

## **Appendix 1 Checklist - Plan of mitigation measures**

### **NOTE:**

This Appendix to the Environmental Management Plan (EMP) for the Works Contract 3D.2/2 *Expansion of the left and right embankment of the Biala river in the Tarnow municipality and the city of Tarnow* specifies the terms and conditions for the implementation of the Contract in terms of measures mitigating adverse impact on the environment. **The costs and the schedule of implementation of those measures should be included in the bid.**

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Conditions described in Appendix 1 to the EMP in reference to the Contractor and its personnel (regardless of the legal form of cooperation) are grouped in the following categories:

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Definitions of the table in Appendix 1 to the EMP:

1. Unless otherwise stated, the definition **Contract Area** refers to the area of performance of any preparatory works, main works (including Permanent Works and Temporary Works) and any other works related to removal of faults and defects or completion of unfinished works enlisted in the Take-over Certificate or reported in the Defects Liability Period, Guarantee and Warranty together with the area of necessary temporary acquisition.
2. Unless otherwise stated, the definition **Contract Implementation Period** refers to the period of performing any preparatory works, main works (including Permanent Works and Temporary Works) and any other works related to removal of faults and defects or completion of unfinished works enlisted in the Take-over Certificate or reported in the Defects Liability Period, Guarantee and Warranty.

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>A. REQUIREMENTS ON SCHEDULE OF WORKS</b>					
1		Schedule of works	The Contract area	<p><b>EMP conditions on the schedule of works</b></p> <p>When setting work schedules and at the stage of their implementation, the EMP conditions regarding the dates and time of conducting various types of work should be taken into account, described in detail in the consecutive items of the table, including, but not limited to:</p> <ul style="list-style-type: none"> <li>a) acceptable hours of works (see item 78);</li> <li>b) acceptable dates for removing (felling) trees and shrubs (see item 32);</li> <li>c) dates of environmental inspection before removal (felling) of trees (see item 33);</li> <li>d) the optimal date for conducting works within the root volumes of trees and shrubs (see item 38);</li> <li>e) dates of inspections related to ensuring the protection of small animals on the site (see items 44 and 45);</li> <li>f) dates of inspection for the Contract area by the team of environmental experts (see item 51);</li> <li>g) agreeing deadlines for carrying out land reclamation works (see item 60);</li> <li>h) deadlines for reporting the implementation of the EMP (see item 111).</li> </ul>	Contractor/Site Manager
2		Schedule of works	The Contract area with access roads and their neighbourhood	<p><b>EMP conditions on activities to be carried out before or at the initial stage of works</b></p> <p>When setting work schedules and at the stage of their implementation, the EMP conditions should be</p>	Contractor/Site Manager

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				<p>taken into account regarding activities to be carried out before or at the initial stage of works, described in detail in the following items of the table, including:</p> <ul style="list-style-type: none"> <li>a) conditions for building and equipping the construction site facilities, service roads and sites (see items 13-16, 65, 67-73, 87-91).</li> <li>b) conditions for the road access to the construction site (see items 3-12, 114);</li> <li>c) the condition for removing and securing the topsoil/mineral soil (see items 26-31);</li> <li>d) the condition for securing trees and shrubs unintended for removal (felling) (see item 34);</li> <li>e) conditions for the implementation of environmental inventories (see items 42);</li> <li>f) the condition for securing the building site against the entry of small animals (see item 45);</li> <li>g) the condition for obtaining decisions authorizing exceptions to the principles of species protection of plants, fungi and animals (see items 52, 53);</li> <li>h) conditions for demolition (see items 56, 57, 58);</li> <li>i) conditions for the development of selected documents (see items 52, 53, 87, 92, 99, 111);</li> <li>j) conditions for documentation of technical condition of buildings and infrastructure facilities (see item 9, 94);</li> <li>k) the condition for explosive ordnance survey of the site (see item 93);</li> <li>l) the condition for inventory of illegal landfills and waste disposal (see item 91);</li> <li>m) the condition on heritage protection (see items 102 - 104);</li> <li>n) the condition for obtaining the Engineer's</li> </ul>	

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				approval for the appointed person to be EMP coordinator and the composition of the team of environmental experts, the team of archaeological experts and the team of sappers (see items 106 - 109). o) the condition for training on the guidelines of the EMP implementation (see item 105).	
<b>B. REQUIREMENTS ON ROAD ACCESS TO THE CONTRACT AREA</b>					
3		Earth surface protection	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>The Contractor shall ensure proper marking of all access roads to the <i>Contract area</i>, in accordance with applicable law and arrangements with relevant Road Managers. These markings will be regularly inspected, and in the event of their destruction or theft, the Contractor will immediately take action to restore or complement them.</p>	Contractor/Site Manager
4		Health and safety protection, Protection of tangible properties	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>The Contractor shall ensure protection of people against increased traffic volume on roads used during construction works.</p> <p>During the Contract implementation period, the Contractor will provide, install and operate all temporary safety devices (e.g. traffic lights, information boards, safety barriers), thus ensuring the safety of vehicles and pedestrians.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
5	II.12	Protection of tangible properties, earth surface protection, water protection, Protection of animate nature	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>Delivery routes for the construction equipment and for the means transporting construction material to the Contract area should be set out within the existing network of traffic routes and limited to the necessary minimum.</p> <p>At setting the delivery routes out the Contractor shall include location of historic objects described in Chapter 4.9 of the EMP.</p>	Contractor/Site Manager
6		Earth surface protection	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>Compacted surfaces (e.g. technological and access roads) and related facilities applied for their proper application, used by the cars transporting building materials and aggregate, should be kept in a proper technical condition.</p>	Contractor/Site Manager
7		Health and safety protection, Protection of tangible properties, earth surface protection	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>The Contractor shall comply with the statutory load limits on the axle when transporting materials and equipment to and from the <i>Contract area</i>. The Contractor shall obtain all necessary permits for the transport of non-standard loads and shall notify the Engineer of any such transport on a continuous basis.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
8		Health and safety protection, Protection of tangible properties, earth surface protection	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>The Contractor will be liable for any damage to civil structures and buildings, roads, drainage ditches, culverts, water and gas pipelines, power poles and lines, cables, geodetic control points and installations of any kind, and other types of objects such as vertical and horizontal markings, navigation markings, information boards, cultural heritage structure, etc., caused by him or his subcontractors, service providers and suppliers during the implementation of the Contract.</p> <p>The Contractor is also responsible for restoring the flow of ditches and drainage systems in the area of works and used transport roads, in the event of damages caused by the performance of works and transport connected with the works.</p> <p>The Contractor shall immediately repair any damage at its own expense and, if necessary, carry out other work ordered by the Engineer.</p>	Contractor/Site Manager



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
9		Earth surface protection	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>a) the Contractor is obliged to provide photographic documentation of the entire Contract area and access roads, with particular reference to the technical condition of roads and buildings located in the vicinity of the roads for transporting building materials. The completed documentation should be described with the place and the date of development thereof.</p> <p>b) prior to the commencement of works, the Contractor shall carry out site inspections in the presence of Road Managers, subsequently to which the protocols of the condition of access roads to the <i>Contract area</i> shall be developed. Based on the protocols, the Contractor will be obliged to restore the technical condition of the roads.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
10		Health and safety protection, Protection of tangible properties, earth surface protection	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>a) the Contractor is obliged to agree with Administrators of roads the traffic management plan and security of the works. The Contractor is obliged to carry out the draft traffic management according to agreed designs (marking and securing of the <i>Contract area</i>, marking of detours and recommended marking of roads, related to the change in traffic management, etc.).</p> <p>b) prior to the commencement of works, the Contractor shall submit to the Engineer for approval the traffic management plan and security of works as agreed upon with Road Managers and traffic authorities as well as the traffic management schedule. Depending on the needs and progress of works, draft traffic management plans should be updated by the Contractor on a regular basis.</p>	Contractor/Site Manager
11		Health and safety protection, Protection of tangible properties, earth surface protection	Access roads to the Contract area with their neighbourhood	<p><b>Conditions for using access roads to the Contract area</b></p> <p>The Contractor is obliged to provide access routes for ambulances and fire brigades throughout the whole period of works, to designate roads, exits and pedestrian crossings and parking spaces for vehicles used on site.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
12	II.12	Protection of tangible properties, earth surface protection, Water protection, Protection of animate nature	Access roads to the Contract area with their neighbourhood	<p><b>Setting new access roads to the Contract area out</b></p> <p>If it would be necessary to develop additional temporary access roads (technical lanes) to the Contract area, they shall be set out as the shortest feasible section beyond the areas of high environmental values.</p> <p>Temporary surface made of reinforced-concrete slabs with a width of up to 3.0 m shall be arranged within their course, and they shall be removed after completion of the works.</p> <p>Temporary access roads / technical lanes shall be set out to avoid necessary removal of trees or shrubs.</p> <p>Planned locations of access roads shall be agreed with the environmental team (including e.g.: expert phytosociologist), and shall be provided – including the aforementioned establishments – for the Engineer’s acceptance.</p>	Contractor/Site Manager//Environmental team - phytosociologist

