

## Appendix 1 - Plan of mitigation measures

In this Appendix to the Environmental Management Plan for the Odra - Vistula Flood Management Project, *Works contract 1B.7 - WFS Widawa – the rebuilding of the flood management system of the communes and municipalities Czernica, Długoleka, Wisznia Mała and Wrocław*, measures are presented mitigating an adverse environmental impact, being the guidelines for the Contractor and the Investor for the above-mentioned Contract.

The conditions described in Appendix No. 1 to EMP are grouped according to the following thematic categories:

Category	Item in table
<i>01 – REQUIREMENTS RELATED TO LOCALISATION AND LIMITATION OF AREA OF TEMPORARY OCCUPATION</i>	1 - 5
<i>02 – REQUIREMENTS CONCERNING THE TRAFFIC SYSTEM OF THE TASK IMPLEMENTATION AREA</i>	6 - 7
<i>03 – ORGANISATION OF THE SITE, BACK-UP FACILITIES, WAREHOUSES AND STORAGE YARDS</i>	8 - 12
<i>04 – REQUIREMENTS FOR SECURING THE PROTECTED NATURAL RESOURCES</i>	13 - 33
<i>05 – TOPSOIL HANDLING PRINCIPLES AND LAND RECLAMATION</i>	34 - 36
<i>06 – REQUIREMENTS FOR FELLING AND PROTECTING TREES AND SHRUBS</i>	37 - 43
<i>07 – REQUIREMENTS CONCERNING WASTE MANAGEMENT</i>	44 - 51
<i>08 – REQUIREMENTS CONCERNING PREVENTION OF PROLIFERATION AND ELIMINATION OF INVASIVE SPECIES OF PLANTS</i>	52 - 54
<i>09 – PRINCIPLES OF CARRYING OUT WORKS WITHIN BEDS OF WATERCOURSES</i>	55 - 60
<i>10 – REQUIREMENTS CONCERNING THE PREVENTION OF ENVIRONMENTAL CONTAMINATION</i>	61 - 69
<i>11 – REQUIREMENTS CONCERNING PROTECTION OF CULTURAL MONUMENTS</i>	70 - 72
<i>12 – REQUIREMENTS FOR ENSURING HUMAN HEALTH AND SAFETY</i>	73 – 83
<i>13 – REQUIREMENTS FOR THE CONTRACTOR’S PERSONNEL ENGAGED IN EMP EXECUTION</i>	84 - 91

Explanations for the table in Appendix No. 1 to EMP:

- unless otherwise stated in a particular case, the term ***Task implementation area*** means the area of performing any preparatory works, essential works (including the Permanent Works and Temporary Works), and any works related to the removal of defects and faults or execution of the unfinished works specified in the Takeover Certificate or revealed during the Defects Notification Period, together with the lands subject to temporary occupation;
- unless otherwise stated in a particular case, the term ***Task implementation period*** means the duration of any preparatory works, essential works execution (including the Permanent Works and Temporary Works), and any works related to the removal of defects and faults or execution of the unfinished works specified in the Takeover Certificate or revealed in the Defects Notification Period;

No.	Issue	Location	Mitigation measures	Responsible entity
<b>01 - REQUIREMENTS RELATED TO LOCALISATION AND LIMITATION OF AREA OF TEMPORARY OCCUPATION</b>				
1.	Land surface and landscape protection	Task implementation area	<p><b>Limitation of land occupation and of land surface transformation</b></p> <p>The following principles shall be applied in order to limit area occupation and land surface transformation during the Task implementation:</p> <ul style="list-style-type: none"> <li>a) area occupation as well as land surface transformation during any types of works conducted in connection with Task implementation shall be limited to the necessary minimum,</li> <li>b) in areas adjacent to the Task implementation area (permanently and temporarily occupied areas), occupy land only in the area of the existing traffic systems.</li> </ul>	Contractor
2.	Land surface and landscape protection	Task implementation area	<p><b>Obligation to prepare site facilities</b></p> <p>Before starting the construction works, it is necessary to provide site back-up facilities, technological roads and yards. Site back-up facilities are to serve for storage of building materials, garaging, refuelling and current repairs of vehicles, machinery and devices, and as location of social facilities and waste containers.</p>	Contractor
3.	Protection of land surface, landscape and natural assets	Task implementation area	<p><b>Preservation of natural assets beyond the places required to be occupied for the purpose of Task execution</b></p> <p>The following will be ensured when determining the location of technological routes and sites, back-up facilities and other places of temporary occupation:</p> <ul style="list-style-type: none"> <li>a) preservation of protected natural habitats, positions and habitats of protected species,</li> <li>b) preservation of all the tree- and shrub-based vegetation occurring beyond the areas required to be occupied in reference to the modernisation of the existing embankments and construction of new ones,</li> <li>c) a precise location of technological routes and sites, back-up facilities and other places of temporary occupation shall be agreed in consultation with experts of the Contractor's environmental team, so as not to worsen the ecological status of natural objects located within the Task implementation area.</li> </ul>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
4.	General conditions concerning nature protection	Task implementation area	<p><b>Reducing the area of damage within natural habitats and habitats of species.</b></p> <p>Reduce as far as possible the area of damage as a result of building works conducted within valuable natural habitats and habitats of species. The results of one-time environmental stocktaking referred to in item 13 of Appendix no. 1 to EMP will be taken into account when fulfilling this condition.</p>	Contractor
5.	General conditions concerning nature protection	Task implementation area	<p><b>Conditions for location of technological routes, back-up facilities, sites</b></p> <p>A precise location of back-up facilities and technological routes and sites shall be agreed in consultation with experts of the Contractor’s environmental team, so as not to worsen the ecological status of natural objects located within the implementation area.</p>	Contractor
<b>02 - REQUIREMENTS CONCERNING THE TRAFFIC SYSTEM OF THE TASK IMPLEMENTATION AREA</b>				
6.	Human health and safety protection	Task implementation area	<p><b>General conditions connected with access to the work area</b></p> <p>Access to the construction site and speed limits near the construction site least disturbing for the people living nearby and safe shall be ensured in the phase of Task implementation (based on the existing system of roads).</p>	Contractor
7.	Human health and safety protection Protection of tangible assets Land protection	Task implementation area	<p><b>Conditions for use of access roads to the Task implementation area along with their surroundings</b></p> <p>In the scope of the use of access roads to the Task implementation area, the following conditions apply:</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
			<ul style="list-style-type: none"> <li>a) The Contractor will provide traffic arrangement design for the duration of the Works, in accordance with the provisions of Technical Specifications and requirements of the road management authorities regarding transport and conditions of roads use.</li> <li>b) The Contractor is obliged to agree with the road management authority of the traffic arrangement and works security plan. The Contractor is obliged to organise traffic in accordance with the agreed plans (marking and securing the Site and marking of detours and recommended road signage related to change of traffic organisation, etc.).</li> <li>c) Prior to commencement of works the Contractor will present to the Engineer for approval, traffic arrangement and works security plans as well as the Programme agreed with the road management authorities. Depending on the needs and works progress, the traffic arrangement plans shall be updated by the Contractor on on-going basis (the updates made must be agreed with the Road management authorities).</li> <li>d) According to valid laws and agreements with Road management authorities, access routes shall be marked for the roads used by the Contractor. This marking shall be regularly controlled by the Contractor, in the case of destruction or theft of marking the Contractor shall promptly rebuild or supplement it.</li> <li>e) Hardened surfaces within the site back-up facilities used for vehicle transportation of building materials should be maintained in good technical condition and clean.</li> <li>f) The Contractor shall be responsible for any damage to the structures, buildings, roads, drainage ditches, culverts, water supply and gas pipe lines, power poles and power lines, cables, land survey control network and any type of services as well as other types of facilities such as vertical and horizontal signs, navigation signs, information boards, cultural assets etc., caused by the Contractor or his Subcontractors during execution of works. The Contractor is also responsible for restoring the flow capacity of drainage ditches and drainage services in the area of conducted works and transport roads, in case of damage caused by execution of works and transport related to works implementation.</li> <li>g) The Contractor is required to prepare the photographic documentation of the whole Task implementation area and access roads, with particular emphasis on the technical condition of the roads and buildings located near the roads for transport of construction materials,</li> <li>h) Prior to the works, the Contractor shall carry out the site inspections in the presence of Road Authorities, which shall be followed by protocols on the condition of access roads to the Task implementation area. On this basis, the Contractor shall be obliged to restore the technical condition of the roads from before the Task implementation period,</li> <li>i) The Contractor shall immediately repair, at its own expense, all damages arisen and – when necessary – shall carry out other works ordered by the Engineer.</li> </ul>	

