km 581.0; 583.7; 6430 – approx. km 581.0; 582.1; 583.2; 584.5; 584.8; 91F0 – approx. km 581.0–582.6; km 585.4–585.7; 6510 – approx. km 582.7–583.7 8 (Appendix 8a); • section 2: 6430 – approx. km 602.5; 603.3; 606.3–606.5; 606.9; 6440 – approx. km 608.6–609.5 (Appendix 8b); • section 3: 615.7–615.8; 616.9–617.3 (Appendix 8c); <p>- within the habitats of protected species of plants and animals: km 616.4; km 616.9–617.3; km 616.5; km 608.6–609.4; km 608–613, and km 615.3–615.6 (Appendices 9a, 9b, 9c);</p>	Contractor

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			* With regard to the kilometres exceeding the immediate work sites of the Task, the requirement applies to materials storage places or access roads.	
47.	General rules for the preservation of animated natural resources Protection of earth surface and landscape	Task Site	b) The Contractor shall care for the condition of the protective measures specified in item a. If they are damaged, the Contractor shall carry out proper repairs. The activities in items 46 a and b will be carried out under the supervision of a competent expert of the Contractor’s environmental supervision team, who will indicate the method of protection minimising the risk of injury to animals (e.g. by getting entangled in the net).	Contractor
48.	General rules for the preservation of animated natural resources	Task Site	Protection of birds from the sparrow family which nest in the rushes and grey willows on the bank Before starting works at a given groyne, bank reinforcement, approach wall or dam, the Contractor shall remove any plants covering the groyne within 30 m from its base, outside the breeding season, i.e. from August to the end of February. The area of plant clearing within 30 m from the groyne base to protect birds from the sparrow family is shown on the layout plans in Appendix 7a to the EMP.	Contractor
49.	General rules for the preservation of animated natural resources – protection of ornitofauna	Task Site	Counteracting the limitation of availability of potential breeding habitats for <i>Iari</i> and <i>charadrii</i> Prior to the commencement of the modernisation works, the Contractor shall execute at least two low “nursery” floating islands with a total area of approx. 250 m ² outside the riverbed, i.e. in the vicinity of Chlewice, on plot no. 272 Chlewice precinct, Boleszkowice commune, Myśliborski district with the following assumptions: construct low floating islands without a „sill” protruding outside, above the water, in a cellular concrete structure, with positive buoyancy, quickly overgrowing with vegetation. The surface of the platform will be covered with a few centimetres’ layer of soil and a special biotextile for the	Contractor, throughout the term of the Contract (including the Defects Notification Period)

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			<p>development of plants, so that it quickly fits into the landscape and becomes settled by ornithofauna.</p> <p>Additional platforms will be located next to breeding platforms already in operation. Detailed location of the platforms and the requirements for the functionality of the islands will be indicated by the host of the waters being sites for the breeding islands requiring the addition of the low floating islands. The Contractor together with its environmental supervision team shall prepare and submit to the Engineer for approval the measure implementation method to be made as a Quality Assurance Plan.</p> <p>Note: The measure is covered by the Option in accordance with Sub-Clause of the Particular Conditions of Contract (Part 3 of the Bidding Document)</p>	
50.	General rules for the preservation of animated natural resources – protection of herpetofauna	Task Site	<p><i>Training in the identification of domestic snakes – protection of the grass snake</i></p> <p>Prior to the works, a herpetologist from Contractor’s environmental supervision team shall train the workers who will carry out the Task in the identification of domestic snakes.</p> <p>The objective is to minimise the mortality of the grass snake. Most people are afraid of snakes, including those completely safe and defenceless such as the grass snake, and often kill them thinking it is the common viper. The training may change that wrong approach at least for some field workers.</p>	Contractor
03 – REQUIREMENTS FOR HANDLING EARTH MASSES ACQUIRED DURING WORKS				
51.	Rules of handling soil	Task Site	<p><i>Handling earth masses</i></p> <p>It is required to apply the following rules of handling earth masses, including deposits extracted from the river channel:</p> <ul style="list-style-type: none"> a) Any excavated soil must be used for land remediation and for shaping the landscape, except earth masses acquired at the sites of invasive species (see item 115 of Appendix 1 to the EMP). Any excess soil shall be moved away using floating equipment and then handled according to relevant provisions of the Waste Management Act of 14 December 2012; b) if any contaminated soil is found (soil which exceeds the admissible substance concentration – see measure in item 52; according to currently applicable regulations, i.e. the Waste Management Act, the Environmental Protection Law, 	Contractor

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			<p>and related implementing acts), it shall be removed and given to entities holding relevant permits for their further management;</p> <p>c) earth masses acquired at the sites of invasive species shall be removed and given to entities holding relevant permits for their further management;</p> <p>d) the manner of handling the soils and sediments will be presented by the Contractor in the Land Management Plan (described in detail in chapter 6.14 of the EMP) and submitted for the Engineer’s approval before commencing earthworks;</p> <p>e) The Contractor shall obtain all the necessary permits required for the management of earth masses, which includes the execution of analyses and tests required to obtain such permits (as per legal requirements and/or the requirements of the earth mass recipient).</p>	
52.	Rules of handling soil	Task Site	<p>Earth mass quality control</p> <p>If ongoing assessment and verification of earth mass quality (see monitoring measure in item 154 in Appendix 2 to the EMP) reveals any untypical parameters and appearance of excavated soil (such as its colour, odour or consistency):</p> <ul style="list-style-type: none"> • The Contractor shall conduct control testing and determine the quality of the soil batch whose parameters and appearance have changed, in accordance with applicable regulations (i.e. the Waste Management Act, the Environmental Protection Law, and related implementing acts). The tests must be conducted by a laboratory accredited for this type of testing. • If any contaminated soil is found, the Contractor shall handle such a soil batch in accordance with item 51b of Appendix 1 to the EMP. • The Contractor shall ensure temporary storage of any batch of soil which is suspected to be contaminated, until the results of laboratory tests are obtained. The method and requirements for such temporary storage of soil shall be defined by the Contractor <i>in the Land Management Plan</i>, which must be approved by the Engineer prior to the works specified therein (see chapter 6.14 of the EMP). The adopted method may not cause environmental pollution. 	Contractor
53.	General rules for the preservation of animated natural resources Protection of surface water	Task Site	<p>No storage of excess earth mass in inter-groyne areas</p> <p>No excess earth mass or other material derived from the reconstructed groynes may be stored within the river channel, inter-groyne areas or the terrace of Odra river. Inter-groyne areas must remain intact during the works as far as possible.</p>	Contractor

