

**DECISION
ON ENVIRONMENTAL CONDITIONS**

Based upon Article 104 and Article 107 (1) of the Act of 14 June 1960 Administrative Procedure Code (consolidated text: OJ of 2013, item 267, as amended), and Article 71 (2) item 2, Article 75 (1) item 1 (i), Article 80 (1) and Article 85 (2) item 1 of the Act of 3 October 2008 on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments (consolidated text: OJ of 2013, item 1235, as amended), and Article 17 of the Act of 8 July 2010 on particular rules of preparing the implementation of flood defense investment (OJ no. 143, item 963), as well Article 3 (1) item 65 of the Regulation of the Council of Ministers of 9 November 2010 on investments, which may significantly affect the environment (OJ of 2010 no. 213, item 1397, as amended),

after consideration of

the application of Mr. Sławomir Szymański, a representative of CERMET-BUD Sp. z o.o. PRZEDSIĘBIORSTWO INŻYNIERSKIE with its office in Cracow at 4. Otwinowskiego Street, acting in the name of the Investor, i.e. Lesser Poland Board of Amelioration and Water Structures in Cracow, dated 06/30/2014 (reception date: 07/01/2014), ref. no.: l.dz. 92/STK/2013, on the issuance of a decision on environmental conditions for the investment titled **“Design on Extension of Flood Embankments for the Vistula River in Cracow: Section 4 – Right embankment of the Vistula from the Skawinka estuary to the Kościuszko barrage”**,

after obtaining an opinion

of the State District Sanitary Inspector in Cracow dated 04/07/2015 (reception date: 04/09/2015), ref. no.: NZ-PG-420-1555/15 ZL/2015/03/1018,

I hereby decide

- I. **To establish environmental conditions for the investment titled “Design on Extension of Flood Embankments for the Vistula River in Cracow: Section 4 – Right embankment of the Vistula from the Skawinka estuary to the Kościuszko barrage” and simultaneously:**

1. To determine:

1.1. Type and location of investment implementation:

The planned investment comprises the extension and sealing of the right embankment of the Vistula River: Section 4 – Right embankment of the Vistula from the Skawinka estuary to the Kościuszko barrage. The subject investment includes rising of the embankment crest and it shall be implemented within the entire length of embankments determined under the paper, i.e.:

- Task no. 1: at chainage from km 60+325 to km 61+662 over a length of 1337 m;
- Task no. 2: at chainage from km 62+017 to km 63+183 over a length of 1166 m;
- Task no. 3: at chainage from km 63+779 to km 65+160 over a length of 1381 m.

Furthermore, the designed investment proposes the redevelopment / expansion or construction of embankment objects (i.e. embankment culverts, locks, embankment passages, roads at embankments) and network of utilities colliding with the embankment object.

The overriding objective of the investment is to improve the flood safety for the areas beyond the embankment, i.e. for the City of Cracow and Skawina, and for surrounding areas.

The planned investment is located within Lesser Poland in the area of the following:

- District: City of Cracow, community: City of Cracow, register unit: Podgórze, areas: 73, 77, and 78;
- District: Cracow, community: Liszki, area of Kryspinów and Piekary, and community of Skawina, area of Skawina.

The detailed scope of the informed investment is determined under “Appendix no. 1”, forming an integral part of this decision.

1.2. Conditions for the use of land in the phase of implementation and in the phase of use, or for application of the investment, with special consideration of the necessary protection of valuable environmental elements, natural resources and historic objects, and for limitation of nuisance for adjacent areas:

- a) At the preparation and at the implementation of the investment one shall assure economical land development.
- b) Develop a plan of works to minimize the use of construction equipment and means of transport. One shall plan a sequence of works to maximally apply the existing access roads.
- c) During the performance apply technically efficient equipment, machines and vehicles to avoid uncontrolled leakage of fuel, and therefore contamination of the ground and water environment.
- d) One shall apply modern and technically efficient construction and transportation equipment.
- e) Delivery of materials should be done using the existing public roads running in vicinity of the planned investment and using technological roads, with maximum possible application of the existing road network.
- f) Storage sites for materials, rest and refreshment facilities, and parking lots for the equipment and for machines shall be located in places of the lowest environmental value, including rules of minimization for acquisition of land and for transformation of its surface, and an obligation to reinstate land after the completion of works; and beyond the direct reach of river's flood water and beyond sites, where water may be contaminated.
- g) One shall secure relevant volume of sorbent for collection of spills in order to minimize the possible leakage of hazardous substances, including oil derivatives.
- h) Materials applied for extension of the embankments cannot contain substances, which may be washed out, and especially substances significantly harmful to the water environment present in the form of dissoluble compounds.
- i) In case of failure polluting the ground, one shall immediately remove the polluted soil layers and hand them over to a specialized company having relevant permits for business actions related to the dangerous waste management.
- j) For the duration of construction works, Flood Management Plan should be provided, specifying the relation between the time of commencement of the evacuation or protection of the equipment and the occurrence of a certain hydro-meteorological situation.
- k) Due to the hatching period for birds the logging of trees and shrubs shall be scheduled for autumn and winter (the works shall be performed from 1 September until the end of February). It is acceptable to perform the logging in a different time provided that an ornithological supervision would be done, which would state that bird nests or hatches would not be damaged as a consequence of logging.
- l) Trees not determined for logging shall be properly protected against damage. The works in vicinity of roots and trunks shall be done manually. One cannot leave rootage uncovered for a long time, so its overdrying would be avoided.
- m) It is banned to store any materials, soil or construction waste in vicinity of tree trunks.
- n) Prior to the commencement of earthworks within a particular area one shall inspect it in relation to the occurrence of protected animal species (e.g. amphibians, reptiles, birds). The works associated with the removal of top layer shall be done from September to February. Identified specimen shall be transferred to the area beyond the investment site to the location having similar habitat conditions and placed in such a distance from the investment site that the animals would not be able to return to the site until the completion of works. The earthworks shall be performed under supervision of a naturalist.
- o) If seasonal migration of amphibians would be identified within the investment site, the investment area shall be protected to disable the amphibians from reaching the site, where – due to the works performed – they would be endangered. For that purpose one shall arrange a temporary fence made of materials having tight structure (e.g. transparent foil, tarpaulin, geo-fabric, geo-textile). At every 20-30 m along the fence one shall excavate shallow pits (about 0.5 x 0.5 x 0.2 m) and lay them with foil, what would form traps for the migrating amphibians, which should be inspected at least once a day. In case of finding amphibians in them, one shall transfer them to the area beyond the investment site to the location having similar habitats conditions and placed in such a distance from the investment site that the animals would not be able to return to the site until the completion of works.

- p) The construction site and excavations shall be kept dry during the project and during the performance.
- q) The site facilities shall be hardened and equipped with sanitary facilities.
- r) Prior to the commencement of earthworks one shall remove a layer of humus, store it beyond the area of earthworks, and assure the possibility of its re-embedding for the development of a fertile layer on further construction stages.
- s) The excavations shall be protected against falling down of small animals.
- t) Mixes of grass and other species of native plants shall be applied for the development of the planned assignment, and their regular mowing shall be assured.
- u) Construction works shall be performed within the day, i.e. from 6:00 am to 10:00 pm.
- v) Produced waste shall be segregated and stored selectively in a separate place in proper containers in a way eliminating its adverse impact on the environment, and assuring taking it over by authorized entities.
- w) The area of planned investment shall be cleared after completion of the works.

1.3. Requirements on prevention of industrial failure's effects:

The investment does not remain an object posing a risk of serious industrial failure's occurrence.

1.4. Requirements on limitation of transboundary environmental impact:

Transboundary impact of the investment on the environment was not identified due to the significant distance from the State Border.

