Szczecin, February 27th, 2010

REGIONAL DIRECTOR OF ENVIRONMENTAL PROTECTION in

SZCZECIN

WOOŚ-TŚ.4233.7.2011.DK.16

DECISION No. 8/2012 on environmental conditions

Pursuant to:

- Art. 104 of the Code of Administrative Procedure Act of June, 14th 1960 (Journal of Laws of 2000, No. 98, Item 1071 as amended),

- Art. 71 Item 2 Pt. 2, Art. 75 Item 1 Pt. 1i, Art. 82 and Art. 85 of the Act on the provision of information about the environment and its protection, public participation in environmental protection and environmental impact assessment of October, 3rd 2008 (Journal of Laws No. 199, Item 1227 as amended),

- § 3 Item 1 Pt. 65 of the Regulation of the Council of Ministers on projects that may have significant effect on the environment of November, 9th 2010 (Journal of Laws No. 213, Item 1397)

after careful consideration of
the request to issue the decision on environmental conditions and the assessment of the impact of the project in question on the environment submitted on June, 16th 2011 by the Director of the Zachodniopomorski Zarząd Melioracji i Urządzeń Wodnych (West Pomeranian Board for the Land Improvement and Water Facilities) in Szczecin

I hereby determine

- **the environmental conditions of the implementation of the project under the following name: "River Embankment - Chlewice - Porzecze - Backwater Embankment of the Oder at the Myśla River" and at the same time: I. I determine:**

1. Type and location of the project:

a) the planned project involves the construction of the river embankment - Chlewice - Porzecze - backwater embankment of the Oder at the Myśla River,

b) the project will be implemented in Gmina Boleszkowice on plots no. 76, 112, 113, 131, 147, 148, 103/6, 24, 25/1, 25/2, 26/ 5, 26/6, 27/1, 103/3, 32, 33, 50, 64, 57/1, 66/3, 74/2, 75, 100, 99, 98/2, 96/2, 94, 90/1, 88, 85/1, 84/3, 84/2, 83, 82/2, 82/3, 81, 80/4, 80/1 i 79/1 within Chlewice Cadastral District and on plots no. 103/1 and 121/1 within Namyślin Cadastral District.

2. Terms and conditions of land use during the implementation and operation or use phase of the project, with particular emphasis on the need to protect valuable natural values, natural resources and historic sites as well as to limit nuisance for adjoining areas:

2.1 The following measures should be taken in order to minimize emission of noise, dust and gases to the environment:

a) works to be performed using heavy equipment (with a high noise emission level)

that can exceed permissible limit values at night in areas adjacent to the areas protected against noise must be carried out within daytime, i.e. from 6.00 a.m. to 10.00 p.m.,

b) to use modern and properly silenced equipment in good working order and the least acoustically

troublesome construction works technologies, as well as to maintain good organization of work, the proper operation of the equipment and machinery and to maintain them in good technical condition,
c) to limit the working time of internal combustion engines, construction machinery and vehicles equipped with diesel engines,
d) to allow only equipment in good working condition with low emissions of pollutants to atmosphere to be used,
e) to protect bulk materials and aggregates for use in the construction phase against blowing away, and excessive dusting of the surface both during transport and storage,
f) to limit the speed of vehicles in the area of construction.

2.2 Measures that should be taken in order to protect soil and water environment include:

a) at the location of the planned project, i.e. an area of imminent threat of flooding, it is forbidden to change the landform, to store materials and to perform other works, including repair and maintenance of equipment and machinery, with the exception of works related to the construction of the river embankment along with their infrastructure,
b) the appropriate stage of construction should be preceded by works related to the preparation of the planned project site including, among others, preparation of laydown areas and construction site facilities,
c) to locate the construction site facilities and landfill for the planned project in the area of the smallest nuisance to environment, i.e. within the inner side of the embankment, ensuring economical use of land and to put the site in order after completion of works,
d) to have materials and sorbents of the petroleum derivatives in the construction site facilities,
e) to design and implement the project in a way as to prevent the penetration of any contamination, particularly petroleum derivatives to the soil and water environment, to remove immediately any possible petroleum derivatives spills and to develop contaminated soil layers in accordance with applicable regulations,
f) to maintain the site in order and to ensure proper organization of work,
g) for project implementation use only building materials harmless to the environment,
h) to discharge domestic waste generated in construction site facilities built to tight tanks, and then regularly forward them to sewage treatment plants,
i) to use a proper drainage system of excavations to ensure keeping them free from standing water.

2.3 To manage waste properly, including the following actions:

a) to manage the generated waste in compliance with applicable regulations,
b) to manage the soil material, including peat, obtained from earthworks within the construction site, using it to build and form embankments.

3. In the field of nature conservation:

a) to locate construction site facilities, roads and waste storage within the inner side of the embankment, i.e. from the side of the Chlewice village buildings,

b) not to destroy vegetation outside the project area during the construction works,
c) to conduct the implementation works outside the bird breeding season, i.e. within the period from October 1st to March 1st, and in case it is necessary to conduct works within this period to start them before March 1st in order to prevent birds from beginning breeding and building nests in the project implementation area,
d) before starting the project implementation it is necessary to obtain the consent, referred to in Art. 56 of the Nature Conservation Act of April 16th 2004 (Journal of Laws No 151, Item 1220), of the locally competent Regional Director of Environmental Protection and the General Director of Environmental Protection to the deliberate scaring and disturbing of the avifauna both under partial and strict legal protection within the area of the project impact,
e) to implement the project under the supervision of experts in the field of nature and ornithology; its scope must include training for staff supervising the construction and contractors and current control of the site and a way of project implementation in order to prevent the project impact on the natural environment including the impact on protected fauna and flora species living in the vicinity and adjoining natural

habitats,

f) to perform the planned tree felling according to the table below:

No.	km of the emb.	tree species	diameter	age	quantity	area m^2	remarks	plot
	embank. M							
1	0+005	Willow (Salix)	72	55				76
2	0+152	Willow (Salix)	48	35				98/2
3	0+165	Pear Tree (Pyrus communis)	32	40			no lic. req.	98/2
4	0+170	Pear Tree (Pyrus communis)	54	70			no lic. req.	98/2
5	0+195	European White Elm (Ulmus laevis)	35	45				98/2
6	0+240	Willow (Salix)	100	80			trunk+outgrowth	96/2
7.1	0+460	Populus × canadensis (Hybrid Black Poplar: P. deltoides × P.	110	70			shared trunk	94
7.2	0+460	Populus × canadensis (Hybrid Black Poplar: P. deltoides × P.	68	35				94
8.1	0+495	Apple Tree (Malus)	18	20			no lic. req.	88
8.2	0+495	Apple Tree (Malus)	30	40				88
9	0+650	Willow (Salix)	32	25				83
10	0+660	Willow (Salix)	55	40				83
11	1+008	Robinia pseudoacacia	42	60			bad condition	76
	embank. C							
12	0+008	Willow (Salix)	32	25			3m tr.	76
13	0+008	European White Elm (Ulmus laevis)	100	125			3m tr.	76
14	0+008	European White Elm (Ulmus laevis)	54	70	1			76
15	0+015	Willow (Salix)	67	55	1			112
16	0+025	Willow (Salix)	60	50	1			112
17	0+080	Willow (Salix)	80	60	1		3m tr.	112
19	0+305	Poplar (Populus)	66	40	1			147
20	0+315	Poplar (Populus)	52	30	1			148
21	0+315	Populus × canadensis (Hybrid Black Poplar: P. deltoides × P. nigra)	48	30	1			148
22.1	0+690	European White Elm (Ulmus laevis)	24	32	1		clump	103/3
22.2	0+690	European White Elm (Ulmus laevis)	18	22	1			103/3
22.3	0+690	European White Elm (Ulmus laevis)	16	20	1			103/3
22.4	0+690	European White Elm (Ulmus laevis)	10	13	8			103/3
22.5	0+690	European White Elm (Ulmus laevis)				80		103/3
23.1	0+705	European White Elm (Ulmus laevis)	61	85	1		clump	103/3

