

DECISION

Acting based upon Articles 104 and 107 of the Act of June 14, 1960 – Administrative Procedure Code (OJ of 2016, item 23) [hereinafter referred to as the APC], Article 71 (1) and (2) item 2, Article 72 (1) item 18, Article 74 (3), Article 75 (1) item 1 letter i), and Article 82 and Article 85 of the Act of October 3, 2008 on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments (OJ of 2013, item 1235, as amended) [hereinafter referred to as the EIA Act], in relation to Article 17 of the Act of July 8, 2010 on the special preparation rules for flood protection investments (OJ of 2015, item 966, as amended), as well as Article 3 (1) item 65 of the regulation of the Council of Ministers of November 9, 2010 on the investments which may significantly affect the environment (OJ of 2016, item 71),

after considering the application

dated February 13, 2015, as provided by Mrs. Magdalena Nykiel (Ecological Techniques and Investment Implementation Agency mkm PERFEKT Sp. z o.o., 1. Rzemieślnicza Street, 30-363 Cracow), acting upon the power of attorney provided by the Małopolskie Board of Amelioration and Hydraulic Structures in Cracow, on the issuance of a decision on environmental conditions for the Works Contract considering extension of the left embankment and of the right embankment of the Biała River in the City of Tarnów, and after receiving a sanitary opinion no. 343/2015 of the State District Sanitary Inspector in Tarnów dated 11/16/2015, ref. no.: NNZ.420.160.2015.3,

I establish

environmental conditions for the Works Contract considering extension of the left embankment and of the right embankment of the Biała River in the City of Tarnów, according to implementation variant "2".

I. Type, scale and location of the Works Contract:

The planned Works Contract shall include expansion of the right flood embankment and the left flood embankment (Class II hydraulic structures) for the River Biała over a length of about 13 km in the following localities: Tarnów, Biała (Commune of Tarnów), and in a small section (about 8 m) in Komorów (Commune of Wierzchosławice). The total area of embankments to be extended is about 170 ha. The scope of the Works Contract comprises extension of the existing flood embankments of the Biała River, including a backwater embankment for the Wątok Stream, through their widening and through rising to elevation of a safe freeboard, and extending the left embankment of the River Biała (forming a closure for the floodplain at Krakowska Street in Tarnów). The Works Contract comprises sealing of the embankments through application of anti-filtration protection in a form of hydro-insulating membrane in the embankment crest. It is also planned to develop necessary roads at the embankment in the area beyond the embankment, to restore the existing and to develop new sections of roads within the embanked area, to extend and construct embankment ramps, to extend

concrete walls, which currently form an integral part of the flood embankments, to develop U-turn yards, and to provide necessary redevelopment for the existing facilities, including: fences, water-supply pipes, sewerage system, gas piping, teletechnical and power lines. The scope of the Works Contract also comprises redevelopment of or repairs to the existing embankment culverts.

The range of the Contract for the right embankment includes sections with the following register chainage: 0+000-2+320, 2+956-3+120, 3+145-4+534, 5+560-5+860, and 5+870-6+700. In case of the left embankment it is km 0+000-6+600. Local chainage was adopted for the discusses embankments, i.e. in case of the right embankment those are: 0+000-3+234, 3+234-4+651, 5+346-5+925, and 5+925-7+170; where as for the left embankment: 0+000-3+134, 3+134-4+516, 4+516-5+995.

The scope of works includes sectional rising of the crest elevation for the existing embankment, by about 0.15-0.50 m on average. In sections of the embankments, where elevation meets requirements of a safe freeboard, it is planned to level the embankment crest and the slope grade. The axis of modernized embankments shall mainly run on the existing route; however, it shall be sectionally shifted towards the area beyond the embankment or the embanked area.

II. Conditions for the use of land on the implementation stage and on the use stage or at the use of Works Contract, with special inclusion of necessary protection of valuable environmental values, natural resources and heritage, and limitation of nuisance to the neighboring sites:

1. The construction works shall be performed beyond the period of flood risk occurrence. One shall develop a proceeding manual for the potential event of flood after the commencement of works.
2. Organization of the construction site shall include the protection of land, particularly comprising inclusion of a rule of minimizing the acquisition area and transformation of its surface. One shall adopt a minimum width of the work strip to reduce the area of vegetation to be damaged.
3. The temporary plant and facilities should be located in the furthest possible distance from residential buildings, and they cannot be moreover located within the embanked area of the River Biała or any other water-course. The temporary plant and facilities in a form of re-loading/storage/construction yards shall be fenced and hardened using concrete road slabs.
4. One shall apply modern and fully technically efficient construction equipment and means of transportation; technical conditions of operating construction and transportation machines shall be inspected on an ongoing basis, especially in terms of diesel derivatives' leakage.
5. One shall apply protection (tarpaulin, sheet or other type of cover) on trucks transporting loose material, which may dust during the delivery, or material emitting gas (e.g. hot bituminous mass) for the purpose of limiting a non-organized emission of dust to the air.
6. In spots, where heavy equipment exits from the construction site to public roads, one shall organize posts, where soil or mud would be removed from wheels of vehicles. Lanes of public roads shall be cleared off of pollution brought from the construction site in order to prevent secondary dusting from soil transferred by wheels of vehicles providing services for the site.
7. One shall periodically sprinkle the uncovered land to avoid dusting in case of favorable weather conditions (drought, wind).
8. The works done with application of construction equipment shall be limited to the daytime, i.e. from 6.00 am to 10.00 pm.
9. Operations of machines and equipment at idle shall be eliminated.

10. One shall avoid unnecessary, excessive concentration of the works including application of heavy construction equipment.
11. The number of truck deliveries for construction materials shall be limited to the necessary minimum.
12. Routes of construction equipment and of vehicles transporting construction materials should be set out within the existing traffic arteries and limited to the necessary minimum. In case development of additional, temporary access roads (technical lanes) to the Works Contract's construction site would be necessary, temporary course made of reinforced-concrete slabs – with a width of up to 3.0 m – shall be arranged within their route, and it shall be removed after the completion of works.
13. After completing the works the area acquired for temporary plant and facilities and for roads / technical lanes shall be restored to its previous condition.
14. The area of technical roads should be clearly marked, in a way visible for operators of heavy equipment, so vegetation located beyond the designated area of works would not be damaged.
15. One shall remove a top layer of soil from the area of construction works prior to the commencement of works, and stock it in piles in vicinity of the work lane. One shall keep its proper humidity (sprinkle, if necessary) until its re-use for the final shaping of the embankment and neighboring sites and/or reinstatement of land acquired for temporary plant and facilities. The top-soil layer should be used completely for the land reinstatement.
16. The works associated with the removal of top layer of ground shall not be done during intensive rainfall and just afterwards.
17. Slopes of flood embankments and any locations, where grass would be removed, shall be formed using priorly removed soil (seed bank) and sown with a mix of such native grass species as: false oat-grass (*Arrhenatherum elatius*), orchard grass (*Dactylis glomerata*), Timothy-grass (*Phleum pratense*), meadow foxtail (*Alopecurus pratensis*).
18. The removal of trees and shrubs shall be limited to the necessary minimum. The logging shall be done beyond the hatching season of birds – from October the 16th until the end of February. Occasional logging may be done during the hatching period of birds under environmental supervision – only after an ornithologist states that nests or hollows are not occupied, and that nestlings are not present or that trees or shrubs to be removed are not inhabited by other animals under protection.
19. At least 3-years-old seedlings with covered root system shall be applied for planned planting. The planting shall be protected against biting by deers and hares.
20. The land strip where the construction works shall be performed shall be systematically mown from the beginning of March until commencement of the construction process for the Works Contract in order to remove the vegetation from the area, which is to prevent provision of hatching sites for birds.
21. The earthworks and any other works associated with the use of mechanical equipment at roots of trees or shrubs not to be logged shall be done in a way, which is the least damaging one to trees and shrubs. In case of damaging the roots one shall cut them evenly with the excavation wall using a sharp tool and shall protect them using a proper preparation (against soil microorganisms). Roots shall be additionally protected against drying out from the beginning of April until the end of October (e.g. using straw mates, which would be poured

with water once in a while). The duration of earthworks in a direct neighborhood of the trees shall be limited to the necessary minimum.

22. Within the area set out by a projection of trees remaining beyond the construction zone one shall observe the following bans: ground condensation, storage of construction materials, stopping and parking of heavy construction equipment.
23. Trunks of trees not to be logged shall be protected for the time of construction works against potential mechanical damages (e.g. through application of fencing, trunk covers made of straw mats or jute, cover made of planks or OSB boards – up to the level of at least 150 cm). Tree boughs shall be protected by e.g. tying the bottom or low branches (boughs) to the higher ones or supporting with a support, so bark would not be damaged. The investor is obliged to assure that the Contractor protects trees and shrubs in a way securing their effective protection against mechanical damage.
24. Prior to the commencement of construction works the area, where the construction works are to be performed, shall be inspected in terms of protected species' habitats occurrence, and in case of identifying a risk for protected species due to the performance one shall undertake proper measures provided in the Act of April 16, 2004 on conservation of nature (OJ of 2015, item 1651, as amended).
25. The construction site, and especially opened excavations, shall be properly protected against forming of traps for animals. At the end of every working day one shall protect such sites by filling, covering with stiff material (e.g. planks, chipboards) or tight fencing.
26. The excavations shall be left opened for the shortest possible time.
27. On every working day one shall – prior to the commencement of works – inspect the construction site in terms of animal presence, and – similarly – the bottom and the walls of excavations shall be inspected prior to their removal (filling, embedding). If necessary, one shall allow the animals to leave the excavations, and – eventually – catch the animals manually and release them beyond the Works Contract area.
28. During the construction works one shall avoid forming of ruts and other land pits, in which water may stay, in order to avoid potential unstable breeding habitats for amphibians.
29. If within the Works Contract area seasonal migration of amphibians would be identified, the construction site shall be protected to disable migration of amphibians to the site, where they would be endangered due to the works – for that purpose one shall properly fence the construction site with a fencing of a minimum height of 0.5 m, including a 10 cm overhang placed outside (e.g. foil, agro-textile). In the bottom part the fencing material shall be dug into the ground – the fencing needs to tightly adjoin the ground and it needs to be anchored. Amphibians shall be caught and transferred to the area beyond the Works Contract to a site having similar habitat conditions, which is located in such a distance from the Contract area that animals would not be able to return to that area until completing the works.
30. It is not allowed to obtain soil from the embanked area.
31. The slope for extension of the embankment shall be made of natural soil. Materials delivered and applied for the construction shall be inspected, and the source of soil shall be precisely inspected. The applied material cannot contain substances, which may be washed out – especially substances which are particularly harmful for the water environment, occurring in a form of soluble compounds.