II. Obligations related to prevention and minimization of environmental effects and to monitoring on the investment impact on the environment:

There are no obligations related to the monitoring of investment impact on the environment.

III. I do not impose an obligation of repeating the environmental impact assessment under the proceeding on the issuance of decision, as discussed in Article 72 (1) of the Act on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments.

IV. The investment does not remain a type of investment, for which a limited use area may be established.

V. The investment does not require imposing an obligation of developing a post-implementation analysis in the construction permit.

VI. Upon the application of the Investor's Proxy, as provided in the note dated 04/14/2015 (reception date: 04/15/2015), ref. no.: L.dz. 36/STK/2015, I hereby make the discussed decision immediately enforceable.

VII. Characteristics of the planned investment:

Characteristics of the investment are presented in "Appendix no. 1" to this decision.

JUSTIFICATION

Mr. Sławomir Szymański, a representative of CERMET-BUD Sp. z o.o. PRZEDSIĘBIORSTWO INŻYNIERSKIE with its office in Cracow at 4. Otwinowskiego Street, acting in the name of the Investor, i.e. Lesser Poland Board of Amelioration and Water Structures in Cracow, provided an application dated 06/30/2014 (reception date: 07/01/2014), ref. no.: l.dz. 92/STK/2013, supplemented with a note dated 07/15/2014 (reception date: 07/17/2014), ref. no.: L.dz. 105/STK/2014, on the issuance of a decision on environmental conditions for the investment titled "**Design on Extension of Flood Embankments for the Vistula River in Cracow: Section 4 – Right embankment of the Vistula from the Skawinka estuary to the Kościuszko barrage**".

The following were attached to the application:

- Investment information sheet with a digital version – 2 copies;
- Copy of register map covering the area, where the investment shall be implemented, and the area covered by the investment impact, including marking of boundaries for the site covered by the application, certified by the relevant authorities – 2 copies;
- Copy of extract from the land register – 1 copy;
- Original power of attorney of the Lesser Poland Board of Amelioration and Water Structures in Cracow dated

05/07/2014, ref. no.: DO-013-67/14, for Mr. Sławomir Szymański, a representative of CERMET-BUD Sp. z o.o. PRZEDSIĘBIORSTWO INŻYNIERSKIE with its office in Cracow at 4. Otwinowskiego Street, to act in the name of the Lesser Poland Board of Amelioration and Water Structures in Cracow in contacts with public administration units and for the purpose of administrative proceedings implemented by those units for the issuance of necessary decisions and necessary agreements on the obtainment of geodetic materials for the purpose of implementation of the aforementioned investment.

- The Proxy, Mr. Sławomir Szymański, declared in the name of the Investor – while referring to Article 17 of the Act of 8 July 2010 on particular rules of preparing the implementation of flood defense investment – in the application on the issuance of a decision on environmental conditions dated 06/30/2014 that the investment in question shall be implemented in accordance with the aforementioned act.

The investment titled “Design on Extension of Flood Embankments for the Vistula River in Cracow: Section 4 – Right embankment of the Vistula from the Skawinka estuary to the Kościuszko barrage” shall be determined as Group II investment in accordance with Article 3 (1) item 65 of the Regulation of the Council of Ministers of 9 November 2010 on investments, which may significantly affect the environment (OJ of 2010 no. 213, item 1397, as amended) - *“flood defenses, except for redevelopment of flood embankments including sealing of the embankment body and its subbase, in order to limit the possibility of their washout and breach during accommodation of flood water; and regulation of water or their channeling understood as water management allowing for their use for navigation purposes”*.

In accordance with provisions under Article 75 (1) item 1 (i) of the Act of 3 October 2008 on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments, the Regional Director for Environmental Protection remains a relevant unit for the issuance of a decision on environmental conditions for the investment in question.

Based upon Article 64 (4) of the Administrative Procedure Code the Regional Director for Environmental Protection in Cracow informed all of the parties in notification dated 07/09/2014, ref. no.: OO.4233.8.2014.BM, about the commencement of proceedings for the issuance of this decision. Due to the fact that the number of parties exceeds 20, Article 49 of the Administrative Procedure Code was applied, stating notification of the parties via an announcement. The subject announcement was published through placement on notice boards in the: City Office of Cracow on 07/11/2014 for 14 days; City Office of Liszki on 07/16/2014 for 14 days; and City and Community Office of Skawina on 07/17/2014 for 14 days; and on the notice board of the Regional Directorate for Environmental Protection in Cracow on 07/10/2014 for 14 days. Furthermore, information on the commencement of proceedings was published in the Public Information Bulletin, on website of the Regional Directorate for Environmental Protection in Cracow, as well as in the publicly accessible data register on website of the Ministry of Environment.

The Regional Director for Environmental Protection in Cracow applied in the note dated 07/09/2014, ref. no.: OO.4233.3.2013.BM, to the State Sanitary Inspector in Cracow for the issuance of opinion prior to the issuance of environmental decision for the discussed investment. The State District Sanitary Inspector in Cracow stated in the note dated 07/23/2014 (reception date: 08/04/2014), ref. no.: NZ-PG-420-302/14ZL/2014/07/601, that the subject investment does not require an environmental impact assessment.

After analyzing the application on the issuance of the decision on environmental conditions and of the IIS for the subject investment, the Regional Director for Environmental Protection in Cracow enquired the Proxy in the note dated 07/21/2014, ref. no.: OO.4233.8.2014.BM, if redevelopment (extension) of part no. 2 of the subject investment, i.e. at chainage km 63+080-63+865 (register chainage of the embankment: 62+030-63+190), was not performed in the previous years. It was related to the part of subject right embankment of the Vistula River at chainage km 63+080 which joined the existing eminence (Grodzisko), whereas at chainage km 63+865 of the River Vistula it joins the existing hill (limestone hill), where the St Benedict’s Monastery is located.

In reference to the aforementioned question the Proxy informed the Regional Director for Environmental Protection in Cracow in the note dated 08/05/2014 (reception date: 08/06/2014), ref. no.: L.dz. 124/STK/2014, that data provided by the Embankment Administrator, i.e. Lesser Poland Board of Amelioration and Water Structures in Cracow – Local Inspectorate in Cracow, proves that from 6 June 2011 to 26 September 2011 MZMiUW was implementing a task titled: *“Removal of flood damage at the right embankment of the Vistula River at chainage km 62+030-63+190 in the area of the St Benedict’s Monastery, City of Cracow, Community of Cracow, District of Cracow”*. The works for the aforementioned task were done based upon the functional programme and upon the construction design, and they were to seal the subject section of the embankment (embankment body). The scope of works for the aforementioned task included the following works:

- Mechanical compaction of lower layers of the body;
- Sealing of the prepared embankment body through placement of water-proofing bentonite mat on the

- riverside slope and in the middle of the crest;
- Redevelopment of the previous shape of the embankment body, with mechanical compaction (embankment parameters: grade 1:2, crest height $h = 0.5$ m, width 3 m);
 - Development of breakstone course on two existing crossing through the embankment.

Furthermore, as clarified by the Proxy, the scope of the aforementioned works was a result of very intensive hydraulic breaks posing a risk to stability of the subject embankment section, as observed during the flood of 2010.

The Regional Director for Environmental Protection in Cracow imposed an obligation to perform the environmental impact assessment and determined the scope of report in the Resolution dated 09/16/2014, ref. no.: OO.4233.8.2014.BM. That resolution was published through placement on notice boards in the: City Office of Cracow on 07/17/2014 for 14 days; City Office of Liszki on 09/19/2014 for 14 days; and City and Community Office of Skawina on 09/18/2014 for 14 days; and on the notice board of the Regional Directorate for Environmental Protection in Cracow on 09/17/2014 for 14 days. Furthermore, information on the obligation to perform the environmental impact assessment was published in the Public Information Bulletin, on website of the Regional Directorate for Environmental Protection in Cracow, as well as in the publicly accessible data register on website of the Ministry of Environment.