23.2	0+705	European White Elm (Ulmus laevis)		20	23	1			103/3
23.3	0+705	European White Elm (Ulmus laevis)		18	22	1			103/3
23.4	0+705	European White Elm (Ulmus laevis)		16	20	1			103/3
23.5	0+705	European White Elm (Ulmus laevis)		14	20	4			103/3
23.6	0+705	European White Elm (Ulmus laevis)		10	15	2			103/3
24.1	0+720	European White Elm (Ulmus laevis)		20	23	1		clump	103/3
24.2	0+720	European White Elm (Ulmus laevis)		18	22	2			103/3
24.3	0+720	European White Elm (Ulmus laevis)		16	20	1			103/3
24.4	0+720	European White Elm (Ulmus laevis)		10	15	7			103/3
25	0+740	Robinia pseudoacacia		70	110	1			50
26	0+735	Robinia pseudoacacia		18	30	1			103/3
27	0+730	Robinia pseudoacacia		34	55	1			50
28	0+730	Willow (Salix)		80	60	1			50

29L	1+200-1+328	Scots Pine (Pinus sylvestris L.)	13-15	20	13		ALP (National Forest Administration Agency) cultivated stand, no lic. req.	121/1 Cadastral district Namyśl
29L		Scots Pine (Pinus sylvestris L.)	16-18	25	32			
29L		Scots Pine (Pinus sylvestris L.)	19-21	30	16			
29L		Scots Pine (Pinus sylvestris L.)	22-25	35	13			
29L		Scots Pine (Pinus sylvestris L.)	26-31	40	3			
29L		European White Elm (Ulmus laevis)	18	22	1			
29L		Birch (Betula)	8	10	4			
Total no. of trees			140					
including: woodlots			58		80			
Summary by diameters						Woodlot	ALP (National Forest Administration Agency)	

		up to 15	21	17
		16-25	12	62
		26-35	6	3
		36-45	1	
		46-55	6	
		56-65	2	
		66-75	5	
		76-85	2	
		area of 96	3	

Abbreviations used in the table:

a. no lic. req. - no license required

b. 3m tr. - felled tree, 3m high trunk left

c. National Forest Administration Agency, cultivated stand, no lic. req. - provisions of the Nature Conservation Act do not apply to the felling of this type of tree stand on the forest area (Art. 83 Item 6 Pt. 1)

g) to perform all works in a manner consistent with applicable regulations, with no harm to trees that are not selected to be cut out, i.e. to secure crowns, trunks and root systems against mechanical damage and drying out,

h) two oaks present within the project implementation area, i.e. an oak with diameter of 92cm present at the toe of the embankment and an oak present in the vicinity of the planned embankment, i.e. within the distance not exceeding 3m from the embankment,

i) removal of trees and shrubs should be performed outside the bird breeding season, i.e. from October, 1st to March, 1st and outside the vegetation season, i.e. from November 1st to March, 1st,

j) a permit referred to in Art. 56 of the Nature Conservation Act (Journal of Laws No. 151, Item 1220) must be obtained in case of the necessity to destroy habitats of Roman snail (Helix pomatia), which is a species subject to partial legal protection,

k) in case reproduction sites of fauna protected species are found within the project implementation area, it is essential to suspend works until animals leave these sites,

l) not to kill animals in the course of earthworks and excavations and those that got into trenches must be allowed to leave them,

m) it is forbidden to store waste and to locate the construction site facilities in places with shallow groundwater inside well-permeable formations, peaty depressions, in close proximity to the waters of the Myśla River, within the boundaries of natural habitats and of habitats of plant and animal species under legal protection within Natura 2000 areas, as well as the sites of plants, animals and fungi under legal protection.

II. Environmental requirements necessary to be included in the documents required to issue a decision referred to in Art. 71 Item 2 Pt. 2 of the Act on the provision of information about the environment and its protection, public participation in environmental protection and environmental impact assessment of October, 3rd 2008 (Journal of Laws No. 199, Item 1227 as amended).

1. Perform the selected variant A of the embankments in question.
2. Embankment parameters:

a) elevation of the embankment crest of approximately 12.70 a.s.l. for the entire length,
b) embankment height of approximately 1.5m, embankment crest width of 3m and inclination of slopes of 1:3, from both the upstream and downstream faces.

3. Embankment construction technology:

a) mow and remove vegetation from the entire surface under the base of the embankment body with the extension of 1.0m on both sides of the designed embankment,
b) remove conflicting trees and shrubs through grubbing them out and then clean up the grubbed area through milling of turfing from the surface,
c) from the surface, on which the river embankment is designed to be constructed, remove the fertile soil layer 20cm thick and move vegetation soil layer (with the milled turfing) away outside of the zone of works,
d) compact the ground substrate according to requirements of PN-B-12095:1997 standard for 3rd importance class structures,
e) embankment slope and crest stabilization to be performed through topsoiling with a layer approximately 10cm thick and then to be sown with a blend of grass seed.
4. Location and parameters of the anti-filtration barrier:
a) Embankment M:

a. from km 0+004.2 to km 0+150 over the length of approximately 145.8m and depth of approximately 8.0m - cemented soil,

b. from km 0+150 to km 320 over the length of approximately 170m and depth of approximately 8.0m - diaphragm wall,

c. from km 0+320 to km 0+360 over the length of approximately 40m and depth of approximately 8.0m - cemented soil,

d. from km 0+360 to km 0+430 over the length of approximately 70m and depth of approximately 7.0m - cemented soil,

e. from km 0+430 to km 0+600 over the length of approximately 170m and depth of approximately 8.0m - cemented soil,

f. from km 0+600 to km 0+750 over the length of approximately 150m and depth of approximately 8.0m - diaphragm wall,

g. from km 0+750 to km 0+795 over the length of approximately 45m and depth of approximately 7.0m - diaphragm wall.

b) Embankment O:

a. from km 0+008.2 to km 0+090 over the length of approximately 81.8 m and depth of approximately 9.0 m - cemented soil,

from km 0+090 to km 0+370 over the length of approximately 280m and depth of approximately 8.0m - cemented soil,

c. from km 0+370 to km 0+500 over the length of approximately 130 m and depth of approximately 7.0m - cemented soil,

d. from km 0+500 to km 1+325 over the length of approximately 825m and depth of approximately 4.5m - cemented soil.

c) design and perform the anti-filtration barrier in the central part of the embankment up to the depth of 4.5 ÷ 9.0 m from the designed barrier crest elevation (approximately 12.00m a.s.l.), i.e. up to elevations of 7.50 ÷ 3.00 so that the wall axis corresponded to the embankment axis,
d) design and perform the anti-filtration barrier so that its top part would be approximately 0.70m below the embankment crest plane,
e) when the barrier reaches full strength it must express the strength of not less than 0.5MPa and the filtration coefficient of $k <= l \times 10^{-8}$ m/s.

5. The anti-filtration barrier technology:

a) design and perform the anti-filtration barrier, approximately 35cm thick, using deep soil mixing and in places with ground that does not meet the requirements concerning ground materials setting up the anti-filtration barriers, perform the anti-filtration barriers using the diaphragm wall technology with full soil replacement, i.e. perform barrier approximately 1742.6m long using deep soil mixing technology and barrier approximately 365m long using diaphragm wall technology with the full soil replacement,

b) required elevation of the filtration barrier to the control water level, i.e. 0.4m below the embankment crest, perform using the band of rigid HDPE film having a thickness of approx. 2.5mm and a width of approx. 60cm, anchored approx. 30 cm in fresh concrete mix, laid on the overlap and joined by welding,
c) excavated peat mixed with removed layer of fertile soil, use for the surface layer of the embankment.

6. At the junction of embankments M and O, i.e. within the profile of the poviat road, design and perform the mobile flood barrier using precast concrete components ensuring tightness, corrosion resistance and mechanical strength. It shall consist of: fixed aluminum beams (stoplogs) with the seal and anchor ears, carrying bracket, foundation rail with an anchor plate and wall connections (ready for installation).
7. Provide protection against filtration through the substrate by means of sheet piling with the length of approximately 12.6m, made of bulkheads approximately 9.0m and approximately 7.5m long.
8. Carry out a closure of the mobile barrier as a mobile one, anchored in abutments approx. 40 cm thick, made of concrete reinforced using steel rods welded to the bulkheads.
9. Design and perform a intake well with a diameter of approximately 1.2m and a height of approximately 1.68m within the slope of the poviat road at the junction with the embankment O.