32. Proper compaction of embankments shall be obtained through placement and compaction of the ground in layers with thickness of about 20 cm in order to obtain the compaction rate of $I_s \geq 0.92$.
33. After development of the embankments it is recommended to reinforce the slopes and sow them as soon as possible with grass (native species) in a way limiting surface erosion.
34. Organization of and technical conditions for the performance associated with the Works Contract shall eliminate the possibility of disturbance for water relations.
35. During implementation of the Works Contract one shall not allow for polluting or littering the River Biała channel and the embanked area, especially with diesel derivatives – the construction works cannot result in deterioration of the cleanliness of surface water and ground water.
36. Fueling of vehicles operating at the extension of embankments shall be done beyond the Contract area, on sites assuring protection for the ground and water environment against contamination with diesel derivatives. One shall set out sealed fueling sites and repairing stations for the construction equipment within fenced reloading/storage/construction yards (the sealing may include placement of geo-membrane – foil – underneath concrete slabs). In case of necessary refueling on the construction site one shall provide a site for that purpose with tight subbase, formed in a way disabling penetration of leaking substance to the areas beyond the fueling site. That place needs to be provided with absorption agents in case of spilling the fuel.
37. Temporary plant and facilities shall be provided with absorbent to neutralize the potential failure leakage of dangerous substances (including diesel derivatives) from construction machines and devices and from the means of transportation.
38. In case of a failure resulting in contamination of the ground one shall immediately remove the polluted layers of soil and transfer them to the specialized company having relevant permits for dangerous waste management.
39. One shall properly manage waste – minimize the quantity of produced waste, collect it selectively in marked containers, within separated and properly organized sites, in conditions protecting it against the impact of weather conditions and the access of outsiders and animals; and it shall subsequently be transferred to units having relevant permit for taking-over, transportation, recovery or treatment of waste, respectively.
40. Temporary plant and facilities shall be provided with sanitary facilities, along with assurance of transfer of domestic sewage to the waste treatment plant.
41. It is not allowed to move vehicles into the Biała river-bed or to interfere in the Biała river-bed in any other way, including e.g. intake of water from the river for the Contract's implementation purposes.
42. In case of discovering fossil remnants of plants or animals one shall immediately notify the regional director for environmental protection about it.
43. During implementation of the Works Contract one shall take special care about protection of the gatehouse (Kassali Street) at the railway bridge over the River Biała, as it is an object under conservator's protection; and one shall keep the remnants of the old bridge (abutments) at Kwiatkowskiego Street in Tarnów.
44. In case of identifying during the construction works objects or items of archaeological value one shall immediately notify relevant conservatory authorities.

45. After completing any following sections of the extended embankment one shall reinstate the sites damaged during the construction works and remove any temporary elements of the works.

III. Requirements related to the protection of environment which shall be included in the documentation required for the issuance of a decision discussed under Article 72 (1) of the Act of on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments.

1. The flood embankment should be designed using natural soil assuring proper parameters – endurance and compaction.
2. Temporary access roads / technical lanes (with a width of about 3 m) shall be set out in such a way to avoid a necessity of logging for trees or shrubs.
3. Design replacement planting in the amount not smaller than 1,000 trees using species corresponding with the potential natural vegetation and adapted to habitat conditions.

IV. Requirements for preventing effects of industrial failures.

The Works Contract is not implemented at industrial plants forming a hazard of serious industrial failure occurrence.

V. I do not impose an obligation to provide a repeated environmental impact assessment under the proceeding on the issuance of decisions discussed under Article 72 (1) item 18 of the Act of on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments.

VI. I do not impose an obligation of providing a post-implementation analysis.

VII. I do not impose an obligation related to the monitoring of Works Contract impact on the environment.

VIII. I state the absence of a necessity to form a restricted use area.

IX. Requirements on limitation of transboundary impact on the environment.

Transboundary impact of the Works Contract on the environment was not identified.

X. Stating the compliance with the local spatial management plan.

The Works Contract is related to the implementation of a flood protection structure developed based upon the act on the special preparation rules for flood protection investments; thus – in accordance with the EIA Act – it is not necessary to state the compliance of its location with valid LSDP.

XI. Characteristics of the planned Works Contract form an appendix to this decision and remain its integral part.

JUSTIFICATION

Małopolskie Board of Amelioration and Water Structures in Cracow (71. Szlak Street, 31-153 Cracow) [hereinafter referred to as the MZMiUW], acting through a Proxy – Mrs. Magdalena Nykiel (Ecological Techniques and Investment Implementation Agency mkm PERFEKT Sp. z o.o., 1/411. Rzemieślnicza Street, 30-363 Cracow), applied on 02/13/2015 to the Regional Director for Environmental Protection in Cracow [hereinafter referred to as the Regional Director] for the issuance of a decision on environmental conditions for the Works Contract comprising extension of the left embankment and of the right embankment of the Biala River in the City of Tarnów.

The following were attached to the application on the issuance of a decision on environmental conditions:

1. Two copies of the Investment Data Sheet, including appendices (+CD).
2. Power of attorney for Mrs. Magdalena Nykiel (Ecological Techniques and Investment Implementation Agency mkm PERFEKT Sp. z o.o., 1/411. Rzemieślnicza Street, 30-363 Cracow) to represent MZMiUW in Cracow in the proceeding in question.
3. Copies of extracts from the land register.
4. Copies of site maps covering the expected area, where the Works Contract shall be implemented, and covering the area of Works Contract impact.

Information on the provided application on the issuance of a decision on environmental conditions has been published in the Publicly Accessible Data Register [hereinafter referred to as the PDWD], on the website of Center of Environmental Information – Ekoportal <http://www.ekoportal.gov.pl>.

The subject Works Contract is qualified as an investment, which may potentially affect the environment significantly, in accordance with Article 3 (1) item 65 of the Regulation of the Council of Ministers of November 9, 2010 on investments which may significantly affect the environment (OJ of 2016, item 71), which lists *flood protection structures, excluding redevelopment of flood embankments including sealing of embankment bodies and their base, in order to limit the possible washing out and failure during accommodation of flood water, and also regulation of water or its channeling understood as management of water allowing for their use for navigation purposes*.

In accordance with Article 71 (2) item 2 of the EIA Act, in case of the planned contracts, which may potentially affect the environment significantly, it is required to obtain a decision on environmental conditions.

A regional director for environmental protection is a unit component for the issuance of a decision on environmental conditions for the aforementioned Works Contract, as – in accordance with the Investor's application – a decision on environmental conditions shall be necessary to obtain an investment project implementation permit, as given in provisions of the Act of July 8, on the special preparation rules for flood protection investments – according to Article 75 (1) item 1 letter i) of the EIA Act.

Location of the Works Contract: Małopolskie Province; District of Tarnów; Municipality of Tarnów-Miasto: City of Tarnów; Commune of Tarnów: Biała; Commune of Wierzchosławice: Komorów.

As the number of parties exceeds 20, therefore – in accordance with delegation included in Article 74 (3) of the EIA Act – Article 49 of the APC was applied for the proceeding, and from that time the parties were notified about any actions of the authorities by notifications and announcements published in a common way, on notice boards of the following: office of Site Issues Department in Tarnów of the Regional Directorate for Environmental Protection in Cracow (address: 5-9. Solidarności Alley, 33-100 Tarnów), City Office of Tarnów (address: 2. Mickiewicza Street, 33-100

Tarnów), Municipality Office of Tarnów (address: 19. Krakowska Street, 33-100 Tarnów), and Commune Office of Wierzchosławice (address: 550. Wierzchosławice, 33-122 Wierzchosławice), as well as in the Public Information Bulletin of the Regional Directorate for Environmental Protection in Cracow at <http://bip.krakow.rdos.gov.pl>.

The Regional Director informed the parties in the notification dated 02/25/2015, ref. no.: ST-I.4233.2.2015.MB, about the commencement of proceeding to issue a decision on environmental conditions for the Works Contract comprising extension of the left embankment and the right embankment of the Biala River in the City of Tarnów. The notification has been published through placement on notice boards of the following: office of Site Issues Department in Tarnów of the Regional Directorate for Environmental Protection in Cracow (from 02/27/2015 to 03/16/2015), City Office of Tarnów (from 02/27/2015 to 03/13/2015), Municipality Office of Tarnów (from 03/06/2015 to 03/20/2015), and Commune Office of Wierzchosławice (from 03/02/2015 to 03/17/2015), as well as in the Public Information Bulletin of the Regional Directorate for Environmental Protection in Cracow at <http://bip.krakow.rdos.gov.pl>.

The planned Works Contract is classified to a group of investments, for which implementation of the environmental impact assessment procedure may be required based upon Article 63 (1), due to Article 59 (1) item 2 of the EIA Act.

After provision of an analysis along with the documentation, the Investor's Proxy was called in the note dated 04/13/2015, ref. no.: ST-I.4233.2.2015.MB, to supplement the investment data sheet.

The proceeding parties were informed about the aforementioned call of the Proxy to supplement the investment data sheet for the proceeding in progress in case of the issuance of a decision on environmental conditions through an announcement dated 04/13/2015, ref. no.: ST-I.4233.2.2015.MB, which was placed on notice boards of the: Site Issues Department in Tarnów RDOŚ in Cracow (from 04/14/2015 to 04/29/2015), City Office of Tarnów (from 04/15/2015 to 04/29/2015), Municipality Office of Tarnów (from 04/20/2015 to 05/05/2015), Commune Office of Wierzchosławice (from 04/16/2015 to 05/04/2015), and at the website <http://bip.krakow.rdos.gov.pl>.

Updating the documentation with information determined in the aforementioned call was necessary to determine the possible impact of the planned Works Contract on the environment, and therefore to identify that it is obligatory to provide an environmental impact assessment or that it is not necessary to provide an environmental impact assessment for the subject Contract.

In reference to the aforementioned call the updated investment data sheet was provided along with a note dated 05/22/2015, ref. no.: BTT-174/MN/2015.

After analyzing the collected evidence, the Regional Director identified in the decision dated 06/11/2015, ref. no.: ST-I.4233.2.2015.MB, that it is obligatory to perform an environmental impact assessment for the planned Works Contract comprising extension of the left embankment and the right embankment of the Biala River in the City of Tarnów, and he simultaneously determined the range of environmental impact report – in accordance with the requirements determined under Article 66 of the EIA Act; and indicated issues which shall be included in the report in details.

An announcement on the issuance of the aforementioned resolution was published through placement on notice boards of the: Site Issues Department in Tarnów RDOŚ in Cracow (from 06/11/2015 to 06/26/2015), City Office of Tarnów (from 06/11/2015 to 06/25/2015), Municipality Office of Tarnów (from 06/15/2015 to 06/29/2015), Commune Office of Wierzchosławice (from 06/12/2015 to 06/29/2015), and at the website <http://bip.krakow.rdos.gov.pl>. Information on the issued resolution was moreover included in PDWD.