In the course of conducted proceeding the Regional Director for Environmental Protection in Cracow suspended *ex officio* the administrative proceedings on the issuance of environmental decision for the investment in question with a resolution dated 10/27/2014, ref. no.: OO.4233.8.2014.BM. The subject resolution suspending the administrative proceedings was published through placement on notice boards in the: City Office of Cracow on 10/28/2014 for 14 days; City Office of Liszki on 10/31/2014 for 14 days; and City and Community Office of Skawina on 10/29/2014 for 14 days; and on the notice board of the Regional Directorate for Environmental Protection in Cracow on 10/27/2014 for 14 days. Furthermore, information on the suspension of proceedings was published in the Public Information Bulletin, on website of the Regional Directorate for Environmental Protection in Cracow, as well as in the publicly accessible data register on website of the Ministry of Environment.

Mr. Sławomir Szymański, Proxy of the Investor, provided the local Directorate with three copies of the environmental impact assessment report with the note dated 12/01/2014 (reception date: 12/02/2014), ref. no.: 178/STK/2014.

The Regional Director for Environmental Protection in Cracow recommenced through the Resolution dated 12/11/2014, ref. no.: OO.4233.8.2014.BM, the administrative proceeding on the issuance of environmental decision for the subject investment, which has been suspended on 10/27/2014. That resolution was published through placement on notice boards in the: City Office of Cracow on 12/15/2014 for 14 days; City Office of Liszki on 12/17/2014 for 14 days; and City and Community Office of Skawina on 12/16/2014 for 14 days; and on the notice board of the Regional Directorate for Environmental Protection in Cracow on 12/12/2014 for 14 days. Furthermore, information on the suspension of proceedings was published in the Public Information Bulletin, on website of the Regional Directorate for Environmental Protection in Cracow, as well as in the publicly accessible data register on website of the Ministry of Environment.

Acting within its legal liabilities, the Regional Director for Environmental Protection in Cracow analyzed provisions of the environmental impact report for the planned contract. As a consequence, the Regional Director for Environmental Protection in Cracow called the Proxy to supplement the discussed report with a note dated 01/26/2015, ref. no.: OO.4233.8.2014.BM. The Proxy provided the local Directorate with two copies of updated environmental impact report and with missing extracts from the land register in a note dated 02/26/2015 (reception date: 02/26/2015), ref. no.: L.dz. 28/STK/215.

The Regional Director for Environmental Protection in Cracow applied in the note dated 03/20/2015, ref. no.: OO.4233.8.2014.BM, to the State Sanitary Inspector in Cracow for the issuance of opinion on conditions for implementation of the subject investment. The State District Sanitary Inspector in Cracow issued a sanitary decision dated 04/07/2015 (reception date: 04/09/2015), ref. no.: NZ-PG-420-115/15 ZL/2015/03/1018, and provided a positive opinion for the subject investment in the scope of hygiene and health requirements, with a reservation that at implementation of the investment one shall consider remarks and conclusions given in the environmental conditions report developed for the subject contract. Those recommendations were included in this decision.

In accordance with Article 33 (1) and in reference to Article 79 (1) of the Act on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments, in order to assure the public participation in the proceedings, resolution of the Regional Director for

Environmental Protection in Cracow dated 03/20/2015, ref. no.: OO.4233.8.2014.BM, was placed on the notice board and on website of the Regional Directorate for Environmental Protection in Cracow, and on notice boards in the: City Office of Cracow; City Office of Liszki; and City and Community Office of Skawina; informing that within the framework of the commenced proceedings on the issuance of environmental decision an environmental impact report for the planned investment and update to the report for the investment were filed. Furthermore, it informed on the commencement of environmental impact assessment for the subject contract, on the unit relevant for the issuance of the decision and on the unit relevant for the issuance of opinion on implementation of the investment, and on the possibility of acknowledging case documentation and of provision of remarks and applications in the subject case within 21 days. The announcement was placed on the notice board of RDOŚ in Cracow from 03/23/2015 to 04/13/2015, and on notice boards of the: City Office of Cracow from 03/23/2015 to 04/13/2015; City Office of Liszki from 03/23/2015 to 04/13/2015; and City and Community Office of Skawina from 03/23/2015 to 04/13/2015. Furthermore, that announcement was published in the Public Information Bulletin, on website of the Regional Directorate for Environmental Protection in Cracow, as well as in the publicly accessible data register on website of the Ministry of Environment. RDOŚ in Cracow did neither receive related remarks nor applications from the parties, the society, and social and ecological organizations within a legal deadline of 21 days.

The Regional Directorate for Environmental Protection in Cracow did neither receive related remarks nor applications from the parties, the society, and social and ecological organizations within a legal deadline of 21 days.

In the course of proceedings the Proxy informed the local Directorate in the note dated 03/19/2015 (reception date: 03/19/2015), ref. no.: L.dz. 30/STK/2015, that solutions described in the Investment Information Sheet (item 4), as well as in the provided Environmental Impact Report for the investment (item 6) titled: "Design on Extension of Flood Embankments for the Vistula River in Cracow: Section 4 – Right embankment of the Vistula from the Skawinka estuary to the Kościuszko barrage" in relation to service and technological roads, also refer to the development of a 3.0 m wide technological lane (unreinforced) at the embankment, located at designed feet in the area beyond the embankment and within the embanked area (directly at the embankment), which would allow for servicing the object and especially for potential repairs to the embankment body in the future. Width of the aforementioned lane does not violate the investment implementation boundary, as determined on maps forming an appendix to the note's update dated 02/26/2015.

Furthermore, in another note dated 03/19/2015 (reception date: 03/19/2015), ref. no.: L.dz. 31/STK/2015, the Proxy applied – due to the necessity of informing Lesser Poland Board of Amelioration and Water Structures in Cracow – to the local Directorate for provision of information on the stage of subject proceedings on the issuance of environmental decision and for provision of the expected time of the issuance.

In reference to the question given above the Regional Director for Environmental Protection in Cracow informed the Proxy in the note dated 03/26/2015, ref. no.: OO.4233.8.2014.BM, that in case of the subject investment public participation, which shall take place from 23 March 2015 to 13 April 2015, is being processed at the moment, in accordance with the Announcement of the Regional Director for Environmental Protection in Cracow dated 03/20/2015, ref. no.: OO.4233.8.2014.BM. Moreover, the Regional Director for Environmental Protection in Cracow applied in the note dated 03/20/2015, ref. no.: OO.4233.8.2014.BM, to the State Sanitary Inspector in Cracow for the issuance of opinion on conditions for implementation of the subject investment. It also informed that the expected time for the issuance of this decision on environmental conditions shall be the end of May 2015 – provided that no remarks and applications would be provided in the subject case by the parties, society, and social and ecological organizations.

The Investor's Proxy applied in the note dated 04/14/2015 (reception date: 04/15/2015), ref. no.: L.dz. 36/STK/2015, based upon Article 108 (1) of the Administrative Procedure Code, to the Regional Director for Environmental Protection in Cracow for ordering immediate enforceability for that decision and for withdrawing from an obligation resulting from Article 10 (1) of the Administrative Procedure Code. It shall simultaneously be emphasized that the overriding objective of the investment is to improve the flood safety for the areas beyond the embankment, i.e. for the City of Cracow and Skawina, and for surrounding areas, and therefore to limit the sanitary hazard. Implementation of the planned investment results from the necessary redevelopment of flood defenses damaged during the flood of 2010. Leaving the embankments in previous technical condition and at current parameters would relate to a risk for health and life of people in case of a flood wave spilling over the River Vistula channel. In case of a flood event it may be necessary to evacuate people, and severe economic and material losses may be suffered – damage to road and bridge infrastructure, and inundation of houses, outbuildings and arable land. The embankments in questions are Class I hydraulic objects.