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<b>C. REQUIREMENTS ON LOCATIONS OF SITE FACILITIES AND SERVICE ROADS AND YARDS</b>					
13		Water and soil protection, Protection of animate nature	The Contract area	<p><b><i>Obligation to build site facilities, service roads and yards</i></b></p> <p>Construction site facilities, service roads and yards must be completed prior to the commencement of construction works.</p> <p>Construction site facilities are used to store building materials, for garaging, refueling and repairing of vehicles, machines and equipment, and to provide location of social facilities (locker rooms, office, workshop, portable sanitary cabins) and waste containers.</p> <p>Equipment for site facilities should meet, among others, conditions provided for in items 44, 65, 68-73, 88-90, 96.</p> <p>When planning the abovementioned facilities of the construction site their space should be limited to the necessary minimum.</p>	Contractor/Site Manager
14	II.3 II.36	Water and soil protection, Protection of animate nature	The Contract area	<p><b><i>Conditions for the location of construction site facilities, yards, storage/disposal sites, etc.</i></b></p> <p>Site facilities in the form of reloading/storage/construction yards shall be fenced and hardened using concrete road slabs.</p> <p>One shall designate a sealed place on the site for fueling and for minor repairs to the construction equipment (the sealing should include placement of a geo-membrane – foil underneath the concrete slabs).</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
15	II.3 II.13	Earth surface protection, habitat protection, protection of the soil and water environment, Acoustic climate protection	<i>The Contract area</i>	<p><b>Conditions for the location of construction site facilities, yards, storage/disposal sites, etc.</b></p> <p>Materials storage place, social facilities and parking lots for machines and equipment should be located:</p> <ul style="list-style-type: none"> <li>a) In the greatest distance from residential houses,</li> <li>b) in the areas with the lowest natural values, taking into account the principle of minimizing land acquisition and transformation of its area and the obligation of land reclamation after completion of works,</li> <li>c) outside the immediate vicinity of flood waters of the river and outside the areas where water may be contaminated,</li> <li>d) outside the embanked area,</li> <li>e) at a distance of not less than 100 m from existing watercourses, water reservoirs and wetlands;</li> <li>f) in the areas ensuring no impact of noise on acoustically protected areas.</li> </ul> <p>The locations intended for site facilities and the abovementioned components of the construction site, as well as the Site Facilities Plan should be agreed with a team of environmental experts (including a phytosociologist and zoologists) and presented for the Engineer's approval together with expert agreements.</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
16	III.2	Protection of animate nature, water protection, earth surface protection	<i>The Contract area</i>	<p><b>Conditions for the location of service roads</b></p> <p>Service roads should be located:</p> <ul style="list-style-type: none"> <li>a) outside the areas with the highest natural values; if the condition cannot be met in a given location, service roads should be located in the immediate vicinity of works, taking up minimum necessary space of the areas;</li> <li>b) at the maximum possible distance from existing watercourses, water reservoirs and wetlands;</li> <li>c) in the first place on existing roads, including existing roads linear to and on flood banks;</li> <li>d) in a way avoiding felling of trees and shrubs.</li> </ul> <p>The locations intended for service roads should be agreed with a team of environmental experts (including a phytosociologist) and presented for the Engineer's approval together with expert agreements.</p>	Contractor/Site Manager/Environmental team
17	II.34	Water and soil protection	<i>The Contract area</i>	<p><b>Performance conditions</b></p> <p>Organization of and technical conditions for the performance associated with implementation of the Works Contract shall eliminate the possibility of disturbing water relations.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
18	II.2	Earth surface protection, water and soil protection	<i>The Contract area</i>	<p><b>Economical use of the site and limitation of works on the embanked area</b></p> <p>Organization of the construction site shall include protection of soil comprising especially inclusion of the minimizing rule for land acquisition and transformation. One shall adopt the minimum width of work zone to damage the smallest possible area of vegetation.</p> <p>All works related to the implementation of the Contract should be carried out to the maximum extent possible outside the areas of the existing embanked area.</p>	Contractor/Site Manager
19		Earth surface protection, water and soil protection	<i>The Contract area</i>	<p><b>Economical use of the site - materials storage place</b></p> <p>When outlining storage spaces, their number and area should be limited to the extent necessary for the current works or activities.</p> <p>In the case the areas intended for storage of materials become empty, such areas should be reused as far as possible for further storage of materials.</p>	Contractor/Site Manager
20		Obtainment of properties for temporary acquisition	<i>The Contract area</i>	<p><b>Buy-outs and compensation</b></p> <p>Buy-outs and compensation as well as assistance for Project Affected Persons (pursuant to Land Acquisition and Resettlement Action Plan).</p>	PIO/Contractor's team/Engineer

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
21		Obtainment of properties for temporary acquisition	<i>The Contract area</i>	<p><b>Payment of compensation</b></p> <p>Payment of compensation by the Contractor for temporary acquisition prior to the commencement of works (in accordance with the Land Acquisition and Resettlement Action Plan).</p>	PIO/Contractor's team/Engineer
<b>D. REQUIREMENTS ON THE QUALITY AND MANAGEMENT OF SOILS</b>					
22		Water and soil protection	<i>The Contract area</i>	<p><b>Management of the soils from within the construction site</b></p> <p>Soils located on the construction site (including earth masses) should first be used on the construction site. The remaining excess of soil should be managed in accordance with the design documentation. The procedure for dealing with soil constituting waste should be presented in the Waste Management Plan prepared by the Contractor and submitted to the Engineer for approval prior to the commencement of works (in accordance with item 87 –preparation of a Waste Management Plan (Waste MP)).</p>	Contractor/Site Manager



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
23	II.31 II.32 III.1	Water and soil protection	<i>The Contract area</i>	<p><b>Conditions for the use of soil applied for construction of the embankment</b></p> <p>The flood embankment shall be designed of natural soil assuring proper parameters – strength and condensation. Materials delivered and applied for construction purposes shall be supervised, and especially the origin of soil shall be checked in details. The applied material cannot contain substances, which may be washed out, and especially significantly harmful substances to the water environment, which occur as soluble compounds.</p> <p>Relevant condensation of slopes shall be obtained through placement and compaction of soil in layers of about 20 cm to reach the proper condensation rate <math>I_s &gt; 0.92</math>.</p>	Contractor/Site Manager
<b>E. REQUIREMENTS FOR WORKS IN THE EMBANKED AREA AND IN CHANNELS</b>					
24	II.30	Water and soil protection	<i>The Contract area</i>	<p><b>Ban to obtain soil from the embanked area</b></p> <p>It is not allowed to extract soil from the embanked area.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
25	II 35 II.41	Protection of animate nature, Water and soil protection	<i>The Contract area</i>	<p><b>Ban to affect the channel and the riverside</b></p> <p>Within the Contract implementation period no interfering is allowed in channels and banks of water-courses, which includes:</p> <ul style="list-style-type: none"> <li>a) banned traffic of vehicles, machines, and devices;</li> <li>b) banned extraction of aggregate from the water-courses channel for construction purposes;</li> <li>c) banned intake of water from the water courses channel;</li> <li>d) ban to pollute and litter the water-courses and the embanked area, especially with diesel derivatives, storage of materials, etc. – the construction works cannot result in deterioration of the cleanliness of surface water and of groundwater.</li> </ul>	Contractor/Site Manager
<b>F. REQUIREMENTS ON PROCEEDING WITH TOPSOIL/MINERAL SOIL</b>					
26	II.15 II.16	Soil protection, Protection of animate nature	<i>The Contract area</i>	<p><b>Collecting the top layer of soil</b></p> <p>In order to protect the layer of topsoil from the Contract area:</p> <ul style="list-style-type: none"> <li>a) prior to the commencement of works top layer of soil of about 15 cm shall be removed from the work area, and it shall be stored in piles in vicinity of the work zone;</li> <li>b) one shall not perform the works associated with the removal of top layer of soil during intensive rainfall or just afterwards.</li> </ul> <p>Earthworks should be carried out under the supervision of a naturalist.</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
27	II.15	Earth surface protection, soil protection	<i>The Contract area</i>	<p><b>Storing of top-soil</b></p> <p>The removed layer of top-soil shall be stored in the following way:</p> <ul style="list-style-type: none"> <li>a) removed top-soil shall be stored beyond the area of earthworks in piles;</li> <li>b) the precise location of top-soil piles should be pre-arranged with a team of environmental experts (including phytosociologist and zoologist), so that top-soil storing does not degrade natural habitats and protected species, nor does it adversely affect the condition of trees and shrubs;</li> <li>c) storage piles of top-soil should be secured against: contamination, being driven over by vehicles, compaction, storage of building materials, etc.;</li> <li>d) storage piles of top-soil, until they are reused for final shaping of the embankment and adjacent areas and/or for reinstatement of land acquired for site facilities, shall be kept in adequate humidity, in a manner allowing for its reuse – they should be systematically sprinkled, with a frequency depending on the weather.</li> </ul>	Contractor/Site Manager/Environmental team
28	II.15	Earth surface protection, soil protection	<i>The Contract area</i>	<p><b>Use of top-soil</b></p> <p>Upon the completion of construction works the top-soil should be entirely used to reinstate the area.</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
29		Earth surface protection, soil protection	<i>The Contract area</i>	<p><b>Collecting the mineral soil layer</b></p> <p>About 40 cm thick layer of mineral soil shall be removed after removing the top-soil (locally more due to arrangement of bentomat).</p>	Contractor/Site Manager
30		Soil protection, Protection of animate nature	<i>The Contract area</i>	<p><b>Storing the mineral soil</b></p> <p>The removed layer of mineral soil shall be stored in the following way:</p> <ul style="list-style-type: none"> <li>a) removed mineral soil shall be stored beyond the area of earthworks in piles;</li> <li>b) the precise location of mineral soil piles should be pre-arranged with a team of environmental experts (including phytosociologist and zoologist), so that mineral soil storing does not degrade natural habitats and protected species, nor does it adversely affect the condition of trees and shrubs;</li> <li>c) storage piles of mineral soil should be secured against: contamination, being driven over by vehicles, compaction, storage of building materials, etc.;</li> <li>d) storage piles of mineral soil, until they are reused for final shaping of the embankment and adjacent areas, shall be kept in adequate humidity, in a manner allowing for its reuse – they should be systematically sprinkled, with a frequency depending on the weather.</li> </ul>	Contractor/Site Manager/Environmental team
31		Earth surface protection, soil protection	<i>The Contract area</i>	<p><b>Use of mineral soil</b></p> <p>The stored mineral soil should be used at later stages of construction.</p>	Contractor/Site Manager

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<b>G. REQUIREMENTS FOR REMOVAL OF TREES AND SHRUBS (FELLING)</b>					
32	II.18	Protection of animate nature	<i>The Contract area</i>	<p><b>Acceptable time of removing (felling) trees and shrubs</b></p> <p>Felling of trees and shrubs shall be limited to the necessary minimum.</p> <p>The felling shall be done beyond the hatching season of birds – from October the 16<sup>th</sup> until the end of February.</p> <p>Occasional felling may be done during the hatching season of birds under environmental supervision – only after identifying that nests and hollows are not occupied, there are no nestlings, and trees or shrubs to be logged are not inhabited by other animals under protection.</p> <p>In case of trees with identified presence of bats, an optimal time of logging is from September the 1<sup>st</sup> to the October the 31<sup>st</sup>.</p>	Contractor/Site Manager/Environmental team
33		Protection of animate nature	<i>The Contract area</i>	<p><b>Environmental supervision before and during the removal (felling) of trees with diameter of over 40 cm at breast height</b></p> <p>In case of removing trees with diameter of over 40 cm at breast height the following rules apply:</p> <p>a) The removal (felling) of trees with diameter of over 40 cm at breast height shall be preceded with inspection for those trees in terms of identifying protected species of invertebrates and bats, done by expert entomologist and expert chiropterologist, not later than 1 week before the logging of a given tree;</p> <p>b) In case of identifying the occurrence of protected</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>species of invertebrates and/or bats in trees to be removed (felled), the aforementioned experts shall indicate acceptable time and methods for the removal and shall determine proceeding methods for wood inhabited by species of protected animals;</p> <p>c) Time of the removal (felling) established with the aforementioned experts cannot violate conditions determined under item 32 - Acceptable time of removing (felling) trees and shrubs;</p> <p>d) In case of identifying presence of protected species of invertebrates and/or bats in trees planned to be removed (felled) and/or in trees to be removed (felled), one shall obtain an administrative decision required by law, which would allow for departure from bans referring to protected species of animals (if required in a given case);</p> <p>e) Transfer of specimens of protected species of invertebrates and/or bats in trees planned to be removed (felled) and/or in trees to be removed (felled) may be done under a direct supervision of the aforementioned expert entomologist and expert chiropterologist only.</p>	