As a consequence, acting in accordance with contents of Article 63 (5) of the EIA Act, the Regional Director suspended the proceeding on the issuance of a decision on environmental conditions for the Works Contract in question comprising extension of the left embankment and the right embankment of the Biala River in the City of Tarnów with a decision dated 06/11/2015, ref. no.: ST-I.4233.2.2015.MB, until provision of the environmental impact report. Information on the decision has been published in the PDWD.

On 09/14/2015 Mrs. Magdalena Nykiel provided – along with a note dated 09/11/2015, ref. no.: BTT-198/MN/2015 – an environmental impact report for the Works Contract in question – “Environmental Impact Report for the Works Contract titled >>Extension of the left embankment and the right embankment of the Biala River in the City of Tarnów<<” [hereinafter referred to as the EIA Report], as developed by KIK ECO LAB Przemysław Kruk, 5a. Karczówkowska Street, Room no. 227, 25-019 Kielce; 21/15. Zbrojarzy Street, 30+412 Cracow. Authors of the report: Przemysław Kruk MSc (team leader), Natalia Błaszczuk MSc, Karolina Kruk B.A. Information on the report has been published in the PDWD.

Acting in accordance with Article 97 (2) of the APC, the Regional Director restarted the suspended administrative proceeding on the issuance of a decision on environmental conditions for the Works Contract with a note dated 09/21/2015, ref. no.: ST-I.4233.2.2015.MB. An announcement on the issuance of a decision has been published through placement on notice boards of the following: office of Site Issues Department in Tarnów of the Regional Directorate for Environmental Protection in Cracow (from 09/21/2015 to 10/06/2015), City Office of Tarnów (from 09/24/2015 to 10/08/2015), Municipality Office of Tarnów (from 09/24/2015 to 10/09/2015), and Commune Office of Wierzchosławice (from 09/22/2015 to 10/07/2015), as well as at the website <http://bip.krakow.rdos.gov.pl>. Information on the resolution has been published in the PDWD.

After analyzing the documentation provided on 09/14/2015 it was deemed that the report submitted during the proceeding on the issuance of a decision on environmental conditions for the Works Contract comprising extension of the left embankment and the right embankment of the Biala River in the City of Tarnów meets requirements determined under Article 66 of the EIA Act and in the decision of the Regional Director dated 06/11/2015, ref. no.: ST-I.4233.2.2015.MB, and therefore it contains all data sufficient for determination of the Works Contract’s implementation conditions.

After analyzing all of the evidence, acting based upon Article 77 (1) item 2 of the EIA Act, the Regional Director applied in a note dated 10/19/2016, ref. no.: ST-I.4233.2.2015.MB, to the State District Sanitary Inspector in Tarnów – being a unit relevant for providing an opinion on the Works Contract in sanitary and hygiene terms – with a request to issue an opinion on implementation conditions for the Works Contract prior to the issuance of a decision on environmental conditions. In the announcement of 10/19/2016, ref. no.: ST-I.4233.2.2015.MB, the proceeding parties were informed about the aforementioned request for opinion. The announcement was published through placement on notice boards of the: Site Issues Department in Tarnów RDOŚ in Cracow (from 10/19/2015 to 11/03/2015), City Office of Tarnów (from 10/19/2015 to 11/02/2015), Municipality Office of Tarnów (from 10/19/2015 to 11/02/2015), Commune Office of Wierzchosławice (from 10/22/2015 to 11/06/2015), and at the website <http://bip.krakow.rdos.gov.pl/>.

The State District Sanitary Inspector in Tarnów provided a positive opinion in the sanitary opinion no. 343/2015 dated 11/16/2015 (reception date: 11/19/2015), ref. no.: NNZ.420.160.2015.3, for environmental conditions for the aforementioned Works Contract in terms of hygiene and health requirements – while keeping all technical, technological and organizational solutions resulting from the environmental impact report, protecting the surrounding and the environment, and – as a result

– health of people against adverse impact of the designed Works Contract, both: on the implementation stage, as well as in the use phase. Those requirements were included among conditions imposed onto the Investor by this decision.

Acting based upon Article 33 (1) and Article 79 (1) of the EIA Act, the Regional Director informed the proceeding parties in the announcement of 11/24/2015, ref. no.: ST-I.4233.2.2015.MB, and simultaneously notified the public about the possibility of acknowledging the EIA Report and complete case documentation for the proceeding on the issuance of a decision on environmental conditions for the planned Works Contract considering expansion of the left embankment and the right embankment of the Biala River in the City of Tarnów, and also about the possibility of providing remarks and conclusions on the aforementioned Works Contract within 21 days – from 11/27/2015 to 12/18/2015, inclusive. Simultaneously, the public was informed about the: subject of the decision, which is to be issued in that case; relevant authorities issuing the decision; and proper authorities for the issuance of opinions. The announcement was published through placement on notice boards of the Site Issues Department in Tarnów RDOŚ in Cracow (from 11/24/2015 to 12/21/2015), City Office of Tarnów (from 11/27/2015 to 12/19/2015), Municipality Office of Tarnów (from 11/24/2015 to 12/15/2015), Commune Office of Wierzchosławice (from 11/25/2015 to 12/10/2015), and at the website <http://bip.krakow.rdos.gov.pl/>, where a complete version of the EIA Report was also made available.

As a consequence of the aforementioned notification none of the proceeding parties or other interested persons informed their will to acknowledge the collected case documentation.

The Investor's Proxy informed the Regional Director about changes in the application – resulting from the progress of designing – in the note dated 12/07/2015 (reception date: 12/10/2015), ref. no.: BTT-215-MN/2015. Those changes did not require new establishments on sanitary and hygiene conditions and the assurance of repeated participation of the public.

The Regional Director – acting based upon Article 10 (1) and Article 49 of the APC, and due to Article 74 (3) of the EIA Act informed the proceeding parties in a notification dated 01/11/2016, ref. no.: ST-I.4233.2.2015.MB, about completing the evidence hearing for the issuance of a decision on environmental conditions for the subject Works Contract, and about the possibility of acknowledging and commenting collected evidence and materials, and informed requirements prior to the issuance of a decision. The notification was published through placement on notice boards of the: Site Issues Department in Tarnów of the RDOŚ in Cracow (from 01/11/2016 to 01/26/2016), City Office of Tarnów (from 01/11/2016 to 01/25/2016), Municipality Office of Tarnów (from 01/11/2016 to 01/25/2016), and Commune Office of Wierzchosławice (from 01/14/2016 to 01/25/2016), as well as at the website <http://bip.krakow.rdos.gov.pl/>.

No demands, reservations, remarks and conclusions were provided during the proceeding on the issuance of a decision on environmental conditions for the Works Contract comprising the extension of the left embankment and the right embankment of the River Biała in the City of Tarnów.

Development of the environmental impact report allowed for adopting optimal solutions leading to reduction or elimination of the adverse impact of the Works Contract on particular elements of the environment.

The possible impacts and the potential hazards associated with the implementation and the use of the Works Contract were determined based upon quantitative analyses done for the EIA Report, and they allowed for proposing measures preventing and mitigating potential adverse impact on the implementation stage and on the operational stage of the Works Contract.

Based upon the collected data and upon analyses included in the documents provided, implementation and use conditions were defined to assure the protection of environmental values and natural resources, and to limit nuisance for neighboring sites.

In conformity with Regulation of the Minister of Environment of April 20, 2007 on the technical conditions for hydraulic structures and their location (OJ of 2007, no. 86, item 579), the subject embankment is Class II structure. A characteristic status for that class is the occurrence probability of $p=1\%$ (design flow Q_d) and the occurrence probability of $p=0.3\%$ (control flow Q_c). The design flow Q_d remains a flow, for which hydraulic structures are developed for, whereas the control flow Q_c remains a flow used for verification of structures' safety in an exceptional load system.

For the purpose of establishing a safe freeboard, model simulation were done for a flood wave having the aforementioned occurrence probabilities, for the current and for the final condition, including extension of embankments under the Works Contract. Valid hydrological data provided by the Institute of Meteorology and Water Management in Cracow were used for the study. Based upon the results of hydraulic modelling done for the flood event with peak flow's occurrence probability of $p=1\%$ (1 in 100 years) and of $p=0.3\%$ (1 in 333 years), flood zones were determined for $Q_{1\%}$ and for $Q_{0.3\%}$.

In compliance with the Regulation, elevation of the safe freeboard shall amount to 1.0 m over the elevation at probability of $p=1\%$ and 0.3 m over the elevation at probability of $p=0.3\%$. The final model was developed as a modification of the base model, which included implementation of the required elevation of the embankment crest, in accordance with the aforementioned safe freeboard. In order to identify the required crest elevation for the embankments in the City of Tarnów, the calculations assumed that an embankment of the River Biała designed separately at local chainage km 0+000 – 0+695 in the City of Tarnów already exists (within the area of garden allotments "Semafor"). Otherwise, the crest elevation of the existing embankments would be lower and – in case of the following development of the embankment at local chainage km 0+000 – 0+695 in the City of Tarnów – it would be necessary to repeat the calculations and to rise the existing embankments.

In case of the right embankment, development of a new embankment section at local chainage km 0+000 – 0+695 shall not result in necessary rising of additional embankment sections, extension of which would not be necessary in case of leaving the previous condition.

In case of the left embankment – both: in case of leaving the current condition within the garden allotments "Semafor" in Tarnów, as well as in case of constructing a new embankment – the existing embankment crest elevation assures accommodation of design water (1 in 100 years) and of control water (1 in 333 years) within the embanked area; however, it does not meet the requirements of freeboard, i.e. it would not provide the required elevation in accordance with the rules of designing, what may in future result in reduction of embankment stability, occurrence of local leakage and hydraulic puncturing, and local decreases of the crest may cause spilling of water onto the areas beyond the embankment.

Due to the fact that the Works Contract in question is related to the existing river embankment in urbanized area, it is necessary to link the Contract with the existing infrastructure and to relate it to the current land management, what would significantly limit the possibility of variants in terms of location. Two Contract implementation variants were developed under the planned extension of the right embankment and of the left embankment of the River Biała in the City of Tarnów.

Variant "0" assumes avoiding the Works Contract comprising extension of the flood embankments, which – in the opinion of EIR Report's authors – may result in future in damaging the traffic system,

technical facilities, and residential buildings located in the area beyond the embankment, because the embankments do not currently have the sufficient freeboard in relation to $Q_{1\%}$ and $Q_{3\%}$ water.