Furthermore, the Proxy justified its application with a fact that in case of the subject task an application on the issuance of water-law permit is currently being proceeded by the Podkarpackie Voivodship Office. Not providing that environmental decision within a proper deadline may result in leaving the aforementioned application on the issuance of water-law permit without consideration due to formal shortcomings (absence of environmental decision). This would result in a necessity of repeating a time-consuming procedure to establish a proper Marshal Office by the National Water Management Authority in Warsaw to proceed the subject case, what may lead to the lack of possibility to obtain the investment project implementation permit in 2015, in accordance with the *Act of 8 July 2010 on particular rules of preparing the implementation of flood defense investment (OJ no. 143, item 963, as amended)*.

Making the decision immediately enforceable is necessary due to an urgent need of commencing the construction works, and the prolonged process of preparing the investment for implementation may relate to a real risk of losing funding for the subject investment for 2016, which would bring a material loss for the society. While assuming that rationale under Article 108 of the Administrative Procedure Code were met and that the investment is factually significant for the public interest and for the interest of the party, the Regional Director for Environmental Protection in Cracow accepted the application and ordered immediate enforceability for the decision, and – due to Article 10 (2) of the Act of 14 June 1960 Administrative Procedure Code – stated that it is justified to withdraw from notifying the parties on the completion of evidence proceeding in case of issuing that decision.

In case of environmental impact assessment for flood defenses developed based upon the Act of 8 July 2010 on particular rules of preparing the implementation of flood defense investment, the Act of 3 October 2008 on providing information on the environment and its protection, public participation in the environmental protection, and on environmental impact assessments (consolidated text: OJ of 2013, item 1235, as amended) releases in Article 80 (2) the authorities from the necessary identification of the investment compliance with provisions under the Local Spatial Development Plan.

The subject investment is to improve the flood safety for the areas beyond the embankment within the City of Cracow, Skawina, and for surrounding areas. The planned investment includes extension and sealing of the discussed sections of the right embankment of the Vistula River. Furthermore, the investment proposes the redevelopment / expansion or construction of embankment objects (i.e. embankment culverts, locks, embankment passages, roads at embankments) and network of utilities colliding with the embankment object.

The following investment implementation options were analyzed under the planned assignment:

Option 0 – so-called option zero including abandonment of implementation, i.e. leaving the embankments in the previous technical condition and with the current parameters. This option brings adverse effects for social and business-economic spheres, which is associated with a possible occurrence of flood and related flood damage, and a risk for health and life of people. In case of a flood it may be necessary to evacuate the inhabitants, and huge economic and material damage may be suffered – damage to road and bridge facilities, and flooding of houses, outbuildings and arable land. The function of the embankments in question and their meaning for the flood protection level within the protected area practically excludes the possibility and legitimacy of demolition for the subject sections of embankments.

Option I (positional) – this is an option including construction of a flood protection embankment in another location, demolition of the old embankment, and development of a new one in a greater distance from the watercourse channel (extension of the embanked area). This option would require acquisition of new land. Simultaneously, new land – with modified hydrological conditions – would be included within the embanked area, and the current land development would be transformed through shaping of water-dependent habitats. Considering the: land development for the area beyond the embankment, ineffective impact of sectional actions on the global enhancement of the channel capacity and on water levels) – due to the Kościuszko Barrage located downstream (backwater effect) and embankments placed downstream of the barrage (especially within the City of Cracow) with a similar of lower spacing than in case of the section under this project, this option is assessed as unfavourable and difficult for implementation due the adjacent development in the area beyond the embankment and due the insufficient global enhancement of channel capacity within Cracow just upstream and just downstream of the barrage.

Option II (proposed by the applicant) – it would be implementation of the investment in a way proposed by the investor, i.e. redevelopment / extension of the embankment within the existing route towards the embanked area, with the development of e.g. sealing for the body and for the embankment subbase, embankment objects, and redevelopment of land facilities colliding with investment actions. Implementation of Option II is associated with a smaller scope of works, as this option would be implemented within the same area, where the existing

embankment is located. **This option has been selected by the Investor for implementation.**

Further part of the justification discusses Option II – the one selected for implementation by the Investor.

Option III (alternative) – this is an option including rising of the embankment crest only through e.g.: reinforced-concrete wall. However, rising of the embankment crest only (e.g.: reinforced-concrete wall) is insufficient as we still leave poorly compacted ground on the embanked area's side, which poses a real hazard of washout for the embankments. Furthermore, implementation of potential stabilization for the existing riverside slope, e.g. through the application of geo-synthetics, is ecologically groundless and not permissible. Issues with shaping of the passable part of the embankment crest (wall at the crest) and problems with technical solution for passages through the embankment would also occur during implementation of the aforementioned option. Implementation of that option would however not exclude interference in the embankment body, which – due to the technical condition – would need to be redeveloped, reinforced, and sealed. Construction of the retaining wall as a new element would moreover adversely affect the landscape and would hamper performance of ongoing conservation and maintenance for the object, and would reduce the accessibility during flood protection actions (difficulties in the traffic). As a consequence, that option is also assessed as unfavourable.

A detailed analysis of the designed assignment in Option no. 2 – as selected by the Investor:

That option should comprise the redevelopment and extension, and the sealing of the right embankment of the River Vistula at chainage km 59+735-65+300 (river chainage) in a reach from the estuary of Skawinka to the Kościuszko Barrage. A part of the right embankment of the Vistula River covered by the investment has been divided into 3 tasks, i.e.:

- Task no. 1 – km 59+735-62+000 – river chainage; km 60+325-61+625 – embankment's register chainage; km 60+325 to 61+662 – real chainage over a length of 1337 m. The first part of the discussed Vistula River embankment joins a section of the Skawinka River embankment (estuary of Skawinka to Vistula) at chainage km 59+735, whereas at chainage km 62+000 of the Vistula River the embankment joins the existing land eminence (Grodzisko Mountain).
- Task no. 2 – km 63+080 to 63+865 – river chainage; km 62+030-63+190 – embankment's register chainage; km 62+017 to 63+183 – real chainage, over a length of 1166 m. The second part of the discussed Vistula River embankment joins the existing land eminence (Grodzisko Mountain) at chainage km 63+080, whereas at chainage km 63+865 of the Vistula River the embankment joins the existing hill (limestone hill), where the St Benedict's Monastery is located.
- Task no. 3 – km 64+211-66+300 – river chainage; km 63+790-65+120 – embankment's register chainage; km 63+779 to 65+160 – real chainage, over a length of 1381 m. The third part of the discussed Vistula River embankment joins the existing asphalt road (Promowa Street) located at the local land height at chainage km 64+211, whereas at chainage km 66+300 the aforementioned embankment joins a road embankment in the artery of motorway running over the Kościuszko Water Barrage.

The planned investment covers a section of Right embankment of the Vistula River in a reach from the estuary of Skawinka to the Kościuszko Barrage. Width of the embanked area within the subject reach is from about 60 m to 270 m.

The existing embankment is in bad technical condition – hydraulic breach, low compaction rate for the body and for the subbase underneath the embankment's riverside foot occur locally, what poses a risk of washing the slope out and of losing the stability by the entire body.