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54.	Rules of handling soil General rules for the preservation of animated natural resources Protection of surface water	Task Site	No relocation of earth mass in the river channel The Contractor is not allowed to conduct dredging works or relocate/move/push earth mass in the river channel.	Contractor
55.	Rules of handling soil	Task Site	Rules of transporting and reloading of earth mass Any excess earth mass generated during works may be transported by land or water using transport equipment approved by the Engineer. Any loading, transport or unloading of material shall be carried out according to the HASP (item 122 of Appendix 1 to the EMP), OHS regulations (items 126 and 149 of Appendix 1 to the EMP) and regulations concerning road and waterway traffic. The method of reloading works, including the requirements for temporary storage location for earth mass, shall be defined by the Contractor in the <i>Land Management Plan</i> , which must be approved by the Engineer prior to the works specified therein (see chapter 6.14 of the EMP). The adopted technology may not cause environmental pollution in the adjacent areas.	Contractor
04 – REQUIREMENTS FOR TRAFFIC MANAGEMENT AT THE TASK SITE				
56.	Protection of earth surface and landscape	Task Site	Transport of construction materials to temporary storage locations The Contractor shall deliver stone to temporary storage locations using local barges.	Contractor
57.	Protection of earth surface and landscape	Task site and waterways	Transport of construction materials from temporary storage locations to work sites The Contractor shall transport stone from temporary storage locations to work sites by pontoons and low-draught barges, having loaded such quantity of stone that allows for free manoeuvring.	Contractor
58.			Requirements for the use of access roads running to the Task site including surroundings	Contractor

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			The use of land access roads running to the Task site is subject to the following requirements:	
59.	Assuring human health and safety Protection of tangible goods Protection of Earth surface	Task site and land access roads	a) The Contractor shall prepare traffic arrangement plans for the duration of works according to the Technical Specifications and requirements of road managers concerning transport and use of such roads,	
60.			b) The Contractor must agree the traffic arrangement plans with the managers of the roads to be used. The Contractor must arrange traffic according to the plans agreed (which includes the signage and protection of work site, the signage of any divergence, the recommended road signage due to any modification of traffic arrangement, etc.),	
61.			c) prior to the works, the Contractor shall submit to the Engineer for approval the traffic arrangement plans agreed with the road managers and traffic management authority,	
62.			d) based on demands and work progress, the Contractor shall keep the traffic arrangement plans up-to-date (any updates must be agreed with the road managers and traffic management authority, and approved by the Engineer),	
63.			e) access routes shall be signed according to applicable law and arrangements with the managers of the roads to be used by the Contractor. The Contractor shall check the signage on a regular basis and restore or replenish it immediately in the event of destruction or theft,	
64.			f) It is required to keep clean and in proper condition any paved areas at the site back-up facilities used for the circulation of vehicles transporting construction materials,	
65.			g) The Contractor must prepare photographic documentation of the whole Task site and access roads, with a particular focus on the condition of roads and buildings located near the roads used for transporting construction materials,	

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			<p>survey control points, any type of installation, and other types of facilities such as signage and marking, navigation signs, information boards, cultural heritage sites, etc., caused by the Contractor or its Subcontractors during the works. The Contractor shall also be responsible for restoring the capacity of ditches and drainage systems within the work area and at the transport roads used, in the event of damage caused by the works or related transport,</p>	
66.			<p>i) The Contractor shall repair any damage at its own expense and, where necessary, carry out other works ordered by the Engineer,</p>	
67.			<p>j) The Contractor shall observe any statutory restrictions regarding axle load when transporting materials and equipment to and from the Task site. The Contractor shall obtain from authorities all permits required to transport any untypical load, and shall notify the Engineer every time in the event of such transport.</p>	
68.	<p>General rules for the preservation of animated natural resources – protection of herpetofauna</p>	<p>Task Site – section at km 604.0–605.0</p>	<p>Conditions of used of the road located on the site, at km 604.0–605.0</p> <p>To minimise the impact of the works on herpetofauna, at km 602.1 it is required to visibly sign the breeding site of the moor frog located near the levee so that it is not damaged by construction equipment when using the road.</p> <p>Measure participated by Contractor's environmental supervision team.</p>	
69.	<p>Protection of human health and safety Protection of tangible goods</p>	<p>Task site and waterways</p>	<p>Safety requirements for water transport equipment</p> <p>Water transport equipment is subject to the following requirements:</p> <p>a) transport equipment (floating sets) and floating equipment must be in accordance with relevant inland navigation regulations applicable in the Republic of Poland,</p>	<p>Contractor</p>
70.			<p>b) the parameters of transport equipment (floating sets) and floating equipment must suit the conditions arising from the current class of waterway and to the water level on a given waterway during the works,</p>	

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71.			c) the use of vessels during the works must be agreed with the waterway manager and the competent Director of the Inland Waterways Authority,	
72.			d) prior to the works, it is required to prepare a Safe Navigation Plan (Instructions for Operation and Circulation of Vessels during Works), which must be approved by the Director of the Inland Waterways Authority in Szczecin and agreed with the Engineer,	
73.			e) prior to the works, it is required to sign the work site and waterway to warn about any existing hazards and restrictions in water traffic. The method of signing and the locations of signs shall be agreed with the Director of the Inland Waterways Authority in Szczecin and the competent waterway administration body	
74.			f) the schedule and arrangement of works must include any presence of low water and the risk of adverse navigation conditions.	
75.	Protection of earth surface and landscape / Noise protection / Assuring human health and safety	Task Site	<p>Reduction of dusting and noise when transporting materials</p> <p>When transporting construction materials by a land road, it is required to:</p> <ul style="list-style-type: none"> a) use technical and organisational measures that ensure the cleanliness of access roads running to the materials storage places and site back-up facilities, b) when passing through developed areas, it is absolutely necessary to maintain appropriate speed of vehicles, c) use technical and organisational measures aimed at reducing noise, <p>properly secure any transported loads to minimise any nuisance (use adequate transport shields, e.g. to reduce dusting).</p>	Contractor
76.	Assuring human health and safety	Task Site	<p>Maintaining the admissible load capacity of transport equipment</p> <p>When transporting materials and carrying out works from water side (using floating equipment), it is required to observe the admissible load capacity of vehicles, barges and other floating equipment.</p>	Contractor

05 – ARRANGEMENT OF CONSTRUCTION SITE, BACK-UP FACILITIES AND STORAGE YARDS				
77.	General rules for the preservation of animated natural resources Protection of ground and groundwater	Task Site	<p>Proper arrangement of Task sites</p> <p>The Task site should be kept in order, and the works should be properly arranged.</p>	Contractor
78.	General rules for the preservation of animated natural resources Protection of ground and surface and ground water	Task Site	<p>Providing the sites posing the risk of contamination with materials and equipment for spillage elimination</p> <p>The Contractor shall provide vessels with materials and equipment used for spillage elimination, such as flexible barriers, sorption barriers or sorbents (mats, rolls, cushions, sleeves). Materials for neutralising spillage (in particular oil derivatives) should also be provided in the areas of works and storage of construction materials.</p>	Contractor
79.	Protection of ground and surface and ground water	Task Site	<p>Paving storage yards*</p> <p>The Contractor shall pave storage yards (temporary places of materials storage), for example with road slabs.</p> <p>* This also applies to any onshore back-up facilities if such are arranged by the Contractor.</p>	Contractor
80.	Protection of earth surface and landscape Assuring human health and safety	Task Site	<p>Arrangement of amenities</p> <p>The Contractor shall arrange a floating amenity area. Ship crews and equipment operators will be provided with amenity areas on the vessels where they work. Other employees will use amenity areas on a houseboat (floating hotel) or a floating pontoon (e.g. W-Z type) equipped with a set of containers.</p>	Contractor