No.	Issue	Location	Mitigation measures	Responsible entity
<b>03 - ORGANISATION OF THE SITE, BACK-UP FACILITIES, WAREHOUSES AND STORAGE YARDS</b>				
8.	General conditions concerning nature protection	Task implementation area	<p><b>Prevention of animal access to the work areas</b></p> <p>Back-up facilities, technological roads, places of storage of construction materials, places where works are performed and similar areas, situated in the vicinity of places of occurrence and routes of seasonal migration of amphibians shall be secured against access of amphibians, reptiles, small mammals, by fencing off with a tight fence with a height of not less than 0.5 m. The type, detailed location of fences and their installation shall be agreed with a specialist in the field of herpetology from the Contractor's environmental team.</p>	Contractor
9.	General conditions concerning nature protection	Task implementation area	<p><b>Repair of possible damages to fencing of works areas</b></p> <p>Any damages existing in the area of the fencing described in item 8 of Appendix no. 1 to EMP shall be regularly removed.</p> <p>Such measures will be conducted with participation of an expert herpetologist of the Contractor's environmental team.</p>	Contractor
10.	General conditions concerning nature protection	Task implementation area	<p><b>Reduction of accidental animal death</b></p> <p>The following rules shall be introduced to reduce accidental animal death within the Task implementation area:</p> <ul style="list-style-type: none"> <li>a) the application of methods securing water chambers, trenches, collectors etc. prior to the confinement of minor mammals, amphibians and reptiles within them. These elements should be designed to allow individual animals to get out of these structures in case animals enter the area of such structures,</li> <li>b) in case where the animals trapped in the above-mentioned structures cannot get out themselves, they shall be safely removed and transported beyond the site of works,</li> <li>c) animals shall be transported under the supervision of an expert herpetologist or an expert theriologist, of the Contractor's environmental team, having experience in procedures in such cases.</li> </ul>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
11.	Land surface and landscape protection	Task implementation area	<p><b>Equipping the areas being potential places of pollution emission with sorbents</b></p> <p>Near places of temporary occupation such as:</p> <ul style="list-style-type: none"> <li>• back-up facilities (used as places of maintenance of vehicles, machinery and devices, where they are parked, fuelled, undergo technical maintenance, etc.),</li> <li>• service roads,</li> <li>• storage yards</li> </ul> <p>a station with sorbent will be provided, enabling fast elimination of results of leaks of fuel and oil derivatives. In particular, in the vicinity of machine garaging and filling there should BE a stand with sorbent.</p>	Contractor
12.	Surface water protection	Task implementation area	<p><b>Site back-up facilities protection against the spreading of pollutants</b></p> <p>Site back-up facilities shall be located on hardened area, covered with a non-permeable insulation material, protecting against penetration of any solid or liquid pollutants.</p>	Contractor
<b>04 – REQUIREMENTS FOR SECURING THE PROTECTED NATURAL RESOURCES</b>				
13.	General conditions concerning nature protection	Task implementation area	<p><b>Execution of one-time environmental stocktaking</b></p> <p>Before the works begin, a one-time environmental stocktaking shall be carried out (prepared by the Contractor’s environmental team referred to in item 87 Appendix No. 1 to EMP) of the areas planned for temporary and permanent occupation, aimed at:</p> <ol style="list-style-type: none"> <li>a) determining the current distribution of patches of natural habitats listed in Appendix No. I of the Habitat Directive (Council Directive 92/43/EEC), sites of protected species of plants, fungi and animals,</li> <li>b) determining the sites of potential occurrence of such species.</li> </ol> <p>The Contractor shall deliver the results of one-time environmental stocktaking to the Engineer within 21 days from its completion.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
14.	General conditions concerning nature protection	Task implementation area	<p><b>Marking the boundaries of natural habitats</b></p> <p>Prior to the commencement of works, identify and mark in field (in a manner visible for employees performing and supervising the works) the boundaries of patches of the following natural habitats:</p> <ul style="list-style-type: none"> <li>oak-elm-ash riparian forests <i>Ficario-Ulmetum</i> (code 91F0) - in vicinity of the sections of embankments: F1-G, G-G1, G1-H, D-D1, E2-E1;</li> <li>alluvial meadows of river valleys (<i>Chidion dubii</i>) (code 6440) - in vicinity of the sections of embankments: K-K1, K1-L.,</li> </ul> <p>The sections of embankments shall be adopted according to the course of embankment sections presented in the <i>Environmental impact report</i> and in Appendix no. 6a of EMP.</p> <p>Such measures will be conducted with participation of an expert phytosociologist of the Contractor's environmental team.</p>	Contractor
15.	General conditions concerning nature protection	Task implementation area	<p><b>Securing the patches of natural habitats</b></p> <p>The patches of natural habitats 91F0, 6440 situated in vicinity of the sections of embankments shall be effectively (e.g. by fencing off with a fence built of wooden piles and forest net) secured against damage, contamination, traffic of machines and vehicles and free access of persons associated with conducted works. The protection condition of patches shall be constantly supervised and any damages shall be removed.</p> <p>Such measures will be conducted with participation of an expert phytosociologist of the Contractor's environmental team.</p>	Contractor
16.	General conditions concerning nature protection	Task implementation area	<p><b>Protection of patches of natural habitats and habitats of species adjacent to work areas</b></p> <p>The Contractor shall be obliged to modify the technology applied for construction / modernisation of the embankments consisting in conducting works at the opposite side to natural objects (patches of natural habitats and habitats subject to species protection), or alternatively - conducting works at the front or crest of the embankment.</p>	Contractor