After implementation of the investment the embankment shall have the following parameters:

- Slope grade: riverside – 1:2.0-1:2.5 (currently about 1:2.25), and landside – 1:2.0-1:2.25 (currently about 1:2.0);
- Width of embankment crest – about 3.5-4.0 m (current crest width of about 3.0 m);
- Mean height of about 4-5 m;
- Technological and service shelf on the side of area beyond the embankment – width of 2.5-3.5 m.

Within the framework of extension it is expected to rise the embankment crest over the entire length by about 0.5 meter. The extension shall require acquisition of the adjacent land up to about 0.5 meter on the embanked area's side and – due to the expected development of service roads and embankment supports – about 5-6 meters on the side of the area beyond the embankment.

Prior to the extension and to the sealing of subbase and body a layer of soil and a layer of turf and top-soil (about 0.5-1.0 m, max. 1.60 m locally) shall be removed from the embankment crest and from the landside slope and

from the riverside slope.

In order to minimize the leakage probability and to reinforce the embankments it is expected to seal the embankment body as well as its subbase in sections under risk of breach. It is initially expected to develop a sealing screen for the embankment body (e.g. bentomat, foil) linked with an anti-filtration membrane in the embankment subbase (e.g. bentonite-cement sealing membrane mixed with the ground). If it would be necessary to rise the embankment, a vertical anti-filtration membrane may be developed from the embankment crest to the embankment subbase (DSM technology membrane: CSM, CDMM or a sheet made of steel piling).

In case of Task no. 2, due to the significant shallowing of the tight ground layer, which may pose a threat of hydraulic breach, it is necessary to deep-seal the embankment substrate over the entire length using a "suspended" membrane in sands, which would not reach the non-permeable layer (tight layer of tertiary dusty loams is placed on a depth of about 8-9 m below the ground).

In case of Task no. 3, due to geotechnical conditions sealing of the subbase was also forecasted over the entire section (place of numerous hydraulic breaches during the flood event of 2010), with a possibility of resigning in a reach from km 64+610 to km 64+880 (due to local good conditions in the subbase).

In case of Task no. 1 it is not expected to deep-seal due to the presence of non-permeable ground layer.

After performing the works the embankment body shall be covered with a layer of top-soil and sown with grass.

Over the entire length of the designed extension for the right embankment of the Vistula River, as given in the application, a new body of the extended embankment shall be developed through expansion and rising of the existing embankment body, so technical parameters would meet the requirements for Class I hydraulic structures. Local materials taken from deposits indicated in geological studies developed on earlier stages for modernization of the Vistula embankment downstream of the Kościuszko Barrage shall be applied for the extension. In case it would be necessary to apply new soil contingency, its geological identification shall be done to verify the utility of ground from embedding in the embankment body. Furthermore, the Author of EIR update does not exclude additional application of a potentially new soil contingency located in vicinity of Task no. 2 and in the neighborhood of the originally expected location. The necessity of applying new soil contingencies (and performance of their geological identification in terms of utility for embedding into the embankment body) depends on the detailed investor's estimate referring to the current evaluation of soil contingency under the spoil balance. It is also permitted to apply materials to be embedded from another source than the one given in the documentation, after meeting utility criteria for embedding into the embankment body.

Soil to be used for the extension of embankment body shall be placed in 20-30 cm thick layers and immediately compacted using self-propelled vibratory rollers. The embankment body extended with layers of properly compacted mineral material shall be covered with the priorly removed layer of soil and sown with a mix of grass. The embankment crest, embankment crossings and roads at the embankment (if they would be extended) shall be reinforced in reference to service purposes and for the purpose of flood protection actions. Width of embankment crossings and roads at the embankment shall be reproduced / extended.

It is also expected on the current stage (initially) to potentially develop footing at the embankment and embankment shelves (also passable ones, performing functions of service roads) associated with the embankment body.

As informed by the EIR Author, if it would be necessary to develop additional supports in the route of the subject embankment sections due to technical reasons, the extension of the foot (embankment body) may also be done on the embanked area's side.

It is expected that the existing embankment culverts in the route of the embankment will be liquidated under the investment, and new culverts made of reinforced-concrete tubes, e.g. "WIPRO", would be developed instead. In case of objects having good technical condition the culverts would be extended. Detailed solutions shall be agreed with the Administrator of objects. It has been initially assumed to increase diameter of the tubes in order to increase the capacity of locks. Ditches at the inlet and at the outlet of the lock shall be redeveloped and reinforced.

All crossing and exit roads shall be redeveloped and adapted to a new geometry of the embankment. It is furthermore expected to reinforce them properly. Shelves planned additionally on the side of the area beyond the embankment, which would perform service and technological functions, would also be linked with embankment crossings and with the embankment crest.

The existing land facilities colliding with the works proposed under the investment shall also be redeveloped. A potential necessity of their redevelopment and the redevelopment method shall result from branch agreements with consignees of those networks.

It is planned under the investment to construct service roads linked constructionally with the embankment. In sections where the service roads are currently present, they will be maintained.

Furthermore, in accordance with provisions of the EIR update, the solutions for service roads and for technological roads also refer to the development of a technological lane (unreinforced one) at the embankment with a width of up to 3.0 m, which would be located at feet designed in the area beyond the embankment as well as within the embanked area (directly at the embankment), and it would allow for servicing the object in the future, and especially for potential repairs to the embankment body.

The location of embankment objects to be redeveloped, extended, and constructed (e.g. culverts, embankment locks, service roads) was tabulated for individual three tasks below:

- **Task no. 1:**

Embankment object
Beginning of the embankment shelf within the embanked area at chainage km 60+335
End of the embankment shelf within the embanked area at chainage km 60+395
Entry to the embankment from the embankment shelf from beyond the embankment at chainage km 60+355
Beginning of the embankment shelf beyond the embankment at chainage km 60+385
End of the embankment shelf beyond the embankment at chainage km 61+538
Embankment crossing at chainage km 60+512
Embankment crossing at chainage km 60+535
Embankment crossing at chainage km 60+566
Entry to the embankment shelf from beyond the embankment at chainage km 60+547
Entry to the embankment shelf from beyond the embankment at chainage km 60+771
Embankment crossing at chainage km 61+192
Beginning of the road within the embanked area at chainage km 61+214 over a length of 49.0 m
End of the road within the embanked area at chainage km 61+255 over a length of 49.0 m
Beginning of the road within the embanked area at chainage km 61+250 over a length of 47.0 m
End of the road within the embanked area at chainage km 61+295 over a length of 47.0 m
Beginning of the road within the embanked area at chainage km 61+281 over a length of 282.0 m
End of the road within the embanked area at chainage km 61+562 over a length of 282.0 m
Existing exit road to the embanked area at chainage km 61+222
Existing embankment culvert at chainage km 61+238 – 1 tube
Existing embankment culvert at chainage km 61+240 – 2 tube
Road culvert at the discharge ditch at chainage km 61+239
Entry to the embankment shelf from beyond the embankment at chainage km 61+538
Embankment crossing at chainage km 61+626
Exit road from the embanked to the embanked area at chainage km 61+645

- **Task no. 2:**

Embankment object
Embankment crossing at chainage km 62+024
Beginning of the road within the embanked area at chainage km 62+061 over a length of 283.0 m
End of the road within the embanked area at chainage km 62+327 over a length of 283.0 m
Entry to the embankment shelf from beyond the embankment at chainage km 62+119
Beginning of the embankment shelf beyond the embankment at chainage km 62+119
End of the embankment shelf beyond the embankment at chainage km 62+878
Beginning of the road within the embanked area at chainage km 62+313 over a length of 645.0 m
End of the road within the embanked area at chainage km 61+963 over a length of 645.0 m
Embankment crossing at chainage km 62+917
Entry to the embankment from the embankment shelf from beyond the embankment at chainage km 62+920
Beginning of the road within the embanked area at chainage km 62+958 over a length of 208.0 m
End of the road within the embanked area at chainage km 63+160 over a length of 208.0 m
Beginning of the road beyond the embankment at chainage km 62+957 over a length of 22.0 m
End of the road beyond the embankment at chainage km 62+976 over a length of 22.0 m
Beginning of the embankment shelf beyond the embankment at chainage km 62+995
End of the embankment shelf beyond the embankment at chainage km 63+159
Existing embankment culvert at chainage km 63+115