06 – REQUIREMENTS FOR WASTE MANAGEMENT				
81.	Assuring human health and safety Protection of groundwater Protection of earth surface and landscape	Task Site	<p>Storage of hazardous substances and materials</p> <p>If any hazardous substances or materials are stored at the site back-up facilities, they must be adequately secured so that they may not be accessed by unauthorised persons, and relevant warning plates must be provided.</p> <p>Any hazardous waste must be sorted and stored in designated containers placed on a paved ground protected against unauthorised access until the waste is handed to an entity holding a relevant permit for neutralisation.</p>	Contractor
82.	p General waste handling procedure Protection of groundwater	Task Site	<p>General requirements for waste management</p> <p>Waste should be managed according to the following rules:</p> <ul style="list-style-type: none"> a) works must be arranged in a way to minimise the quantity of waste generated and to minimise its adverse impact on the environment, b) any waste generated while performing the Task should be sorted and stored separately in containers or separated and dedicated locations (including on barges), in conditions that prevent dusting and the spillage of light fractions and their adverse impact on the environment, c) it is required to provide regular waste collection by entities duly authorised for its further management, d) any ship waste containing oils or lubricants, load waste and waste generated on vessels or other floating equipment, as well as wastewater and domestic waste, must be collected within the vessels in a way preventing the release of contaminants to the environment, e) ship waste shall be handed to specialised ship waste collection points, f) The Contractor shall obtain all permits required for waste management, which includes the execution of any analyses and tests required to obtain such permits and to determine the waste characteristics, as per legal requirements and/or the requirements of the waste recipient. <p>Waste management shall be carried out in accordance with the Waste Management Act of 14 December 2012, the Inland Waterways Act of 21 December 2000, and the <i>Waste Management Plan</i> referred to in item 123 of Appendix 1 to the EMP.</p>	Contractor

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83.	General waste handling procedure Protection of groundwater	Task Site	<p>Management of waste produced by personnel</p> <p>Any waste produced by personnel shall be collected in designated bags and containers. The Contractor shall ensure that waste is then collected and utilised according to environmental regulations by specialised waste collection companies. Particular attention must be paid to regular collection of waste produced by personnel in the immediate vicinity of the river channel, so that the channel is not contaminated.</p>	Contractor
84.	Handling of domestic wastewater Protection of groundwater	Task Site	<p>Ensuring appropriate conditions of hygiene within the Task site</p> <p>The Task site shall be provided with tight toilets in a required quantity (including mobile toilets if necessary) and with a required quantity of personal care products, and it is required to train all personnel in maintaining appropriate conditions of hygiene within the Task sites and their immediate surroundings. Contractor’s personnel should satisfy their physiological needs only in dedicated places.</p>	Contractor
85.	Handling of domestic wastewater Protection of groundwater	Task Site	<p>Handling of domestic wastewater</p> <p>Domestic wastewater should be collected in tight septic tanks and collected on a regular basis by authorised entities.</p>	Contractor
07 – REQUIREMENTS FOR THE CLEARANCE AND PRESERVATION OF TREES AND BUSHES				
86.	General rules for the preservation of animated natural resources – protection of ornithofauna	Task Site	<p>Restriction for tree and bush clearing</p> <p>Trees and bushes (only the selected specimens) shall be cleared outside the bird breeding season, with the stipulation that it may be conducted in the said protection period where it is impossible to adjust the clearing to the protection period due to technical reasons, but at least 3 days prior to any clearing to be conducted in the breeding season, the ornithologist from Contractor’s environmental supervision team must check the site to confirm the absence of nests or hatches of birds.</p> <p>The said derogation does not apply to cavity trees (discovered at the following sites: English oak: 1 specimen at km 585.68; European white elm: 2 specimens at km 614.52), which may only be cleared in the period of reduced activity and wintering of bats, i.e. from August 15th to April 30th, taking into account the nesting season of birds.</p>	Contractor

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87.	General rules for the preservation of animated natural resources – protection of trees	Task Site	<p>Protection of trees growing near the works</p> <p>Any trees which are not to be cleared but grow within the Task site and are exposed to damage caused by the operation and circulation of equipment must be protected by the Contractor through:</p> <ul style="list-style-type: none"> a) shielding any trunks of trees growing in the immediate vicinity of earthworks, e.g. by installing trunk shields made of wooden boards around the whole trunk at least to 1.5 m, b) where possible, conducting manually any earthworks carried out within the root system, c) covering any exposed tree roots with mats made of straw or bag fabric, or with turf, to protect them against excessive drying (in summer) or freezing (in winter), d) not storing any construction materials or excavated soil under tree limbs, in order to prevent gas transfer between the air and the soil, which may cause the roots to decay and die out e) preventive trimming of tree crowns to prevent their damage in the machinery and equipment garaging area. 	Contractor
88.	General rules for the preservation of animated natural resources – protection of trees	Task Site	<p>Taking adequate measures in case of damage to trees</p> <p>If any tree is damaged, it is required to immediately carry out necessary maintenance works to limit the effects of damage, which must be supervised by a phytosociologist/botanist from Contractor's environmental supervision team.</p>	Contractor
89.	General rules for the preservation of animated natural resources – preservation of the protected beetle species	Task Site	<p>Assessment for the presence of beetle species prior to tree clearing</p> <p>Prior to any tree clearing, it is required to meet the following requirements:</p> <ul style="list-style-type: none"> a) any clearance of trees with a circumference exceeding 100 cm (measured at 130 cm) should be preceded with a check by an entomologist from Contractor's environmental supervision team for the presence of any protected beetle species existing within each such tree, b) if any tree is inhabited by a protected species of beetle, the Contractor shall obtain the permits for derogations from the bans applicable to protected animal species, required under the Nature Conservation Act of 16 April 2004, c) the Contractor shall comply with the requirements stated therein under the supervision of an entomologist from Contractor's environmental supervision team, d) the Contractor shall prepare relevant reports on the implementation and scope of the activities subject to the derogation from the bans applicable to protected animal species. 	Contractor

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90.	General rules for the preservation of animated natural resources – protection of chiropterofauna	Task Site	<p>Assessment for the presence of bat species prior to tree clearing</p> <p>To minimise any loss of protected bat species, which may exist in the tree hollows, prior to clearing the following requirements must be fulfilled:</p> <ul style="list-style-type: none"> a) any clearance of trees with a circumference exceeding 100 cm (measured at 130 cm) should be preceded with a check by a chiropterologist from Contractor’s environmental supervision team for the presence of bats within each such tree, b) if any bats are found within the trees intended for clearing, prior to the clearing the Contractor shall obtain necessary permits for derogation from the bans applicable to protected animal species, issued under the Nature Conservation Act of 16 April 2004, c) any further works at the sites of protected bat species shall be supervised by a chiropterologist from Contractor’s environmental supervision team and conducted according to relevant requirements stated in the administrative decisions issued under the Nature Conservation Act of 16 April 2004, d) the Contractor shall prepare relevant reports on the implementation and scope of the activities subject to the derogation from the bans applicable to protected animal species. 	Contractor
08 – REQUIREMENTS FOR THE PREVENTION OF ENVIRONMENTAL POLLUTION				
91.	Protection of soil, ground and surface and ground water	Task Site	<p>Prevention of spillage and the contamination of soil, ground and water</p> <p>To prevent the contamination of soil, ground and water during the arrangement and execution of works, the following measures must be taken:</p> <ul style="list-style-type: none"> a) avoid any spillage and seal any potential sources of contamination: containers and pavements used for reloading and refuelling, b) to prevent any accidental leakage of hazardous oil derivatives and other substances, it is required to use adequate protective measures and procedures involving proper storage of substances in specified quantities, c) materials and equipment shall be stored in locations adequately protected against the contamination of groundwater environment. 	Contractor