No.	Issue	Location	Mitigation measures	Responsible entity
17.	General conditions concerning nature protection	Task implementation area	<p><b>Protection of bats within the bridge along Rieczna Street</b></p> <p>Directly prior to commencement of works relating to flow improvement under the bridge along Rieczna Street, inspect the bridge structure for presence of bats with participation of an expert chiropterologist of the Contractor's environmental team.</p> <p>Continue further works in consultation with a chiropterologist of the Contractor's environmental team, and if presence of bats is found, according to the chiropterologist's guidelines.</p>	Contractor
18.	General conditions concerning nature protection	Task implementation area	<p><b>Obtaining necessary departures from prohibitions in relation to protected species</b></p> <p>The Contractor (if necessary - in proportion to the results of the conducted environmental stocktaking referred to in item 13 of Appendix no. 1 of EMP) shall obtain all necessary permits for derogations from prohibitions in relation to the protected species of plants, fungi and animals issued under the Act on environmental protection.</p>	Contractor
19.	General conditions concerning nature protection	Task implementation area	<p><b>Relocation of protected species outside work areas</b></p> <p>If it is necessary to destroy or relocate protected species outside work areas, the Contractor is obliged to:</p> <ul style="list-style-type: none"> <li>a) plan such actions and obtain relevant permits (administrative decisions issued under the Act on environmental protection) to conduct them,</li> <li>b) effectively conduct such actions,</li> <li>c) and implement other activities required in the permit (e.g. drawing-up and submitting reports to the body issuing relevant permission (administrative decision)).</li> </ul>	Contractor
20.	General conditions concerning nature protection	Task implementation area	<p><b>Adopting the appropriate schedule for execution of works</b></p> <p>The Contractor should provide the schedule for execution of works so that the dates and location of respective stages of construction works are in compliance with requirements of the environmental decision and EMP and so that they do not affect species under protection which are found on the Task implementation area and in its vicinity.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
21.	General conditions concerning nature protection	Beds of watercourses: Młynówka Kiełczowska, Mrówka, Widawa within the boundaries of the Task implementation area	<b>Dates of carrying out works within beds of watercourses</b> All works carried out within watercourses shall be undertaken beyond the period of 15 April to 30 June.	Contractor
22.	General conditions concerning nature protection	Beds of watercourses: Młynówka Kiełczowska, Mrówka, Widawa within the boundaries of the Task implementation area	<b>Principles of carrying out works within beds of watercourses</b> Works within water beds and banks of watercourses shall be carried out according to the principle of progress of works from the headwater side downstream.	Contractor
23.	General conditions concerning nature protection	Task implementation area	<b>Protection of habitats of amphibians adjacent to work areas</b> Within the mid-embankment of Widawa River - not to dig up local depressions with a surplus of ground formed during performance of work.	Contractor
24.	General conditions concerning nature protection	Task implementation area	<b>Reduction of accidental death of amphibians</b> Any occurrence of standing water which could constitute places where amphibians settle shall be regularly eliminated in the task implementation area. Standing water shall be eliminated in agreement with and under supervision of an expert herpetologist from the Contractor's environmental team.	Contractor
25.	General conditions concerning nature protection	Task implementation area	<b>Reduction of accidental animal death</b> Shall be reduced (as far as possible) the minimum depth of excavations / trenches and shorten (as far as possible) the duration of works.	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
26.	General conditions concerning nature protection	The balance reservoir on the Mrówka stream	<p><b>Restoration of vegetation within the balance reservoir</b></p> <p>After finishing earthworks, within the area of the balance reservoir on the Mrówka stream, plant the littoral of the balance reservoir with water and above-water plants, in particular to create a band of rushes. The works shall be carried out in consultation with an expert phytosociologist from the Contractor’s environmental team.</p>	Contractor
27.	General conditions concerning nature protection	Task implementation area	<p><b>Guidelines for construction of embankments related to protection of valuable species of beetles in natural objects 7 and 20</b></p> <p>Within the area of natural objects no. 7 “Riparian forest between Wilczyce and Kiełczów” and no. 20 - “Oak alley for extension of Wierzbowa Street in Kiełczówek”, specified in Appendix No. 7 of EMP, design the course of the task elements and works in such a way as to preserve all the trees being a habitat of Hermit Beetle <i>Osmoderma eremita</i> and Great Capricorn <i>Cerambyx cerdo</i>. If the species of above habitats cannot be preserved for technical reasons, cutting and principles of managing the cut trees shall be conducted according to an expert entomologist’s guidelines from the Contractor’s environmental team.</p>	Contractor
28.	General conditions concerning nature protection	Task implementation area	<p><b>Guidelines for construction of embankments related to protection of valuable species of beetles in the natural object 28</b></p> <p>Within the area of the natural object no. 28 specified in the Appendix no. 7 to EMP - “Oaks between Wilczyce and Kiełczów”, design and perform the course of the investment elements and works in such a way as to preserve sessile oaks settled by Capricorn beetle, <i>Cerambyx cerdo</i>.</p>	Contractor
29.	General conditions concerning nature protection	Bridges on Widawa along Wilczycka Street and Rieczna Street	<p><b>Ensuring the migration conditions of animals within bridge structures</b></p> <p>For the performance of works concerning the flow improvement of the bridges, apply solutions which ensure the ecological functionality for animals moving through the valley of the Widawa river, e.g. through:</p> <ul style="list-style-type: none"> <li>a) dry land at river-bank areas above average water levels,</li> <li>b) natural character of river-bank areas under the bridges (e.g. by presence of herbaceous plants and bushes).</li> </ul>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
30.	General conditions concerning nature protection	Task implementation area	<p><b>Guidelines for protection of natural habitats and habitats of species within the “new” mid-embankment of Widawa River</b></p> <p>Do not design drainage systems and new melioration ditches in the area of the “new” mid-embankment of Widawa River within the limits and distance of less than 100 metres from wastelands, permanent grasslands, groups of rushes, water reservoirs, oxbow lakes, bushes, tree stands and forests.</p>	Designer, Investor
31.	General conditions concerning nature protection	Task implementation area	<p><b>Execution principles of anti-filtering membrane</b></p> <p>In the places where an anti-filtering membrane and a sealing screen are used within the area of flood protection embankments, anchor the anti-filtering membrane and the sealing screen in the underground part in such a way that they do not reach the layers of non-permeable grounds.</p>	Contractor
32.	General conditions concerning nature protection	Task implementation area	<p><b>Ensuring the right damming level on the Kiełczówek weir</b></p> <p>Do not increase the agreed damming level under the rehabilitation works planned for the Kiełczówek weir. The maximum damming level shall not exceed the elevation of 119.40 m a.s.l.</p>	Contractor, Investor
33.	General conditions concerning nature protection	Task implementation area	<p><b>Considering the conditions resulting from the existence of protected areas</b></p> <p>During the construction works, the Contractor shall observe standards, prohibitions and recommendations as well as respect limitations arising from the existence of areas and facilities formed under the Environment Protection Act.</p>	Contractor
<b>05 – TOPSOIL HANDLING PRINCIPLES AND LAND RECLAMATION</b>				