Variant "1" means implementation of the Works Contract comprising extension of the flood embankments through their rising to the required elevation of safe freeboard, using anti-filtration membrane in the embankment foot on the riverside. It is planned to link the new embankments with the existing landside foot in order to interfere in the technical facilities located beyond the embankment in the smallest possible way. Such a solution would be associated with shifting of the design axis in relation to the axis of the existing embankment towards the Biała river-bed. Greater area of the embankment would be acquired in comparison to acquisition of land located on the landside. Such a redevelopment of the embankments may be related to sectional narrowing of the embanked area, what may result in decreasing the floodplains' area, increasing the water flow velocity in the channel, and increasing the occurrence of erosion during accommodation of high water flows. Development of a membrane at the riverside slope's foot may be associated with necessary acquisition of additional area in order to perform the works, and it may cause increasing the scale of necessary logging of trees and shrubs.

Variant "2" comprises implementation of the Works Contract including extension of the right embankment and of the left embankment through rising of embankment crest elevation to the required elevation of safe freeboard while keeping the axis of the existing embankments. The axis of designed embankments shall mostly overlap with the existing axis, and sectionally it shall be shifted towards the embanked area or the area beyond the embankment; however the slope of modernized sections shall join – in the riverside – the foot of the existing embankment. As a consequence, a floodplain at the embankment area shall not be narrowed. In order to minimize the probability of leakage and to reinforce the embankment an anti-filtration membrane shall be developed within the embankment crest, what would decrease the necessary range of acquisition for additional spots of embanked area. Logging of trees and shrubs shall be limited to minimum in comparison to variant "1". After the removal of trees they shall be restored through replacement planting. In accordance with data given in the EIA Report, the Works Contract compliant with variant "2" is economically justified, and it shall also provide flood protection for neighboring residential sites, industrial plants, and the existing technical facilities.

The EIA Report provides a multi-criteria analysis for two of the aforementioned variants based upon comparative analysis method presented in the study titled *"Zastosowanie analizy wielokryterialnej do wyboru preferowanego wariantu ochrony przeciwpowodziowej w zlewni wykorzystywanej w analizach planistycznych regionu wodnego Górnej Wisły"* [*"Application of multi-criteria analysis to select the preferred flood protection variant for the river basin used for planning analyses for the water region of Upper Vistula"*] done upon an order of the Regional Water Management Authority in Cracow. The analysis done proved that variant "2", as supported by the Investor, is the most favourable one for the natural environment and for the social environment.

Variant "2", which was adopted for implementation, shall not cause excessive impact on the environment on both: the implementation stage, as well as the use phase. Emission of pollutions to the air and emission of noise shall be minor and associated with the performance stage only. The use stage shall not cause emission to the environment. Also the impact on the natural environment shall occur on the performance stage. While implementing reservations related to the performance time and planning of the Works Contract, which would affect the embanked area in a minimal way, the Works Contract's impact on the environment would be limited to minimum and would not cause

damage to the environment, which would affect valuable natural habitats or species under protection.

The EIA Report includes analyses on the impact of the Works Contract on particular environmental components, and also lists a series of solutions planned for implementation in order to prevent and limit adverse impact on the environment.

Networks of technical facilities colliding with the Works Contract shall be redeveloped in conformity with technical conditions provided by their administrators.

Access to the Contract area shall be available using the existing roads, and mainly the following streets: Chemiczna, Kwiatkowskiego, Wyszyńskiego, Wody, Krakowska in Tarnów, and using technical roads along the embankments.

The works associated with implementation of the Works Contract shall be performed in stages.

During the use of the Works Contract only the works that would aim at maintenance and at assuring good technical condition of the embankments would be done. The works would comprise periodical mowing of plants and cleaning of embankment culverts.

In accordance with information included in the EIA Report, species of plants protected based upon the Regulation of the Minister of Environment of October 9, 2014 on the protection of plant species (OJ of 2014, item 1409) and species of fungi listed in the Regulation of the Minister of Environment of October 9, 2014 on the protection of fungi species (OJ of 2014, item 1408) have not been identified within the area of the planned Works Contract.

It is necessary to remove trees and shrubs directly colliding with the planned Works Contract within its framework. The logging of trees and shrubs shall be limited to the necessary minimum allowing for implementation of the Contract. The logging should be done beyond the hatching season of birds – from October the 16th until the end of February. Occasional logging may be done during the hatching season under environmental supervision – only after identifying that trees or shrubs to be logged are not inhabited by animals under protection.

The logging shall be compensated by replacement planting, the scope and detailed location of which shall be established at developing a detailed design.

Trees and shrubs, which shall not be logged, and which are located within and in vicinity of the construction yard, that may be mechanically damaged due to the works, shall be properly protected.

The Works Contract does not collide with animals' migration corridors of regional significance.

The Works Contract area remains a spot of constant presence, feeding, nesting or breeding of animals under protection based upon the Regulation of the Minister of Environment of October 6, 2014 on the protection of animal species (OJ of 2014, item 1348) – the Contract shall be implemented in a way avoiding violation of provisions on the protection of animal species. In case it would be necessary to remove habitats of protected species or in case of other departures from bans valid in reference to species under protection, it is required to obtain a permit from relevant authorities within a separate proceeding – in accordance with Article 56 of the Act on conservation of nature.

During the construction works one shall avoid forming of ruts and land pits, in which water may stay, in order to avoid forming of potential habitats for breeding of amphibians, which – due to the temporary character of that phase of the Works Contract – would be unstable and removed after completion of the works, what may form a risk to the development of tadpoles.

Considering the necessity of minimizing the adverse impact of planned construction works on the environment, including protection against excessive interference of the Works Contract with animal

habitats protected based upon the Regulation on the protection of animal species, and considering the necessary assurance of a proper condition for environmental habitats, conclusion of this decision imposes an obligation of implementing the Works Contract in compliance with the following conditions: limitation of logging for trees and shrubs to the necessary minimum allowing for implementation of the Contract; proper protection of trees and shrubs, which may be damaged, against mechanical damage caused by the works; proper protection of the construction site against forming of traps for animals; inspection of the construction site, including the bottom and walls of excavations before their removal in terms of animal presence, and – if necessary – allowing the animals for leaving the excavations, and potentially catching them and releasing beyond the Works Contract area; proper mowing of the land strip, where the construction works would be performed to remove plants – in which birds' hatching sites may be formed – from that area.

Implementation of the Works Contract shall be associated with temporary adverse impact on the environment, what would be visible and noticeable during the performance.

During implementation of the Works Contract there will be impact on the water and ground environment in a form of necessary removal of soil in the area of the works comprising extension of the embankments, in order to assure proper parameters of embankments and their sealing. Due to possible use of all of the removed soil within the Contract area that impact would not be significant.

The applied technical and technological solutions shall allow for limiting the adverse impact of the Works Contract on the cleanliness of soil and of the water environment – both: in reference to surface water, as well as to ground water. The earthworks may be done only using efficient machines and devices, which would not degrade the environment through leakage of diesel and fuel.

Within the framework of the Works Contract it is not expected to modify water relations in the area beyond the embankment – surface water shall be discharged from the area beyond the embankment in accordance with a natural drop through drainage ditches collecting rainfall water, and subsequently through embankment culverts to the Biała River – as in the existing condition. The existing embankment culverts shall be redeveloped or repaired.

Due to site conditions implementation of the Works Contract requires moving of soil, mostly due to the development of embankments and excavations. Unfavorable impact on the ground surface in the implementation period shall result from the necessary performance of essential construction works. Those impacts shall be local.

During the use of the Works Contract the impact on water and soil environment shall not be present. On the performance stage it is expected to produce waste and domestic sewage, and to emit air pollutions, noise, and vibrations.

During implementation of the Works Contract construction waste shall be produced, and those are: debris, power and telecommunication cables, water-supply and sewerage pipes, mineral-bituminous materials, used containers for construction materials, and operations of the temporary plant and facilities and domestic waste associated with leaving needs of the employees performing the construction works.

Waste produced during the development and removal of temporary plant and facilities shall be stored in receptacles or containers protected against pollution of the ground. Waste storage sites shall be protected against possible ground contamination. Waste management shall be organized in a way enabling selective collection of waste in the area of planned Works Contract, what would allow for its subsequent recovery as recycling materials completely or partially, directly or by processing. Waste shall be stored at keeping the safety rules, and then it shall be handed over to specialized companies having relevant permits for taking-over, transportation, recycling or treatment of waste,

respectively. Removal of hazardous waste and other than hazardous waste produced during the construction works shall be entrusted to a specialized company having relevant permits for running business related to hazardous waste management. In case of the waste management all provisions of the Act of December 14, 2012 on waste (OJ of 2013, item 21, as amended) shall absolutely be met.

Sanitary needs of construction teams shall be secured in a form of portable sanitary devices, and sewage produced in them shall be transported to the waste treatment plan, when necessary. During implementation of the Works Contract no technological sewage would be produced.

On the Works Contract use stage waste shall not be produced – the only source of waste production shall be the works associated with mowing of plants on the embankments (waste having a code 20 02 01 *Biodegradable waste*).

Implementation of the Works Contract shall be done using specialized construction equipment having technical and capacity parameters adapted to the size and to the character of the works.

Sources emitting gas and dust to the air on the performance stage are mainly the works associated with the use of diesel-propelled heavy construction equipment. On the performance stage there may occur a temporary increase of dusting from the means of transportation and from storage of construction materials. Those emissions shall however be unorganized. Such pollutions shall be emitted to the air as: sulphur dioxide, nitrogen dioxide, carbon monoxide, PM 10 and PM2.5 suspended particulates, ammonia, benzene, aromatic hydrocarbon, aliphatic hydrocarbon. That emission would be limited by application of modern machines. During the earthworks, transportation and storage of construction materials, dust shall be also emitted. Those pollutions shall however not reach high concentration, which would adversely affect the environment.

This decision imposes an obligation onto the Investor of meeting several conditions, fulfilment of which shall affect the reduction of dust and gas pollution emission to the air on the performance stage. Those are e.g.: application of protection (e.g. tarpaulins, sheets) on trucks delivering loose materials, which may cause dusting during deliveries, or materials emitting gas (e.g. hot bituminous mass); keeping the access roads in a condition limiting dusting and cleaning the course off of gathered mud and soil; assurance of proper organization of the construction works; elimination of operations of machines and devices at idle. It allows for stating that on the performance stage there would not be an excessive impact in case of emission to the air due to application of minimizing measures and to the fact that emission of pollutions to the air – associated with location of construction sites – would be temporary.