Existing road culvert at chainage km 63+109
Beginning of the reinforced-concrete wall at chainage km 63+153
End of the reinforced-concrete wall at chainage km 63+183

- **Task no. 2:**

Embankment object
Embankment crossing at chainage km 63+842
Entry to the embankment from the embankment shelf from beyond the embankment at chainage km 63+871
Beginning of the embankment shelf beyond the embankment at chainage km 63+913
End of the embankment shelf beyond the embankment at chainage km 65+066
Embankment crossing at chainage km 64+144
Entry to the embankment from beyond the embankment at chainage km 65+037
Embankment crossing at chainage km 65+158

Additionally, as informed by the EIR update Author, at the right embankment of the Vistula River at chainage km 63+183 (embankment chainage – Task no. 2), joining a wall of the St Benedict’s Abbey in Tyniec, it was designed to rise the embankment in that location with a reinforced-concrete wall over a length of 30 m in order to limit the earthworks to the necessary minimum in the area of the monastery (related to the extension of the embankment body). That wall shall be higher than the existing embankment crest by about 40 cm. It is additionally expected to perform low-pressure injection in that place, which would replace the essential sealing for the embankment body in the form of bentomat.

In vicinity of the road embankment for the express road (Task no. 2), the scope of earthworks shall be limited to the necessary minimum due to the existing high elevation of the embankment crest. The earthworks shall comprise correction of the embankment crest’s height only, and its reinforcement. The final section of earthworks shall be located at the existing embankment crossing, which would be properly reinforced. Considering the large width of the embankment crossing (mild slope on the riverside) it is not expected to perform special works associated with sealing of the embankment substrate, except for potential sealing of the embankment body. To sum up, based upon the current design solutions it is not expected to develop additional special protection except for the aforementioned ones.

The planned investment shall be mainly implemented within BSW Wisła od Skawinki do Podłęzanki (PLRW PLRW2000192137759), which has been established as a heavily modified water body. Its status was assessed in the Water Management Plan for the Vistula Rived Basin as bad, and achievement of environmental objectives was deemed as under risk, and temporary derogation was accepted due to salinity and impact of mine waters. According to the assessment of bodies of surface water for the years 2010-2012, as developed by WIOŚ in Cracow, the chemical status of BSW Wisła od Skawinki do Podłęzanki is good, whereas the ecological potential is bad; thus the status of BSW was assessed as bad.

In a minor reach the investment is also located within BSW Sidzinka (European code: PLRW200016213572), which was established as a natural body of water, and achievement of environment objectives, i.e. achievement of good ecological and chemical status, was assessed as under risk, and the Water Management Plan for the Vistula River Basin proposed derogation comprising establishment of less rigorous environmental objectives. To justify the derogation the following were indicated: effects of anthropogenic activities for the status of BSW, and the lack of technical possibilities limiting the impact of those activities. According to the assessment of WIOŚ for the years 2010-2012 the chemical status of Sidzinka was assessed as good, and the ecological status as bad, which in turn forms the general bad condition for that BSW.

The report provided proves that the subject extension of flood embankments shall not affect ecological elements, as the investment is related to the existing embankment only, and shall not relate to interference in the Vistula river-bed. Also in case of hydro-morphological elements the subject investment shall not significantly affect the bodies of surface water, because extension of the embankments is not associated with the regulation of river-bed and shall not modify the volume and dynamics of flow in the river, and acquisition of additional sites within the embanked area shall be minor in relation to the entire width and shall not significantly affect the flow of flood water. The investment shall also not affect the hydraulic relation between the river and the area beyond the embankment, as anti-filtration membranes planned under tasks no. 2 and 3 shall be “suspended” in a layer of sand, and they shall not reach the non-permeable layer. However, task no. 1 does not propose the development of anti-filtration membranes. In case of physical and chemical elements the investment may have minor insignificant effect on the implementation stage until consolidation of the works associated with vegetation, and it shall result from the increase of suspension’s concentration and from temporary deterioration of oxygen conditions. On the operational stage it shall not affect the chemical status of water, as the materials planned for application shall be taken from deposits, which have already been used for investments of that type. Nonetheless, if it would be

necessary to apply materials from new sources, a relevant geological research would be performed to confirm the utility of soil to be embedded into the embankment crest.

Considering the above, one shall deem that the subject investment shall not pose a threat for the achievement of environmental objectives established for the BSW within the river basins, where it would be implemented.

The investment is located within two BGWs: BGW 139 and BGW 150, with quantitative status and chemical status assessed as good under the Water Management Plan for the Vistula River Basin, and the achievement of environmental objectives, i.e. at least maintenance of those conditions, was assessed as not under risk.

The investment shall not relate to the intake of groundwater and to the discharge of wastewater to the ground, and therefore it shall not affect the quantitative and chemical status of the aforementioned BGWs, and shall not remain a risk for the achievement of environmental objectives established for them.

In the EIR update filed to the local Directorate it has been informed that in reference to the scope given in the application on the issuance of environmental decision the range of the decision was increased, and it results from the necessary works associated with the assurance of stability for the embankment. This however does not effect in a necessity of including additional plots in the application.

Implementation of the analyzed investment shall be associated with temporary acquisition of land adjacent to the river-bed for the purpose of project implementation, i.e. for traffic purposes, traffic of machines and equipment, and storage of materials and parking of machines and construction equipment.

Currently the area beyond the embankment forms a mosaic of wasteland, arable land, forest areas, and developed sites. However, the embanked area is almost entirely covered by groups of invasive species, with dominating goldenrod, and with local groups of trees and shrubs.

It is planned under the assignment to remove trees and shrubs directly colliding with the planned investment and within the area temporarily acquired for temporary technological roads and maneuvering yards. In accordance with data given in the EIR update, about 31 trees and about 3.5 K m² of shrubs is qualified for logging on the current stage. Considering the fact that at the moment the design solution is not treated as the final solution, the aforementioned quantity of trees to be logged may be slightly different (decrease or increase).

In accordance with information given in the environmental report, an inventory of plants has been done in the area of the planned assignment. The environmental inventory was done from April to September 2014.

The occurrence of protected plant species has not been identified within the area of direct investment impact, i.e. at the embankment and at the directly adjacent site.

The occurrence of protected natural habitats has not been identified within the investment area. Single trees or groups of willow prove that remnants of riparian forests were present there in the past. Almost the entire embanked area is currently occupied by habitats of invasive species.

Within the analyzed area such invasive species were identified as: goldenrod *Solidago Canadensis*, and such highly invasive arborescent species as boxelder maple *Acer negundo* and black cherry *Prunus serotina*.

The area beyond the embankment is formed by a mosaic of arable fields, orchards, wasteland, and urbanized areas. Plants growing on slopes of river embankments on the riverside and on the landside are mainly anthropogenic grass groups with features and structure of lowland hay meadows *Arrhenatherion elatioris*; however, they are used intensively, as the embankments are regularly mown. Groups of viper's bugloss and sweet clover *Echio-Melilotetum* may be especially identified in that area.

A dirt road is located on the embankment crest, where parts of trampleable plant groups were formed – broadleaf plantain *Plantago medicinalis* and annual bluegrass *Poa annua* mainly.