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92.	Protection of soil, ground and surface and ground water	Task Site	<p>Prevention and measures concerning the release of contaminants to groundwater environment</p> <p>The Contractor shall carry out the Task in a way to mitigate the risk of any contaminants penetrating to groundwater environment, which applies in particular to oil derivatives. In the event of spillage of an oil derivative, the following rules of procedure shall be applied:</p> <ul style="list-style-type: none"> a) any leakage must be immediately eliminated and neutralised, and any contaminated soil layers must be immediately removed and managed according to regulations in force; b) any areas covered by leaked oil derivatives must be reinstated to their original condition; c) in the event of leakage to water, immediately contain the spread of contaminants and remove the oil derivative from water surface. 	Contractor
93.	Protection of soil, ground and surface and ground water	Task Site	<p>Spillage prevention procedure</p> <p>Given the risk of leakage of oil derivatives, prior to the works the Contractor shall prepare and present to the Engineer for approval a so-called spillage prevention procedure (see section 6.14 of the EMP) and procure its implementation.</p>	Contractor
94.	Protection of soil, ground and surface and ground water	Task Site	<p>Rules of fuel supply</p> <p>Fuel shall be supplied to the site by bunkering barges filled with fuel in a dedicated location with properly equipped quays, and once the barge arrives at the site, fuel shall be transferred to pushboats and temporary mobile fuel stations installed on pontoons provided with diggers.</p>	Contractor
95.	Protection of soil, ground and surface and ground water	Task Site	<p>Rules of operating a mobile fuel station</p> <p>Mobile fuel station shall be installed in a sealed bath to avoid the spillage of fuel on the pontoon deck, and the vessels shall be provided with materials and equipment for spillage elimination such as flexible, pneumatic or sorption barriers and sorbents (mats, rolls, cushions, sleeves).</p>	Contractor
96.	Protection of soil, ground and surface and ground water	Task Site	<p>Rules of refuelling machinery</p> <p>Machines and vehicles may only be refuelled in dedicated locations. When refuelling, the machine and vehicle operation manuals must be observed. Refuelling should be carried out using mobile or fixed fuel dispenser points with appropriate safeguards such as a sorbent station for eliminating potential fuel leaks and spills to the ground.</p>	Contractor

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97.	Protection of soil, surface and ground water and air / noise protection	Task Site	<p>Operability and inspections of equipment, machinery, vehicles and vessels</p> <p>a) The equipment to be used for construction must be fully operational and ready to work and should meet the requirements for admission for operation, so to ensure adequate protection of soil, surface water and groundwater against contamination, as well as protection against dust, gas and noise emissions.</p> <p>b) The Contractor shall conduct ongoing inspections (i.e. carried out at least before start-up and after completion of works) of equipment, machinery, vehicles and vessels, in particular the Contractor shall eliminate by any available means the risk of any contaminants penetrating to groundwater environment, including the spillage of fuel, hydraulic oil or oil derivatives, during the handling, transport and operation of equipment, machinery, vehicles and vessels.</p> <p>c) Any equipment used during construction must conform to applicable operation regulations. The Contractor shall provide the Engineer with copies of the documents confirming the admission of the equipment for use, where required by law.</p>	Contractor
98.	Protection of soil and surface and ground water	Task Site	<p>Day-to-day checks and repairs of equipment</p> <p>Any operated machinery must be repaired and maintained as necessary to prevent any leakage in hydraulic or fuel systems.</p>	Contractor
99.	Protection of soil and surface and ground water	Task Site	<p>Appropriate storage of materials and equipment</p> <p>Materials and equipment shall be stored in locations adequately protected against the contamination of groundwater environment.</p>	Contractor
100.	Protection of soil and surface and ground water	Task Site	<p>Protection of Odra river terrace against contamination</p> <p>It is not allowed to store any waste generated by the repair or maintenance of equipment, machinery or working devices within the Odra river terrace. Any repair or servicing of machines should be conducted by a specialised company or a person authorised for such works by the manufacturer (authorised service company). Any waste generated by such works (such as damaged parts, seals, filters, fluid or lubricant tanks, worn oils, fluids, etc.) shall be collected by the repairing or servicing entities and shall not be stored on site. Such waste should then be managed in accordance with relevant regulations governing the classification and management of waste and</p>	Contractor

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			with the guidelines included in the <i>Waste Management Plan</i> referred to in item 123 of Appendix 1 to the EMP.	
101.	Air protection and noise protection	Task Site	<p>Reducing exhaust and noise emissions by machines and vehicles</p> <p>To reduce nuisance during the construction phase, i.e. the temporary increase of dust and noise emissions, it is required without limitation to:</p> <ul style="list-style-type: none"> • conduct the works only during daytime (6:00 a.m. to 10:00 p.m.), while for works generating higher noise levels, take into account the acoustically protected areas located in Słubice, Kostrzyn nad Odrą and in the Górzycza commune (in the area of the border with the Kostrzyn nad Odrą commune), e.g. by limiting the engine working time at the highest speed; • use machinery and equipment that meet environmental requirements and standards, including equipment that is adequately soundproofed, technically sound and shows low pollutant emission; • limit the operating time of engines at top speed; • use operational machinery and vehicles, with a proviso that the machines used for the Task should have modern drive units showing limited exhaust emission; • switch off unnecessary noise-emitting equipment, machines, and tools that are not in use at the time. 	Contractor
102.	Air protection (protection against dust)	Task Site	<p>Reduction of dust generated by transport equipment</p> <p>It is required to reduce dust generated by land and water transport equipment, for example by the adequate use of the following measures:</p> <ol style="list-style-type: none"> a) cleaning vehicle wheels before entry to a public road, b) cleaning internal haul roads, c) using vehicles with canvas covers for transporting dusty materials, or transporting loose materials in packages, d) providing water transport equipment with canvas covers for transporting dusty materials, or transporting loose materials in packages, e) other measures preventing the contamination of local roads with sand or mud carried by vehicles, f) sprinkling water on internal haul roads. 	Contractor