No.	Issue	Location	Mitigation measures	Responsible entity
34.	Topsoil handling principles	Task implementation area	<p><b>Removing and securing the topsoil prior to the commencement of works</b></p> <p>Prior to undertaking substantial levelling and earth works the top humus soil layer shall be removed (to the depth of 30 cm on average) and store in the vicinity of the area of works, in separate piles secured against drying and mixing with native rock.</p> <p>Location of topsoil heaps should be agreed with the Contractor's team of environmental experts referred to in item 87 Appendix No. 1 to EMP and presented for the Engineer's approval.</p>	Contractor
35.	Topsoil handling principles	Task implementation area	<p><b>Principles of restoring the topsoil layer</b></p> <p>Upon completion of earthworks - use the taken-off humus for forming the slopes and crest of the embankments intended for turf assessment. At the width of 5-10 metres along the slopes and crest of the embankments, at one side or both sides of the embankment - spread and level the previously taken-off humus.</p> <p>Within the places of back-up facilities, technological sites and roads - additionally execute all the tillage works: plating with discs, harrowing, fertilising and seeding grass mixtures in accordance with meadow habitats located closest to the site of re-cultivation.</p> <p>A composition of the grass mix will be agreed on with an expert phytosociologist of the Contractor's environmental team and the Engineer's approval will be obtained.</p>	Contractor
36.	Principles of land reclamation	Task implementation area	<p><b>Land reclamation after the completion of works</b></p> <p>After finishing works, the area shall be ordered and procedures supporting the restoration of green areas shall be performed in the places indicated by a phytosociologist from the Contractor's environmental team, including sowing and planting using native species in accordance with habitat conditions.</p> <p>In the places where plants were sown and planted, ensure proper maintenance (e.g. maintenance mowing) of the restored areas until the end of the Defects Notification Period.</p> <p>Before starting to perform the conditions defined in this item of EMP, a <i>Quality Assurance Plan</i> for the above-mentioned works will be presented for the Engineer's approval.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
<b>06 - REQUIREMENTS FOR FELLING AND PROTECTING TREES AND SHRUBS</b>				
37.	General conditions concerning nature protection	Task implementation area	<p><b>Conditions and permitted dates for felling trees and shrubs</b></p> <p>Limit the felling of trees and shrubs to the ones colliding with task implementation. Tree and shrubs felling in the period of 15 March to 15 August to be performed under the supervision of ornithologist expert from the Contractor's environmental team, who, directly before performing it, will inspect trees for presence of bird nests, and if such are found - will indicate the permitted felling performance time. The above-mentioned supervision in the remaining period (between 16 August and 14 March) will be carried out in the periods and locations proposed in advance by the Contractor's environmental team and accepted by the Engineer.</p>	Contractor
38.	General conditions concerning nature protection	Task implementation area	<p><b>Reducing tree clearance within the patches of breeding habitats</b></p> <p>When designating the trees planned for cutting, maintain the possibly largest area of the natural habitat of oak-elm-ash riparian forests Ficario- Ulmetum (code 91F0).</p>	Contractor
39.	General conditions concerning nature protection	Task implementation area	<p><b>Inspection for presence of protected species of beetles and bats</b></p> <p>In case of an intention of felling of trees with their breast height over 50 cm, directly prior to the felling, the following should be performed with the participation of specialists: entomologist from the Contractor's environmental team - a control of the occupancy of these trees by protected species of beetles, such as: Great Capricorn Beetle <i>Cerambyx cerdo</i>, Hermit Beetle <i>Osmoderma eremita</i>, chiropterologist from the Contractor's environmental team - a control of the presence of bats.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
40.	General conditions concerning nature protection	Task implementation area	<p><b>Conditions justifying the felling of trees occupied by valuable species of beetles</b></p> <p>In cases of statement of the presence of beetles (larval or adult forms), the permission for cutting the occupied tree can only be conditioned by technical or technological reasons.</p> <p>Prior to felling a tree occupied by protected species of beetles, the Contractor shall obtain the necessary administrative decision, issued under the Act on environmental protection, for derogation from prohibitions regarding protected species.</p> <p>Then, the Contractor will perform cutting and any other activities imposed by the administrative decision issued under the Act on nature protection.</p>	Contractor
41.	General conditions concerning nature protection	Task implementation area	<p><b>Rules of procedure for felling the trees occupied by species of bat</b></p> <p>In cases of statement of the presence of bats in trees to be felled, temporarily suspend felling and implement the recommendations of an expert chiropterologist from the Contractor's environmental team, which are adequate to the current atmospheric situation and identified the species of bats.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
42.	General conditions concerning nature and landscape protection	Task implementation area	<p><b>Protection of trees not intended for felling</b></p> <p>Within the whole area of task implementation, secure all the trees and shrubs designated to be left, including the ones being habitats for Great Capricorn and Hermit Beetle, against accidental damage by using the following methods:</p> <ul style="list-style-type: none"> <li>• make tree-trunk protection (e.g. made of planks) fully around tree trunks up to the level of 1,5 m at minimum, ,</li> <li>• make shields around shrubs (e.g. made of planks) up to the level of 1,0 m at minimum, ,</li> <li>• make dig-outs / trenches at a distance of not less than 2 m from tree trunks,</li> <li>• do not store construction materials or solid / liquid waste which can alter the chemical characteristics of soil (e.g. salts, oils, fuels), or soil masses within the projection of tree crests,</li> <li>• execute earth works manually around skeletal roots. It is unacceptable to undercut skeletal roots,</li> <li>• in the period of hot weather, maximally reduce the time of exposure of roots to desiccation, while in the period of cost weather (frost) - to freezing,</li> <li>• make dig-outs / trenches, conducted within the root systems of trees and shrubs, manually, if necessary, use drilling or jacking methods.</li> </ul>	Contractor
43.	General conditions concerning nature protection	Task implementation area	<p><b>Taking appropriate measures in case of damage to tree</b></p> <p>In the event of damage to trees, the necessary maintenance measures to be introduced immediately under the supervision of an expert phytosociologist from the Contractor’s environmental team to limit effects of the damage.</p>	Contractor
<b>07 - REQUIREMENTS CONCERNING WASTE MANAGEMENT</b>				
44.	Developing the Waste management programme	Task implementation area	<p><b>Developing the Waste management programme</b></p> <p>Within 42 days of the date of commencing works, the Contractor shall prepare and submit for the Engineer's approval the Waste Management Programme - associated with the implementation of the contract, specifying management method for waste generated during works, considering, among others, guidelines of waste handling, included in Appendix No. 1 to EMP item 45 – 49.</p>	Contractor