10. Design and perform the intake well using the precast components with the bottom, i.e. using two inlets with the diameter of 400mm, and the well equip with a lid, i.e. cast iron, lockable manhole cover.
11. Design and perform piping connected to the well, draining leaks from the other road side, with the diameter of 400mm and the length of approximately 12m.
12. Perform 18 embankment crossings, including 5 for local roads, i.e. 7 crossings on road plots with the numbers: 131, 148, 33, 50, 64 of the Chlewice cadastral district and within the boundaries of the plots: 112, 99, 98/2, 96/2, 94, 90/1, 88, 84/3, 84/2, 83, 82/2, 81, 82/3, 79/1, 80/1, 75, 103/3, 32, 27/1, 26/6, 25/1, 25/2, 24, 103/6 of Chlewice cadastral district and plots 103/1, 121/1 of the Namyślin cadastral district.
13. Stabilize the embankment crest within the road crossings using solid road slabs, and the embankment slopes at the junction with the crest using perforated slabs, creating a belt approximately 0.75m wide laid on the geotextile layer. Anchor the perforated slabs using the piles (2 pcs. per 1 slab), stabilize other parts of crossings the same way as the embankments, i.e. through the topsoiling with the layer approximately 10 cm thick and sow it with a blend of grass.

III. I hereby report the need monitor the environmental impact of the investment within the following range:

a) during the construction works, and the operation of the investment, the correct condition of the building equipment should be controlled as well as the transport vehicles, in order to minimize the environmental contamination,

b) it is required to ensure the environmental and ornithological supervision in order to determine whether there was no breach of valuable elements of the natural environment and the confirmation of the possibility to start the conducting of works and to determine the additional conditions of their conducting.

The environmental supervision should also include the training for the employees supervising the construction and guidance, protection during construction.

IV. It is not obligatory to carry out assessment of the environmental impact of the investment project under the procedure concerning issuing the decision referred to in Article 72, passage 1 of the Act of 3 October 2008 on making available information on the environment and its protection, participation of the society in environmental protection, as well as on environmental impact assessments (Journal of Laws No. 199 item 1227 with amendments).

SUBSTANTIATION

On 16 June 2011 Director of the West Pomeranian Board of Land Facilities and Water Management in Szczecin, applied to the local authority with a request for a decision on environmental conditions for the proposed project under the name "Flood embankment - Chlewice - Porzecze - back water embankment of Oder river at Myśla river".

According to Article 75, passage 1, item 1, letter and Act of 3 October 2008 on making available information on the environment and its protection, participation of the society in environmental protection, as well as environmental impact assessments (Journal of Laws No. 199, item 1227 with amendments), the competent authority for issuance of the decision on environmental conditions for the concerned investment within the meaning of the Act of 8 July 2010 on particular principles of preparation for implementation of investment with regard to flood protection structures (Journal of Laws of 2010, No. 143, item. 963), is locally appropriate regional Director for Environmental Protection.

After determining the authority competent to issue a decision on the environmental conditions for this project, by letter dated 27 June 2011, ref no.: WOOS.TS.4233.7.201 l.DK, local authorities urged investors to supplement the formal deficiencies in the submitted proposal, ie . to submit certified by a competent authority copies of cadastral map, including the projected area on which the project will be implemented and covering an area that will be affected by the project. To supplement received on 4 July 2011. Finally, in accordance with Article 74, passage 1 of the Act of 3 October 2008 on making available information on the environment and its protection, participation of the society in environmental protection (Journal of Laws No. 199, item. 1227, with amendments), to the application for issue of the abovementioned decisions for projects that could potentially have a significant impact on the environment that may potentially significantly affect the environment, are attached:

1. The project information card.
2. A copy of the registry map, certified by a competent authority, covering the anticipated area where the investment project will be implemented and covering the area affected by the investment project.
3. An extract from the land register covering the anticipated area where the investment project will be implemented and covering the area affected by the investment project.

In accordance with Article 74, passage 1 of abovementioned Act to request for a decision on environmental conditions for projects for which the body conducting the proceedings is the regional director for environmental protection accompanied by the Extract from the local zoning plan when it was adopted or information about his absence, with the exception of flood protection structures implemented on the basis Act of 8 July 2010 on Special Rules for the implementation of investments in the field of flood protection structures.

In accordance with Article 64 and Article 77 of abovementioned Act, authority before issuing the application and the decision on environmental conditions for the project involving the construction of flood embankments not consulted Sanitary Inspection.

The planned project includes intention of reconstruction of flood embankment, which is flood structure. The investment is classified into projects listed in § 3, passage 1, item 65 of the Regulation of the Council of Ministers of 9 November 2010 on undertakings possible to significantly influence the environment (Journal of Laws No. 213, item. 1397), ie. flood control structures, excluding the reconstruction of flood embankments consisting of sealing the embankments body and their substrate to reduce the possibility of blur and break during the passage of flood waters, as well as regulation of the water or sewer understood as the management of water to enable their use for

shipping. In accordance with abovementioned Regulation, the investment under consideration belongs to the category of projects that may potentially significantly impact the environment for which pursuant to Art. 71, passage 2 of the Act of 3 October 2008 on making available information on the environment and its protection, participation of the society in environmental protection, as well as on environmental impact assessments (Journal of Laws No. 199 item 1227 with amendments) it is required to obtain a decision on environmental conditions and the obligation to assess the environmental impact is optional.

The number of pages in the present proceedings exceeded 20. According to the Article 74, passage 3 of the Act of 3 October 2008 on making available information on the environment and its protection, participation of the society in environmental protection, as well as environmental impact assessments (Journal of Laws No. 199 item 1227 with amendments) the parties are informed about decisions or other activities of public administration authorities by the announcement or in any other customary manner. As a result, the parties to the proceedings in accordance with Article 10 § 1 and Article 49 of the Act of 14 June 1960 Code of Administrative Procedure (Journal of Laws of 2000 no. 98 item 1071 as amended), were informed at every stage of the pending proceedings, with an opportunity to review the case file, opportunity to comment on what the documents submitted by the investor, as well as submit their comments, objections and explanations. Announcements were posted in the announcement bulletins of the Regional Directorate for Environmental Protection in Szczecin and on the website BIP - Public Information Bulletin of local office, as well as on the announcement bulletins of the Commune Office in Boleszkowice. In the course of the proceedings did not receive any comments, requests and complaints on issued during the proceedings provision.

In accordance with Article 63, passage 1 abovementioned Act, Regional Director of Environmental Protection in Szczecin taking into account the total circumstances specified in Article 63, on 5 August 2011 with decision, ref. no. of the case: WOOŚ-TŚ.4233.7.2011.DK.5 said about the need to assess the project's environmental impact, put on the investor's obligation to report on the impact on the environment and defined its scope. The local authority investigated the matter referring to the materials submitted by the applicant, the conditions under Article 63, passage 1 of the Act of 3 October 2008 on making available information on the environment and its protection, participation of the society in environmental protection (Journal of Laws No. 199, item. 1227, with amendment), as well as records of Reclamation Wildlife Westpomeranian Region (BKP, Szczecin 2010.). Pending the submission by the applicant the report on the environmental impact of the project, the local authority suspended the present proceedings. Above document was filed on 26 September 2011, in connection with the above decision of 30 September 2011, Regional Director of Environmental Protection in Szczecin made the decision of the present proceedings. By letter dated 12 October 2011, ref. no. WOOŚ-TŚ.4233.7.2011.DK.12 local authority called on investors to submit written additions and clarifications in the submitted report. On 10 November, 2011 has been submitted an annex to the report, however, it did not contain all of the issues included in the above call. On 28 November 2011at the headquarters of the Regional Directorate of Environmental Protection in Szczecin, was held a meeting with the investor and author of the report, to discuss issues necessary to clarify and detail. On 2 December 2011 fitting complement was received. Accordingly, the Regional Director of Environmental Protection in Szczecin proceeded to assess the impact of the project on the environment, within which ensured public participation in this procedure, by a notice dated 2 December 2011, ref. no. WOOŚ- TŚ.4233.7.2011.DK .14, which hung on the blackboard Comune Office in Boleszkowice on 2 December 2011 to 10 January 2012 and on the board of the local authority on 5 December 2011 to 27 December 2011, and was placed on the website of BIP - Public Information Bulletin. Within the 21 day time limit specified in the notice, i.e. 5 December to 27 December 2011, any comments, conclusions have not been received.