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>H. REQUIREMENTS ON PROTECTING TREES AND SHRUBS NOT INTENDED FOR REMOVAL (FELLING)</b>					
34	II.23	Protection of animate nature	<i>The Contract area</i>	<p><b>Protection of tree trunks not intended for removal (felling)</b></p> <p>Prior to the commencement of construction works, tree trunks not to be felled shall be protected against mechanical damage for the time of works (e.g. through application of fencing, trunk covers made of straw mats or jute, sheets made of planks or OSB panels – up to the level not lower than 150 cm).</p> <p>In case of applying plank covers, the planking should be attached to the trunk (e.g. with wire bands or steel tape) in a way that does not harm the tree.</p> <p>During the Contract implementation period, the condition of protection for tree trunks exposed to damage should be monitored on an ongoing basis and the protection should be maintained in a proper condition providing efficient protection against mechanical damage.</p> <p>After the completion of works trunk protection should be removed.</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
35	II.22	Protection of animate nature	<i>The Contract area</i>	<p><b>Protection of the areas under crowns of trees and shrubs</b></p> <p>Construction works should be carried out in a way that does not harm trees and shrubs that have not been intended for removal (felling).</p> <p>At a distance of less than 1 m from the edge of the protrusion of the crown of trees and shrubs not intended for removal (felling), it is forbidden to:</p> <ul style="list-style-type: none"> <li>a) outline roads and service yards, parking lots and other elements that may influence the increase in tamping and changes in soil aeration;</li> <li>b) allow for traffic, stopover and parking of vehicles, machines and equipment;</li> <li>c) store earth masses (including topsoil) and building materials (in particular bulk materials);</li> <li>d) condensate the ground;</li> <li>e) smoke or use fire, use equipment or machines producing high temperature that can cause drying of the crown of trees.</li> </ul> <p>The storage of cement, aggregates, diesel, fuels and binders is prohibited at a distance of less than 10 m from trunks of trees and shrubs not intended for removal.</p> <p>The method of forming and compacting embankments in the vicinity of trees and shrubs not intended for removal shall be agreed with an expert dendrologist, and the results of the findings should be submitted to the Engineer for approval.</p>	Contractor/Site Manager/Environmental team - dendrologist



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
36	II.23	Protection of animate nature	<i>The Contract area</i>	<p><b>Protection of tree branches exposed to damage</b></p> <p>Tree boughs shall be protected through e.g. tying them to the lowest branches (boughs) or to ones placed at small height, to the ones placed above, or to support them with a prop to avoid damages to bark.</p>	Contractor/Site Manager/Environmental team - dendrologist
37		Protection of animate nature	<i>The Contract area</i>	<p><b>Preventive cutting of branches of trees exposed to damage</b></p> <p>In the case of exposure of tree boughs and branches to mechanical damage by working or moving vehicles, machines and equipment, preventive cutting of tree branches exposed to damage should be carried out.</p> <p>These pruning cuts - under the supervision of an expert dendrologist - cannot disturb the natural habit of trees (they cannot cover more than 1/3 of the green mass), they should ensure stability and statics of trees (pruning must be even on each side of the crown).</p>	Contractor/Site Manager/Environmental team - dendrologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
38	II.21	Protection of animate nature	<i>The Contract area</i>	<p><b><i>Carrying out works within root blocks of trees and shrubs</i></b></p> <p>Earthworks and other works including application of mechanical equipment in the vicinity of root blocks of trees and shrubs not intended for removal (felling) should only be carried out manually in a way affecting the trees and shrubs to the smallest possible extent, subject to the following conditions:</p> <ul style="list-style-type: none"> <li>a) skeletal roots (with a diameter of over 4 cm) should not be cut off;</li> <li>b) excavations should be carried out no closer than 2 m from the trunk;</li> <li>c) the time of root exposure to drying should be shortened to the minimum (while maintaining the conditions referred to in item 39 - Securing of exposed roots of trees and shrubs);</li> <li>d) the suitable period for carrying out the work in question is from October to April;</li> <li>e) the time of excavations in the direct neighborhood of trees shall be reduced to the necessary minimum.</li> </ul> <p>The aforementioned measures shall be implemented in agreement with the team of environmental experts – expert dendrologist, and after their implementation one shall provide the Engineer with an opinion of that team for acceptance in reference to the correctness assessment for the implemented measures.</p>	Contractor/Site Manager/Environmental team - dendrologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
39	II.21	Protection of animate nature	<i>The Contract area</i>	<p><b>Securing of exposed roots of trees and shrubs</b></p> <p>Exposed roots of trees and shrubs not intended for removal (felling) should be covered with straw or jute mats.</p> <p>From the beginning of April until the end of October the roots shall additionally be protected against drying out from the beginning of April until the end of October (e.g. straw mats periodically poured with water).</p> <p>At negative temperatures these mats should be dry (to avoid freezing of the roots).</p>	Contractor/Site Manager/Environmental team - dendrologist
40	II.21	Protection of animate nature	<i>The Contract area</i>	<p><b>Securing of damaged trees and shrubs</b></p> <p>In case aboveground parts of trees and shrubs not intended for removal have been damaged, the necessary care measures should be carried out immediately, adequate to the place and type of damage.</p> <p>In case of root damage, the ends should be trimmed off in line with the excavation edge using a sharp tool and the roots secured with a proper preparation (combating soil microorganisms).</p> <p>The abovementioned activities should be performed in consultation with the team of environmental experts – expert dendrologist, and after they have been completed, the Engineer should be presented with an opinion on the aforementioned team regarding the assessment of the activities.</p>	Contractor/Site Manager/Environmental team - dendrologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
41	II.14	Protection of animate nature	<i>The Contract area</i>	<p><b>Protection of vegetation growing beyond the work area</b></p> <p>The works should be clearly marked in a way visible for operators of heavy equipment in order to avoid damage to vegetation located beyond the set-out work area.</p>	Contractor/Site Manager/Environmental team - dendrologist
<b>I. REQUIREMENTS ON SECURING PROTECTED NATURAL RESOURCES</b>					
42	II.24	Protection of animate nature	<i>The Contract area</i>	<p><b>One-time environmental inventory of the area of works prior to the commencement of works</b></p> <p>Prior to the commencement of works, a one-time environmental inventory of the Contract area shall be done, performed by a team of environmental experts, referred to in item 107 - Providing a team of environmental experts.</p> <p>The purpose of the inventory is to determine the current distribution of natural habitats and habitats and sites of protected species of flora and fauna, including ongoing revision of information on the subject as included in the Environmental Impact Report (drawn up in 2015, together with later updates).</p> <p>If the presence of natural habitats and habitats or protected sites of plant and animal species in the Contract area has been confirmed, it is necessary to act as follows:</p> <p>a) In the case of identifying hazard for protected species, as a result of the performance, it is necessary to undertake measures expected in the Act of 04/16/2004 on nature conservation;</p> <p>b) in the case of natural habitats - further actions should be agreed with a competent environmental</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>team's expert, and the results of the findings should be submitted to the Engineer for approval;</p> <p>c) in the case of habitats or sites of protected species - perform the actions referred to in item 52 (Obtaining a decision allowing for exceptions to the principles of species protection of plants, fungi and animals for the habitats and sites of protected species indicated in the EIA and the Investment Data Sheet) and item 53 (Obtaining a decision allowing for exceptions to the principles of species protection of plants, fungi and animals for newly detected habitats and sites of protected species);</p> <p>d) identified representatives of protected species (e.g. amphibians, reptiles, birds) should be relocated outside the Works Contract site to a place with similar habitat conditions, far away enough from the Works Contract site, so that animals cannot return to this area until the work has been completed. All work will require an appropriate administrative decision in accordance with the procedure indicated in the above item - b). (Before relocating amphibians, one needs to obtain the permit of the owner or manager of the reservoir, watercourse or terrain to which they will be transferred).</p>	
43		Protection of animate nature	<i>The Contract area</i>	<p><b>Limiting the time of the Contract completion</b></p> <p>The Contractor should ensure such organization of works as to shorten the duration of the Contract as much as possible and in this way minimize the adverse impact of works on animals living in the area of the Contract and its neighbourhood.</p>	Contractor/Site Manager
44	II.29	Protection of animate nature	<i>The Contract area</i>	<p><b>Securing the Contract area against small animals entering the site</b></p>	Contractor/Site Manager/Environmental team – herpetologist and theriologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>Works should be performed in such a way as to avoid killing of animals.</p> <p>The Contract area shall be secured against the occurrence of small animals, and especially the following locations:</p> <ul style="list-style-type: none"> <li>- sites of currently performed works;</li> <li>- site facilities, storage yards, etc.;</li> <li>- land pits, where water may be collected.</li> </ul> <p>If seasonal migrations of amphibians are reported to take place on the Works Contract site, the area of works should be secured so that the amphibians cannot get to the site where they would be at risk - for this purpose, one shall properly fence the area of works with a fencing having a minimum height of 0.5 m, including 10 cm overhang on the outside (e.g. foil, agro-textile). In the bottom part the fencing material shall be driven into the ground – fences shall tightly adjoin the ground and they need to be anchored. Amphibians should be caught and moved outside the Works Contract site under environmental supervision done by an expert naturalist experienced in field works, having know-how and abilities to recognize species and habitats in a wide range, and they should be moved to a site beyond the Contract area, which is so distant from the Contract area that the animals would not have the possibility to return to the site until completion of the works.</p> <p>Determining the precise location of fencing securing the Contract area against animals entering the site and installation of the abovementioned fencing should be carried out under the supervision of an expert herpetologist and an expert theriologist.</p> <p>During the entire period of the Contract implementation, in case of applying the</p>	

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>abovementioned measures, the condition of the abovementioned fencing should be inspected on regular basis and any possible gaps should be immediately removed, including:</p> <ul style="list-style-type: none"> <li>a) from March the 1<sup>st</sup> to August the 31<sup>st</sup> these inspections should be carried out at least once every 3 days;</li> <li>b) from September the 1<sup>st</sup> to the end of February - not less than once every 10 days.</li> </ul> <p>Fencing inspections should be carried out with the participation of the abovementioned experts.</p>	