No.	Issue	Location	Mitigation measures	Responsible entity
45.	Protection of water and soil	Task implementation area	<p><b>Storage of hazardous substances and materials</b></p> <p>Hazardous waste should be categorised and stored in designated containers placed at hardened and protected areas secured against access of third parties until their transfer to entities having the appropriate permission for their disposal. Ensure the regular collection of such type of wastes by operators with appropriate authorisation for their further management or neutralisation.</p>	Contractor
46.	Protection of water and soil	Task implementation area	<p><b>Waste management principles</b></p> <p>Waste generated during the Task implementation shall be managed according to the following rules:</p> <ul style="list-style-type: none"> <li>a) collect and store wastes only in dedicated places, the location of which is agreed in prior by the Contractor with the Engineer,</li> <li>b) categorise and store the wastes in leak-tight containers or at places being enclosed and adapted for this purpose, under conditions which prevent dusting and dispelling light fractions, and their negative effects on the environment,</li> <li>c) ensure their gradual collection by operators with appropriate authorisation for their further management or neutralisation,</li> <li>d) waste management shall be carried out in accordance with current waste management regulations and the mentioned in item 44 of Appendix No. 1 to EMP.</li> </ul>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
47.	Rules of testing and procedure for sediments from beds of watercourses	Beds of Młynówka Kiełczowska, Mrówka, Widawa within the boundaries of the Task implementation area	<p><b>Determination of the quality of sediments in beds of watercourses</b></p> <p>Prior to the construction works in the places of the planned removal of sediments and works in the beds of watercourses, the Contractor shall carry out control tests and define the quality of sediments in accordance with applicable regulations (pursuant to the Act on waste and relevant executive acts).</p> <p>The aim of the tests is to:</p> <ul style="list-style-type: none"> <li>● determine the possibilities of managing the acquired land and sediments within the boundaries of the construction site, in accordance with applicable regulations, and</li> <li>● establish an acceptable method of dealing with the land and sediments not usable within the construction site boundaries.</li> </ul> <p>The tests should be performed in accordance with current regulations, including the Waste Act, Environmental Protection Law and implementing acts to the above laws.</p> <p>The tests should be carried out by an accredited laboratory, approved by the Engineer. Before starting the tests, the Contractor shall submit the methodology of planned tests to the Engineer for approval.</p>	Contractor
48.	Rules of testing and procedure for sediments from beds of watercourses	Beds of Młynówka Kiełczowska, Mrówka, Widawa within the boundaries of the Task implementation area	<p><b>Management of soils coming from the construction site</b></p> <p>Sediments from watercourse riverbeds should be used at the construction site in the first place. The remaining excess land should be used in accordance with the applicable regulations and the design documentation. The procedure for the waste land should be presented in the <i>Plan of waste management</i>, developed by the Contractor and submitted to the Engineer for approval before the commencement of works (according to item 44 of Appendix No. 1 to EMP).</p>	Contractor
49.	Protection of water and soil	Task implementation area	<p><b>Preventing the creation of illegal waste dumps</b></p> <p>Prior to the commencement of works, the Contractor shall conduct a site inspection in terms of illegal waste dumps. During the execution of the Task, the Contractor shall secure the Task implementation area against creation of such waste dumps.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
50.	Protection of water and soil	Task implementation area	<p><b>Handling of sewage and rainwater</b></p> <p>In case where it is not possible to discharge social and domestic sewage to the existing sanitary sewerage system, the sewage must be collected in leak-proof, drain-less tanks and ensure that they are regularly collected by authorised bodies.</p> <p>Stormwater drained water from hardened yards, sealed and temporary objects of back-up facilities (e.g. storage places of fuels and oils, car parks, barracks, etc.) cannot transfer contaminations from them to surface and ground waters.</p>	Contractor
51.	Protection of water and soil	Task implementation area	<p><b>Ensuring appropriate hygienic conditions within work areas</b></p> <p>It is necessary to equip all construction sites with a required number of portable toilets and provide training to all the employees with regard to maintaining appropriate hygienic conditions within the area of the construction site and its direct surrounding. The Contractor's workers should meet their physiological needs in dedicated places.</p>	Contractor
<b>08 – REQUIREMENTS CONCERNING PREVENTION OF PROLIFERATION AND ELIMINATION OF INVASIVE SPECIES OF PLANTS</b>				
52.	Protection of natural resources	Task implementation area	<p><b>Inspection of sections of embankments for presence of invasive species of plants</b></p> <p>Prior to the start of the growing season, the following sections of embankments shall be inspected: K-K1, K1-L, L-M (specified according to the <i>Environmental impact report</i> and presented in Appendix No. 6a to EMP), for presence of invasive positions of species of plants, with special consideration to Sosnowsky's hogweed <i>Heracleum sosnovskyi</i> and <i>Echinocystis lobata</i>.</p>	Contractor
53.	Protection of natural resources	Task implementation area	<p><b>Necessary elimination of positions of invasive species of plants</b></p> <p>In the positions where invasive plants were found, mentioned in item 52 of Appendix No. 1 to EMP (within the limits of embankments: K-K1, K1-L, L-M indicated in Appendix No. 6a to EMP), and within the area of other positions possibly discovered in the Task implementation area, in the construction phase and over the next two growing seasons after their end, all discovered individuals of plants shall be removed belonging to external invasive species, especially Sosnowsky's hogweed <i>Heracleum sosnovskyi</i> and <i>Echinocystis lobata</i>, until they disappear and are replaced by local plants.</p>	The Contractor until the end of the Defects Notification Period, then the Investor

No.	Issue	Location	Mitigation measures	Responsible entity
54.	Protection of natural resources	Task implementation area	<p><b><i>Prevention of proliferation and elimination of positions of invasive species of plants</i></b></p> <p>The elimination of positions of invasive species of plants, mentioned in item 53 Appendix No. 1 to EMP - depending on the species – shall be carried out with participation and according to detailed instructions specified by an expert phytosociologist of the Contractor's environmental team, following at the same time the following guidelines:</p> <ul style="list-style-type: none"> <li>a) the elimination of positions of invasive species of plants shall be made by digging them out or by extracting (together with the root mass) or/and chemical spraying,</li> <li>b) during removal of humus from places of temporary occupation, the humus taken-off with invasive plants - not connected with other earth masses - pass to entities having relevant waste management licences for transfer to a waste dump.</li> </ul>	The Contractor until the end of the Defects Notification Period, then the Investor
<b>09 – PRINCIPLES OF CARRYING OUT WORKS WITHIN BEDS OF WATERCOURSES</b>				