According to the attached report, the impact of the proposed project on the environment arises:

The project is the construction of a new water appliance - backwater flood embankment of the Odra River at the river mouth to protect the buildings of Chlewice village and adjacent agricultural area.
It is designed to build two flood control facilities, i.e. two sections of the flood embankment (section M and section O), that covers Chlewice village from the north and south. Above-mentioned embankments connects ends in cross with county road: before entering Chlewie (from the east) and below the village buildings of Chlewice (from the west, before the bridge over the Myśla river). Embankment M - southwards from Chlewie, on the rural length of buildings runs parallel to the Myśla river, and the embankment O - northwards from Chlewie, on the rural length of buildings runs almost parallel to the county road. The planned to build embankments connects through the county road, i.e. on the north-eastern edge of Chlewie buildings on the existing roadway and on the southern edge of Chlewie buildings with the flood barier.
Location of the proposed project area is in comune Boleszkowice on plots 76, 112, 113, 131, 147, 148, 103/6, 24, 25/1, 25/2, 26/5, 26/6, 27/1, 103 / 3, 32, 33, 50, 64, 57/1, 66/3, 74/2, 75, 100, 99, 98/2, 96/2, 94, 90/1, 88, 85/1, 84 / 3, 84/2, 83, 82/2, 82/3, 81, 80/4, 80/1 and 79/1 precinct Chlewice and on plots 103/1 and 121/1 precinct Namyślin.

The embankment line will be on the section from the beginning of the buildings of the village Chlewice from the Namyślin, along the Myśla river to the bridge over the county road on the board of the Myślibórz Starost (plot 76 precincts Chlewice) and then it will encircled the building area (in the west and north- east along the periphery of the buildings) to the municipal road connecting Chlewice with Porzecze (plot 50). A further section of the route will be located in an easterly direction to the SN power line and the rim of the forest, the closing circuit of protected area on the county road at the entrance to the Chlewie from the Namyślin. The embankment on the south side of the the county road, is approx. 1008 m, while on the north side of the road, has a length of approx. 1328 m.
Construction of these facilities is aimed to flood protection. On the basis of the Regulation of the Minister of Environment dated April 20, 2007 on technical conditions to be met by hydrotechnical buildings and their location have been used (Journal of Laws of 2007., No. 86 item. 579), designed flood embankment have been classified into III class hydro validity of buildings.
For the III class building should be in accordance with applicable regulations, given the volume of water likely and fall of water in the section 5 km from the water gage to the building section, it was assumed the elevation of the embankment crown for the entire embankment lenght equal to approx. 12.70 m and thereby the average embankment height of 1.5 m. Furthermore, the embankment structure parameters are:
- elevation of the embankment crown with width of 3 m (traffic flow on the embankment for maintenance and repairs),
- inclination of scarps 1:3 (identical for the waterside scarp and landside scarp).

As part of the planned flood protection measures, it is planned to:
1. Geodetic restoration and consolidation of embankment line, restoration of cross sections and location of other devices.
2. Mowing and removing vegetation from the entire surface under the embankment's body with expanding by 1.0 m on both sides.
3. Removal of interfering trees and shrubs by grubbing and cleaning the area after clearing.
4. Reomoval of layer of fertile soil thickness of 20 cm, with prior milling sodding of the surface, on which will be constructed embankment and removal of plant soil layer (with milled turf) outside the work zone.
5. Soil compaction substrate according to the requirements for III class structures validity of the PN-B-12095: 1997 norm and the construction of the antifiltration barrier.
6. In embankment sections, where in the surface layer occurs peat, remove the strip of 2.0 m of peat soil and backfilling with sand from the bed. Use removed peat, after it has been mixed with the removed layer of fertile ground, in the embankment cover layer.
7. Execution of embankment works, i.e. the construction of the embankment and passes through it.
8. Implementation of mobile flood barrier and intake well with pipeline.
9. Execution of finishing and consolidation works.

Prior to the embankment construction, place of the investment will be prepared among others by removing interfering vegetation, including trees and shrubs. Trees and shrubs will be removed by grubbing. The investor does not provide for work in the immediate vicinity of the Myśla river and interference with the natural undergrowth banks of the river, or changes in water flow conditions, or living organisms. Transport of materials and moving of equipment will take place the existing system of roads and the embankment crown.
According to the Act of 18 July 2001 Water Law (Journal of Laws of 2005 No. 239, item 2019 with amendments) it is prohibited from planting trees and shrubs on embankments and at a distance of 3 m from the foot of the embankment. Therefore, as part of the investment to remove foreseen trees growing in the contour of the embankment and at a distance of 3 m from the projected foot of embankment, i.e. in total accordance with the submitted report - 140 trees.
In order to ensure a good seal of the embankment, there will be made watertight bulkhead, deep soil mixing method, which involves the destruction of the existing structure of the ground and mixing it with a binding material. The planned barrier will be formed in the central part of the embankment to a depth of 4.5 ÷ 9.0 m from the designed crown of barrier
(12.00), ie. to ordinate 7.50 ÷ 3.00. An axis of the barrier wall will overlap with the embankment axis. The thickness of the planned barrier, constituting a single, continuous wall is approx. 35 cm. Top of the barrier will be approx. 0,70 m below the embankment crown. Due to the presence of places where the ground does not meet the requirements for setting up the partitions soil material which co-create antifilter barrier, there will be carried out antifilter barriers in technology of diaphragm wall with full replacement of the soil, i.e. the removal of soil from the excavation and pumping hardening suspension, meets the conditions of strength and water permeability. After the barrier has reached its full strength, it will have the strength not less than 0.5 MPa and the filtration coefficient of $k<=1 \times 10^{-8}$ m/s. Required uplift of the filtration barrier to the level of the controlling water, namely 0.4 m below the

embankment dyke, should be made of the rigid ribbon of the PEHD foil 2.5 mm thick and app. 60 cm wide, anchored app. 30 cm in the fresh concrete mix. Foil strips will be placed overlapping and joined by welding.
The location, barrier's depth and its type:

1. Embankment M:

a) from km 0+004.2 to km 0+150 at length app. 145.8 m and depth app. 8.0 m - foundation concrete,
b) from km 0+150 to km 320 at length app. 170 m and depth app. 8.0 m - sheet piling,
c) from km 0+320 to km 0+360 at length app. 40 m and depth app. 8.0 m - foundation concrete,
d) from km 0+360 to km 0+430 at length app. 70 m and depth app. 7.0 m - foundation concrete,
e) from km 0+430 to km 0+600 at length app. 170 m and depth app. 8.0 m - foundation concrete,
f) from km 0+600 to km 0+750 at length app. 150 m and depth app. 8.0 m - sheet piling,
g) from km 0+750 to km 0+795 at length app. 45 m and depth app. 7.0 m - sheet piling.

2. Embankment O:

a) from km 0+008.2 to km 0+090 at length app. 81.8 m and depth app. 9.0 m - foundation concrete,
b) from km 0+090 to km 0+370 at length app. 280 m and depth app. 8.0 m - foundation concrete,
c) from km 0+370 to km 0+500 at length app. 130 m and depth app. 7.0 m - foundation concrete,
d) from km 0+500 to km 1+325 at length app. 825 m and depth app. 4.5 m - foundation concrete. In total,

designed to make the antifilter barrier in deep mixing technology, i.e. ground concreter, at approx. 1742.6 m and technology of diagram wall with full exchange of soil for a length of approx. 365 m.