09 – GUIDELINES FOR LIMITING ENVIRONMENTAL NUISANCE BY USING ADEQUATE MATERIALS AND TECHNOLOGIES				
103.	Soil protection General rules for the preservation of animated natural resources Protection of earth surface and landscape	Task Site	<p>Conducting works from water side</p> <p>The Contractor shall ensure that the works are conducted from water side.</p> <p>Certain works may be carried out from the land only if they may not be conducted from water due to environmental conditions (rapidly changing water level).</p> <p>Any work to be carried out from the land must be each time approved by the Engineer, and relevant areas must then be excluded as specified for each kilometre (see item 2 of Appendix 1 to the EMP).</p> <p>The circulation of equipment along the shoreline requires fulfilment of the requirement in item 23d [d] <i>the Contractor shall work on the construction of wingwalls from the furthest point of the wingwall towards the groyne to allow the circulation of construction equipment along the shoreline which will be finally taken by the wingwall structure</i>, as defined for the protection of natural habitat 3270.</p>	Contractor
104.	Protection of soil and surface water General rules for the preservation of animated natural resources	Task Site	<p>Use of environmentally neutral materials</p> <p>During the works, the Contractor shall use natural materials such as stone, fascine, timber, gravel or sand; geotextile is allowed for separating the new components from the existing ones.</p> <p>The construction materials to be used must have technical approvals and certificates admitting them for use in hydro-engineering.</p>	Contractor
105.	General rules for the preservation of animated natural resources	Task Site	<p>Rip-rap stabilisation</p> <p>The Contractor shall not clamp the rip-rap with concrete; the top section of rip-rap made of hydro-engineering stone with a grain size of 15 to 45 cm shall be wedged with finer stone (5 to 15 cm) for stabilisation.</p>	Contractor
106.	General rules for the preservation of animated natural resources	Task Site	<p>Measures for protecting site conditions at the locations of river wall construction</p> <p>In places where river walls are to be constructed:</p> <ul style="list-style-type: none"> • only use natural materials; however, geotextile may also be used; • allow a corrugated route of the wall, i.e. the wall should run according to the existing terrain relief. 	Contractor

107.	General rules for the preservation of animated natural resources	Task Site	<p>The use of suspension curtains during bay construction at km 582.4 and 582.7</p> <p>Use suspension curtains when building the bays (replacement habitats in the form of oxbows as in item 30 of Appendix 1 to the EMP).</p> <p>A curtain should be used directly upstream of bay 1 construction site, at km 582+400. It must be installed before starting the bay construction works. Curtain position: upstream of the bay entrance, at straight angle at the bank and then diagonally downstream, so to separate the work site from the remainder of the inter-groyne area (situated upstream of the bay construction site). Similarly use a curtain for bay 2 at km 585+700 – installation rectangularly to the bank and then diagonally downstream to separate the area downstream of the bay. Remove the curtains once the works are completed.</p> <p>The location of the curtains is shown on the site plans in Appendices 7a and 7b to the EMP.</p>	Contractor
108.	General rules for the preservation of animated natural resources	Task Site	<p>Method of works</p> <p>The Contractor shall carry out demolition of any existing structures with due caution in order to prevent any removed structural components and other contaminants from falling into the river.</p>	Contractor
10 – GUIDELINES FOR CONTAINING THE SPREAD OF ALIEN SPECIES				
109.	<p>General rules for the preservation of animated natural resources – protection of native plants</p> <p>Protection of earth surface and landscape</p>	Task Site	<p>The Contractor shall contain the spread of invasive plant species (especially the <i>Echinocystis lobata</i> and <i>Xanthium albinum</i>) by fighting any invasive plants growing on the banks directly affected by the Task (groynes including adjacent inter-groyne areas), as per the following assumptions:</p> <p>a) prior to the works, the Contractor shall inspect the work sites together with a phytosociologist/botanist from Contractor’s environmental supervision team in order to identify the sites and determine the population of invasive plants (the sites of the invasive species mentioned above change dynamically, and their local range and frequency of existence must be updated every year, as they change and largely depend, for example, on weather conditions), and then shall clearly sign those sites,</p>	Contractor

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110.	General rules for the preservation of animated natural resources – protection of native plants Protection of earth surface and landscape	Task Site	b) Contractor's environmental supervision team shall not allow for the growth of annual invasive species which settle the disturbed habitats at the banks of Odra river, where the works will disturb the existing vegetative cover or expose or create a bare earth surface or rip-rap, through annual checks of all such locations, which should be conducted preferably in the first half of June (possibly from the third decade of May to the first decade of July),	Contractor
111.	General rules for the preservation of animated natural resources – protection of native plants Protection of earth surface and landscape	Task Site	c) it is required to remove, together with Contractor's environmental supervision team, any characteristic seeds and young plants of the following species: <i>Echinocystis lobata</i> , <i>Impatiens glandulifera</i> , rough cocklebur <i>Xanthium strumarium</i> , and <i>Xanthium albinum</i> . Any young plants that appear shall be removed mechanically (pulled out), and if they grow in bulk, they may be cut down or reaped, but this must be performed before the plant fruit-bearing season (until mid-July),	Contractor
112.	General rules for the preservation of animated natural resources – protection of native plants Protection of earth surface and landscape	Task Site	d) in case of a very large population, the biomass of invasive species should be removed from riverside habitats with the participation of Contractor's environmental supervision team in order to allow the growth of native alluvial species. The preferred method is to pull out the invasive plants (most effective and precise). Any reaping must be carried out possibly low not to prevent the plants from regenerating, and only in locations where the reaping will not cause a threat to rare native species of plants,	Contractor
113.	General rules for the preservation of animated natural resources – protection of native plants Protection of earth surface and landscape	Task Site	e) protect any earth and plant material acquired at the sites of invasive species, and then dispose it according to regulations in force.	Contractor

11 – REQUIREMENTS FOR THE RECLAMATION OF SITES ACQUIRED TEMPORARILY				
114.	Protection of earth surface and landscape Protection of soil and ground	Task Site	<p>Surface reclamation after the works</p> <p>If earth surface is disturbed by any required earthworks or the operation of heavy equipment, such locations must be restored to a condition no worse than before the works.</p> <p>After the works, any sites acquired temporarily shall be restored to the original condition (method of use). After the works, the site must be cleared and kept in a state being possibly close to natural. Any works on the restoration of sites acquired temporarily shall be supervised by a botanist/phytosociologist from Contractor's environmental supervision team.</p>	Contractor
115.	Protection of earth surface and landscape Protection of soil and ground	Task Site	<p>Prohibition to reclaim land using soil acquired from the sites of invasive species</p> <p>The Contractor shall not reclaim any land or shape any terrain with the use of earth masses acquired from the sites of invasive species.</p> <p>The method of handling earth masses acquired from the sites of invasive species must meet the requirements laid down in item 51c of Appendix 1 to the EMP.</p>	Contractor
12 – REQUIREMENTS FOR THE CONSERVATION OF CULTURAL ARTEFACTS				
116.	Preservation of archaeological assets	Task Site	<p>Measures taken within revealed archaeological sites</p> <p>Throughout the duration of the Task, the Contractor shall ensure participation of a team of archaeologists (archaeological supervision).</p> <p>The team of archaeologists is to properly secure and remove any valuable objects and other elements of historic substance from the Task site in order to enable the principal works and provide archaeological supervision in the area of Kostrzyn Fortress.</p> <p>Depending on the needs, the team of archaeologists may consist of one or more persons holding a relevant professional licence. The composition of the team of archaeologists must be approved by the Engineer. Prior to the works, the Contractor shall submit to the Engineer for approval the <i>Quality Assurance Plan</i> covering the activities of the archaeologists.</p>	Contractor