No.	Issue	Location	Mitigation measures	Responsible entity
55.	General conditions concerning nature protection	Młynówka Kiełczowska within the boundaries of the Task implementation area	<p><b><i>Principles of carrying out works within partly liquidation of the bed of Młynówka Kiełczowska (about 0.2 km long)</i></b></p> <p>Perform works for relocation of the bed of Młynówka Kiełczowska according to the following principles:</p> <ul style="list-style-type: none"> <li>a) prior to liquidation of the outlet section of Młynówka Kiełczowska, its new section shall be constructed as “dry”, entering directly the Mrówka watercourse,</li> <li>b) prior to liquidation of the outlet section, rubble shall be recovered from its bottom to be used for construction of the new section of the watercourse,</li> <li>c) upon completion of construction of the new section, the existing outlet section planned for liquidation shall be cut off from the headwater with a cofferdam, thus closing the supply of water, which will be directed to the new outlet section of the Młynówka,</li> <li>d) after closing the supply of water to the liquidated watercourse section by separating its channel with a cofferdam, wait until water flows down from it, undertaking at the same time works (excavations, trenches) facilitating its flow, enabling more aquatic organisms, especially fish, to escape from this trap together with water,</li> <li>e) When water flows down from this section, collect the fish left in the depressions with water and molluscs and other animals and release them to Młynówka Kiełczowska several hundred metres above the conducted works,</li> <li>f) Works shall be carried out with the participation of the following specialists: ichthyologist and entomologist from the Contractor’s environmental team,</li> <li>g) before releasing the collected organisms, their species should be identified, and after completion of works, information on the number and species of the collected organisms will be given in the Contractor’s monthly report,</li> <li>h) before performance of activities encompassing catching and transfer of water organisms, necessary permission will be obtained resulting from provisions of the Act on nature protection and Inland fishing act.</li> </ul>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
56.	General conditions concerning nature protection	The bed of Młynówka Kielczowska within the boundaries of the Task implementation area.	<p><b>Conditions concerning the construction method of a new bed of Młynówka Kielczowska (with length of approx. 0.2 km)</b></p> <p>The new bed of Młynówka Kielczowska should have its character similar to the liquidated bed of the watercourse (cross-section and longitudinal inclination of bottom), and, in addition, the following principles of its execution should be adopted:</p> <ul style="list-style-type: none"> <li>a) use the rubble coming from the bottom of the eliminated section to construct the bottom of the new watercourse section,</li> <li>b) rubble is to be recovered from the bottom of the liquidated section before its backfilling,</li> <li>c) the banks shall be covered with turf and reinforced with fascine hurdles or planted with poplar cuttings,</li> <li>d) do not reinforce with rip-rap of broken stone, nor with stone cubes,</li> <li>e) do not use gabion mattresses or baskets to reinforce bank slopes,</li> <li>f) measures shall be planned in advance and then performed consisting of differentiation of the bottom structure (e.g. by creating hollows and shallow places, and also by laying boulders, branches).</li> </ul> <p>The scope and method of performing such measures should guarantee safe passage of flood water. Perform the measures with participation of an expert ichthyologist from the Contractor's environmental team.</p>	Designer, Contractor
57.	General conditions concerning nature protection	The bed of Młynówka Kielczowska within the boundaries of the Task implementation area.	<p><b>Formation of places of stagnant water in the new bed of Młynówka Kielczowska</b></p> <p>In the new bed of Młynówka Kielczowska, execute not less than 2 places of stagnant water in the form of oval bays with the water surface area of not less than 1 m<sup>2</sup>. Execute the places of stagnant water with participation of an expert ichthyologist from the Contractor's environmental team.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
58.	General conditions concerning nature protection	Task implementation area	<p><b>Informing the fishing organisation of works in the bed of Młynówka Kielczowska</b></p> <p>Inform the fishing organisation (Polish Fishermen Association, Wrocław District) of the planned date of performing organisms catching in the bed of Młynówka Kielczowska at least two months in advance.</p> <p>Before starting to catch water organisms, agree upon with the fishing organisation the schedule and manner of performing fish catching and the places of transferring the fish.</p>	Contractor
59.	General conditions concerning nature protection	Task implementation area	<p><b>Control of sediments extracted from watercourses</b></p> <p>After performing works connected with desludging of the watercourse and removing sediments and rubble from the watercourses, apply the following rules of conducting works:</p> <ul style="list-style-type: none"> <li>a) directly after removing the bottom material from the course bed and again within an hour after desludging, inspect the places where material is stored,</li> <li>b) storage places will be agreed with the Contractor's environmental team and transferred in advance for agreement to the Engineer,</li> <li>c) the inspection mentioned in item a is made by an expert ichthyologist from the Contractor's environmental team</li> <li>d) the frequency of inspections may be higher than specified above and shall be adjusted to the type and quantity of the extracted bottom sediments and weather conditions prevailing during performance of works (for example high temperature),</li> <li>e) intervals between controls are possibly increased according to recommendations of an expert ichthyologist from the Contractor's environmental team,</li> <li>f) collect and release to water any discovered animals found in the collected bottom sediments (especially fish, molluscs), larval stages of invertebrates, (especially dragon flies),</li> <li>g) the collected individuals should be moved and released at places ensuring their safety (e.g. at sections of completed works in the bed or where desludging works were not carried out).</li> </ul>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
60.	General conditions concerning nature protection	Beds of ditches within the boundaries of the Task implementation area	<p><b>Conditions of desludging beds of melioration ditches</b></p> <p>Desludging during maintenance of the sections of the melioration ditches listed below shall be limited to the sections only where a layer of organic silts is limiting the correct flow of water.</p> <p>Remove the layer of silts with a thickness of not more than 30 cm. The performance of works should also ensure the maintenance of the existing bankline of ditches.</p> <p>The following sections of melioration ditches are covered by desludging works:</p> <ul style="list-style-type: none"> <li>• R4 – maintenance of three sections of the ditch on plot no. 262/1 with the distance of 79.7 m, on plot no. 216 with the distance of 153.6 m, on plot no. 226/2 with the distance of 351.1 m, map sheet AM2, precinct of Śliwice;</li> <li>• R7 – maintenance of the section of the ditch with distance of 45.8 m, plot no. 326, map sheet AM2, precinct of Dobrzykowice;</li> <li>• R10 – maintenance of the section of the ditch with distance of 41 and 28.5 m, plot no. 498/4, map sheet AM2, precinct of Kielczów;</li> <li>• R11 – maintenance of the section of the ditch with distance of 96.5 m, plot no. 499/1, map sheet AM2, precinct of Kielczów;</li> <li>• R12 – maintenance of the section of the ditch with distance of 183 m, plot no. 524, map sheet AM2, precinct of Kielczów;</li> <li>• R15 – maintenance of the section of the ditch with distance of 233.5 m, plot no. 212, map sheet AM2, precinct of Śliwice;</li> <li>• R16 – maintenance of the section of the ditch R-K9 with distance of 135.6 m, plot no. 200, map sheet AM2, precinct of Śliwice;</li> <li>• R25 – maintenance of the section of the ditch R-G1 with distance of 70.6 m, plot no. 520, map sheet AM1, precinct of Wilczyce;</li> </ul> <p>R29 – maintenance of the section of the existing ditch W-13 with the distance of 50.6 m from the planned embankment culvert PW7 to the Widawa riverbed, plot no. 3, map sheet AM6, the precinct of Swojczyce.</p>	Designer, Contractor