Above the working plane, when spreading soil of constructed embankment in the first layer, the soil delivered will be placed evenly on both sides of the foil being an extension (increase) of the barrier to the required level so that the foil vertically anchored in the concrete is not crushed when compacting the soil. Soil removed from the embankment's subsurface will be embedded in the outer part of the embankment, on the slopes and the embankment's crown.
Strengthening of slopes and embankment's crown will be made through the humus layer thickness of approx. 10 cm, and then sown with a mix of grasses.
It is designed to make 18 embankment passages, including 5 in strings of comune roads, allowing access to agricultural lands. Passages will be made in roads 131, 148, 33, 50, 64 precinct Chlewice and within the plots: 112, 99, 98/2, 96/2, 94, 90/1, 88, 84/3, 84/2, 83 , 82/2, 81, 82/3, 79/1, 80/1, 75, 103/3, 32, 27/1, 26/6, 25/1, 25/2, 24, 103/6 precinct Chlewice and 103/1, 121/1 precinct Namyślin.
The embankment's crown in passing on the road will be strengthened with full concrete road slabs and slope in contact with the crown with multi-hole slabs, strip width of approx. 0.75 m, on the base of geotextile. Multi-hole slabs will be anchored with fascine pegs (2 pcs. to 1 slab). In addition to the above, passages will be strenghtened the same as embankments (humus layer thickness of 10 cm and sowing grasses).
At the junction of the embankment M and O (profile of county road) will be made compartment with ready-made elements ensuring tightness, corrosion resistance and mechanical strength, which will consist of: aluminum beams (stoplogs) with the seal and terminal anchoring support bracket, foundation rail with a anchored plate and wall connections (ready for installation). Anti-filtration barrier through the ground will be a retaining wall with a length of approx. 12.6 m, made of sheet piles having a thickness of approx. 7.9 mm and a length of approx. 9.0 and 7.5 m. There will be made mobile closing anchored in abutments thickness of approx. 40 cm of reinforced concrete with steel rods, welded to the sheet piling.
In the scarp of local road at the contact with bank "O" it is planned to install the intake well Ø 1.2 m and height of 1.68 m. Intake well will be made for possible pumping of filtration leaks of the protected area. The well will be prefabricated with the bottom, i.e. with two inlets with a diameter of 400 mm. The well will be equipped with a lid, i.e. iron lockable hatch. Tothe well will be connected a pipeline with a diameter of 400 mm and a length of approx. 12 m supplying leaks from other side of the road.

The parameters, in accordance with the submitted report are as follows:

1. Embankment M:

- embankment length 1008 m,
- average embankment height 1,81 m,
- embankment net cubature 15447 m^3,
- area of slopes 11099 m^2,
- area of embankment base 15641 m^2,
- passage through the embankment 8 pcs.,
- filtration barrier of the made by means of deep mixing 3336.4 m^2,
- filtration barrier of the made by means of diaphragm wall 2875 m^2.

2. Embankment O:

- embankment length 1328 m,

- average embankment height 1.54 m,
- embankment net cubature 15521 m^3,
- area of slopes 12611 m,
- area of embankment base 13400 m^2,
- passage through the embankment 10 pcs.,
- filtration barrier of the made by means of deep 7598.7 m^2,

3. Embankment Mi O:

- mobile flood barrier with a diameter of 5.2 m and a height of 1.55 m - 1 piece,
- draining well with a diameter of 1.2 m and a height of 1.8 m - 1 piece,
- grubbing of trees - in total, app. 140 pcs.,
- removing the layer of fertile soil - thickness approx. 20 cm approx. 33713m^2 (i.e. approx. 6742,6m^3),
- Gross embankment cubature (body, transport, subsidence) - 33268 m^3,
- sowing slopes with grass, embankment's crown and passages - 25127 m^2.

According to the information included in the submitted report, an investor has made an analysis of the planned project. Finally to the completion was chosen option A, which is also the most advantageous in terms of environmental protection. Due to the investment objective, i.e. the village flood protection, hydro technical parameters of buildings resulting from its importance class, there were not be tested. As a solution of assumptions detrimental to the environment, the investor also rejected the embankment's location near Myśla and Odra riverbeds, which would cut off the flood plains of rivers and would require adjustment of riverbeds and had limited antiflood effectiveness (water impoundment in a narrow inter-embankment).

According to that, there were considered three options of the spatial arrangement of the embankment:

- Option A (the shortest), which provides protection only to the Chlewice village, embankments surrounding the village and pieces of agricultural land directly adjacent to the buildings. Other agricultural land, protected under option B and C remain without protection. The total length of the embankment is approx. 2336 m and embankments protected area of approx. 25 hectares. Embankment, in this option, runs through agricultural lands, in a passage the route is conducted by edge of a forest, due to the collision with the existing SN line and the altitude reasons. Embankment line crosses the paved county road in Chlewice and 5 commune roads: the road linking the villages Chlewice and Porzecze and access roads to agricultural land;
- Option B (the longest), which provides embankment's line on the section from the Chlewie to Porzecze by agricultural lands, on the area at an average height of 10.00 m, with the back embankment in a wooded hill below the Porzecze village and bypass embankment of the village from the north, with the embankment's closure on higher ground in the center of the village. The total length of the embankment is approx. 3280 m and embankments protected area of approx. 100 hectares. The embankment's line in this option, separates the floodplains from not only the complex of arable lands, but also fragments of grass-sedge meadows on the sediments of the Odra valley - northwest of the Chlewie.
- option C (intermediate), which provides that embankment's line begins from the county road in front of the buildings of the village Chlewice and enclosing the village from the east and south side, i.e. from the Myśla river, to the outlet of the road below the village buildings 50 meters from the bridge on Myśla. Further to the west and north side of buildings, the line leads to the gravel and slag road connecting Chlewice with Porzecze. Then the embankment's line runs along a dirt road to support the embankment on a wooded dune hill, stretching to the Porzecze village. On the grounds of the Porzecze village, embankment's connection with dune hill above the terrain, covered with forests. The total length of the embankment is approx. 3125 m and embankment's protected area is approx. 50 hectares.

The most preferred for the environment is selected by the investor option A because of the following:

- investment course after mineral grounds in the immediate vicinity of the village, so it will not be destroyed and will limit space habitats of protected species of plants and animals and natural habitats, in particular, there is no interference with the coated natural or semi-natural communities floodplains, which are important breeding site for the population of the corn crake and spotted crake (option B),
- surrounding the village with flood embankment will be limit largely anthropogenic impacts (noise, disturbance, predation by domestic animals) in the floodplain near the village,
- surrounding the village with flood embankment designate the boundaries of the safe building development, excluding the virtually risk of dispersion of housing projects and recreational facilities in the area, which also allows you to avoid secondary risks associated with the transformation of the landscape, disappearance or degradation of natural and semi-natural alluvial habitats, extending the effect of noise, disturbance, pressure of predators associated with man,
- position of protected species will not be destroyed, i.e. sand sedge *(Carex arenaria)* and an endangered species, i.e. marsh spurge (*Euphorbiapalustris*) (option B),

- realization of investments in option C does not encroach with the natural habitats and the habitats of species, as well as realization of investments in option A, but like in option B would result in reduction in the number of bird's breeding species which are protected by Natura 2000.
Realization and operation of the project would not involve the necessity to use surface water resources or groundwater. During the project phase there will be used only typical for such projects materials, raw materials and fuel, among other things: the ground for embankments, a mixture of grasses to fill embankment's slopes, humus, fertilizers, cement-concrete mixtures with the appropriate approvals.
Construction works will be carried out using mechanical equipment. It is expected to use of liquid fuels serving as a source of energy for construction equipment.
Operation phase will not involve any need to use raw materials, water, fuel and materials.