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
45	II.25 II.26 II.27	Protection of animate nature	<i>The Contract area</i>	<p><b>Inspection of places that could be traps for small animals</b></p> <p>The Construction site, and especially the opened excavations, shall be properly protected against forming of traps for animals.</p> <p>In the end of each working day one shall protect such sites through filling, covering with stiff materials (e.g. planks, chipboards), or through tight fencing.</p> <p>The excavations shall be left opened for the shortest possible time.</p> <p>Prior to the commencement of works on each working day one shall inspect the construction site in terms of animal presence, and one shall similarly inspect the bottom and walls of excavations prior to their removal (filling, embedding). If necessary, one shall allow the animals to leave the excavations or – eventually – catch the animals in a safe way and release them beyond the Works Contract area.</p> <p>In the periods from March the 1<sup>st</sup> to May the 15<sup>th</sup> and from September the 15<sup>th</sup> to October the 15<sup>th</sup>, a second inspection should also be carried out every day in the late afternoon.</p> <p>The last inspection for the presence of animals in the excavations should be carried out immediately before backfilling the excavations.</p> <p>Inspections should be carried out under the guidance and in accordance with the guidelines of an expert herpetologist and expert theriologist, who will also coordinate and indicate the places of release of caught animal species.</p> <p>All wells, excavations and other anthropogenic structures which may be a trap for amphibians and small mammals should be secured according to the guidelines and under the guidance of the abovementioned expert herpetologist and expert theriologist.</p>	Contractor/Site Manager/Environmental team – herpetologist and theriologist



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
46	II.28	Protection of animate nature	<i>The Contract area</i>	<p><b>Ongoing liquidation of marginal water deposits in the Contract area</b></p> <p>During the Contract implementation period, one shall avoid forming of ruts and other land pits, where water may stay, in order to avoid provision of potentially unstable breeding habitats for amphibians. It is necessary to permanently eliminate marginal water deposits in places which may interfere with ongoing or scheduled works as well as in places where ongoing or scheduled traffic of vehicles, machines and equipment is to be run.</p> <p>This measure aims to prevent the settlement of protected amphibian species in the Contract area during the performance of works. This activity should be carried out in consultation with a herpetologist, who will also supervise if the procedures are followed.</p>	Contractor/Site Manager/Environmental team - herpetologist
47		Protection of animate nature	<i>The Contract area</i>	<p><b>Ensuring the possibility of safe migration of amphibians</b></p> <p>Works should be carried out in a manner that ensures the safe migration of amphibians, including the migration through designed internal roads within the Contract area. Detailed rules for meeting this condition should be agreed with a herpetologist, who will also supervise if the procedures are followed.</p> <p>The abovementioned agreements with a herpetologist should be submitted to the Engineer for approval.</p>	Contractor/Site Manager/Environmental team - herpetologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
48		Protection of animate nature	<i>The Contract area</i>	<p><b>Trapping and relocating small animals from the Contract area</b></p> <p>If small animals are reported to inhabit the Contract area (amphibians, reptiles, small non-flying mammals, bats), in places where works may pose a threat to their life or health, they should be trapped and relocated from the Contract area to the appropriate habitats, located outside the impact range of the works.</p> <p>These actions should be performed under the supervision of a competent environmental expert (herpetologist, theriologist and/or chiropterologist).</p>	Contractor/Site Manager/Environmental team - herpetologist, theriologist, chiropterologist
49	II.20	Protection of animate nature	<i>The Contract area</i>	<p><b>Preventing the occurrence of birds' hatching sites within the performance area</b></p> <p>From the beginning of March until the commencement of the performance one shall systematically mow the land strip, where the construction works will be performed, in order to remove plants from that area, as they may remain bases for hatching sites of birds.</p>	Contractor/Site Manager/Environmental team - ornithologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
50		Protection of animate nature	<i>The Contract area</i>	<p><b><i>Fighting alien invasive plant species</i></b></p> <p>During the works, alien invasive plant species should be removed (at least twice a year, in the entire Contract area), until they disappear and are replaced with local vegetation.</p> <p>Removal of alien invasive plant species should be done by pulling out the plants (along with the root ball), transporting and then disposing of them.</p> <p>The actions should be carried out in accordance with detailed instructions specified by the expert phytosociologist.</p>	Contractor/Site Manager/Environmental team - phytosociologist
51		Protection of animate nature	<i>The Contract area</i>	<p><b><i>Ongoing inspections of the team of environmental experts during the Contract implementation period</i></b></p> <p>Works and other works performed during the Contract implementation period should be carried out under the ongoing supervision of a team of environmental experts (referred to in item 107).</p> <p>These experts should, among others, carry out regular inspections of the entire area of the Contract (at least once a month) and submit their comments and recommendations to the Contractor's staff responsible for carrying out works in accordance with the EMP conditions.</p> <p>The notes from the inspections should be made in writing, attached to the monthly reports on the implementation of the EMP conditions (referred to in item 111 - Reporting the implementation status of the EMP).</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
52		Protection of animate nature	<i>The Contract area</i>	<p><b><i>Obtaining a decision allowing for exceptions to the principles of species protection of plants, fungi and animals for the habitats and sites of protected species shown in the EIA Report and the Investment Data Sheet</i></b></p> <p>In respect of the resources of protected animals species, as shown in the Environmental Impact Report along with subsequent updates, the following actions should be performed before the commencement of construction works:</p> <p>a) The Contractor shall obtain and submit to the Engineer for approval a written opinion of the team of environmental experts including the specification of:</p> <ul style="list-style-type: none"> <li>• the extent of the possible impact of the works on the identified natural resources, and</li> <li>• the need to obtain the decision referred to in item b herein,</li> </ul> <p>and then, if it proves necessary in the light of the abovementioned opinion, the Contractor shall carry out the activities referred to in items b-d (hereunder);</p> <p>b) before taking any actions that may lead to the destruction of habitats and sites or flushing out the representatives of protected species, the Contractor is required to obtain the administrative decision required by law, allowing for exceptions to the binding prohibitions regarding protected species of plants, fungi and animals;</p> <p>c) the Engineer should be notified of the decision obtained;</p> <p>d) the Contractor is obliged to precisely and timely implement the conditions contained in the abovementioned decision.</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
53		Protection of animate nature	<i>The Contract area</i>	<p><b>Obtaining a decision allowing for exceptions to the principles of species protection of plants, fungi and animals for the newly detected habitats and sites of protected species</b></p> <p>If prior to the commencement of implementation or during the construction works presence of habitats or stands of protected species of flora and fauna (other than stands discussed under item 52) would be identified within the Contract area, then the Contract shall undertake measures listed under item 52.</p>	Contractor/Site Manager/Environmental team
54		Protection of animate nature	<i>The Contract area</i>	<p><b>Relocation of protected species</b></p> <p>Prepare a report and photographic documentation on the activities related to the relocation/destruction of existing plant or animal species, in accordance with the guidelines provided in the obtained administrative decision.</p> <p>The report should state at least the type and quantity of relocated species, indicate the places from which and to which they will be relocated, the manner of relocation and the time.</p>	Contractor/Site Manager/Environmental team
55	II.42	Protection of animate nature	<i>The Contract area</i>	<p><b>Fossil remnants of plants and animals</b></p> <p>In case of discovering fossil remnants of plants or animals, one shall notify the regional director for environmental protection about it immediately.</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>J. REQUIREMENTS ON DEMOLITION</b>					
56		Protection of soil and earth surface, Protection of animate nature water protection, landscape protection	<i>The Contract area</i>	<b>Environmental protection in the performance area</b>  The Contractor is obliged to include environmental protection within the area of works, and especially the protection of: soil, greenery, natural shape of land, and water relations.	Contractor/Site Manager/Environmental team
57		Protection of soil and earth surface, Protection of animate nature water protection, landscape protection	<i>The Contract area</i>	<b>Limiting the use and transformation of environmental elements</b>  At the performance it is allowed to apply and transform environmental elements in an extent necessary due to demolition of buildings.	Contractor/Site Manager/Environmental team
58		Protection of soil and earth surface, Protection of animate nature water protection, landscape protection	<i>The Contract area</i>	<b>Repair of damages</b>  If it is not possible to protect environmental elements, the Contractor is obliged to repaired the caused damage.	Contractor/Site Manager/Environmental team
<b>K. REQUIREMENTS ON RECREATION OF THE SITE AFTER THE COMPLETION OF CONSTRUCTION WORKS</b>					
59	II.33	Protection of earth surface	<i>The Contract area</i>	<b>Protection of slopes against erosion</b>  After developing the embankments it is recommended to protect the slopes and to sow them with grass (native species) as soon as possible to limit the surface erosion.	Contractor/Site Manager/Environmental team - phytosociologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
60	II.13 II.17	Protection of animate nature	<i>The Contract area</i>	<p><b>Recreation of topsoil layer and green areas and tidying up the site after completion of works</b></p> <p>After completion of works:</p> <ul style="list-style-type: none"> <li>a) construction facilities, service roads and sites should be dismantled, whilst road panels and sand collected from ballast should be transported outside the Contract area to the place specified beforehand (accepted by the Engineer);</li> <li>b) in the areas acquired in connection with the implementation of the Contract (within the boundaries of the Contract area), appropriate agrotechnical measures should be taken (soil loosening, fertilization, etc.), in order to prepare the recreation of the fertile soil layer;</li> <li>c) in the areas acquired in connection with the implementation of the Contract (within the boundaries of the Contract area), the fertile soil layer should be recreated (including the use of the topsoil collected from the area of works);</li> <li>d) treatments facilitating the restoration of green areas should be performed – slopes of the flood embankment and any spots, from where the existing grass vegetation would be removed shall be formed using the priorly removed soil (as a bank of seeds) and shall be sown with such species of native grass species as: false oat-grass (<i>Arrhenatherum elatius</i>), orchard grass (<i>Dactylis glomerata</i>), Timothy-grass (<i>Phleum pratense</i>), meadow foxtail (<i>Alopecurus pratensis</i>);</li> <li>e) proper care of the recreated green areas should be ensured (until the end of the Defect,</li> </ul>	Contractor/Site Manager/Environmental team – phytosociologist and dendrologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>Guarantee and Warranty Period);</p> <p>f) tidy up the Contract area;</p> <p>g) the area covered by the works as used by machines, means of transport, and areas adjacent to the area of works should be restored to its original state.</p> <p>Activities described in items b, c, d, e (above) should be performed under the supervision of expert phytosociologist and expert dendrologist, including e.g.:</p> <p>a) agreement of the exact dates of works;</p> <p>b) agreement of the composition and quantitative proportions of seed mixtures planned for sowing;</p> <p>c) agreement of conditions for preparation of soil and seedling;</p> <p>d) agreement of the principles of caring for the recreated green areas;</p> <p>e) submission of the results of the above agreements to the Engineer for approval;</p> <p>f) supervision over the implementation of activities supporting the recreation of green areas and supervision over the care of these areas (until the end of the Defects Notification Period, Guarantee and Warranty).</p> <p>Activities related to the recreation of the topsoil layer and the restoration of green areas referred to in this item of the EMP should be commenced as soon as their implementation is possible.</p>	