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117.	General arrangements on the conservation of cultural artefacts and monuments	Task Site	<p>Rules of procedure in case of discovering movable artefacts or archaeological sites</p> <p>Rules of procedure in case of discovering movable artefacts or archaeological sites</p> <p>If during construction or earth works the Contractor discovers any object which is suspected to be a monument, the Contractor shall:</p> <ul style="list-style-type: none"> a) suspend all works which may damage or destroy such object, and protect the object and its location using available means, b) immediately notify the Provincial Heritage Conservation Officer, and if this is impossible, then the competent town mayor and the Engineer, c) proceed as instructed by Contractor’s archaeologists, d) allow and ensure documentation activities, archaeological surveys and other necessary measures indicated by Contractor’s archaeologists and/or administration authorities responsible to protect artefacts and other historic substance, e) for immovable artefacts, after completion of the measures specified in item d, the Contractor shall implement the instructions and other measures determined by the archaeologists or administration authorities responsible to protect such objects and other historic substance. 	Contractor
118.	General arrangements on the conservation of cultural artefacts and monuments	Task Site near the Kostrzyn Fortress	<p>Execution of works near the Kostrzyn Fortress</p> <p>The works in the Kostrzyn Fortress area (under heritage protection) shall be performed by the Contractor under archaeological supervision in accordance with the approvals by the monument protection services.</p>	Contractor
119.	General arrangements on the conservation of cultural artefacts and monuments	Task Site	<p>Obtaining a permit from the Provincial Heritage Conservation Officer</p> <p>To implement the measures specified in items 116 to 117 of Appendix 1 to the EMP, involving the protection of cultural heritage and monuments, the Contractor shall also obtain if necessary, under a power of attorney granted by the Employer, a permit from the Provincial Heritage Conservation Officer (PHCO) for conducting a salvage archaeological survey, and shall then conduct the survey.</p>	Contractor

13 – REQUIREMENTS FOR ENSURING HEALTH AND SAFETY OF PEOPLE				
120.	Assuring human health and safety	Task Site	<p>Appropriate storage of construction materials</p> <p>Materials used for construction shall be stored in such a way to protect them against destruction and not to pose a hazard to people or property.</p>	Contractor
121.	Assuring human health and safety	Task Site	<p>Ensuring safe conditions during works</p> <p>The operation of machinery, equipment and other devices must be conducted in a way not to pose a hazard to people or property and to prevent the machinery and equipment from rolling over, sliding or rolling down.</p>	Contractor
122.	Assuring human health and safety	Task Site	<p>Ensuring human health and safety, including in terms of fire protection and the conditions of work with floating equipment</p> <p>The Contractor shall prepare a Health and Safety Plan (HASP), have it approved by the Engineer, and then carry out the works according to the HASP, which will remain in force until the end of construction.</p> <p>When preparing the HASP, the Contractor must pay particular attention to the safety of works conducted using floating equipment, in the immediate vicinity of running water, and in weather conditions typical of autumn and winter (the Contractor must specify the procedures of work and the provision of employees with adequate personal protective equipment).</p> <p>Any fire protection requirements included in the HASP should also cover the ban on building bonfires and burning flammable materials on the construction site.</p> <p>The persons handling the construction of Task components should meet the health standards according to applicable regulations, including the Health and Safety Plan (HASP) prepared for the Task.</p>	Contractor

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123.	Preparation of additional plans for managing emergency situations Assuring human health and safety	Task Site	Contractor’s preparation of additional plans for managing the environment and emergency situations	Contractor
124.			a) Before commencing the works, the Contractor shall prepare and submit to the Engineer for approval a <i>Waste Management Plan</i> specifying the method of managing waste generated during the works, which must include without limitation the waste handling instructions set out in the EMP,	
125.			b) Before commencing the works, the Contractor shall prepare and submit to the Engineer for approval a document titled <i>Site Flood Protection Plan</i> , which must include local hydrological and meteorological conditions. In the event of flood, the Contractor shall follow the procedures set out in the document,	
126.			c) Before commencing the works, the Contractor shall prepare and submit to the Engineer for approval a document titled <i>Site Arrangement Plan</i> , which must cover, without limitation, elements such as the location of back-up facilities, the arrangement of back-up facilities, the security of back-up facilities, haul roads, and environmental protection at back-up facilities,	
127.			d) Before commencing the works, the Contractor shall prepare and submit to the Engineer for approval a document titled <i>Quality Assurance Plan</i> , which must cover, without limitation, elements such as the method of works, on-site traffic arrangement including work signage, OHS and environmental protection, list of working crews, scope of responsibilities of key personnel, quality control, and laboratory tests,	
			e) Before commencing the works, the Contractor shall prepare and submit to the Engineer for approval the ES Management Strategies and Implementation Plans (management strategies and implementation plans for environmental, social, health and safety risks), which must include, without limitation, elements such as a description of measures taken to manage risks, description of materials and equipment used, description of management processes, etc., which the Contractor and its subcontractors will implement to minimise any risks. At the Engineer’s request, the Contractor shall update the ES Management Strategies and Implementation Plans and submit them for approval.	
128.	Assuring human health and safety	Task Site	Designation and proper signage of danger zones At work sites and within site back-up facilities, the Contractor must designate any danger zones which pose a threat to the life and health of people, sign the zones with warning plates, and additionally protect them against unauthorised access.	Contractor

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129.	Assuring human health and safety	Task Site	<p>Obligation to ensure health and safety during works</p> <p>The Contractor must ensure and maintain the safety of people during the works.</p>	Contractor
130.	Assuring human health and safety	Task Site	<p>Adequate security and signage of work site</p> <p>The Contractor must secure and sign the construction site. Contractor’s OHS supervisors shall be responsible for adequate signage of the construction site in accordance with applicable legal regulations. The Contractor shall check the signage on a regular basis and restore or replenish it immediately in the event of destruction or theft.</p>	Contractor
131.	Assuring human health and safety, General rules for the preservation of animated natural resources	Task Site	<p>Assuring appropriate visibility</p> <p>If any works must be carried out after dusk or in conditions of limited visibility, the Contractor shall provide light sources which assure an illumination level adequate to the working conditions.</p> <p>If the construction site is illuminated, the range of illumination shall be limited as far as possible, as light may in particular scare off bats from their feeding areas and hiding places.</p>	Contractor
132.	Assuring human health and safety, General rules for the preservation of animated natural resources	Task Site	<p>Assuring appropriate visibility of protective devices and site signage</p> <p>The Contractor shall ensure constant visibility, during the day and night, of protective devices and site signage (barriers and signs) for which this is crucial for safety reasons.</p>	Contractor

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133.	Assuring human health and safety	Task Site	<p>Prevention of diseases such as HIV-AIDS and other infectious diseases including COVID 19</p> <p>(Clause 6.7 of the General Conditions of Contract)</p> <p>Prevention of HIV-AIDS The Contractor shall conduct training and implement a scheme of raising awareness of the spread of diseases such as HIV-AIDS through an approved service provider, take all other measures set out in the Contract (Clause 6.7 of General Conditions) in order to mitigate the risk of spreading the HIV virus amongst Contractor’s personnel and local community, and promote early diagnosis and assistance to persons infected. The measures shall be implemented throughout the term of the Contract (including the Defects Notification Period), at least every other month. They shall include information and awareness-raising campaigns on the risk involved in the spread of HIV-AIDS. The training sessions shall also cover other diseases (e.g. COVID 19).</p>	Contractor
134.	Assuring human health and safety	Task Site	<p>Rules of handling unexploded ordnance</p> <p>If any unexploded ordnance is found:</p> <ul style="list-style-type: none"> a) stop the work immediately; b) evacuate people from the area surrounding the object; c) immediately notify the sapper supervision crew and the Police, and proceed as they instruct; d) notify the Engineer and Employer. <p>It is absolutely forbidden to lift, excavate, bury or relocate any unexploded ordnance, put it into fire or water, etc.</p>	Contractor