Character of the Works Contract makes its acoustic impact noticeable on the performance stage only, as it is necessary to apply heavy construction equipment and to deliver construction materials. During the performance there shall be movable and spot sources of noise associated with preparation of land for implementation, loading, delivery and offloading of raw materials, rising of the embankment, condensation of the embankment, development of hydro-insulating membrane, and clearance works connected with land leveling and sowing with grass. Exceeding the permissible noise standards may relate to the time of works of heavy equipment and truck deliveries in vicinity of emission sources. In order to minimize the impact of noise emission one shall e.g.: eliminate operations of machines and devices at idle, avoid unnecessary, excessive concentration of works at application of heavy construction equipment, reduce the number of truck deliveries for construction materials to the necessary minimum. A solution decreasing the acoustic impact on the performance stage is limitation of emission at the source through application of modern machines and devices meeting standards and provided with elements reducing emission of noise to the environment, as well as not allowing for excessive concentration of operations of construction machines, and also

performance of the construction works in the shortest possible time and only during the day, i.e. from 6.00 am to 10.00 pm. Furthermore, the temporary plant and facilities shall be located in the furthest possible distance from residential buildings. Machines and devices applied at the performance shall meet the levels of acoustic power determined in the Regulation of the Minister of Economics of December 21, 2005 on the essential requirements for devices applied outside of rooms in terms of noise emission to the environment (OJ of 2005 no. 263, item 2202, as amended). The impact on the implementation stage shall be temporary and it shall cease after completion of the construction works. During the use the Works Contract shall not cause emission of noise.

The impact occurring on the performance stage shall be local and limited to the performance site and its direct vicinity. Care for good technical condition of the machine base and its rational application shall assure keeping the emission at the lowest possible level. One shall moreover develop and implement such a plan of works to optimize the application of construction equipment and means of transportation, e.g. through reduction of unnecessary deliveries.

Due to the presence of residential houses in vicinity of the construction site the decision states that it is necessary to perform the construction works with due care and only during the day; a series of other conditions associated with the performance stage was also determined.

On the performance stage one shall take care about proper protection of the construction site and parking and servicing spots for construction machines against penetration of pollutions into the ground (especially in case of diesel derivatives).

The volume of: water, raw materials, material, fuel, and power used during the performance shall result from the adopted technology and from the type of equipment applied. All materials applied for the performance shall be accepted for application in construction engineering and have required certificates or attestation.

The Contractor shall have proper materials for immediate neutralization in case of failure leakage of diesel derivatives. The Contractor shall have a relevant proceeding manual in case of exceptional hazard to the environment caused by the construction works, and it shall strictly observe it.

In accordance with information included in the EIA Report, accumulation of Works Contract's impacts with other contracts shall not result in exceeding environmental quality standards.

Impact of the Works Contract on the level of ground water shall be temporary and shall only occur during accommodation of flood waves. It shall be associated with the development of hydro-insulating membrane in the embankment body, which would modify the condition of water flow in the ground during floods, when hydraulic gradient is modified through rising the table of water dammed within the embanked area. In normal conditions the ground water levels vary depending on the level of water in the water-course. At designing of a depth of the membrane the type of subbase and the presence of non-permeable layers, which have not been drilled, have been included.

Ground water shall not affect the flood embankments' feet and their stability. During average flows and low flows the level of ground water on the right bank and on the left bank is associated with the level of water in the river valley, and it does not depend on the applied hydro-insulating membrane. It shall be varied depending on the level of water-table in the river.

In that case the hydro-insulating membrane with a depth of 8.0 m shall not "close" the ground space below. Modification of the level of ground water during floods shall be temporary and – after transferring the flood wave – ground water shall restore its level from before the peak flow.

The Works Contract is essentially planned within the body of surface water BSW Biała od Rostówki do ujścia, with European code PLRW200014214899 and within a small part of BSW Wątok, with European code RW200012214889.

In conformity with the draft Update of Water Management Plan for the Vistula River Basin [uWMP] the BSW Biała od Rostówki do ujścia has the following characteristics: status – *natural body of water*; assessment of the status for the years 2010-2012 – ecological condition *weak* (rates determining the condition: *Ichthyofauna*, *Phytobenthos*), chemical status *good*, overall condition *bad*, environmental objective for the BSW *good ecological status* and *good chemical status*, time for achieving determined environmental objectives was set out for 2021. In accordance with the uWMP the assessment of risk of not obtaining the environmental objective for the aforementioned BSW is: under risk. As a consequence, departures from environmental objectives were adopted for the planning period of 2015-2021 in accordance with Article 4 (4)-1 of the Directive 2000/60/EC of the European Parliament and of the Council of October 23, 2000 establishing a framework for Community action in the field of water policy (OJ UE L of December 22, 2000, as amended) [so-called Water Framework Directive].

In conformity with the uWMP, BSW Wątok has the following characteristics: status – *highly modified body of water*; assessment of the status for the years 2010-2012 – ecological condition/potential *weak*, rates determining the condition: *Ichthyofauna*, *Phytobenthos*, chemical status *good*, overall condition *bad*, environmental objective for the BSW *good ecological potential* and *good chemical status*. Time for achieving determined environmental objectives was set out for 2021. In accordance with the uWMP the assessment of risk of not obtaining the environmental objective for the aforementioned BSW is: under risk. As a consequence, departures from environmental objectives were adopted for the planning period of 2015-2021 in accordance with Article 4 (4)-1 of the Water Framework Directive.

In accordance with a study titled “Zasady weryfikacji przesłanek z art 4 ust. 7 Ramowej Dyrektywy Wodnej w odniesieniu do przedsięwzięć przeciwpowodziowych realizowanych w stanie prawnym obowiązujący przed i po 18 marca 2011 r.” [“Rules of verification for rationale under Article 4 (7) of the Water Framework Directive in reference to flood protection investments implemented according to legal provisions valid before and after March 18, 2011”], which is available at the website of the State Water Management Authority, construction of new flood embankments may have an adverse impact on the status of water, as given in the Water Framework Directive. In conformity with that document, proper authorities – settling in case of the issuance of a decision on environmental conditions – should, based upon complete evidence, consider social, economic, as well as environmental reasons, and shall assess whether the interest related to implementation of the Works Contract or benefits coming from the implementation surpass the necessity of water protection against deterioration of its ecological function and deterioration of the status of land ecosystems and wet areas, which directly depend on water.

Impact of the Works Contract on chemical status of bodies of water is determined based upon the priority substances determined in Appendix no. 9 to the Regulation of the Minister of Environment of October 22, 2014 on the classification method for bodies of surface water and on the environmental quality standards for priority substances (OJ of 2014, item 1482). Implementation and further operation of the Works Contract (essentially comprising the maintenance works, i.e. mowing of the embankments and cleaning of embankment culverts) does not provide new chemical substances to the environment, including priority substances. An analysis of the collected evidence proves that implementation of the Works Contract in question shall not adversely affect deterioration of physical-chemical, chemical, biological or morphological elements to the extent, which may cause deterioration of the status of bodies of surface water or not achieving the environmental objectives determined for them. Minor impact of the Works Contract on surface water also results from the fact

that its implementation shall be done beyond the river bed. Conditions for the performance and rules for location and organization of the temporary plant and facilities, as determined in this decision, shall protect surface water and ground water against their possible contamination with diesel derivatives. Furthermore, anti-filtration membranes planned shall not reach non-permeable layers, thus the current water relations shall be kept in vicinity of the embankments, and extension of the water filtration route through the embankment – using sealing – shall not result in a significant modification for transferring shallow ground water in vicinity of the embankments. Considering that fact, one may state that the planned Works Contract shall not adversely affect the chemical status of BSW Biała od Rostówki do ujścia and of BSW Wątok.

Good ecological status/potential is measured with the following biological coefficients: Phytobenthos – Multimetric Diatom Index (IO), Macrophytes – Macrophyte River Index, Benthos macro-invertebrates – multimetric coefficient MMI_PL, Ichthyofauna – EFI+ coefficient. Good ecological status is the value of biological coefficients corresponding with Class II. The planned Works Contract – extension of the embankments – shall be implemented beyond the river bed and beyond the junction between the bank and the channel, with which coefficient-related biological organisms refer to; thus, it shall be deemed that in case of the Works Contract in question there shall be no impact of the Contract on those organisms (direct damage to habitats, which may affect the composition and volume of coefficient-related organisms). As a result of embanking the river valleys (construction of embankments) their retention is reduced, and the accelerated flow of water results in damage to vegetation. One shall however note that the planned Works Contract in fact remains an extension of the existing embankments; thus, concentration of water in the channel and the accelerated discharge during floods in fact remain the current environmental condition. Coefficients determining the ecological status of the BSW Biała od Rostówki do ujścia are: *Ichthyofauna* and *Phytobenthos*, whereas in case of the BSW Wątok it is *Phytobenthos*. The scope of works shall be implemented beyond the river bed and beyond the junction between the bank and the channel; thus, there shall be no impact of the Contract on ichthyofauna habitats, and therefore on the aforementioned coefficient-related organisms. It may be therefore deemed that the planned Works Contract is neutral for biological coefficients; thus, it is neutral for the achievement of environmental objectives determined for the aforementioned BSWs.

In accordance with the draft uWMP the Works Contract is simultaneously located within the body of ground water BGW no. 150 with European code PLGW 2200150 (within BGW no. 139 in the 1st planning cycle) – status assessment (2012): chemical status *good*, quantitative status *good*, overall status *good*, risk assessment for not achieving the environmental objective: *not under risk*. It is an area set out for the intake of water to be consumed by people. The environmental objective for that body of ground water is the maintenance of its good chemical status and good quantitative status. The Works Contract's frames do not provide construction of any element that may affect the quantitative status or chemical status of ground water. The planned Works Contract – both: on the performance stage, as well as on the operational stage – shall not affect the quantitative status of the BGW due to the fact that it shall not be connected with organizing the intake of water. The Works Contract comprising extension of the embankments is not linked with development of deep excavations; thus, impact factors associated with modification of the quaternary water-table shall not occur. The Works Contract shall also be not connected with implementation of chemical substances to the ground, and therefore there will be no impact on its chemical status. Within the framework of planned embankment construction, it is planned to develop anti-filtration membranes. Potential leakage of diesel derivatives shall be immediately removed, what would disable adverse

impact on ground water. It is planned to develop anti-filtration membranes within the framework of embankment extension. The planned membranes shall not reach non-permeable layers, and – in turn – it shall still be possible to discharge ground water towards the river.

An analysis of case documents allows for stating that the planned extension of the left embankment and the right embankment of the River Biała in the City of Tarnów shall not modify the characteristics of BSW or of BGW, which deteriorate the status of body of water or disable achieving the environmental objectives established for them.

Considering the above and the location, the adverse impact of the planned Works Contract on the possibility of achieving the determined environmental objectives, as given in the water management plan for the Vistula river basin is not expected [due to Article 81 (3) of the EIA Act].