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
61	III.3 II.19	Protection of animate nature	<i>The Contract area</i>	<p><b>Implementation of replacement planting</b></p> <p>The Contractor shall do the replacement planting.</p> <p>On the stage of commencing the construction works, the Contractor shall determine the quantity and the type of planting. Replacement planting shall be planned in the amount not less than 1,000 trees, in accordance with potential natural vegetation adapted to local habitat conditions – species of trees and their quantity shall correspond with native species and quantity of logged trees. It is not allowed to provide alien invasive species.</p> <p>Apply at least 3-years old seedlings for the planned planting, with covered root system.</p> <p>The planting shall be protected against biting by deers and hares.</p> <p>The planting shall be done as close to the contract site as possible, on plots owned by the Municipality of Tarnów and/or the Commune of Tarnów.</p>	Contractor/Site Manager/Environmental team – phytosociologist and dendrologist
62		Protection of animate nature	<i>The Contract area</i>	<p><b>Caring for grasslands</b></p> <p>Caring for grasslands in the first growing season after planting consists in:</p> <ul style="list-style-type: none"> <li>• fertilizing, lawns should be supplied with mineral fertilizers as needed (no more 3-5 kg NPK/are/year). Mixtures of fertilizers should be prepared in such a way as to supply the grass with ingredients required in particular seasons: <ul style="list-style-type: none"> <li>○ in spring, the lawn requires a mixture with dominating nitrogen,</li> <li>○ from the middle of summer nitrogen should be reduced, increasing the dose</li> </ul> </li> </ul>	Contractor/Site Manager/Environmental team – phytosociologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>of potassium and phosphorus,</p> <ul style="list-style-type: none"> <li>○ the final fertilization should not contain nitrogen, but potassium and phosphorus.</li> <li>• Additional seeding,</li> <li>• mowing: <ul style="list-style-type: none"> <li>○ the first mowing should be carried out when the grass is about 10 cm high and should be cut to a height of 6 cm,</li> <li>○ subsequent mowing should take place at such intervals so that the grass does not exceed 15 cm in height,</li> <li>○ the last pre-winter mowing should be carried out 1 month before the expected cold weather (for the climate of Poland the first half of October may be assumed),</li> <li>○ after each mowing, cut grass should be removed from all surfaces and harvested hay should be stored outside the construction site,</li> </ul> </li> <li>• it is necessary to maintain adequate soil moisture.</li> </ul> <p>Mowing of grasslands in subsequent growing seasons should be carried out twice a year.</p>	

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>L. REQUIREMENTS ON THE PREVENTION OF THE ENVIRONMENTAL POLLUTION</b>					
63		Water and soil protection, health and safety protection, Protection of animate nature	<i>The Contract area</i>	<p><b><i>The use of building materials in accordance with regulations and standards and harmless to the environment</i></b></p> <p>Materials delivered and used for construction shall be supervised, and the source of soil material origin shall especially be checked.</p> <p>Only building materials that are not harmful to the environment (natural, environmentally friendly or neutral) should be used for the implementation of the Contract. One shall not apply substances that may be lethal to the present animals, except for substances necessary for proper operations of construction machines.</p> <p>The materials, raw materials, fuels, fertilizers, cement-concrete mixes used should be certified and approved for use. The applied material cannot contain substances, which may be washed out, and especially substances, which are particularly harmful to the water environment, occurring in a form of soluble compounds.</p> <p>Material applied for the embankment should be made of natural materials, without the use of materials emitting hazardous substances to the ground-water environment.</p>	Contractor/Site Manager
64	II.4	Water and soil protection	<i>The Contract area</i>	<p><b><i>Technical efficiency and inspections of vehicles, machines and equipment</i></b></p> <p>In order to prevent contamination of soil and water, only technically efficient vehicles, machines and equipment should be used to carry out works.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>The Contractor should carry out ongoing inspections of the efficiency of vehicles, machines and equipment, review the condition of vehicles, machines and equipment, and eliminate with any resources available any permeating of contamination to soil and water, including in particular spilling of fuel, hydraulic diesel and petroleum substances, both during operating, refueling, transport, as well as the work of vehicles, machines and equipment.</p>	
65		Water and soil protection	<i>The Contract area</i>	<p><b><i>Conditions on the location of the sites for collection and production of building materials</i></b></p> <p>Building materials, in particular bulk materials, should be collected only on compacted surfaces within the site facilities. These materials cannot be collected at a distance of less than 100 m from existing watercourses.</p> <p>Analogous conditions apply to the places of production of building materials (cement mixes, prefabricates, aggregates, etc.).</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
66		Water protection	<i>The Contract area</i>	<p><b>Reducing time and number of drainage and the ban to dispose of water from excavations directly to watercourses</b></p> <p>The time for carrying out drainage should be reduced to the minimum and such methods should be applied to reduce the amount of pumped water and ensure its protection against contamination.</p> <p>The water pumped out from the excavations cannot be directly disposed to watercourses due to high content of suspension.</p> <p>Before disposing to watercourses, the water should be purified of suspension, e.g. through the use of sedimentation tanks.</p> <p>Suspensions after treatment should be managed in a manner consistent with their qualifications eliminating the possibility of entering the watercourse or storage in places where flooding or permeating may occur.</p>	Contractor/Site Manager
67		Protection of animate nature, earth surface protection	<i>The Contract area</i>	<p><b>Conditions for movement of vehicles, machines and equipment in the Contract area</b></p> <p>Movement of vehicles, machines and equipment shall be carried out only:</p> <ul style="list-style-type: none"> <li>a) within the site area;</li> <li>b) on existing roads;</li> <li>c) on service roads and yards;</li> <li>d) on internal roads (after they have been built).</li> </ul>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
68		Water and soil protection	<i>The Contract area</i>	<p><b><i>Parking place for machines and vehicles after finishing the work</i></b></p> <p>Machines and vehicles shall be parked, every day after finishing the work, and especially on off days, in places intended for parking in the site facility area.</p> <p>After stay over periods of the vehicles parked during the break in operation, the parking lot should be inspected for the presence of any leak of operational substances prior to the start-up and application.</p>	Contractor/Site Manager
69		Water and soil protection	<i>The Contract area</i>	<p><b><i>Sealing of the ground intended for movement of vehicles, machines and equipment on the construction site</i></b></p> <p>The site facilities area intended for movement of vehicles, machines and equipment shall be sealed from the ground using insulating materials to guarantee the soil protection.</p>	Contractor/Site Manager
70		Water and soil protection	<i>The Contract area</i>	<p><b><i>The ban to carry out maintenance activities and repairs of vehicles, machines and equipment outside the site facilities</i></b></p> <p>Maintenance of vehicles, machines and equipment (including e.g. change of diesel, liquids, etc.) may be carried out only in designated places on the construction site, meeting the conditions specified in item 71 - Designation and sealing of garages and maintenance of vehicles, machines and equipment.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
71		Water and soil protection	<i>The Contract area</i>	<p><b><i>Designation and sealing of garages and maintenance sites for vehicles, machines and equipment</i></b></p> <p>Places intended for maintenance of vehicles, machines and equipment (including garaging, refueling and technical service yards, etc.) should be designated and properly marked on the site facilities.</p> <p>The above-mentioned places intended for maintenance of vehicles, machines and equipment should be periodically (until completion of the construction) lined with impermeable insulating materials, protecting the substrate against penetration of solid or liquid contaminants.</p> <p>When determining the location of the places, safe distance from flowing and standing water courses should be taken into account, among others.</p> <p>The detailed location of the above places should be agreed in advance with a team of environmental experts (including an expert phytosociologist and an expert zoologist).</p>	Contractor/Site Manager/Environmental team – phytosociologist, zoologist
72		Water and soil protection	<i>The Contract area</i>	<p><b><i>Ensuring the outflow of water from parking lots and roads to sewage systems</i></b></p> <p>Parking lots for equipment and access roads should be made with a slope ensuring outflow of rainwater and snowmelt and wastewater to sewage devices or to other receivers in a way preventing penetration of soil of surface water by any type of contamination.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
73	II.37	Water and soil protection	<i>The Contract area</i>	<p><b><i>A stand with a sorbent near the service and parking lots for vehicles, machines and equipment</i></b></p> <p>Site facilities shall be provided with sorbent for neutralizing the potential failure leak of hazardous substances (including diesel derivatives) from construction machines and equipment and from trucks. In the vicinity of the places intended for servicing vehicles, machines and equipment (including garaging, refueling and technical service yards, etc.) it is necessary to ensure adequate quantities of sorbent.</p>	Contractor/Site Manager
74	II.36	Water and soil protection	<i>The Contract area</i>	<p><b><i>Guidelines for refueling of vehicles, machines and equipment</i></b></p> <p>Refueling should be carried out using mobile or stationary fuel distribution points, with appropriate safeguards, such as a stand with sorbent used for liquidation of leaks and outflows of diesel derivatives.</p> <p>If it would be necessary to refuel on the construction site, one shall prepare a site with sealed ground for that purpose, shaped in a way preventing potential leakage beyond the refueling site. That place needs to be provided with sorbents for the purpose of fuel leakage.</p>	Contractor/Site Manager