During the implementation of the project, gas and dust emissions as well as noise will be introduced into the environment. The sources of the emissions of gases, dust and noise will be machines and equipment used at the stage of the construction of the embankment in question. In addition, the movement of earth masses during the work may cause an increase of temporary dustiness. These emissions will be of local and short-term range and they will stop with the completion of the investment stage. However, in order to limit the emission of pollution into the air, the investor has undertaken to organise the work well, use the equipment properly and to carry out its appropriate maintenance.
The equipment used will meet the binding standards, will have the relevant attestations and low emission factor.
The area in which the implementation of the investment is planned is located in the vicinity of the buildings of the village of Chlewice, i.e. within the distance of 20-160m. According to the submitted report, these building are farmsteads as well as residential and service buildings with the acceptable noise level of 55 dB during the day and 45 dB at night, according to the Regulation of the Minister of the Environment of 14 June 2007 on the permissible noise levels in the environment (Journal of Laws No.120, item 826). The construction work will a source of noise emission of different levels and duration. Although the embankment is a linear structure, the equipment will only work at certain points. The emission of noise generated as a result of the construction work and the use of the equipment is unavoidable. Most of the residential buildings are located within the village of Chlewice and screened by farm buildings and trees located at the edges of the village. Noise emissions at the implementation stage are not subject to standardisation. However, in order to minimise the levels of the noise emissions, the investor has been obliged to use the technology that is the least burdensome, avoid the simultaneous work of a large number of equipment units, use equipment in a good working order and to locate the parking lots of the machines possibly the furthest from the area subject to noise protection but at the same time close to area covered by the work. Work at night is not planned. In connection with the use of heavy equipment to construct the embankments, such as a trencher, pile-driver and a vibration hammer, vibrations will be emitted to the environment. However, taking into account the distance to the nearest buildings and temporary duration of these emissions, one should not expect a considerable impact on human life and health. In addition in order to limit the level of emitted vibrations, the investor has undertaken not to use dynamic equipment, i.e. vibrating rolls, for soil compaction when constructing embankments close to the buildings (embankment M up to hectometre 0+50). According to the submitted report, the geotechnical documentation that has been prepared identifies basic layers in the soil profiles, i.e. non-cohesive fine sands (medium density, water-soaked), non-cohesive medium sands (medium density, water-soaked) and locally (in the form of inserts) organic soils – peat, covered by a layer of mineral soil. The peat was drilled in a line of holes made on the section of the route along the Myśla river. None of the holes reached impermeable surface. In connection with the planned construction of the embankment, there will interference into soil and water environment by, *inter alia*, the removal of the layer of fertile soil, the compaction of the surface and construction of an anti-filtration cut-off wall, backfilling of excavations and also filling works. This stage will also involve an increased use of entry roads by vehicles and therefore their compaction and compressing by heavy equipment. In addition, this stage of the construction will may pose a risk that petroleum compounds and other technological pollutants related to the transport service are released into ground.
The area covered by the investment (and its vicinity) is the terrace of the Odra river, consisting of alluvial soils and sandy sediments. Deposits of peat only developed only in the depressions crossed by the rejected variant B. Sands are dominant east and north of Chlewice and form a dune south of Porzecze, also crossed by the rejected variant B. There are no plans to use substances that pollute the soil and the ground in the construction process so the investment will not affect the quality of the soil. In order to avoid and limit the pollution of the water and soil environment, particularly by petroleum substances, equipment in good working order will be used to implement the investment; the principles of environmental protection and the use of the equipment will rigorously observed. In addition, the investor was obliged to equip the construction site with materials and sorbents of petroleum substances and also to train the employees in their use. In addition, in the case of a possible spill of these

substances it will be immediately removed and the polluted layers of the ground will be managed according to the binding regulations.

The embankment, as an earthen structure, will be made of natural materials; materials that are dangerous or harmful for health will not be used. The insulating element of the embankment – the anti-filtering cut-off wall – will be made of bentonite and cement mixture with the natural soil of the surface. Therefore, the embankment will not have negative impact on the quality of surface water and ground water. In addition, due to a considerable distance to the Major Groundwater Reservoir, i.e. approx. 10 km, and the lack of contact with the usable aquifer in the area of the facility there is no risk of polluting the water, loss of resources or any other type of unfavourable impact on the ground water at the usable level, both at the implementation stage and the later use of the flood embankment. The anti-filtering cut-off wall will practically eliminate ground flow through the body of the embankment. The flood embankment will not reach the impermeable layer so it will not eliminate ground flow through the surface of the embankment but it will affect the intensity of the flow. The anti-filtration cut-off wall will slow down the pace of change of the level of ground water in the protected area when the level of the Odra river rises or falls.

The planned investment is located above the mouth of the Myśla river, approx, 1.5 from the river banks, at the 628 km of the Odra river. This section of The Odra river is a representative of a great lowland river. The Odra river, between the mouth of the Warta river and the Odra Zachodnia river is located within the Surface Water Body (SWB) with symbol PLRW60002119199. The Myśla river, between Myśliborskie Lake and the mouth is located within the SWB with symbol
PLRW600020197699.

Taking into account the fact that the scope of work planned within the investment in question does not involve interference with the bed of the Myśla river, located 1.5 km away, and that the planned investment will not have contact with the water which is SWB and GWB, one should conclude that the implementation of the investment will not worsen the current state of the water
and will not affect the achievement of the objectives set out by Water Framework Directive 2000/60/WE of 23 October 2000 establishing a framework for Community action in the field of water policy. In addition, the construction of the flood embankments in question does not involve intervention in water-dependent natural habitats, it will not result in the change of ground water and surface water level and will not change the conditions of the water flow and therefore the environmental conditions of fauna and flora species present in the riverbed.

Temporary haul roads for the needs of the investment are not planned because the materials will be transported on public roads. According to the preliminary location of the site facilities indicated in the report,

they will be located on the inner side of the flood embankment, i.e. on the side of buildings of Chlewice. In addition, one of the conditions of this decision indicates that it is prohibited to store waste and to locate site facilities in the areas of shallow ground water in well-permeable formations, peat-filled depressions, in the close vicinity of the water of the Myśla river, within natural habitats, habitats of plants and animals subject to protection in Natura 2000 areas and also the habitats of plants, animals and fungi subject to legal protection.
The impact on the ground and water environment will be short-term and will stop when the construction work is completed. At the stage of the implementation and later use of the investment the level of ground water in the adjacent areas will not change; the characteristic water levels in rivers and canals are not expected to change.

The operation stage will directly affect the ground and water environment. However, the permanent impact will concern the elimination of the flooding of the area of the village. During the flow of the great waters, filtration through the surface of the embankment in the direction of the protected area will take place which may result in the flooding of the lowest grounds in the area surrounded by the embankment, used as meadows and pasture. The construction of an intake well in the vicinity of the bridge on the Myśla river is planned, from where it will be possible to pump out water from the leaks under the embankments.

Due to the character of the investment and the type of the planned work, there will be impact on the natural environment, i.e. temporary elimination of the vegetation on the embankments, the emigration of some species of fauna caused noise, vibrations, exhaust gases and increased presence of people – however it should be considered temporary. Habitats of soil fauna in the investment area will also be eliminated in the construction areas due to the elimination of the soil cover. In addition, the investor was obliged to carry out the earth works and excavations in such a way so as not to kill animals that reached the excavations and enable the animals to leave

them.

The impact mentioned above will be short-term and spatially limited. It will in general not be significant and will not lead to the loss of biodiversity.

In addition, at the implementation stage of the investment waste will not be generated because no raw materials or semi-finished products will processed in the investment site. There also no plans to store, in the construction site, any waste related to the repair and maintenance of machines used for the construction work. Any repair of the machines and also the full service support will be provided by specialist companies authorised by the manufacturers (authorised service) or other outside companies. Waste generated during this type of work, e.g. damaged parts, filters, seals, empty lubricant containers, used oils will be collected by service companies – such companies being the owner of waste are obliged to observe the procedures in this respect, In addition the soil acquired as a result of the excavations, including peat, will be used to build and form the bodies of the embankments.

Domestic and sanitary sewage will be generated during the implementation of the investment. They will be stored in portable toilets. The generated sewage will transferred to a sewage treatment plant.
The operation stage of the investment does not involve emitting gas and dust pollution or the emission of noise into the air. It will also not involve the generation of waste and domestic and sanitary sewage. The use of the embankment will involve maintain in the proper
technical condition, *inter alia* by periodical mowing of the vegetation on the embankment with agricultural equipment or by grazing. Possible emissions related to use of the mowing equipment will have a local and periodical character and will not significantly affect the state of the environment. In addition during the implementation stage and later use technological waste will not be generated. Draining of rainwater will take place at the surface. The operation stage will also not involve the generation of waste as the use and maintenance of the embankment will mainly consist in its regular mowing.

Due to the character of the investment, the planned project is not an investment posing a risk of serious accidents.

The investment will carried outside water and mud areas.

The planned investment will not be carried out in coastal areas.

The planned investment is not located in mountainous or forest areas.

The investment will not be implemented within water intakes protection zones and protection zones of inland water reservoirs; the nearest Major Groundwater Reservoir Dębno no. 134 is located approx. 10 km away from the investment site and the effect of the investment of the area mentioned above is not expected.