The only serious hazard, which may cause adverse impact on surface water and on ground water, may be the potential failure of heavy construction equipment, and especially leakage of diesel derivatives, grease, etc. Hazards of that type are hardly forecastable; thus, for performance of the construction works one shall apply only the fully efficient equipment with tight drive and hydraulic systems, and in case of contamination one shall undertake standard measures to stop the spread of contamination and to remove them as soon as possible, in accordance with the binding regulations.

The eastern part of the planned Works Contract is partially located within the Natura 2000 site Dolny Dunajec PLH120085 (over a length of about 1.2 km – estuary of the Biała River to the River Dunajec) and in a distance of about 0.85 km from the boundaries of the Natura 2000 site Biała Tarnowska PLH120090.

The Natura 2000 site Dolny Dunajec PLH120085 covers the Dunajec River in a reach from the dam in Czchów to the estuary to Vistula, along with selected tributary rivers. In accordance with *Plan zadań ochronnych dla obszaru Natura 2000 Dolny Dunajec PLH120085* [“Plan of protective measures for the Natura 2000 site Dunajec Dolny PLH120085”], as established by the Resolution of the Regional Director for Environmental Protection in Cracow on September 4, 2014 (OJ of Małopolskie Province of 2014, item 4920), the following are considered as units protected within the site: Alpine rivers and the herbaceous vegetation along their banks [code 3220]; as well as the following species of fish and their habitats: asp [code: 1130], barbel [code: 1138], European bullhead [code: 1163], and brook lamprey [code: 1096]. The most important existing and / or potential hazards for the area are especially the following: presence of a cascade of reservoirs developed at Dunajec upstream of the habitat’s boundaries, regulation (straightening) of river beds, obtainment of gravel from the river beds and gravel-banks, presence of barriers for migration of ichthyofauna, presence of invasive plant species, traffic of diesel vehicles on gravel-banks and within the river-bed, plans to develop cascades at Dunajec for the purpose of water power engineering.

The Natura 2000 site Biała Tarnowska PLH120090 covers a narrow valley of the River Biała in a reach from Śnietnica to the vicinity of Tarnów, excluding reaches of the river running through bigger localities. The following natural habitats are protected within the Natura 2000 site Biała Tarnowska PLH120090: Alpine rivers and the herbaceous vegetation along their banks [code 3220], Alpine rivers and their ligneous vegetation with *Myricaria germanica* [code 3230], Alpine rivers and their ligneous vegetation with *Salix elaeagnos* [code 3240], Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Pandion, Alnion incanae, Salicion albae) [code 91E0]. Among the species of animals, the following were identified as subject of protection: barbel [code 1138], European bullhead [code 1163], yellow-bellied toad [1193], and thick-shelled river mussel [code 1032]. The most important existing and / or potential hazards for the area are especially the following: regulation (straightening) of river beds, obtainment of gravel from the river beds and gravel-banks, cross-structures within

water-courses affecting transportation of river rubble, presence of barriers for migration of ichthyofauna, presence of invasive plant species, removal of forest plants and shrubs from the bank line within the framework of flood prevention, illegal collection of wood, discharge of waste from households, and other pollution of surface water.

Within the framework of environmental impact assessment the Regional Director verified the expected impact of the Works Contract on the objectives of protection for Natura 2000 sites Dolny Dunajec PLH 120085 and Biała Tarnowska PLH120090, and deemed that implementation of the subject Works Contract shall take place beyond the natural habitats protected within the aforementioned Natura 2000 sites and shall not decrease their occurrence range, and it shall also not result in deterioration of the status of natural habitats, reduction of their area or modification of their characteristic features. Implementation of the Works Contract shall not deteriorate integrity of the aforementioned Natura 2000 sites, and shall not adversely affect its connection with other sites of Natura 2000 network.

An analysis of collected case evidence proves that the area of planned Works Contract is located beyond water-mud sites and other sites with shallowly located ground water, beyond shorelines, beyond areas adjacent to lakes, mountains or forests, beyond protected zones of water intakes and protected areas of in-land water reservoirs, and also beyond the areas, where environmental quality standards have been exceeded. There are no areas under health resort protection in vicinity of the planned Works Contract.

In accordance with a standpoint of the Małopolski Provincial Heritage Conservator in Cracow Office in Tarnów given in a note dated 04/02/2015, ref. no.: OZT.5183.61.2015.MSz-W, one shall take special care during implementation of the Contract about the railway gatehouse (Kassali Street), which is an object of significant historic value under conservator's protection, at the railway bridge over the River Biała. One shall moreover maintain remnants of the old bridge (abutments) located at Kwiatkowskiego Street in Tarnów.

During the environmental impact assessment also the impact of the Works Contract on the landscape was analyzed, and it is essentially related to changes in consideration of the landscape by people, i.e. visual changes or visual and aesthetic changes, also understood as changes to the "spatial order" of the cultural landscape. The subject Works Contract essentially comprises extension of the existing flood embankments. As a consequence, it shall be deemed that the planned Works Contract shall not deteriorate landscape values in the City of Tarnów.

Location, character and scale of the Works Contract allow for stating that the planned extension of the left embankment and the right embankment of the River Biała in the City of Tarnów shall not cause the increase of pollution emission, which may affect changes of climate.

The Works Contract is not connected with industrial plants causing a hazard of serious industrial failures discussed in the Regulation of the Minister of Economics of October 10, 2013 on types and volume of hazardous substances, which – if present in the plant – decide on its classification to plants under higher risk or plants of high risk of a serious industrial failure (OJ of 2013, item 1479). As a consequence, it is not obligatory to determine the requirements on prevention of the effects of industrial failures.

In the opinion of the Regional Director – at considering provisions under Article 82 (2) of the EIA Act – data provided on the issuance stage for the decision on environmental conditions in reference to the Works Contract allow for exhaustive assessment of the Works Contract's impact onto the environment, and it is not necessary to implement an environmental impact assessment within the framework of issuing the decision, as discussed under Article 72 (1) of the EIA Act. The data collected

allowed for exhaustive and comprehensive assessment of its impact on the environment, including impacts accumulated with other contracts, and for determining the Works Contract's implementation conditions. The assessment done proves that there is no significant accumulation of adverse impacts.

Analyses of the Works Contract's impact on particular components of the environment – done for the EIA Report – did not identify a necessity of establishing restricted use areas.

Due to the range of the Works Contract impact reaching the contract's vicinity it was deemed that the planned Works Contract shall not link with a risk of impact beyond the boundaries of the Republic of Poland; thus, this decision states the absence of transboundary impact on the environment.

Considering the above, after analyzing the case documentation it was stated that implementation of the subject Works Contract – at application of mitigation measures and conditions determined in this decision – shall not cause excessive nuisance to the environment.

As a consequence, it was decided as given in the conclusion.

INSTRUCTION

The parties may claim against this decision to the General Director for Environmental Protection (52/54. Wawelska Street, 00-922 Warsaw) through the Regional Director for Environmental Protection in Cracow, Site Issues Department in Tarnów (5-9. Solidarności Alley, 33-100 Tarnów) within 14 days from the serving date.

As this decision (~~resolution~~) has not been claimed against in time and mode legally provided, it became final on 04/09/2016, and shall be implemented.
Tarnów, 08/12/2016

pp. Regional Director
for Environmental Protection in Cracow

Eng. Paweł Kozioł MSc
Manager of Site Issues Department in Tarnów

REGIONAL DIRECTORATE FOR
ENVIRONMENTAL PROTECTION IN
CRACOW

Site Issues Department in Tarnów
33-100 Tarnów 5-9. Solidarności Alley

Chief Specialist

Eng. Magdalena Budzyn MSc

Decision released from stamp charge based upon Article 7 (3) of the Act of November 16, 2006 on the stamp charge (OJ of 2015, item 783, as amended).

Appendices:

- 1. Characteristics of the Planned Works Contract – according to Article 82 (3) of the EIA Act.**

Recipients:

1. Mrs. Magdalena Nykiel, mkm PERFEKT Sp. z o.o., 1/411. Rzemieślnicza Street, 30-363 Cracow.

CC:

1. State District Sanitary Inspector in Tarnów, 10. Mościckiego Street, 33-100 Tarnów;
2. City Office of Tarnów, 2. Mickiewicza Street, 33-100 Tarnów;
3. Municipality Office of Tarnów, 19. Krakowska Street, 33-100 Tarnów;
4. Commune Office of Wierzchosławice, 550. Wierzchosławice, 33-122 Wierzchosławice;
5. Proceeding parties – notifications in the mode under Article 49 of the APC:
/notice board of the CO of Tarnów/
/notice board of the MU of Tarnów/
/notice board of the CO of Wierzchosławice/
/notice board of the RDOŚ in Cracow Site Issues Department in Tarnów/
/website <http://bip.krakow.rdos.gov.pl/>
6. ST-I file.

**REGIONAL DIRECTOR
FOR ENVIRONMENTAL PROTECTION
IN CRACOW**

Tarnów, March 8, 2016

**Appendix to the decision on environmental conditions
dated 03/08/2016, ref. no.: ST-I.4233.2.2015.MB**

CHARACTERISTICS OF THE PLANNED WORKS CONTRACT

in accordance with Article 82 (3) of the Act of October 3, 2008 on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments (OJ of 2013, item 1235, as amended)

The Works Contract considering **extension of the left embankment and of the right embankment of the Biała River in the City of Tarnów, in accordance with variant "2"** shall comprise expansion of the right flood embankment and the left flood embankment (Class II hydraulic structures) for the River Biała over a length of about 13 km in the following localities: Tarnów, Biała (Commune of Tarnów), and in a small section (about 8 m) in the Town of Komorów (Commune of Wierzchosławice). The total area of embankments to be extended is about 170 ha. The scope of the Works Contract comprises extension of the existing flood embankments of the Biała River, including a backwater embankment for the Wątok Stream, through their widening and rising to elevation of a safe freeboard, and extending the left embankment of the River Biała (forming a closure for the floodplain at Krakowska Street in Tarnów). The Works Contract comprises sealing of the embankments through application of anti-filtration protection. It is also planned to develop necessary roads at the embankment in the area beyond the embankment, to restore the existing and to develop new sections of roads within the embanked area, to extend and construct embankment ramps, to extend concrete walls, which currently form an integral part of the flood embankments, to develop U-turn yards, and to provide necessary redevelopment for such existing facilities as: fences, water-supply pipes, sewerage system, gas piping, teletechnical and power lines. The scope of the Works Contract also comprises redevelopment of or repairs to the existing embankment culverts. The scope of designing – objective of which is to obtain the required safe freeboard over the entire length of the embankments – includes sectional rising of crest elevation for the existing embankment, by about 0.15-0.50 m on average. In sections of the embankments, where elevation meets requirements of a safe freeboard, it is planned to level the embankment crest and the slope

grade. The axis of modernized embankments shall mainly run on the existing route; however, it shall be sectionally shifted towards the area beyond the embankment or the embanked area.