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
75		Water and soil protection	<i>The Contract area</i>	<p><b><i>Guidelines for washing and cleaning of vehicles, machines and equipment</i></b></p> <p>It is forbidden to mark places or wash vehicles near watercourses, i.e. at a distance of less than 100 m, water reservoirs, as well as places where water stagnation has formed (conditions specified in item 14 - Conditions for the location of construction site facilities, yards, storage/disposal sites, etc.).</p>	Contractor/Site Manager/Environmental team
76		Water and soil protection	<i>The Contract area</i>	<p><b><i>Prevention of leaks from vehicles, machines and equipment</i></b></p> <p>Maintenance of vehicles, machines and equipment used in the Contract area (including, among others, cleaning the equipment after concreting works) are allowed only in designated places on the site facilities, adequately secured against the possibility of contamination of the ground and waters and equipped in such way as to enable the immediate removal of any contamination.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
77	II.38	Water and soil protection	<i>The Contract area</i>	<p><b><i>Proceedings in the case of emission of diesel derivatives</i></b></p> <p>In the event of a failure contaminating the ground, the following measures should be taken:</p> <ul style="list-style-type: none"> <li>a) take immediate action to prevent the spread of contamination, by means of available resources (e.g. sorbents);</li> <li>b) immediately remove contaminated layers of soil and transfer them to a specialized company having a relevant permit for business actions related to hazardous waste treatment;</li> <li>c) in case of major failures, use the procedures described in item 100 – Emergency notification rules.</li> </ul>	Contractor/Site Manager
78	II.8	Acoustic climate protection	<i>The Contract area</i>	<p><b><i>Reducing time of works to daytime</i></b></p> <p>Construction works should be carried out in a daytime, i.e. from 6:00 am to 10:00 pm.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
79		Acoustic climate protection	<i>The Contract area</i>	<p><b>Reducing noise of vehicles, machines and equipment</b></p> <p>During the Contract implementation period only technically efficient vehicles, machines and equipment shall be used, with noise emission (acoustic power) compliant with the binding regulations and which does not result in exceeding the environmental quality standards in the scope of permissible noise levels.</p> <p>In case any inefficient vehicles, machines and equipment are found which can generate a higher noise level in their neighbourhood, they should be immediately replaced with the efficient ones.</p>	Contractor/Site Manager
80		Acoustic climate protection	<i>The Contract area</i>	<p><b>Reducing noise of pump sets</b></p> <p>In the case of carrying out works in the acoustically protected areas or in their vicinity, in order to reduce their inconvenience to residents, only such pump sets shall be used which are equipped with soundproof housing which ensures the reduction of the noise levels to be compliant with the applicable regulations and standards (regarding permissible noise levels in the environment).</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
81		Acoustic climate protection	<i>The Contract area</i>	<p><b>Control of noise level in acoustically protected areas</b></p> <p>In the case of works carried out in acoustically protected areas or in their vicinity, the noise level shall be constantly monitored and, depending on the needs, appropriate technical and organizational measures ensuring noise reduction to be compliant with applicable regulations and standards (regarding permissible noise levels in the environment) should be applied.</p>	Contractor/Site Manager
82		Air protection, Acoustic climate protection	<i>The Contract area</i>	<p><b>Limiting the power consumption of vehicles, machines and equipment</b></p> <p>Vehicles, machines and equipment shall be used with low power consumption and switch off power/engines during the break in operation.</p> <p>Operating time of vehicles, machines and equipment shall be reduced to the necessary minimum.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
83	II.4 II.9 II.10 II.11	Air protection	<i>The Contract area</i>	<p><b>Limiting air pollution with exhaust fumes</b></p> <p>In order to reduce the adverse impact on the condition of the air:</p> <ul style="list-style-type: none"> <li>a) only technically efficient vehicles, machines and equipment should be used, with the required approvals to reduce the emission of gaseous and particulate substances into the air;</li> <li>b) a place should be provided for free manoeuvres of vehicles, such as yards;</li> <li>c) it is necessary to limit the traffic of vehicles, machines and devices to the necessary minimum, as well as to limit the speed of traffic on the construction site;</li> <li>d) it is necessary to eliminate the idling time of engines and follow the instructions on turning the machines and equipment off during breaks in operation;</li> <li>e) it is necessary to minimize the number of truck deliveries for construction materials;</li> <li>f) unnecessary, excessive concentration of the works using heavy equipment shall be avoided</li> <li>g) vehicles should be parked with the engine turned off.</li> </ul>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
84	II.7	Air protection	<i>The Contract area</i>	<p><b><i>Limiting dusting from the construction site and roads</i></b></p> <p>When carrying out construction works, the effects of secondary dusting should be limited by maintaining a high work culture, in particular by:</p> <ul style="list-style-type: none"> <li>a) regular cleaning of the construction site;</li> <li>b) applying the necessary technical and organizational measures to limit the emission of dust from the construction site, including storage places for building materials causing dusting;</li> <li>c) spraying dusty road surfaces in dry periods, during deliveries.</li> </ul>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
85	II.5 II.6	Health and safety protection, Air protection	<i>The Contract area</i>	<p><b><i>Keeping the roads clean</i></b></p> <p>In order to keep the roads clean and prevent dusting on the roads the following steps should be taken:</p> <ul style="list-style-type: none"> <li>a) the Contractor shall apply all available technical means and organize works to minimize the dusting and pollution of access roads to the Contract area;</li> <li>b) the Contractor shall apply protection on truck delivering bulk materials that may cause dusting or materials emitting gas during the delivery (tarpaulins, cover sheets, and other types of covers);</li> <li>c) in places of departure of heavy equipment from the construction site, the Contractor will install stands where initial removal of soil or mud from vehicle wheels will take place.</li> <li>d) the Contractor shall clean lanes of public roads off of pollutions brought from the construction site due to the traffic of vehicles, machines and equipment related to the implementation of the Contract, in order to prevent secondary dusting by soil brought by wheels of vehicles providing services to the site.</li> </ul>	Contractor/Site Manager
86		Air protection	<i>The Contract area</i>	<p><b><i>Ban to burn fires and burn down materials, waste, litter, etc.</i></b></p> <p>It is forbidden to burn fires and burn down materials, waste and litter, etc. in the Contract area.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>M. REQUIREMENTS ON WASTE MANAGEMENT</b>					
87		Water and soil protection	<i>The Contract area</i>	<p><b>Development of a Waste Management Plan (Waste MP)</b></p> <p>Prior to the commencement of works the Contractor shall develop and submit for the Engineer's approval a Waste Management Plan, specifying the way of handling waste expected to be generated during the works and taking into account, among others, conditions for waste management included in the EMP.</p>	Contractor/Site Manager
88	II.39	Water and soil protection, Air protection	<i>The Contract area</i>	<p><b>Guidelines for waste management</b></p> <p>Waste shall be properly managed:</p> <p>a) Minimize the volume of produced waste;</p> <p>b) Collected selectively in marked containers, in separate and properly organized places, in conditions protecting against the impact of weather and the access of third parties and animals;</p> <p>c) hand over to units having proper permits – for taking over, transportation, recovery or treatment of waste, respectively.</p>	Contractor/Site Manager
89		Water and soil protection	<i>The Contract area</i>	<p><b>Guidelines for handling hazardous waste</b></p> <p>Hazardous waste should be segregated and stored separately in special sealed containers placed in the sealed, paved area that is marked and secured against access by third parties, until it is handed over to entities authorized to handle it.</p>	Contractor/Site Manager



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
90	II.40	Water and soil protection	<i>The Contract area</i>	<p><b>Guidelines for handling domestic waste</b></p> <p>Site facilities shall be provided with tight holding sanitary facilities, with assurance of domestic waste transfer to the waste treatment plant by entities authorised to handle it.</p>	Contractor/Site Manager
91		Water and soil protection	<i>The Contract area</i>	<p><b>Preventing illegal dumping of litter and waste</b></p> <p>Prior to the commencement of works the Contractor shall investigate the area for possible illegal landfills of litter and waste. In case of identifying an illegal landfill, the Contractor shall clear such sites through removing the waste and transporting it away to the treatment site. In the Contract implementation period the Contractor shall secure the Contract area against possible formation of such landfills.</p>	Contractor/Site Manager
<b>N. REQUIREMENTS ON HEALTH AND SAFETY PROTECTION</b>					
92		Health and safety protection	<i>The Contract area</i>	<p><b>Development of documents related to safety in the Contract area</b></p> <p>In the Contract area it is necessary to maintain order and ensure proper organization of works.</p> <p>Prior to the commencement of works, the Contractor will develop and then obtain the Engineer's approval for the following documents related to safety on the construction site:</p> <ul style="list-style-type: none"> <li>a) Health and Safety Plan (BIOZ);</li> <li>b) Construction Site Organization Plan.</li> </ul>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
93		Health and safety protection	<i>The Contract area</i>	<p><b>Sapper inspection and supervision in the Contract area</b></p> <p>In order to minimize the risk related to the possible occurrence of dangerous objects of military origin in the area of the Contract, the Contractor shall ensure:</p> <ul style="list-style-type: none"> <li>a) Prior to the commencement of works – inspection in the Contract area in terms of unexploded shells and misfires presence (report containing results of sapper inspection shall be submitted for the Engineer's acceptance);</li> <li>b) during the works – sapper supervision of works (carried out by the team of sappers), consisting in the ongoing checking and clearing of the Contract area of dangerous objects of military origin along with their utilization;</li> <li>c) in the case of finding dangerous objects of military origin in the Contract area - implementation of procedures described in item 101 - Conditions for handling unexploded ordnance or live bombs.</li> </ul>	Contractor/Site Manager/Environmental team - sapper

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
94		Health and safety protection, Protection of tangible properties	<i>The Contract area</i>	<p><b>Documentation and monitoring of the technical condition of buildings exposed to tremor and vibrations</b></p> <p>Before starting works during which tremors and vibrations threatening the local residents as well as nearby buildings and infrastructure facilities may occur, the Contractor will carry out an inventory of existing buildings and facilities, with particular reference to cracks and damages.</p> <p>During the performance of the aforementioned works, the Contractor will monitor the condition of these buildings and facilities on a regular basis.</p>	Contractor/Site Manager
95		Health and safety protection	<i>The Contract area</i>	<p><b>Implementation of guidelines on work safety requirements</b></p> <p>The Contractor will ensure the implementation of detailed guidelines on work safety requirements, including in terms of:</p> <ul style="list-style-type: none"> <li>a) development of the construction site, including hazardous areas;</li> <li>b) storage and transport;</li> <li>c) electrical installations and devices;</li> <li>d) machines and technical equipment;</li> <li>e) work at heights;</li> <li>f) earthworks;</li> <li>g) selected renovation and demolition works, contained in applicable legal regulations.</li> </ul>	Contractor/Site Manager – H&S supervision

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
96		Health and safety protection	<i>The Contract area</i>	<p><b>Ensuring hygienic conditions</b></p> <p>In the Contract area, it is necessary to ensure the necessary number of portable toilets and ensure their use by employees, as well as ensure the training of all employees in maintaining appropriate hygiene conditions within the construction site and its immediate neighbourhood.</p>	Contractor/Site Manager – H&S supervision
97		Health and safety protection	<i>The Contract area</i>	<p><b>Limiting the impact of deliveries on the inhabitants</b></p> <p>Delivery routes for construction materials and equipment shall be established to minimize the impact of deliveries on people – avoiding developed areas.</p>	Contractor/Site Manager – H&S supervision
98		Health and safety protection	<i>The Contract area</i>	<p><b>Limiting the impact of works on the inhabitants</b></p> <p>Implementation time of the entire Works Contract shall be limited to minimum.</p> <p>One shall assure such an organization of work to allow for elimination of the impact of accumulation for the extension of embankment section on the inhabitants living in vicinity. The smallest possible number of construction equipment shall operate in vicinity of buildings.</p>	Contractor/Site Manager – H&S supervision