The occurrence of protected species of fungi, lichens, mosses, and plants was not identified within the section in question.

Due to the temporarily marshy character of the embanked area and to the close neighborhood of the river, avifauna of that site is represented by numerous water and mud birds. The occurrence of 25 species of birds in total was identified in the area covered by the inventory along the Vistula River, including 2 unprotected species (birds of prey), 4 species partially protected, and 19 species under strict protection.

Furthermore, three species of amphibians were identified within the inspected area, i.e. common toad, edible frog, and pool frog, and two species of reptiles, i.e. grass snake and sand lizard.

In accordance with information provided by the EIR Author, water ponds were not identified in the direct vicinity of the embankment based upon the inventory performed. It is therefore not planned to fill them. Local land depressions (likely formed due to the presence of a pit on the construction stage for the discussed sections of the embankment), which pose a risk to the stability of embankments, shall be filled directly at the embankment. The subject construction works shall be performed in a lane of about 4.0 m from the existing embankment foot beyond the embankment.

The planned performance is associated with the investment impact on the area's vegetation and fauna. However, the method assumed for implementation minimizes that impact, and limits it to the impact on vegetation colliding with the assignment directly. Herbaceous plants shall be destructed and trees and shrubs directly colliding with the planned investment and placed in the area acquired for temporary technological roads, service road, and maneuvering yards shall be logged. Due to environmental and landscape values, vegetation surrounding the embankment shall not be affected within the most of the embankment covered by the planned modernization.

Embankment objects essentially perform a protective function for the area beyond the embankment, and therefore their maintenance in proper technical conditions remains a superior task also in case of (local) interference in the world of flora and fauna functioning in their vicinity. Impact of the investment on fauna shall mainly result from the increased range of noise during the investment implementation (noise generated by operating machines and construction equipment mainly), what may cause temporary scaring of animals. The investment shall exert a direct impact on soil fauna through interference in the soil structure during redevelopment of the embankments and during the development of technological roads; however, those would be reversible and short-term effects. After completion of the planned construction works the area of excavations, where machines and means of transport operated, shall be restored to the original condition. Furthermore, reinstatement of a natural soil cover within that site shall – with a lapse of time – reproduce previous plant groups and fauna due to the natural succession.

The site facilities shall be equipped with portable toilets with tight holding tank.

The redevelopment / extension technology for the embankment does not expect that intake of water for technological reasons would be necessary. As a result of the earthwork, quality of water in the river may be deteriorated in temporary adverse weather conditions due to the surface discharge. Also the occurrence of a flood wave during the construction process may result in washing the embankments out and in deterioration of the surface water quality. However, due to incidental character of the discussed cases, they should not be considered for the general status of water. Domestic sewage and minor volume of technological wastewater shall be produced during the construction process.

The planned works shall also result in generation of a small amount of waste, domestic waste mainly, and they should be delivered to municipal disposal facilities. Assuming the correct course of works, hazardous waste posing a risk of deterioration to the water quality shall not be produced.

Short-term impact on acoustic climate – associated with the emission of noise by operating construction machines – shall occur during implementation of the investment. The most significant impact would occur at the works in the direct vicinity of acoustically protected areas. According to information presented in the EIR update, houses located in vicinity of the embankment are present only at the section described as Task no. 2. Houses located at chainage km 62+320-62+350 are the closest ones to the embankment, i.e. they are placed in a distance of min. 50 m from the planned foot beyond the embankment, counting from the façade gauge; and at chainage km 62+950 – in a similar distance. Major groups of houses beyond the embankment are located just in vicinity of the St Benedict's Abbey in a mean distance of about min. 150-200 m from the designed foot beyond the embankment.

Noise associated with truck deliveries may too a minor extent affect the acoustic climate for the addressed area, as deliveries of materials (local materials and other materials) shall be done using generally accessible public roads, where there is an average traffic of vehicles and intensive traffic of bicycles due to a bicycle route located in vicinity. However, it shall be emphasized that deliveries of materials during the development of embankments shall be temporary, and the “acoustic input” associated with transportation of materials may be omitted.

It shall also be emphasized that on the current stage there is a very intensive traffic of vehicles using A4 motorway in the area of the embankment in question. Additionally, only single structures are located within the area of discussed investment. Noise generated to the environment due to operations of heavy construction

equipment (excavators, loaders, compactors) is local, i.e. it shall occur only within the redeveloped sections of embankments covered by the investment.

In accordance with the initially adopted technology, operations of heavy equipment may be done within the “embanked area” and “beyond the embankment”. In case of the embanked area, the extension towards that direction in acoustic terms is very favourable due to screening provided by the embankment. In such a case standard noise values would not be exceeded within areas located directly behind the flood embankment.

In some sections of the embankment operations of heavy equipment may also be done beyond the embankment. The works shall also be performed on the embankment crest within the entire length of the discussed section. As a consequence, local exceedance of acoustic background over the permissible values shall occur. That case shall however be short-term and would not cause irreversible changes to the environment.

The earthworks during the construction process – and especially ones performed at high air turbulence – may cause local deterioration of air quality. Main pollution sources for the atmosphere on this stage would mainly be vehicles delivering the materials for embankment rising, operations of machines and vehicles working on site, and dislocation of major volume of spoil. However, that deterioration would be local and ceaseable, and as a result it shall not affect the general air quality within the discussed site.

During the use of planned investment the impact on acoustic climate and the impact on air shall practically not occur. There may be some temporary impact in the form of noise emission during annual mowing of plants growing on the embankment crest and on slopes of the embankment.

The planned investment is located within the Bielańsko–Tyniecki Landscape Park. Skolczanka Nature Reserve and two Natura 2000 sites are also located in vicinity. The closest area of special protection Natura 2000 is the Dębnicko–Tyniecki meadow area (PLH120065) located in a distance of about 1.9 km from the planned investment. That area of special protection covers about 282.9 ha, and is located in south-western part of Cracow, at junction of three geo-morphological units: ice-marginal valley of Vistula, and isolated parts of Brama Krakowska and of Wysoczyzna Krakowska. It is formed by few enclaves comprising well-shaped and maintained patches of molinia meadows and hay meadows, and parts of xerothermic lawns formed in sunny spots, in connection with Jurassic rock visible on the surface. The area is covered with a network of amelioration ditches, and short time ago it was an arable land with typical farms, where land was split between arable fields (dominating area), meadows, and pastures. After inclusion of that area to the city (several km from the Main Market Square), the use of land was modified – agricultural production was left, what led to the distribution of hawthorn and caragana thickets, and tight groups of reed in moisture spots and fields of goldenrod (alien species), and the site became more attractive as a civil engineering site. The area especially protects major meta-populations of scarce large blue and dusky large blue, and sites of major occurrence of violet copper and large copper, and alcon blue. Those populations are the ones examined the most in Poland. Furthermore, within xerothermic lawns of the Skolczanka Reserve there is a station of dryad – a very rare butterfly, endangered in Poland.

A station of fen orchid is located on the edge of the site, which was found in that area after about 100 years, although it was not the same station. The area also protects natural habitats, especially molinia meadows and hay meadows, which simultaneously remain a habitat for protected butterflies. The protection of xerothermic lawns does not have a significant meaning in the scale of country, as those are poorly developed and degenerated patches of groups; however, they increase the local biodiversity.

Due to the local and very limited character, implementation of the planned investment shall not affect landscape values of the Dębnicko-Tyniecki Landscape Park. In accordance with data provided in the EIR, protected natural habitats were not identified within the area of the planned investment. Almost the entire embanked area is currently formed by habitats of invasive plants. Furthermore, it is not expected to fill water ponds within the framework of that investment, and it is not planned to perform any works within the Vistula river-bed.