The range of the Contract for the right embankment includes sections with the following register chainage: 0+000-2+320, 2+956-3+120, 3+145-4+534, 5+560-5+860, and 5+870-6+700. In case of the left embankment it is km 0+000-6+600. Local chainage was adopted for the discussed embankments, i.e. in case of the right embankment those are: 0+000-3+234, 3+234-4+651, 5+346-5+925, and 5+925-7+170; whereas for the left embankment: 0+000-3+134, 3+134-4+516, 4+516-5+995. The total length of the embankments under the Works Contract is about 13 km.

The Works Contract shall be implemented within plots having the following register numbers:

- Area of Biała (Commune of Tarnów): 25/14, 284/1, 284/2, 285/1, 285/2, 290/1, 290/2, 291/1, 291/2, 291/1, 292/2, 293/1, 294/2, 294/3, 294/4, 295/1, 295/2, 296/1, 296/2, 297/1, 297/3, 297/4, 298/3, 298/5, 298/6, 324, 325/2, 325/3, 325/4, 326/1, 326/3, 326/4, 327/1, 327/3, 327/4, 328/1, 328/3, 328/4, 329, 330/1, 330/3, 330/4, 331, 332/1, 332/3, 332/4, 333/1, 333/3, 333/4, 334/1, 334/3, 334/4, 334/5, 335/1, 335/3, 335/4, 336/1, 336/3, 336/4, 337/2, 337/3, 337/4, 340/2, 340/3, 340/4, 341/1, 341/3, 341/4, 342/1, 342/3, 342/4, 343/2, 343/3, 343/4, 344/2, 344/3, 344/4, 345/1, 345/3, 345/4, 346/1, 346/3, 346/4, 347/2, 347/3, 347/4, 349/2, 349/3, 349/4, 350/1, 350/3, 350/4, 351/1, 351/3, 351/4, 352/2, 352/3, 352/4, 353/2, 353/3, 353/4, 354/1, 354/2, 355/2, 355/3, 355/4, 356/3, 356/4, 356/7, 362/1, 362/2, 369/1, 369/2, 370/1, 370/2, 371/1, 371/2, 372/1, 372/2, 373/1, 373/2, 379/1, 379/2, 380/1, 380/2, 381/1, 381/2, 383/1, 383/2, 389/4, 394/1, 394/2, 397/3, 397/4, 397/5, 397/6, 397/7, 398/5, 398/6, 398/7, 398/8, 398/10, 398/11, 398/12, 398/13, 398/14, 399/2, 399/3, 399/4, 399/5;
- Area of Komorów (Commune of Wierzchosławice): 336;
- Area no. 211 Tarnów-Miasto: 12/4, 36, 37;
- Area no. 208 Tarnów-Miasto: 1/1, 1/2, 1/12, 1/13, 1/14, 1/15, 2/1, 2/4;
- Area no. 203 Tarnów-Miasto: 1/62, 1/103, 1/204, 1/214, 1/235, 1/236, 1/313, 2, 3/1, 3/3, 3/4, 4/1, 4/2, 5/1, 5/5, 5/6, 6/1, 6/4, 6/5, 7, 8/1, 8/2, 9/1, 9/4, 10/3, 10/4, 10/5, 10/6, 11/1, 11/3, 11/4, 11/5, 12/1, 12/5, 12/6, 13/1, 13/2, 13/3, 14/1, 14/2, 15/1, 15/2, 16/1, 16/2, 17/1, 17/2, 18, 19, 20, 21, 22, 24, 23/2, 23/3, 25/13, 25/14, 25/26, 25/28, 25/3, 25/34, 25/37, 25/38, 25/48, 25/52, 28/1;
- Area no. 200 Tarnów-Miasto: 1/18, 1/19, 1/44, 1/262, 2/1, 2/2, 3/2, 3/3, 3/4, 4/2, 4/3, 4/4, 5/1, 5/2, 6/1, 6/2, 6/3, 7/1, 7/2, 8/1, 8/2, 8/6, 9/1, 9/2, 10/1, 10/3, 10/4, 11/1, 11/2, 14/1, 14/2, 15/2, 15/3, 15/4, 15/5, 15/7, 15/12, 15/13, 15/14, 16/1, 16/2, 17/1, 17/3, 17/7, 17/11, 17/12, 18/2, 18/4, 18/5, 18/6, 18/7, 19/4, 19/5, 27/1, 28/1, 28/2, 30/3, 30/4, 30/5, 30/6, 31, 33, 34, 35, 36/2, 37/1, 37/2, 247/4, 249, 250;
- Area no. 192 Tarnów-Miasto: 44/2, 44/5, 44/4, 45/2, 45/4, 45/6, 45/7, 46/2, 46/3, 46/5, 46/6, 46/7, 46/12, 46/13, 47/1, 47/2, 48, 49/1, 49/3, 49/4, 49/5, 49/6, 49/7, 50/1, 50/2, 50/4, 50/5, 51/1, 51/2, 52/3, 52/4, 52/5, 52/6, 53/1, 53/4, 53/5, 53/6, 53/7, 54/1, 54/2, 54/15, 66/3, 77/1, 78/3, 78/4, 78/5, 78/6;
- Area no. 199 Tarnów-Miasto: 1/1, 1/7, 1/8, 1/9, 1/10, 1/11, 1/12, 1/13, 1/14, 2/2, 2/5, 2/6, 2/7, 2/9, 4, 5/1, 5/2, 5/4, 5/5, 6/2, 6/8, 6/9, 8/3, 8/8, 8/9, 8/10, 8/11, 8/12, 8/13, 9/2, 9/4, 9/5, 10/7, 10/8, 10/9, 10/10, 11/3, 11/4, 11/5, 11/6, 14/4, 14/5, 14/6, 14/7, 14/8, 14/18, 15/2, 15/8, 128/1, 128/2, 128/3, 192/2, 129/3, 129/4, 130/2, 130/3, 130/4, 131/1, 131/2,

131/5, 133/1, 133/4, 135/1, 135/8, 135/11, 136/1, 136/6, 137/1, 137/3, 138/1, 138/2, 139/1, 139/2, 314/11, 314/12, 314/13, 315/70;

- Area no. 247 Tarnów-Miasto: 1/16, 1/41, 1/65;
- Area no. 276 Tarnów-Miasto: 80/3, 80/4, 80/5, 80/7, 80/8, 81/1, 81/3, 82/1, 82/4, 82/5, 82/6, 83/1, 83/2, 84/3, 84/4, 84/5, 84/6, 85/1, 85/2, 86/1, 86/3, 86/4, 87/1, 87/2, 88/1, 88/2, 89/1, 89/3, 141/1, 141/8, 142/3, 142/4, 142/11, 142/17, 180/8, 180/9, 180/10, 180/11, 180/12, 180/19, 180/24, 180/34, 181/1, 181/3, 181/4, 181/4, 182/3, 182/4, 182/5, 182/6, 183, 243/41, 244, 245/1, 245/2, 246/2, 246/3, 246/4, 246/5, 247/2, 247/3, 247/4, 247/5, 248/, 274, 276/1, 277, 281, 282/3, 284/1, 284/2, 330/7;
- Area no. 324 Tarnów-Miasto: 1/7, 1/9, 1/11, 1/12, 1/13, 1/14, 1/15, 1/16, 1/17, 1/18, 1/19, 1/20, 1/21, 1/22, 1/34, 1/35, 8/1, 8/2, 8/6, 8/19, 8/22, 13/18, 13/19, 13/21, 13/22, 13/23, 14/8, 14/9, 14/10, 14/11, 14/12, 14/13, 14/19, 14/20, 14/22, 14/23, 14/24, 14/31, 14/33, 14/34, 15/1, 16/1, 16/2, 16/3, 16/4, 21/1, 21/2, 21/24, 21/25, 21/26, 21/28, 34/1;
- Area no. 273 Tarnów-Miasto: 1/2, 1/7, 1/8, 1/9, 98/13, 98/14, 100/7, 100/8, 100/10, 100/11, 100/12;
- Area no. 290 Tarnów-Miasto: 1/3, 1/6, 1/7, 1/8, 2/3, 2/4, 3/1, 3/4, 3/6, 5/8, 6/2, 8/4, 9/4, 10/2, 14/3, 14/4, 15/3, 15/4, 26, 27/3, 27/4, 27/5, 27/6, 27/7, 28, 29/1, 29/2, 30/4, 30/5, 30/6, 30/7, 30/11, 32, 33/1, 33/5, 33/6, 33/7, 37/2, 39/2, 39/10, 39/12, 39/14, 39/15, 39/16, 39/17, 56, 57, 58, 59, 67, 77, 81;
- Area no. 291 Tarnów-Miasto: 15/3, 15/4, 15/5, 15/6, 15/7, 15/14, 20/1, 20/4, 20/5, 20/8, 20/12, 21/1, 21/2, 21/4, 21/6, 21/11, 21/12, 21/13, 21/14, 21/15, 26/4, 26/5, 26/6, 26/7, 26/10, 26/11, 27/1, 27/3, 27/5, 27/8, 27/9, 27/10, 32/1, 32/5, 32/6, 32/7, 32/8, 32/9, 32/13, 32/14, 32/16, 32/17, 32/18, 32/19, 32/20, 32/21, 32/22, 32/24, 32/25, 33/4, 33/6, 33/29;
- Area no. 314 Tarnów-Miasto: 34/1, 35/1, 35/2, 35/3, 36, 37/1, 37/2, 37/3, 38/1, 38/2, 39/1, 39/2, 39/3, 40/3, 40/6, 40/8, 40/9, 40/11, 40/12, 40/13, 40/14, 40/15, 40/16, 40/17, 40/18, 41/2, 41/5, 41/7, 41/9, 41/10, 41/11, 41/12, 41/26, 41/28, 41/29, 41/30, 41/31, 44, 45/1, 45/2, 46/1, 46/3, 46/6, 46/7;
- Area no. 311 Tarnów-Miasto: 1;
- Area no. 274 Tarnów-Miasto: 1/8, 17.

The embankment shall be of trapezoid shape in its cross-section, with inclination of the riverside slope and of the landside slope of 1:2, and with a crest width of 3.0 m, with its inclination of 2% towards the embanked area. In case of the right embankment at chainage km 3+234-3+454, 3+835-4+120 on the riverside slope, and in case of the left embankment at chainage km 4+516-5+909 on both: the riverside slope, as well as the landside slope, slope inclination of 1:2.5 was applied in reference to the condition of the existing embankments.