No.	Issue	Location	Mitigation measures	Responsible entity
<b>10 - REQUIREMENTS CONCERNING THE PREVENTION OF ENVIRONMENTAL CONTAMINATION</b>				
61.	Air quality protection	Task implementation area	<p><b>Limitation of dusting from means of transport</b></p> <p>Limit dust generation caused by the means of transport, in particular by applying the following steps adequately:</p> <ul style="list-style-type: none"> <li>a) cleaning vehicle wheels before entering the public roads,</li> <li>b) cleaning surface of internal technological roads,</li> <li>c) using of vehicles adapted for transportation of powdery materials secured by tilt or transportation of powdery materials in packagings,</li> <li>d) other actions for prevention of contamination of roads with sand and mud, moved by vehicles,</li> <li>e) in dry periods, sprinkle surfaces of internal technological roads during conducted construction works.</li> </ul>	Contractor
62.	Air quality protection	Task implementation area	<p><b>Limitation of dusting during the execution of works</b></p> <p>Loose materials and aggregate intended for being used at the construction stage must be protected against being blown away and against excessive dusting during storage, as well as during their incorporation.</p>	Contractor
63.	Air quality protection	Task implementation area	<p><b>Limitation of flue gas emissions from machines and vehicles</b></p> <p>It is necessary to reduce the work time of motor machines and vehicles. Do not allow long-term operation of internal combustion engines of machinery and construction vehicles at a standstill (limit emissions at the so-called stage of idling speed).</p> <p>Equipment used at the stage of construction works must be in perfect technical order and satisfy all the legal requirements for the purpose of ensuring protection against dusts and gases being emitted to the air.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
64.	Soil, grounds, surface waters and air protection	Task implementation area	<p><b>Prevention and actions related to penetration of contaminants into soil and water environment</b></p> <p>All work should be implemented in such a way as to eliminate the risk of penetration of any contaminants, in particular oil derivatives, into the soil and water environment.</p> <p>In the event of any spillage of oil derivatives, steps will be taken limiting the spreading of such pollutants, and the pollutants shall be immediately removed.</p> <p>In the event of any contamination of soil layers, remove it immediately (with help of specialised contractor) and managed in compliance with the applicable legal regulations. Places of such kind are to be restored to the original condition.</p>	Contractor
65.	Soils and water protection	Task implementation area	<p><b>Providing back-up facilities with devices for pre-treatment of rain water</b></p> <p>Back-up facilities (used as places of maintenance of vehicles, machinery and devices, where they are parked, fuelled, undergo technical maintenance, etc.) shall be provided with devices for pre-treatment of rain water (to protect surface water and soils against oil derivatives).</p>	Contractor
66.	Soils, surface water protection	Task implementation area	<p><b>Requirements for equipment used during works</b></p> <p>Equipment and machines used for works must meet the appropriate quality and technical standards, excluding the emission of hazardous contaminants to water and earth, mainly from the oil-derivative group (oils, greases, fuels).</p>	Contractor
67.	Soils, surface water protection	Task implementation area	<p><b>Using fully operational equipment during the performance of works</b></p> <p>Do not use machines and equipment having technical defects or damages likely to have adverse impact on the environment and on the safety of people and assets.</p>	Contractor
68.	Reduction of noise emission	Task implementation area	<p><b>Limitation of performance period of works to daytime</b></p> <p>Works shall be performed at daytime, i.e. between 6.00 a.m. and 10.00 p.m.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
69.	Soils, surface water protection	Task implementation area	<p><b>Limitation of potential sources of contamination by oil derivatives</b></p> <p>Construction works shall be so organised as to limit the pouring of fuels and other chemical agents on the task implementation area. Such measures can only be conducted within the hardened surfaces of back-up facilities provided with a non-permeable layer preventing the penetration of pollutants to water and soils.</p>	Contractor
<b>11 - REQUIREMENTS CONCERNING PROTECTION OF CULTURAL MONUMENTS</b>				
70.	Monuments protection	Task implementation area	<p><b>Ensuring archaeological supervision</b></p> <p>For the whole period of earthworks performance, the Contractor shall ensure the participation of a team of expert archaeologists (the Contractor's archaeological supervision). The team is responsible for implementation and/or coordination of the following actions:</p> <ul style="list-style-type: none"> <li>a) archaeological works will be conducted within discovered archaeological sites,</li> <li>b) for carrying out works within the limits of the discovered archaeological sites in line with the conditions specified in the works permit issued by the Provincial Monument Conservator,</li> <li>c) appropriate protection of valuable objects and other elements of historical value and transporting them from the working site to the designated institution place or institution,</li> </ul> <p>prepare an appropriate action plan for archaeological supervision in form of a Quality Assurance Plan.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
71.	Monuments protection	Task implementation area	<p><b>Procedure in case of discovering movable historical objects or archaeological sites</b></p> <p>If during construction works or earthworks the Contractor discovers an object likely to be a historical object, he/she is obliged to:</p> <ul style="list-style-type: none"> <li>a) suspend all the works likely to destroy or damage the objects discovered, shall secure them and the place of discovery with the use of available measures,</li> <li>b) shall notify the Provincial Conservator of Historical Monuments immediately, and if impossible, the competent local authorities (mayor). The Contractor shall also notify the Engineer in this respect,</li> <li>c) the Contractor's team of expert archaeologists shall be notified immediately,</li> <li>d) the performance of appropriate documentation actions will be facilitated and ensured, archaeological examinations and other necessary actions indicated by the team of archaeological experts from the Contractor and/or administration bodies responsible for securing the objects and other historical values,</li> <li>e) in case of immovable historical objects, after finishing the measures described in point d, the guidelines and other actions shall be enforced as specified by the archaeological team and/or administration bodies responsible for securing the objects and other historical values.</li> </ul>	Contractor
72.	General findings concerning cultural heritage and monuments protection	Task implementation area	<p><b>Obtaining the permit from the Provincial Conservator of Historical Monuments</b></p> <p>For the purpose of implementing the above EMP conditions related with protection of cultural heritage and monuments (item 70, 71 Appendix No. 1 to EMP), the Contractor, if so needed, will also obtain, under an authorisation granted by Employer, the permit of the Provincial Conservator of Historical Monuments (PCHM) for the performance of archaeological rescue survey.</p>	Contractor
<b>12 - REQUIREMENTS FOR ENSURING HUMAN HEALTH AND SAFETY</b>				
73.	Human health and safety protection	Task implementation area	<p><b>Appropriate storage of building materials</b></p> <p>Store the materials used during construction works in the manner securing them against damage and in the manner not posing a risk to the environment, human and property.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
74.	Human health and safety protection	Task implementation area	<p><b><i>Ensuring the safety conditions during performance of works</i></b></p> <p>The operation of machinery, equipment and other devices must be conducted in a manner not threatening the safety of environment, people and property, excluding falling over, sliding down or falling down equipment and machinery.</p>	Contractor
75.	Human health and safety protection	Task implementation area	<p><b><i>Protection of health and safety of people, including fire protection</i></b></p> <p>The Contractor shall prepare the HASP Plan, will obtain approval of the Engineer for its content, and will then perform works according to the provisions of the HASP plan.</p> <p>Requirements with regard to fire protection included in HASP should include also prohibition on bonfires and combustion of flammable materials within the task implementation area.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
76.	Human health and safety protection	Task implementation area	<p><b>Preparation of documents connected with the safety of people, property and environment in the Task implementation area</b></p> <ul style="list-style-type: none"> <li>a) Considering the risk of flood occurrence, the Contractor will prepare and present for the Engineer's approval a document entitled: <i>Construction site's flood management plan</i>, which will consider the local hydrological and meteorological conditions in the construction site areas. In case of flood, the Contractor shall proceed in accordance with the procedures described in the above-mentioned document,</li> <li>b) The Contractor will prepare and present for the Engineer's approval a document entitled: <i>Building site organisation design</i>, which should include, among others, the following elements: site back-up facilities location, site back-up facilities development, site back-up facilities protection, technological roads, environment protection within the site back-up facilities,</li> <li>c) The Contractor will prepare and present for the Engineer's approval a document entitled: <i>Quality assurance plan</i>, which should include, among others, the following elements: works performance organisation, organisation of traffic at the site together with marking of works, OH&amp;S and environment protection, list of working teams, scope of duties of the key personnel, quality control, laboratory tests.</li> <li>d) The Contractor will prepare and present for the Engineer's approval a document entitled: <i>Implementation plan and management strategy of Environmental, Social, Health and Safety Risks</i>: which should include, among others, the following elements: description of actions taken for risk management, description of the used materials, equipment, description of management processes, etc., to be implemented by the Contractor and its subcontractors to minimise the risks.</li> </ul>	Contractor
77.	Human health and safety protection	Task implementation area	<p><b>Designation and appropriate marking of dangerous zones</b></p> <p>On the task implementation area, the Contractor is obliged to designate dangerous zones which pose a risk to human health and life and mark such zones with the use of warning boards and additionally secure them against unauthorised access.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
78.	Human health and safety protection	Task implementation area	<p><b>Requirement of appropriate protection and marking of the work area</b></p> <p>The Contractor shall secure and provide marking in the building site. The Contractor's OHS experts shall be responsible for adequate marking assurance of building site according to applicable laws. This marking shall be regularly controlled, in the case of destruction or theft of marking the Contractor shall promptly rebuild or supplement it.</p>	Contractor
79.	Human health and safety protection	Task implementation area	<p><b>Ensuring appropriate conditions of visibility</b></p> <p>In case where works have to be carried out at night-time and in the conditions of limited visibility, the Contractor shall provide sources of lighting allowing to achieve light intensity appropriate for working conditions.</p> <p>The Contractor shall ensure permanent visibility conditions at day and night for elements of building site protection and marking such barriers and signs, for which it is necessary for safety reasons.</p>	Contractor
80.	Human health and safety protection	Task implementation area with surroundings	<p><b>Documenting and monitoring the technical condition of buildings exposed to the impact of vibrations</b></p> <p>Before beginning of the works throughout of which there may occur vibrations, which shall constitute a threat for the neighbouring inhabitants and infrastructural structures nearby, the Contractor will carry out survey of existing buildings and objects with particular focus on cracks and damages</p>	Contractor
81.	Human health and safety protection	Task implementation area	<p><b>Prevention rules for diseases such as HIV-AIDS</b></p> <p>The Contractor shall implement training and programme of raising awareness of spreading HIV-AIDS through an approved service provider and shall take all other measures outlined in order to reduce a risk of HIV transfer among the Contractor's personnel and local population.</p> <p>Such measures will be carried out in accordance with the conditions defined in the <i>Bidding Documents</i> of the contract (part General Conditions, <i>clause 6.7</i>).</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
82.	Human health and safety protection	Task implementation area	<p><b>Sapper supervision on the Task implementation area</b></p> <p>In order to minimise the risk related to the likely occurrence of hazardous military objects on the Task implementation area, the Contractor shall ensure:</p> <ul style="list-style-type: none"> <li>a) before starting works – the Task implementation area will be inspected in terms of the existence of unexploded shells (a report with results of the above-mentioned sapper inspection shall be submitted to the Engineer),</li> <li>b) during the execution of earthworks – sapper's supervision over works (conducted by the Contractor's sapper supervision team), consisting of regular checking of and cleaning of the Task implementation area of hazardous military objects, along with their utilisation;</li> <li>c) in the case of finding objects of dangerous military origin in the Task implementation area - implementing the procedures described in item 83 of Appendix No. 1 to EMP.</li> </ul>	Contractor
83.	Human health and safety protection	Task implementation area	<p><b>Rules of procedure for unexploded shells</b></p> <p>In case of finding an unexploded shell:</p> <ul style="list-style-type: none"> <li>a) immediately stop the works;</li> <li>b) evacuate people and equipment from the area around the find and secure against unauthorized access;</li> <li>c) immediately notify the sapper supervision and the Police, and then act according to their instructions;</li> <li>d) notify the Engineer and Employer;</li> <li>e) for the discovered unexploded shells, it is absolutely prohibited to raise them, excavate them, bury them, transfer them or throw them to the fire or water, etc.</li> </ul>	Contractor
<b>13 – REQUIREMENTS FOR THE CONTRACTOR'S PERSONNEL ENGAGED IN EMP EXECUTION</b>				