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>O. REQUIREMENTS ON EXTRAORDINARY THREATS TO THE ENVIRONMENT</b>					
99	II.1	Health and safety protection	<i>The Contract area</i>	<p><b>Guidelines on the conduct in connection with the flood risk</b></p> <p>The works shall be done beyond the flood risk occurrence period.</p> <p>In connection with the flood risk, the Contractor will prepare and submit to the Engineer's approval a document entitled: "Flood protection plan for the construction site, taking into account local hydrological and meteorological conditions in the vicinity of the construction site". The document shall contain e.g. a proceeding manual in the potential event of flood after commencing the works.</p> <p>In the event of a flood, the Contractor will follow the procedures described in the above-mentioned document.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
100		Health and safety protection	<i>The Contract area</i>	<p><b>Guidelines on notifying of emergency</b></p> <p>In the event of emergency (other than a flood), accident, major failure, etc., the Contractor is obliged to take the following actions:</p> <ul style="list-style-type: none"> <li>a) Immediately notify relevant services (Fire Brigade, Ambulance Service, Police, etc.);</li> <li>b) until the arrival of the relevant services, take the necessary actions to reduce the risk of loss of personnel, property and environment (as agreed with the relevant services, if possible);</li> <li>c) notify the Engineer and the Employer</li> <li>d) after the arrival of the relevant services, act strictly according to their guidelines and instructions.</li> </ul>	Contractor/Site Manager
101		Health and safety protection	<i>The Contract area</i>	<p><b>Guidelines for handling unexploded ordnance or live bombs</b></p> <p>In the case of finding unexploded ordnance or live bomb, the Contractor shall:</p> <ul style="list-style-type: none"> <li>a) immediately stop works on the particular site;</li> <li>b) assure evacuation of the employees from the explosion risk area;</li> <li>c) immediately notify the sapper supervision team and the Police, and then follow the guidelines obtained from them;</li> <li>d) notify the Engineer and the Employer.</li> </ul> <p>Under no circumstances unexploded ordnance or live bombs may be picked up, dug out, buried, relocated, thrown to fire or water, etc.</p>	Contractor/Site Manager/Environmental team - sapper

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>P. REQUIREMENTS ON CONSERVATION OF HISTORIC MONUMENTS</b>					
102		Conservation of historic monuments	<i>The Contract area</i>	<p><b>Providing archaeological supervision</b></p> <p>The Contractor shall be obliged to provide ongoing archaeological supervision for the time of earthworks.</p> <p>To this end, the Contractor shall:</p> <ul style="list-style-type: none"> <li>a) prepare a relevant action plan in this regard;</li> <li>b) ensure the participation of a team of archaeologists who conduct ongoing supervision of earthworks</li> <li>c) if necessary, obtain the permission required by law to conduct archaeological research from the competent heritage conservator.</li> </ul>	Contractor/Site Manager/Environmental team - archaeologist
103	II.43	Conservation of historic monuments	<i>The Contract area</i>	<p><b>Rules of proceeding with historic objects</b></p> <p>During implementation of the Works Contract one shall draw particular attention to the protection of a railway gatehouse (Kassali Street) at the railway bridge over the River Biała, as it is an object under conservatory protection; and one shall also maintain remnants of the old bridge (abutments) located at Kwiatkowskiego Street in Tarnów.</p>	Contractor/Site Manager/Environmental team - archaeologist
104	II.44	Conservation of historic monuments	<i>The Contract area</i>	<p><b>Guidelines on the conduct in the case of uncovering mobile monuments or archaeological sites</b></p> <p>If during the works an object is uncovered which may be or certainly is a historic monument or has a historical value, the Contractor is obliged to:</p> <ul style="list-style-type: none"> <li>a) immediately stop any work that may damage or</li> </ul>	Contractor/Site Manager/Environmental team - archaeologist

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>destroy uncovered objects in a given place;</p> <p>b) secure (by means of available sources) uncovered objects and the place where they were found against being destroyed, damaged or stolen;</p> <p>c) immediately notify the team of archaeologists and the Engineer;</p> <p>d) immediately notify relevant conservatory services;</p> <p>e) take further security measures, agreed with the team of archaeologists and the Engineer;</p> <p>f) facilitate and ensure carrying out documentary activities, archaeological research and other necessary activities indicated by an expert team of archaeologists and/or administrative authorities responsible for preserving the historic substance;</p> <p>g) after completing the activities and research listed in items d) and e) uncovered mobile monuments should be relocated to appropriate institutions indicated by a team of archaeological experts and/or administrative authorities responsible for protecting the historic substance (in accordance with the applicable regulations and the content of the Permit referred to in item 102, letter c) – Providing archaeological supervision)</p> <p>h) in the case of immobile monuments, after completing the activities and research listed in items d) and e) the guidelines should be implemented regarding further treatment of the uncovered historic substance, established by a team of archaeological experts and/or administrative authorities responsible for</p>	



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				protecting the historic substance (in accordance with applicable regulations and the content of the Permit referred to in item 102, letter c) - Providing archaeological supervision).	
<b>Q. REQUIREMENTS ON THE CONTRACTOR'S STAFF ENGAGED IN THE IMPLEMENTATION OF THE EMP</b>					
105		Implementation and reporting of the EMP	<i>The Contract area</i>	<p><b>Training of the Contractor's staff in the scope of the EMP implementation</b></p> <p>The Contractor is obliged to train their managerial and engineering and technical staff on the rules and methods of implementation of these EMP terms which, in accordance with Appendix 1 and Appendix 2 to the EMP, are assigned to the Contractor. These trainings should be completed with a test.</p> <p>In the monthly reports submitted to the Engineer, the Contractor shall provide information on the state of training of the Contractor's staff in the scope of the EMP terms in the current reporting period.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
106		Implementation and reporting of the EMP	<i>The Contract area</i>	<p><b>Appointment of the EMP coordinator in the Contractor's team</b></p> <p>In the Contactor's team, a person shall be appointed to co-ordinate and oversee actions related to the implementation of the EMP.</p> <p>The responsibilities of the person shall include:</p> <ul style="list-style-type: none"> <li>a) supervising the implementation of individual EMP terms in the subsequent stages of the Contract implementation;</li> <li>b) ongoing monitoring of the status of implementation of individual terms of Appendix 1 and Appendix 2 to the EMP in the Contract area;</li> <li>c) ongoing informing of the Contractor's management team on the obligations arising from the EMP at the particular stage of works, as well as on the issues arising during the implementation of the EMP;</li> <li>d) co-operation with the rest of the Contractor's team (including a team of environmental experts, a team of archaeologists and a team of sapper supervision) in the scope of ensuring the implementation of the EMP;</li> <li>e) preparation of commentaries and reports (kick-off, monthly, quarterly, ad-hoc, final report, reports to RDOŚ in Cracow - only to the extent resulting from the decisions obtained at the implementation stage, e.g. exceptions, if they result in the need to make the report to the authorities);</li> <li>f) co-operation with people responsible for the implementation of the EMP from the Engineer's and Employer's team.</li> </ul> <p>The person appointed to perform the</p>	Contractor/Site Manager/Environmental team
				<p>abovementioned role shall require the Engineer's approval.</p>	Page   66

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
107		Implementation and reporting of the EMP	<i>The Contract area</i>	<p><b>Providing of a team of environmental experts</b></p> <p>Throughout the whole Contract implementation period the Contractor shall provide the team of environmental experts, composed of the representatives of the following specializations:</p> <ul style="list-style-type: none"> <li>a) botanist - phytosociologist (natural habitats and protected plant species);</li> <li>b) dendrologist (rule for tree care and protection);</li> <li>c) zoologist - an expert in the field of invertebrates;</li> <li>d) zoologist - herpetologist (amphibians and reptiles);</li> <li>e) zoologist - ornithologist (birds);</li> <li>f) zoologist - chiropterologist (bats);</li> <li>g) zoologist - theriologist (non-flying mammals).</li> </ul> <p>Each specialist shall have carried out at least two natural supervisions in their professional carrier.</p> <p>Monthly and quarterly reports shall be prepared on the activities performed by the Environmental Team of the Contractor as part of their environmental supervision.</p> <p>The Environmental Team of the Contractor will be required over the entire duration of the implementation phase to supervise the proper performance of works in the context of their potential adverse impact on protected natural habitats and protected species, the proper place of conducting works with the view of protected habitats and species, proper implementation of preventive measures to fauna (trapping, relocation) and all other activities in the field of environmental protection.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
				<p>These experts will be involved in the implementation of selected mitigation and monitoring measures specified in the EMP.</p> <p>The personnel composition of the team of environmental experts requires the Engineer's approval.</p> <p>One member of the team of environmental experts may combine at most two specializations listed above in points a-g.</p> <p>Being involved in the work on other OVFM Project contracts or on any other Contracts cannot limit the availability of the experts for this Contract.</p> <p>Before the commencement of works, the Contractor will submit to the Engineer's approval a Quality Assurance Plan regarding the activities of the team of environmental experts.</p>	

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
108		Implementation and reporting of the EMP	<i>The Contract area</i>	<p><b><i>Providing a team of archaeological experts</i></b></p> <p>Throughout the whole Contract implementation period the Contractor shall provide the team of archaeological experts.</p> <p>These experts will be involved in the implementation of selected mitigation measures specified in the EMP.</p> <p>Depending on the needs, a team of archaeological experts can consist of one or more people with the appropriate professional licenses. The personnel composition of the team of archaeologists requires the approval of the Engineer. Being involved in the work on other OVFM Project contracts or on any other Contracts cannot limit the availability of the experts for this Contract.</p> <p>Before the commencement of works, the Contractor will submit to the Engineer's approval a Quality Assurance Plan regarding the activities of the team of archaeological experts.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
109		Implementation and reporting of the EMP	<i>The Contract area</i>	<p><b>Providing of a sapper supervision team</b></p> <p>Throughout the whole Contract implementation period the Contractor shall provide the sapper supervision team.</p> <p>This team will be involved in the implementation of selected mitigation measures specified in the EMP.</p> <p>Depending on the needs, a team of sappers can consist of one or more people with the appropriate professional licenses. The personnel composition of the team of sappers requires the approval of the Engineer. Being involved in the work on other OVFM Project contracts or on any other Contracts cannot limit the availability of the experts for this Contract.</p> <p>Prior to the commencement of works, the Contractor will submit to the Engineer for approval a Quality Assurance Plan for the sapper supervision team</p>	Contractor/Site Manager
110		Implementation and reporting of the EMP	<i>The Contract area</i>	<p><b>Discussing the implementation of EMP during working meetings and Site Meetings</b></p> <p>During the Contract implementation period monthly meetings of the representatives of the PIO, the Engineer and the Contractor will be held to discuss and control the implementation of mitigation measures and monitoring measures specified in the EMP.</p> <p>Notwithstanding the above, updated requirements and problems related to the implementation of the EMP will be discussed at all Site Meetings.</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>R. REQUIREMENTS ON EMP IMPLEMENTATION REPORTING</b>					
111		Implementation and reporting of the EMP	<i>The Contract area</i>	<p><b>Reporting the implementation status of the EMP</b></p> <p>During the Contract implementation period, the Contractor will submit monthly reports to the Engineer on the implementation of the conditions specified in the EMP (in the form of a checklist together with the necessary attachments, including reports on the implementation of environmental supervision).</p> <p>A template of the above-mentioned report (checklist) will be developed by the Contractor and submitted to the Engineer for approval.</p> <p>Depending on the circumstances, the Engineer may request the Contractor to submit additional reports regarding, among others, emerging critical situations, implementation of selected EMP items, and others.</p> <p>In addition, the Contractor is obliged to make a kick-off report, quarterly, ad-hoc, final reports and reports to RDOŚ in Cracow - only to the extent resulting from the decisions obtained at the implementation stage, e.g. exceptions, if they result in the need to make the report to the authorities.</p>	Contractor/Site Manager/Environmental team