The investment site is located:
- within the special bird protection zone PLB320003 “The valley of the Lower Odra river”
- in immediate vicinity of the Site of Community Interest PLH320037 “The Lower Odra river” and is partially located within its boundaries
- partially within the Landscape Park “The Mouth of the Warta river”

According to the submitted report and its appendices, the investment site covers arable grounds, pastures and ruderal communities located in the vicinity of the village of Chlewice. East and south of Chlewice, variant A of the embankment, selected for implementation is located along a dirt road dividing the pastures from the arable grounds, between the road from Chlewice to Namyśl and the valley of the Myśla river. The planned embankment is then located parallel to the Myśla river, along the edge of arable grounds and pastures located on this river. Variants B and C, rejected at the stage of variant analysis of the location of the embankment, were designated in a considerable distance from the buildings and were located on the meadows and rushes in the alluvial area between Chlewice and Porzecze and in the final section interfered with forests on dune sands in the vicinity of Porzecze. According to the report and its appendices, the nature survey of the investment site was carried out between November 2010 and September 2011.

The planned flood embankment will located Chlewice and therefore, within the investment site, one can identify several sections in which the presence of the following species of flora was found during the land surveys:
a) on pastures and arable grounds located outside the Mayśla river valley, on low-quality sandy soil, there are segetal communities represented by common chickweed *(Stellaria media),* shepherd's-purse *(Capsella bursa-pastoris*), common windgrass *(.Apera spica-venti),field pansy (Viola arvensis). On the pastures there are grasslands containing*
common bent (*Agrostis capillaris), orchard grass* (*Dactylis glomerata), red fescue {Festuca rubra) and also common yarrow* (*.Achillea millefolium), Plantago lanceolata, sheep's sorrel (Rumex acetosella), red clover (Trifolium pratense), white clover (Trifolium repens) and* mouse-ear hawkweed (*Hieracium pilosella). In addition the presence of ruderal and meadow species was found such as: common knotgrass (Polygonum aviculare), perennial rye-grass (Lolium perenne) and broadleaf plantain (Plantago major).*

b) *on the pastures whose edge is the embankment in question, located below, i.e. in the Myśla river valley, there is a community represented by meadow foxtail (Alopecurus pratensis), cock's-foot (Dactylis glomerata),* creeping cinquefoil (*Potentilla reptans), common silverweed (Potentilla anserina) and curly dock (Rumex crispus). In the area where the embankment is planned to located near the buildings and the bridge on the Myśla river, there are communities including reed canary grass (Phalaris arundinacea), bitter dock (Rumex obtusifolius) and pale persicaria (Polygonum lapathifolium);*
c) *along the farmsteads, beyond the road leading to the bridge on the Myśla river, ruderal plants are preent, characteristic for areas directly adjacent to buildings and represented by a number of species, such as Impatiens glandulifera, bitter dock (Rumex obtusifolius), Polygonum lapathifolium, common nettle (Urtica dioica), Dactylis glomerata and couch grass (Agropyron repens). In addition, along the buildings there are trees that interfere with the investment and are intended to cut: Populus Canadensis, willow (Salix Sp), elm {Ulmus Sp.) and elder (Sambucus nigra) shrubs.*

d) at the western edge of Chlewice, near the crossroads of dirt roads, the presence of ruderal plant (the former place for storing manure) was found, with the following species: *Artemisia vulgaris, Chenopodium album and Polygonum lapathifolium;*
e) *on the northern side the embankment is located at the boundary of the buildings, i.e. between farm buildings, gardens and pastures and arable grounds located outside the embankment which determines the presence of species-poor communities, mainly represented by couch grass (Agropyron repens).*
f) *on the eastern side the embankment will be located on low-quality sandy pastures in which the following species are present: Agrostis capillaries, Dactylis glomerata and Festuca rubra.*
The aim of designating the Area of Community Interest PLH320037 "The Odra river valley" is to protect natural habitats and wild fauna and flora included in the appendices to the Habitats Directive. The above-mentioned natural survey shows that in the investment site there are no flora species and natural habitats which are the objective and subject of protection of the above-mentioned Natura 2000 area. Therefore, i.e. in the connection with the presence of fields and pastures containing common and ruderal plants in the investment site, it is expected that the project in question will not affect the above-mentioned PLH320037 "Lower Odra river" area and will also not affect the integrity and coherence of Natura 2000 areas.

The investor chose to implement the most beneficial variant from the point of view of environmental protection because in the rejected variants B and C the embankment would cross rushes and meadows on an alluvial area located between Chlewice and Porzecze where one can come across –common in Poland but quite rare in Pomerania - *Mentha pulegium*, or *Pulicaria vulgaris which was included in the red list of Polish plants and fungi.*
The implementation of the investment in the selected variant A will also make it possible to locate the embankment outside the forest on dune sand, near which the following species are present: marsh spurge (*Euphorbia palustris), included in the Red List of Polish plants and fungi in the group of vulnerable species, and sand sedge (*Carex arenaria), a plant under partial species protection on the basis of the Regulation of the Minister of Environment of 5 January 2012 on the species protection of plants (Journal of Laws of 2012, No. 14, item 81). West of Chlewice, outside the location of the investment, habitats of the following species – included in the Red List of Polish plants and fungi, considered vulnerable – were found: *Allium angulosum* and *Lathyrus palustris.* However, in the investment site, the presence of flora subject to strict and partial protection was not found.
The construction of teh flood embankment in the selected A variant requires cutting trees and shrubs. However, the withdrawal from variant B made it possible to designate the location of the embankment outside the forest on dune sands which minimised the number of trees thta need to be cut. In connection with implementation of the project, due to the acquisition of the area for the construction of the embankment, and also the binding regulations prohibiting planting trees and shrubs on embankments as well as 3 m from the bottom of an embankment, trees

will cut according to the table below:

No.	km of the embankment	species of the tree	diameter	age	pcs..	area in m^2	remarks	plot
	eml							
1	0+0	14	0+008	European white elm	54	70 1		76
2	0+1	15	0+015	willow	67	55 1		112
3	0+1	16	0+025	willow	60	50 1		112
		17	0+080	willow	80	60 1	trunk 3m	112
4	0+1	19	0+305	poplar	66	40 1		147
		20	0+315	poplar	52	30 1		148
5	0+1	21	0+315	poplar	48	30 1		148
6	0+2	22.1	0+690	European white elm	24	32 1		103/3
7.1	0+4	22.2	0+690	European white elm	18	22 1		103/3
7.2	0+4	22.3	0+690	European white elm	16	20 1	cluster	103/3
8.1	0+4	22.4	0+690	European white elm	10	13 8		103/3
8.2	0+4	22.5	0+690	European white elm		80		103/3
9	0+6	23.1	0+705	European white elm	61	85 1		103/3
10	0+6	23.2	0+705	European white elm	20	23 1		103/3
11	1+0	23.3	0+705	European white elm	18	22 1		103/3
	eml	23.4	0+705	European white elm	16	20 1	cluster	103/3
12	0+0	23.5	0+705	European white elm	14	20 4		103/3
13	0+0	23.6	0+705	European white elm	10	15 2		103/3
		24.1	0+720	European white elm	20	23 1		103/3
		24.2	0+720	European white elm	18	22 2	cluster	103/3
		24.3	0+720	European white elm	16	20 1		103/3
		24.4	0+720	European white elm	10	15 7		103/3
		25	0+740	false acacia	70	110 1		50
		26	0+735	false acacia	18	30 1		103/3
		27	0+730	false acacia	34	55 1		50
		28	0+730	willow	80	60 1		50

By diameter		areas	Forests
	Up to 15	21	17
	16-25	12	62
	26-35	6	3
	36-45	1	
	46-55	6	
	56-65	2	
	66-75	5	

		76-85	2	
		Over 96	3	

Explanation of the abbreviations used in the table:

a. permit n. r.- permit not required

b. trunk 3 m - tree cut, a trunk with a height of 3.0 m remaining

c. Administration of the State Forests Trees under cultivation permit n. r. – removing trees in a forest area is not subject to the provisions of the Environment Protection Act (article 83.6.1)

The Investor, according to the report stipulations, decided to leave the oak with diameter of 92 cm, growing within the basis of the flood embankment and also the grand oak growing in the near vicinity, e.g. within the distance not greater than 3 m from the flood embankment. Trees and bushes planned to removal are not creating the natural habitations described in Appendix I to the Habitat Directive. Cut-out activities will be performed outside of the birds hatching period, e.g. from October 1 to March 1 and plant growing season, e.g. from March 1 to October 31. If the conditions mentioned above will not be fulfilled, because of necessity of human lives and health protection or superior public interest, all the works conducted within the birds hatching period should be started before the birds hatching period, to avoid the nests formation within the area colliding with the investment. Moreover, all the works should be performed under the environmental and ornithological supervision. At the same time, according to the report stipulations, because the necessity to cut-out of ca. 60 trees on the periphery of the villages and additional several dozen within the area of the State Forests, the Investor obliged himself to compensate the greenery decrease by rising the greenery revitalization costs in Chlewice town. Such activities will be performed with cooperation with Bolszekowice community and local public society, e.g.

the Village Head. During such activities, it is necessary to take into account the specificity of the trees flora, e.g. form among the domestic species large contribution of European white elms, smaller of white oaks and ashes and large contribution of invasive Robinia and ash-leaved maples.