As a consequence, due to the character of the investment and its location beyond Natura 2000 sites, and due to the scale of the investment and type of works to be performed, it was stated that its implementation shall not adversely affect the status of natural habitats and species of animals, for protection of which sites of European Ecological Network Natura 2000 were established.

Due to unequivocal description of the planned investment and the scope of related works, and to applied measures to mitigate nuisance for the environment, as a result of the planned assignment, a necessity of repeating the environmental impact assessment under the proceeding on the issuance of decision was not identified, as discussed under Article 72 (1) of the Act of 3 October 2008 on providing information on the environment and its

protection, public participation in the environmental protection, and on environmental impact assessments, provided that no modification will be implemented in reference to the requirements determined in this environmental decision.

This decision does not impose an obligation to conduct a proceeding on transboundary impact on the environment, because the discussed assignment would not be associated with a risk of impact beyond the boundaries of the Republic of Poland.

Based upon the Regulation of the Minister of Economy of 9 April 2002 on the type and volume of harmful substances occurrence of which in the plant decides on classification of that plant as one with increased risk or as one with high risk of serious industrial failure occurrence (OJ no. 58, item 535, as amended) it was identified that the planned assignment does not belong to the category of plants posing a risk of serious failures. As a consequence, it is not necessary to determine requirements on prevention to effects of industrial failures.

The investment does not belong to the type of investments, for which a limited use area may be established, and it also does not require imposing an obligation of developing a post-development analysis in the development consent.

The collected evidence (application, Investment Information Sheet dated June 2014, environmental impact report for the discussed investment developed by Mr. Sławomir Szymański MSc, Mr. Zbigniew Onyśko, and Mrs. Dominika Grzesiak in October 2014, and supplementation to the environmental impact report developed by Mr. Sławomir Szymański in February 2015) prove that at meeting the conditions given in the aforementioned document and in this decision, the investment intended for implementation shall not cause nuisance to the environment exceeding the standards.

As a consequence it has been ruled as in the sentence.

Instruction

One may appeal against this decision to the General Director for Environmental Protection in Warsaw (00-922 Warsaw, 52/54. Wawelska Street) through the Regional Director for Environmental Protection in Cracow within 14 days from the serving date.

This decision is released from fiscal charges in accordance with the Act of 16 November 2006 on fiscal charges (OJ of 2006 no. 225, item 1635, as amended).

In case of identifying protected plants, animals or fungi in the area of planned excavations, one shall observe provision on the protection of species resulting from the Act of 16 April 2004 on natural environment protection (OJ of 2013, item 627, as amended) and from the Regulation of the Minister of Environment of 9 October 2014 on the protection of fungi species (OJ of 2014, item 1408).

Killing of animals, and destruction of protected plants and fungi and destruction of habitats of protected species requires obtainment of a derogation issued by the General Director for Environmental Protection or by the Regional Director for Environmental Protection in Cracow, respectively, for deviation from bans valid in reference to the protected species, as issued based upon Article 56 (1) or (2) of the Act of 16 April 2004 on natural environment protection (OJ of 2013, item 627, as amended).

Regional Director
for Environmental Protection
in Cracow

Rafał Rostecki MSc

Recipients:

1. Mr. Sławomir Szymański, CERMET-BUD Przedsiębiorstwo Inżynierskie, 4. Otwinowskiego Street, 31-432 Cracow – Proxy;
2. Other parties of the proceeding notified in the mode under Article 49 APC;
3. File OO.BM.

CHARACTERISTICS OF THE INVESTMENT

The planned investment comprises the redevelopment / extension and sealing of sections of the right embankment of the Vistula River at chainage km 59+735-65+120 (river chainage) in Cracow: Section 4 – Right embankment of the Vistula from the Skawinka estuary to the Kościuszko barrage.

The planned investment is located within Lesser Poland in the area of the following:

- District: City of Cracow, community: City of Cracow, register unit: Podgórze;
- District: Cracow, community: Liszki, area of Kryspinów and Piekary, and community of Skawina, area of Skawina.

The route of right embankment of the Vistula River covered by the scope of investment runs generally in line with the river from south-west (km 59+735) to north-east (km 66+300), i.e. in compliance with the course of the river flow. Initial and final sections of reaches of the right embankment of the Vistula River described below join: the existing natural hills and land eminences, a local asphalt road, an embankment of the road bridge running along A4 motorway and over the Kościuszko Water Barrage, and the right embankment of the Skawinka River (estuary of Skawinka to Vistula).

The planned investment covers about 4 km long section of the Right embankment of the River Vistula in a reach from the Skawinka estuary to the Kościuszko barrage. Width of the embanked area within that section is from about 60 m to 270 m.

A part of the right embankment of the Vistula River covered by the investment has been divided into 3 tasks, i.e.:

- Task no. 1 – km 59+735-62+000 – river chainage (60+325-61+625 – embankment's register chainage) over a length of 1337 m. The first part of the discussed Vistula River embankment joins a section of the Skawinka River embankment (estuary of Skawinka to Vistula) at chainage km 59+735, whereas at chainage km 62+000 of the Vistula River the embankment joins the existing land eminence (Grodzisko Mountain).
- Task no. 2 – km 63+080 to 63+865 – river chainage (62+030-63+190 – embankment's register chainage) over a length of 1166 m. The second part of the discussed Vistula River embankment joins the existing land eminence (Grodzisko Mountain) at chainage km 63+080, whereas at chainage km 63+865 of the Vistula River the embankment joins the existing hill (limestone hill), where the St Benedict's Monastery is located.
- Task no. 3 – km 64+211-66+300 – river chainage (63+790-65+120 – embankment's register chainage) over a length of 1381 m. The third part of the discussed Vistula River embankment joins the existing asphalt road (Promowa Street) located at the local land height at chainage km 64+211, whereas at chainage km 66+300 the aforementioned embankment joins a road embankment in the artery of motorway running over the Kościuszko Water Barrage.

The currently existing embankment is in bad technical condition – hydraulic breaches, low compaction rates for the body and for the subbase underneath the embankment's riverside foot occur, what poses a risk of washing the slope out and of losing the stability by the entire body.

After implementation of the investment the embankment shall have the following parameters:

- Slope grade: riverside – 1:2.0-1:2.5 (currently about 1:2.25), and landside – 1:2.0-1:2.25 (currently about 1:2.0);
- Width of embankment crest – about 3.5-4.0 m (current crest width of about 3.0 m);
- Mean height of about 4-5 m;
- Technological and service shelf on the side of area beyond the embankment – width of 2.5-3.5 m.

Within the framework of extension it is expected to raise the embankment crest over the entire length by about 0.5 meter, on average. The extension shall require acquisition of the adjacent land up to about 0.5 meter on the embanked area's side and – due to the expected development of service roads and embankment supports – about 5-6 meters on the side of the area beyond the embankment.

Prior to the extension and to the sealing of subbase and body a layer of soil and a layer of turf and top-soil (about 0.5-1.0 m, max. 1.60 m locally) shall be removed from the embankment crest and from the landside slope and

from the riverside slope.

It is estimated on the current stage that at assuming meeting the requirement on freeboard (design water and control water: $Q_d = Q_{0.5\%}$ and $Q_c = Q_{0.1\%}$ for Class I embankment), the crest of designed embankment requires mean rising by about 0.5 m.

The estimated area including the area occupied currently by the embankment body, as well as the area of initially evaluated for extension of the embankment body, shall amount to about 3.5 ha for each of the sections (total of about 10.5 ha).

Regional Director
for Environmental Protection
in Cracow

Rafał Rostecki MSc