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135.	Sapper supervision crew Assuring human health and safety	Task Site	<p>Supervision of the Task site by sappers</p> <p>To mitigate the risk involved in the excavation or discovery of unexploded ordnance on the Task site, the Contractor shall provide:</p> <ul style="list-style-type: none"> a) prior to the works – investigation of the Task site by sappers (a report of the investigation shall be submitted to the Engineer); b) during the works – sapper supervision (carried out by the sapper supervision crew) involving ongoing checks and clearing the Task site of any hazardous military items, and disposing of such items; c) if any unexploded ordnance is found at the Task site – implementation of the procedures laid down in item 134 of Appendix 1 to the EMP. <p>The experts from the sapper supervision team must hold relevant professional licences. The composition of the sapper supervision team must be approved by the Engineer. Prior to the works, the Contractor shall submit to the Engineer for approval the <i>Quality Assurance Plan</i> covering the activities of the sapper supervision team.</p>	Contractor
136.	Assuring human health and safety	Task Site	<p>Rules of reporting emergency situations</p> <p>In case of emergency (other than flood), accident, major failure, etc., the Contractor must take the following measures:</p> <ul style="list-style-type: none"> • immediately notify appropriate services (Fire Brigade, Ambulance Service, Police, etc.); • until the arrival of appropriate services, take actions necessary to mitigate the risk of loss in personnel, property and environment (agreed with appropriate services as far as possible); • notify the Engineer and Employer; • upon the arrival of appropriate services, strictly comply with their instructions and recommendations. 	Contractor
14 – REQUIREMENTS FOR CONTRACTOR’S PERSONNEL INVOLVED IN THE EMP IMPLEMENTATION				
137.	Implementation of the EMP	Task Site	<p>Requirements for Contractor’s environmental supervision team</p> <p>The Contractor shall appoint a team of naturalist for the whole duration of the Task (Contractor’s environmental supervision):</p>	Contractor

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- a) Contractor’s team of naturalists shall consist of specialists in the fields of biology, nature conservation, ecology of flowing water (botanist/phytosociologist, entomologist, ichtiologist, herpetologist, ornithologist, teriologist and chiropterologist), and hydrology.
- b) the specialists composing Contractor’s team of naturalists must have documented experience in their fields and a university degree in the listed or related specialities,
- c) the composition of Contractor’s team of naturalists must be approved by the Engineer prior to the works
- d) one member of Contractor’s environmental supervision team may represent up to two environmental specialities listed in item (a) above.

The experts shall be engaged in certain mitigating and monitoring measures during the implementation of the Task, as set out in the EMP, in particular:

- a) the mitigating measures referred to in Appendix 1 to the EMP in the following categories: 01 – Rules of land acquisition, 02 – Requirements for securing protected natural resources, 07 – Requirements for the clearing and preservation of trees and bushes, 10 – Guidelines for containing the spread of alien species, 11 – Requirements for the reclamation of sites acquired temporarily, 14 – Requirements for Contractor’s personnel involved in the EMP implementation.
- b) the monitoring measures referred to in Appendix 2 to the EMP, in the categories of measures listed above, and environmental monitoring at execution stage as specified in items 156 to 158.

The scope of activities of Contractor’s naturalists is defined in item 11 of Appendix 1 to the EMP.

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138.	Implementation of the EMP	Task Site	<p>Training of Contractor’s personnel in EMP implementation</p> <p>The Contractor must conduct training (to be concluded with a test checking the participants’ knowledge) in the rules and conditions of the EMP and protection indications for the time of construction, dedicated to Contractor’s executives and engineers supervising the construction, which training should be prepared by Contractor’s team of naturalists. The Contractor’s employees who handle fuels, other oil derivatives or any other substance harmful to health or environment should be trained in the rules of preserving groundwater environment and using measures for its preservation, including the use of sorbents.</p> <p>In the monthly reports submitted to the Engineer, the Contractor shall provide information on the status of training of Contractor’s personnel in the conditions of the EMP in the current reporting period.</p>	Contractor
139.	Implementation and reporting of the EMP	Task Site	<p>Designating Contractor’s EMP Coordinator</p> <p>There shall be a person designated in Contractor's team to coordinate and monitor the measures involved in EMP implementation.</p> <p>The person shall be responsible for the following, without limitation:</p> <ul style="list-style-type: none"> a) supervising the implementation of various requirements of the EMP at each stage of executing the Task; b) day-to-day monitoring over the status of implementing each requirement stated in Appendices 1 and 2 to the EMP at the Task site; c) day-to-day reporting to Contractor’s team management on the obligations arising from the EMP at a given stage of works, and of any issues concerning the implementation of the EMP; d) collaboration with other members of Contractor’s team (including the teams of naturalists and archaeologists, sapper supervisors, and OHS supervisors) in order to ensure proper implementation of the EMP; e) reporting the implementation of the EMP; f) collaborating with persons responsible for implementing the EMP from Engineer’s and Employer’s teams. <p>The EMP Coordinator may not be a member of Contractor’s environmental supervision team. The person appointed for this position must be approved by the Engineer.</p>	Contractor

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140.	Reports by the team of naturalists during execution of the Task	Task Site	<p>Reports by Contractor’s environmental supervision team</p> <p>Contractor’s team of naturalists shall conduct reporting which includes:</p> <ul style="list-style-type: none"> a) preparing periodic reports (monthly and quarterly reports and the final report) on the implementation of the requirements stated in the EMP; b) monthly reports shall be submitted as a checklist including necessary appendices, including reports on environmental supervision; c) preparing periodic reports to be submitted to environmental protection authorities in line with project-related permits, including the environmental permit and species protection permits (Appendix 4a,4b,4c,4d to the EMP); d) the reports shall be submitted to the Engineer and require his approval, with the stipulation that the reports mentioned in item c shall be submitted to the Engineer no later than 2 weeks before the deadline for submission to a relevant authority. 	Contractor
141.	Regular meetings on the implementation of mitigating and monitoring measures	Task Site	<p>Discussing the implementation of the EMP at working meetings and Site Meetings</p> <p>In the period of execution of the measures indicated in the EMP, the PIO’s, Engineer’s and Contractor’s teams shall hold monthly meetings to discuss and check the implementation of the mitigating and monitoring measures.</p> <p>Notwithstanding the above, any current requirements and issues related to the implementation of the EMP shall be discussed at Site Meetings.</p>	PIO, Engineer, Contractor
15 – PARTICULAR REQUIREMENTS OF THE WORLD BANK’S ES POLICIES				
142.	Assuring human health and safety Protection of water, Protection of natural resources	Task Site	<p>ES Code of Conduct</p> <p>The Contractor shall take all measures necessary to assure that Contractor’s personnel have been informed on the ES Code of Conduct submitted along with the proposal and described in section 6.14 of the EMP, including on certain forbidden behaviours, and have understood the consequences of engaging in such forbidden behaviours.</p> <p>The Contractor shall also make sure that the ES Code of Conduct is visibly exposed in areas where Contractor’s personnel are present.</p> <p>This applies to the Contractor and its personnel regardless of the legal basis of cooperation, and accordingly to Subcontractors and their personnel.</p>	Contractor