No.	Issue	Location	Mitigation measures	Responsible entity
84.	Implementation of the EMP execution	Task implementation area	<p><b>Ensuring the team of expert archaeologists</b></p> <p>For the whole period of performance of the Task, the Contractor shall ensure the participation of a team of expert archaeologists. The experts will be involved in execution of selected mitigating measures specified in the EMP (specifically the measures described in item 70, 71, 72 of Appendix No. 1 to EMP). Members of the team of expert archaeologists must have an appropriate license. The Engineer's approval is required for personal composition of the team of expert archaeologists.</p> <p>Before the commencement of works, the Contractor shall present for the Engineer's approval the <i>Quality assurance plan</i> in scope of activities of the team of expert archaeologists.</p>	Contractor
85.	Implementation of the EMP execution	Task implementation area	<p><b>Ensuring the team of OH&amp;S experts</b></p> <p>For the whole period of performance of the Task, the Contractor shall ensure the participation of OH&amp;S experts. The experts will be involved in on-going supervision, implementation and control of compliance with OH&amp;S regulations and rules. Members of the team of OH&amp;S experts must have an appropriate license. The Engineer's approval is required for personal composition of the team of OH&amp;S experts.</p> <p>Before the commencement of works, the Contractor shall present for the Engineer's approval the <i>Quality assurance plan</i> in scope of activities of the team of OH&amp;S experts.</p>	Contractor
86.	Implementation of the EMP execution	Task implementation area	<p><b>Ensuring the team of sapper supervision</b></p> <p>For the whole period of performance of the Task, the Contractor shall ensure the participation of a team of sapper supervision. The team will be involved in execution of selected mitigating measures specified in the EMP (specifically the measures described in item 82, 83 of Appendix No. 1 to EMP). Experts of the team of sapper supervision must possess appropriate licenses. The Engineer's approval is required for personal composition of the team of sapper supervision.</p> <p>Before the commencement of works, the Contractor shall present for the Engineer's approval the <i>Quality assurance plan</i> in scope of activities of the team of experts of sapper supervision.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
87.	Implementation of the EMP execution	Task implementation area	<p><b><i>Nature supervision during performance of works</i></b></p> <p>Works shall be conducted under the supervision of the Contractor’s environmental team:</p> <ul style="list-style-type: none"> <li>a) the Contractor's environmental team shall include the following experts: phytosociologist, ichthyologist, herpetologist, entomologist, chiropterologist, ornithologist and theriologist;</li> <li>b) the Engineer’s approval is required for personal composition of the team of naturalists, the acceptance condition is to demonstrate appropriate knowledge and experience of a given expert: supervision will be performed by specialists having higher education in scope of biology, forestry, environmental protection and having in their professional experience at least two nature supervision procedures for investments in scope of, respectively, ornithology/botanics/herpetology, etc.</li> <li>c) the correct performance of measures mitigating the Task’s negative environmental impact shall be pursued by the Contractor’s environmental team within the whole Task implementation period;</li> <li>d) each day of Task implementation, at least one expert of the environmental team shall perform inspection of the entire Task site and of compliance of works being performed with the conditions of the environmental decision for the Task.</li> </ul>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
88.	Implementation of EMP execution	Task implementation area	<p><b>Reports of the Contractor's environmental team</b></p> <p>The Contractor's environmental team conducts reporting including:</p> <ul style="list-style-type: none"> <li>a) preparation of periodic reports (monthly, quarterly and final reports) from the execution of the conditions specified in EMP;</li> <li>b) monthly reports will be submitted as a checklist with necessary attachments, including reports on implementation of environmental supervision;</li> <li>c) preparation of reports from nature supervision conducted, which should be submitted to a body supervising the Natura 2000 site at the date until the last day of each calendar quarter. The last report on implementation monitoring should be prepared within 3 months from the date of completion of the Task. The Contractor submits a report to the Engineer 21 days in advance in relation to the date of report submission to RDOŚ in Wrocław;</li> <li>d) report on the monitoring of fish prepared according to the conditions described in Appendix No. 2 to EMP, item 91;</li> <li>e) above mentioned reports will be submitted to the Engineer and require its approval.</li> </ul>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
89.	Implementation and reporting of EMP execution	Task implementation area	<p><b><i>Appointment of the EMP Coordinator in the Contractor's team</i></b></p> <p>A person shall be appointed in the Contractor's team coordinating and supervising the measures related to EMP implementation.</p> <p>The responsibilities of such person shall be, in particular:</p> <ul style="list-style-type: none"> <li>a) supervision of implementation of particular EMP conditions over the next stages of Task implementation;</li> <li>b) current monitoring of the implementation status of particular conditions from Appendix No. 1 and 2 to EMP on the Task implementation area;</li> <li>c) informing the Contractor's team management on a regular basis of the obligations resulting from EMP on a given stage of works, and also of problems in EMP implementation;</li> <li>d) cooperation with the other part of the Contractor's team (including the environmental team, a team of archaeological experts of the Contractor, the Contractor's sapper supervision team, Safety supervision specialists) in scope of ensuring the adequate implementation of the EMP;</li> <li>e) reporting of EMP execution;</li> <li>f) cooperation with the persons responsible for EMP enforcement in the Contractor's and Employer's team.</li> </ul> <p>The Engineer's approval is required for the person appointed to perform the above-mentioned function.</p>	Contractor

No.	Issue	Location	Mitigation measures	Responsible entity
90.	Implementation and reporting of EMP execution	Task implementation area	<p><b><i>Training of the Contractor's staff for EMP implementation</i></b></p> <p>The Contractor is responsible for providing training (completed with a test verifying the knowledge of participants) within EMP rules and conditions and protective indications at the time of construction for its managing personnel and engineering-technical personnel supervising the construction works, which must be prepared with the help of Contractor's environmental team. The Contractor's employees who will handle fuels and other oil derivative substances and other substances harmful for health and environment should receive training within the protection of soil and water environment and applicable protective measures, including the use of sorbents.</p> <p>The Contractor, in monthly reports submitted to the Engineer, will provide information on the status of training for the Contractor's personnel within EMP conditions in the current reporting period.</p>	Contractor
91.	Periodic meetings on implementation of mitigation and monitoring measures	Contractor's Office/engineer's office/Investor's office	<p><b><i>Discussing the EMP implementation during working meetings and at Site Councils</i></b></p> <p>During the implementation of the tasks arising from the EMP, monthly team meetings of PIU, Engineer and Contractor will take place, to discuss and monitor the implementation of mitigation and monitoring measures.</p> <p>Regardless the above, current requirements and problems relating to EMP implementation will be discussed at Site Councils.</p>	PIU, Engineer's team and Contractor