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>S. REQUIREMENTS AFTER THE COMPLETION OF WORKS</b>					
112	II.13 II.45	Protection of soils and earth surface	<i>The Contract area</i>	<p><b>Cleaning works, restoration of the area to its original state</b></p> <p>After completing each section of the embankment to be extended, areas damaged during the works shall be reinstated and any temporary site elements shall be removed, including site facilities and technical roads and lanes, and the site shall be restored to its original condition.</p>	Contractor/Site Manager
113		Protection of soils and earth surface, Protection of animate nature	<i>The Contract area</i>	<p><b>Topsoiling, sowing, mowing the grass</b></p> <p>After completing the construction works, all of the earth surface will be topsoiled and sown with grass in accordance with the measures detailed in item 60 - Recreation of a topsoil layer and green areas and tidying up the site after completion of works, and in items 61 – Implementation of replacement planting, and 62 - Caring for grasslands.</p> <p>During the performance of construction works and during the operational phase places sowed with grass mixes should be cured of by means of e.g.: twofold mowing during the year, and removal of hard lichens. This measure includes the performance period, as well as the Defects Notification Period and the Guarantee and Warranty Period.</p>	Contractor/Site Manager/Environmental team - phytosociologist



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
114		Protection of soils and earth surface	<i>The Contract area</i>	<p><b>Management, maintenance, repairs of roads</b></p> <p>The Contractor is obliged to remove defects/damages to roads used under this Contract during the Contract Implementation Period.</p> <p>During the operating period, roads and technological lanes must be properly maintained/managed through appropriate winter road maintenance in accordance with the existing weather conditions. Gravel/dirt roads - unevenness should be levelled, if necessary.</p>	Contractor/Site Manager

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
<b>T. REMAINING ESHS REQUIREMENTS</b>					
115		ESHS issues	<i>The Contract area</i>	<p><b><i>Obligation to observe ESHS requirements and conditions</i></b></p> <p>The Contractor shall be obliged to apply and observe all ESHS policies' requirements and conditions (i.e. the ones related to environmental, social and health and safety issues) as determined in the Contract documents and in the ESHS Proceeding Code, and in Implementation Plans and in the Environmental, Social and Health and Safety (ESHS) Risk Management Strategy (as developed by the Contractor in accordance with the Construction Works Agreement), and as results from the legislation valid in Poland (including the Labour Code, the Construction Law, and others).</p> <p>The ESHS requirements and conditions determined in reference to the Contractor and its personnel in the aforementioned sources (regardless of the legal cooperation form) are also valid in the scope relevant for a given case for Contractor's subcontractors and their personnel and their subcontractors.</p>	Contractor/Site Manager/H&S supervision

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
116		ESHS issues	<i>The Contract area</i>	<p><b>Assurance of safety in case of accidents at work</b></p> <p>The Contractor shall be obliged to assure such conditions for implementation of the Contract (including performance conditions) to avoid accidents engaging any people associated with implementation of the Contract (including the staff of e.g.: the Contractor, the Engineer, the Investor, the PCU, subcontractors, suppliers, and others) and third parties.</p> <p>In case an accident happens, the Contractor shall immediately assure proper treatment for injured people, notify relevant services and provide them with access to the site, and secure the place in a way assuring safety to the aforementioned services and other people, who may be present in the area of the event.</p> <p>Regardless of the aforementioned actions the Contractor shall immediately inform the Engineer about all accidents and near misses related to implementation of the Contract (both: on site, as well as in any other location), in accordance with binding procedures determined in the Contract documents (see also: item no. 123).</p>	Contractor/Site Manager/H&S supervision

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
117		ESHS issues	<i>The Contract area</i>	<p><b>Provision of H&amp;S Expert in the Contractor's team</b></p> <p>The Contractor shall be obliged to assure a permanent H&amp;S supervision throughout the Contract implementation period, and the supervisor shall take care for observing the H&amp;S rules determined in the Contract documents and in the binding provisions of national law. Members and qualifications of the H&amp;S supervising team need to be in compliance with Polish provisions of the labour law.</p>	Contractor/Site Manager/H&S supervision
118		ESHS issues	<i>The Contract area</i>	<p><b>Educational actions related to H&amp;S rules and regulations</b></p> <p>The H&amp;S Supervising team shall implement trainings and an awareness programme for the Contractor's staff in reference to the H&amp;S rules and regulations on site.</p> <p>Those actions shall be implemented throughout the performance period, at least once per 12 months. They shall take a form of informational, educational and awareness campaigns related to H&amp;S issues in the scope corresponding with the current stage of Contract implementation.</p>	Contractor/Site Manager/H&S supervision

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
119		ESHS issues	<i>The Contract area</i>	<p><b>Assurance of safety for people in case of sexual harassment and mobbing</b></p> <p>The Contractor shall be obliged to assure such conditions of Contract implementation to avoid cases of sexual harassment or mobbing towards the Contractor's personnel and subcontractors, any other people associated with implementation of the Contract, and any third parties.</p> <p>If aforementioned cases of sexual harassment or mobbing occur, the Contractor shall undertake measures to immediately stop the aforementioned behavior, and subsequently it shall immediately take disciplinary measures determined by the law and internal regulations of the company in relation to perpetrators, and shall provide the victims of such behavior with any necessary help and support in the scope corresponding with the case.</p> <p>Regardless of the aforementioned actions the Contractor shall immediately inform the Engineer about any cases of sexual harassment or mobbing, in accordance with binding procedures determined in the Contract documents (see also: item no. 123).</p>	Contractor/Site Manager/Expert for Preventing Cases of Sexual Harassment and Mobbing

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
120		ESHS issues	<i>The Contract area</i>	<p><b><i>Educational actions to prevent cases of sexual harassment and/or mobbing</i></b></p> <p>The Contractor shall implement trainings and an awareness programme for the Contractor's staff in reference to the prevention of cases of sexual harassment and mobbing.</p> <p>Those actions shall be implemented throughout the performance period, at least once per 12 months.</p> <p>They shall take a form of informational, educational and awareness campaigns related to sexual harassment and mobbing.</p> <p>The measures shall be implemented by an expert having proper substantial qualifications in that scope, who would remain a member of the Contractor's team.</p>	Contractor/Site Manager/Expert for Preventing Cases of Sexual Harassment and Mobbing

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
121		ESHS issues	<i>The Contract area</i>	<p><b>Assurance of proper conditions of work and payment for the personnel</b></p> <p>The Contractor shall be obliged to secure proper conditions of works and payment for the personnel associated with implementation of the Contract, fully in accordance with provisions of the labour law binding in Poland (and especially with the Labour Code), including the following, e.g.:</p> <ul style="list-style-type: none"> <li>– the Contractor shall assure equal treatment in case of payment for the employees performing the same work, without consideration of sex, sexual orientation, and age;</li> <li>– people employed at the Contract shall not be harassed due to sex, sexual orientation and age;</li> <li>– the Contractor may employ only such a young employee, who is 15 years old, completed at least 8-years of primary school, and provided a medical statement confirming that a work of a given type is not risky to his/her health;</li> <li>– the Contractor – adequately to the potential and conditions, and in accordance with Polish provisions of the Labour Code – shall secure the living and social needs of the employees on the work site;</li> <li>– the Contractor shall be obliged to facilitate the employees in improving their professional qualifications.</li> </ul>	Contractor/Site Manager/H&S Supervisor

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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
122		ESHS issues	<i>The Contract area</i>	<p><b><i>Educational actions related to the provision of claims referring to the conditions of work and payment</i></b></p> <p>The Contractor shall inform all people employed due to implementation of the Contract about a possibility of providing claims related to the conditions of work and payment, and shall develop an information leaflet with necessary data on provision of claims and applications, in which it would assure about e.g. the absence of repercussion for a person notifying about an issue.</p> <p>Contents of the aforementioned leaflet shall be agreed with the Engineer.</p>	Contractor/Site Manager/H&S Supervisor



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No.	Item in the ED	Issue	Place	Mitigating measure	Entity
123		ESHS issues	<i>The Contract area</i>	<p><b><i>Development and implementation of procedures related to the ongoing provision of information on ESHS issues</i></b></p> <p>In the period not longer than 30 days from the commencement date of the Contract, the Engineer shall develop and provide the Contractor with a set of procedures related to the ongoing provision of information related to the following:</p> <ul style="list-style-type: none"> <li>– exceptional hazards (i.e. emergency and crisis situations discussed in section 5.12 of the EMP);</li> <li>– accidents and near misses;</li> <li>– cases of sexual harassment and mobbing;</li> <li>– claims of the personnel related to the conditions of work and payment.</li> </ul> <p>The Contractor shall immediately inform the Engineer about any issues in that scope, in accordance with the conditions determined under the valid contractual procedures.</p>	Contractor/Site Manager/H&S Supervisor
124		ESHS issues	<i>The Contract area</i>	<p><b><i>Guidelines on HIV – AIDS prevention</i></b></p> <p>The Contractor shall, via an approved service provider, implement a program to raise awareness of HIV-AIDS type diseases (including appropriate training) and will take all other measures to reduce the risk of HIV spreading among the Contractor's personnel and the local community. These activities should be performed in accordance with the detailed guidelines set out in the Bidding Documents.</p>	Contractor/Site Manager/H&S Supervisor