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143.	Assuring human health and safety	Task Site	<p>Prevention of sexual harassment and mobbing</p> <p>The Contractor must ensure such conditions during execution of the Contract to prevent any case of mobbing or sexual harassment of its personnel, Subcontractors and other persons (whether or not associated with the execution of the Contract).</p>	Contractor
144.	Assuring human health and safety	Task Site	<p>Raising awareness about the prevention of sexual harassment and mobbing</p> <p>The Contractor, through an approved service provider holding relevant qualifications, shall conduct training courses and implement a scheme raising awareness about the prevention of sexual harassment and mobbing. These measures shall be implemented throughout the term of the Contract, including the Defects Notification Period, at least every other month. They shall take the form of information, education and awareness-raising campaigns.</p>	Contractor
145.	Assuring human health and safety	Task Site	<p>Reporting cases of sexual harassment and mobbing</p> <p>The Contractor must immediately notify the Consultant of any reported or suspected case of sexual harassment and mobbing.</p> <p>All reported and suspected cases of sexual harassment and mobbing shall be entered into the Book of Complaints and Requests kept by the Contractor.</p> <p>If any case of mobbing or sexual harassment is found, the Contractor must take measures to immediately terminate such behaviours and draw all legal consequences against the offenders. The Contractor must also provide any necessary assistance and support to the victims.</p>	Contractor
146.	Assuring human health and safety	Task Site	<p>Allowing the submission of complaints and requests by personnel involved in the Task</p> <p>The Contractor shall inform all persons employed on the construction site that they may submit a complaint about their working and payment conditions, and shall deliver an information leaflet stating all information on such submission, including a guarantee that the person submitting a complaint will bear no consequences.</p> <p>The Contractor shall keep a Book of Complaints and Requests</p> <p>The contents of the leaflet and the format of the Book shall be agreed with the Consultant.</p>	Contractor

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147.	Assuring human health and safety	Task Site	<p>Provision of safe working conditions</p> <p>The Contractor shall provide such conditions, both at and outside the Task site (during Task-related activities, e.g. during transport), to prevent any accident involving persons engaged in the implementation of the Contract, including the personnel of the Contractor, Engineer, Investor, Subcontractors and others, as well as third parties.</p> <p>In case of such an accident, it is required to:</p> <ul style="list-style-type: none"> • immediately provide appropriate assistance to the injured person; • secure the scene; • notify the Engineer as soon as possible about the event and the manner it was handled by the Contractor; • notify appropriate services and allow them access to the scene. 	Contractor
148.	Assuring human health and safety	Task Site	<p>Employment conditions for adolescent workers</p> <p>The Contractor may hire for the Contract only such adolescent workers who are at least 15 years of age, completed an at least eight-year primary school, and presented a medical certificate confirming that the assigned type of work does not pose any risk to their health. The Contractor shall ensure that juveniles (persons under the age of 18) will not perform works prohibited to juveniles in accordance with applicable regulations (see p. 6.15. of the EMP).</p>	Contractor
149.	Assuring human health and safety	Task Site	<p>Contractor's OHS supervision</p> <p>The Contractor shall ensure continuous OHS supervision during the implementation of the Task. The scope of duties, qualifications and composition of Contractor's OHS services shall conform to Polish labour law.</p> <p>Before the works, Contractor's OHS supervisors shall carry out dedicated training for Contractor's personnel on work safety and the risk of accident while implementing the Task.</p>	Contractor

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150.	Assuring human health and safety	Task Site	<p>The Contractor must apply and observe all labour law provisions applicable in Poland, in particular all the provisions of the Labour Code, and comply with the ES Code of Conduct. In particular, the following issues should be reflected in Contractor’s employment policy and salary regulations:</p> <ul style="list-style-type: none"> • the assurance of equality in remunerating employees who perform the same work, without regard to their gender, age or sexual orientation; • the assurance that persons employed for the Contract will not be persecuted or discriminated on the grounds of gender, sexual orientation or age; • the assurance that the Contractor will, according to its capacity, conditions and the provisions of the Polish Labour Code, satisfy the needs of its personnel in terms of welfare and amenities in the place of work; • the assurance that the Contractor facilitates the improvement of professional qualifications of its personnel. 	Contractor
16 – GUIDELINES IN CASE OF THE STATE OF EPIDEMIC OR THE SATE OF EPIDEMIC RISK APPLYING DURING THE WORKS				
151.	Assuring human health and safety	Task Site	<p>If the state of epidemic of the state of epidemic risk applies during the works, the Contractor shall:</p> <ol style="list-style-type: none"> a) provide persons remaining at the construction site with all necessary preventive measures to maintain the health and safety of workers, Personnel of the Contractor, Employer and Engineer, and local community, in the scope defined in the Conditions of the Contract, in particular by taking adequate measures to avoid or minimise the spread of diseases, including measures aimed to avoid or minimise the spread of infectious diseases which may be related to the inflow of permanent workforce in connection with the Contract, in the manner prescribed by applicable laws, for example by the Regulations on establishing certain restrictions, orders and prohibitions due to the state of epidemics, issued under Article 46a of the Act of 5 December 2008 on the prevention and fighting against infections and infectious diseases of human (consolidated text: Polish Journal of Laws 2019, item 1239, as amended); b) designate a person responsible within the Contract for matters concerning the health and safety at work during epidemics or the state of epidemic risk; c) implement relevant recommendations of the World Bank and sanitary services for the territory of the Republic of Poland; d) cooperate with the Employer and Engineer, in particular provide current information on any precautions taken or planned, including those regarding appropriate protection of the 	Contractor

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			<p>Construction Site against unauthorised access, any implemented procedures and appropriate updating of the documents referred to in section 6.14, in particular the HASP, Waste Management Plan, Site Arrangement Plan, and ES Management Strategies and Implementation Plans;</p> <ul style="list-style-type: none">e) organise an information campaign (e.g. in the form of posters and instructions placed at the Construction Site) concerning the symptoms and signs of infection, the spread of the virus, and the methods of protection (including regular hand washing);f) arrange training sessions for workers and Contractor's Personnel, covering at least the following:<ul style="list-style-type: none">i. revised procedures and documents,ii. the symptoms and signs of COVID-19 (or any other infectious disease related to an introduced state of epidemic / epidemic risk), including independent monitoring of such symptoms, the spread of the virus, and available protective measures,iii. procedure in case of noticing any symptoms of the disease in ourselves or other persons,iv. applicable regulations concerning the quarantine of employees and their families, remuneration for the period of disease, isolation or quarantine, the provision of healthcare, including sanitary transport provided to prevent infection,v. applicable procedures of reporting any breach or filing complaints by employees,vi. waste handling, for example masks, gloves, disinfectants and cleaning agents. <p>During the state of epidemic or the state of epidemic risk, as far as permitted by law, training sessions should be conducted through means of electronic communication or in the form of self-training.</p> <p>The aforesaid rules shall be applied in an appropriate manner in case of the state of epidemic or the state of epidemic risk established in the Republic of Poland due to any other infectious disease.</p>	
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