The scope of performance also covers – in the final part – the extension of the left embankment over a length of about 80 m and connecting it with the existing road embankment at Krakowska Street, and extension of the right embankment, which simultaneously forms a backwater embankment for the Wątok Stream over a length of about 470 m.

In case of the right embankment at local chainage km 2+440-2+750, where there currently is no embankment, an earth-fill embankment was designed. Its beginning and end shall be linked with the existing embankment. Maintenance of the existing tubes, aim of which is to clean them, is expected at local chainage km 1+400.

At chainage km 0+172-0+217, 0+591-0+650, and 1+233-1+270 of the left embankment, where the existing slopes have been replaced with reinforced-concrete walls, it is planned to extend them

through raising to the elevation of embankments for the Biała River to be extended, i.e. rising by about 0.20-0.50 m.

Along the area of Zakłady Azotowe (Nitrogen Plant), on the landside, over a length of about 1,100 m the slope was cut-off and stabilized with a concrete wall made of precast elements with a barrier. Slopes of the embankment at the embanked area and on the side beyond the embankment shall be reinforced with open-work slabs: at the pumping station in the area of the Bródka Stream – at the left embankment (over a length of about 17.0 m), and in the area of overpasses for piping owned by the Grupa Azoty (Azoty Group), which run over the left embankment and the right embankment (over a length equal to the crossing, i.e. from 8.0-17.0 m).

In case of both of the embankments it is planned to extend the existing sections of roads at the embankment and to develop new ones in the area beyond the embankment and within the embanked area, including development of U-turn yards.

Width of designed roads was adopted as 3.0 m, whereas width of roads to be redeveloped corresponds with the existing condition, i.e. from 3.0 m to 6.0 m. It is expected to reinforce new sections of roads with breakstone on sand ballast.

Dimensions of yards was adopted as min. 12.5 m x 12.5 m, on average, and it was assumed that they will also be reinforced with breakstone. Furthermore, at the existing section of roads, where the works associated with extension of the embankments shall be performed, it is expected to redevelop the roads using original materials (e.g. concrete, asphalt). In sections, where one cannot design roads at the embankment due to the existing land management, the roads shall run on the embankment crest, which would be reinforced with breakstone on sand ballast.

On the left embankment – along the Nitrogen Plant – two pass-byes were designed with a length of 25 m, slant of 1:2, and road width of 5.0 m in that location, due to length of a section running along the concrete fence on one side and of a newly designed concrete wall on the other side.

In case of the right embankment it is planned to extend 16 embankment ramps and to construct 8, whereas in case of the left embankment it is planned to extend 16 embankment crossings and construct 7. The crossings shall be reinforced using concrete slabs on sand ballast. On the embankment crest – in places of the aforementioned crossings – embankment turnpikes shall be assembled. The embankment crest at the passable embankment ramp shall be reinforced with concrete slabs, at sites where the roads run on the crest – with breakstone, and in the remaining sections without passage sowing with a mix of grass shall be provided.

Development of 7 embankment culverts and repairs to 1 culvert at the Chyszkowski Stream are expected for the right embankment, as well as extension of one embankment culvert at the Stary Wątok Stream at local chainage km 5+482 – through provision of an additional tube $\varnothing 1200$. One embankment culvert at chainage km 3+507 shall not be redeveloped, as it is in a very good technical conditions; thus, it does not require modernization. The embankment chainage present at chainage km 3+832 shall be liquidated.

One embankment culvert existing at chainage km 3+764 of the left embankment shall be redeveloped due to the bad technical condition of the tube. Embankment culvert with two openings of $\varnothing 1200$, which is located at the Bródka Stream at chainage km 5+320, shall be extended by the third tube located upstreams, due to the lack of efficiency during floods. A pumping station is planned in that spot, along with a service road allowing for the quick access and for draining the site and discharging water to the Bródka Stream. Damaged and not used embankment culvert at chainage km 2+537 shall be liquidated.

The access to embankment locks shall be available through redeveloped embankment ramps and through roads at the embankment. In order to allow for the access to the aforementioned culverts, typical concrete stairs with a width of 1.0 m were designed on embankment slopes in the area of each culvert, where there are no roads on the riverside. All of the stairs existing on the embankments shall be demolished, and only the ones located on the left embankment in the area of Azoty Group Plant and at the Bródka Stream shall be reconstructed. In case of the embankment culvert, modernization of which was determined as repairs, it is expected to seal the inlet abutments and outlet abutments and to desilt the openings only. In case of the left embankment it is expected to repair 3 embankment culvert at local chainage km 0+196, 0+600, and 1+250.

Within the framework of extension for flood embankment it is also planned to:

- Redevelop or protect the existing technical facilities, which collide with the designed solutions (networks: water-supply, sewerage, teletechnical, power, gas);
- Remove the existing piping, which currently is out-of-order – as indicated by their administrator, and which cross the embankment;
- Demolish the existing fencing for the time of performance – fences shall be restored after completion of the works;
- Redevelop ditches supplying and discharging water to and from embankment culverts within the embanked area and in the area beyond the embankment through application of concrete and open-work protection at the bottom and on slopes, and through land levelling;
- Develop concrete hectometer posts on the embankment crest;
- Repair, redevelop and construct descend roads forming a junction between the roads at the embankment and the adjacent road network;
- Repair the existing access roads, which would be damaged during the performance;
- Log trees in the total amount of about 3,000 pieces and shrubs in the area of about 1.5 ha for both of the embankments;
- Demolish a house located at register plot 9/4 – area no. 199 Tarnów;
- Demolish 3 outbuildings (2 on the right embankment, 1 on the left embankment) within the scope of works to be performed;
- Demolish 2 garden sheds located within garden allotments at the left embankment;
- Redevelop the existing spots of geodetic control network;
- Develop protective strips with a width of 3.0 m, on average, from the embankment slope's foot or from the road at the embankment (no construction works – scope adopted for the purpose of future expropriation);
- Level land on the riverside or on the landside to keep the natural drop of the embankment;
- Develop sidewalks used for pedestrian traffic from every maneuvering yard to the embankment lock for the purpose of maintenance and service;
- Provide the embankment culverts with such accompanying facilities as: landings, platforms, barriers, stairs;
- Redevelop the existing barriers on the left embankment at the ramp leading to a footbridge for pedestrians;
- Reconstruct road culverts damaged during the performance;

- Develop revetments for the riverside slope of the left embankment using geo-grid due to the small distance between the embankment and the river-bed.

Networks colliding with technical infrastructure of the Works Contract shall be redeveloped in accordance with technical conditions obtained from their administrators.

The temporary plant and facilities – in the amount of from five to ten facilities located at ends of the embankments set out by the system of streets and the end or the beginning of the Contract range – shall be organized in a form of re-loading/storage/construction yards, fenced and hardened using concrete road slabs. A sealed fueling spot and a place of minor repairs for construction equipment shall be set out within the fenced yard (the sealing shall include placement of geo-membrane – foil underneath concrete slabs). The temporary plant and facilities shall be provided with portable toilets containing tight holding tanks.

Within the framework of works to be performed, temporary access roads / technical lanes with a width of about 3 m shall be set out, and they shall be used for traffic purposes and maneuvering with heavy equipment (e.g. excavators, bulldozers). Technical lanes shall run in such a way to avoid necessary additional logging of trees and shrubs.

Soil necessary for extension of the embankment shall be delivered from beyond the Works Contract site and shall be provided by external suppliers, and not from the embanked area. It shall have application attestation for water engineering. It is not expected to store soil within the Works Contract area – it shall be delivered on an ongoing basis.

Slopes for the embankment and for rising of the embankment shall be made of natural soil. Soil to be embedded at the slope shall be accepted by the Engineer prior to the application. The acceptance shall be done on an ongoing basis during the earthworks, based upon the Contractor-provided results of macroscopic field works, as determined under PN-74/B-04452 *Construction grounds, field tests*. Any mineral soil, i.e. non-cohesive soil of various granulation and weak- and medium-cohesive soil shall be useful for extension of the embankments. In case organic soil or soil polluted with organic parts would be provided, those soils would be embedded at the top part of the slope as a subbase for biological development.

According to requirements of the Technical Conditions for Development and Commissioning [WTWiO] one shall observe the following conditions for the construction of embankments:

- Soil with lower permeability should be placed in the middle of the embankment,
- Soil with higher permeability should be placed close to the slopes,
- Soil at the slope should not form lens or layers facilitating filtration or sliding.

Soil should be compacted in such a way to achieve the condensation rate of $I_s \geq 0.92$. Proper compaction shall be obtained through placement and compaction of the ground in layers with thickness of about 20 cm.

Any soil produced during the works shall be embedded within the Works Contract. Top layer of the ground (top-soil) shall be removed and selectively stock-piled, and completely used for re-shaping of the area after completing the performance.

Within the framework of protection against leaks the design expects to develop an anti-filtration membrane within the crest – with minimum thickness of 0.4 m and depth of 8.0 m – over the entire length of the planned embankment. It shall be located 1.0 m b.g.l. at the embankment crest. Anti-filtration protection has been designed according to the currently applied standard of technical solutions. It expects application of CDMM – Continuous Deep mixing Method, and high-pressure injection method, i.e. jet-grouting, at crossings with the existing underground facilities. The mixing process for bentonite and cement leaven shall be done within the Works Contract site, in accordance

with the technology adopted by the Contractor, and water shall be delivered in water-carts. It is not expected to take the water in from the River Biała.

A bentonite mat is proposed as a filtration protection at local chainage km 2+643-2+660 of the right embankment and at chainage km 2+903-2+918 of the left embankment. The mat shall be ended with a draining prism filled with a sand-gravel mix.

There shall be no works within the Biała river-bed.

The logging of trees and shrubs shall be limited to the necessary minimum allowing for implementation of the Contract, and it shall essentially be done after obtaining relevant permits, beyond the hatching season of birds, i.e. from the beginning of September until the end of February. Occasional logging may be done during the hatching season under environmental supervision – only after it would be identified that trees or shrubs to be logged are not inhabited by animals under protection. Trees and shrubs, which shall not be logged and which are located within the reach of the works, shall be properly protected against possible mechanical damage. The necessary logging shall be compensated by replacement planting.

Natural raw materials and also remaining materials shall be applied during the construction works only in technologically required quantities. The work technology shall be typical for the Works Contract related to the extension of flood embankments – those are typical water and amelioration works. The construction shall be done while keeping standards imposed by the construction law and by secondary legislation.

Works associated with implementation of the Works Contract shall be performed in stages. Detailed technical solutions shall be determined on the stage of construction design.

As this decision (~~resolution~~) has not been claimed against in time and mode legally provided, it became final on 04/09/2016, and shall be implemented.
Tarnów, 08/12/2016

pp. Regional Director
for Environmental Protection in Cracow

Eng. Paweł Kozioł MSc
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