During the natural inventory conducted on the area of the planned investment, the appearance of the following avifauna was discovered, e.g.: house sparrow *(Passer domesticus),* Eurasian tree sparrow *(Passer montanus),* tree creeper *(Certhia brachydactyla),* snow-bird *(Fringilla coelebs),* goldfinch*(Carduelis carduelis),* green finch *(Carduelis chloris),* ring-dove *(Columba palumbus),* and also during the hatching, the hatching places of winter wren *(Troglodytes troglodytes),* grey nightingale *(Luscinia luscinia),* blackbird *(Turdus merula),* river warbler *(Locustella fluviatilis),* blackcap *(Sylvia atricapilla),* common chiffchaff *(Phylloscopus collybita),* willow warbler *(Phylloscopus trochilus),* great tit *(Parus major),* blue tit *(Parus caeruleus),* Eurasian nuthatch *(Sitta europaea),* magpie *(Pica pica),* starling *(Sturnus vulgaris),* snowbird *(Fringilla coelebs),* greenfinch *(Carduelis chloris),* yellow-hammer *(Emberiza citrinella).*

The Investor obliged himself to conduct the realization works outside the birds hatching period, e.g. from October 1 to March 1, and in case, when the works will be started within the mentioned above period, all the works will be started before the March 1, to avoid birds hatching and foundation of nests within the investment realization site. The part of the inventoried species is under the strict species protection, e.g. sparrow, mazurka, tree creeper, goldfinch, green finch, wren, gray nightingale, blackbird, river warbler, chiffchaff, willow warbler, Eurasian nuthatch, green finch, yellow-hammer and under partial protection - magpie. According to the above, the proper permit must be obtained for any scaring activities, described in Art. 56 of the Act of 16 April 2004 about the nature protection (Journal of Laws No. 151, item 1220), of the Regional Director of Environmental protection and General Director of Environmental protection regarding intentional scaring and annoying of the avifauna, covered accordingly with partial and strict protection on the area impacted by the investment.

According to the information resulted from submitted report and its Annexes, within the investment realization site, the existence of the following birds species included in the Annex I to the Birds Directive was discovered: white stork *(Ciconia ciconia),* black stork *(Ciconia nigrd),* western marsh harrier *(Circus aeruginosus),* sea eagle *(Haliaetus albicilla),* spotted crake *(Porzana porzana),* corn crake *(Crex crex),* common crane *(Grus grus),* common tern *(Sterna hirundo),* little tern *(Sterna albifrons).* As described in the report, habitations of the

species mentioned above are localized outside of the investment realized in the variant A. The following habitations are localized closest to the planned flood embankment and buildings of the Chlewice village: spotted crake *(Porzana porzana)* and corn crake *(Crex crex),* e.g.. on the grasslands on the flood soils on south and west from the Chlewie village. Realization of the investment in the variant A, e.g. in the near vicinity of the buildings, is not colliding with the birds hatching areas and feeding grounds for the birds and animals species mentioned above being the subject of the Nature 2000 protection areas. In case, when the planned flood embankment will be arranged according to the rejected variant B, deterioration of the habitations will be possible for the birds connected with the alluvial meadows, such as: corn crake *(Crex crex)* and spotted crake *(Porzana porzana)* through the separation from the flood areas part of the wet grass-sedge meadows, being the habitation of the species mentioned above, and direct transformation of these habitations should be possible (covered up with the flood embankment). On the areas mentioned above, discovered also appearance of the following species: common grasshopper warbler *(Locustella naevìa),* river warbler *(Locustella fluviatilis),* Eurasian reed warbler *(Acrocephalus scirpaceus),* great reed warbler *(Acrocephalus arundinaceus),* and also meadow pipit *(Anthus pratensis),* western yellow wagtail *(Motacilla flava),* carrion crow *(Corvus corone).*

Moreover, near the Myśla river, the existence (feed) of castors *(Castor fiber)* was discovered - specie included in the Appendix II of the Habitat Directive. Places of existence of this mammalian are placed outside of the scope and and investment influence zone, and therefore the planned investment should not have any influences on the castors existence areas.

In the Myśla river valley, above the Chlewie village, the following amphibians were discovered: frog *(Bombina bombino),* common frog *(Rana temporaria),* moor frog *(Rana arvalis)* and pool frog *(Rana lessonae),* European green toad *(Bufo viridis),* and also spineless animals: lilypad whiteface *(Leucorrhinia caudalis)* and green snaketail *(Ophiogomphus cecilia)* - species included in the Appendix II of the habitat Directive, butterflies: blackleg tortoiseshell *(Nymphalis polychloros),* map *(Araschnia levano),* European hornet *(Vespa crabo)* and snails: grive snail *(Cepaea hortensis)* and burgundy snail *(Helix pomatia).* Because of the localization of the fauna species mentioned above is located outside of the investment realization and its influence zone, the planned investment should not have any impact on these animal species. The exceptions are existence places of burgundy snail, placed in the bushes and trees near the buildings of the Chlewice village. In case when the distraction of the burgundy snail habitations will be needed, the proper permit must be obtained, which is described in Art. 56 of the Act of 16 April 2004 about the nature protection (Journal of of Laws, No. 151, item 1220). At the same time, in case of allegation of other reproduction places for protected fauna species on the area of the investment realization, the investor should be obliged to stop all the works until all animals will leave such habitations. Moreover, the report shows, that during the earth works and excavations, killing of animals that are present in the excavation is strictly prohibited, and all measures should be taken to make possible that animals will leave such excavations.

Because of the existence of the endangered flora on the meadows located outside of the planned investment, e.g. field mint, wild pea, mouse garlic and reproduction and feeding habitations for corn crake and spotted crake, the investor was obliged to minimize earth works and machine traffic, and also storage of the materials and location of the back of the construction on the external side towards the planned flood embankment location.

Because all the works will be conducted under the environmental supervision outside of the vegetative and hatching period, and also because of the scope and character of the investment, significant and negative impact of the investment on the environment and on

object and target of the PLB320003 „Lower Odra River Valley" areas can not be expected, including coherency and integrity of Nature 2000 areas.
According to the stipulations included in Natural Inventory of West Pomerianian Province (BKP, Szczecin 2010), the west part of the flood embankment is localized within the borders of the Natural Landscape Area „Warta River Mouth". According to Art. 17 Section 1 point 5 of the Act of 16 April 2004 about nature protection (Journal of Laws of 2011, No. 224, item 1337), in the natural landscape area all the works that will permanently distort the relief are prohibited, except the works connected with the flood protection or construction, reconstruction, maintenance, repairs or overhauling of the water devices. According to the above, the prohibition mentioned above does not refer to the planned investment, as the flood protection construction.
The impact of the planned investment during the realization stage should absolutely refer to the liquidation of the fauna existing within the area provided for the construction of the flood embankment and cut-out of 140 trees. According to the informations described in the submitted documents, this fauna does not form any natural habitations that are subject of environmental protection. The planned investment will not have any negative impact on the environment, because the reconstruction of the flood embankments refers only to the existing facilities, and the planned cut-out of the trees will be performed outside of the birds hatching period, e.g. within the period from October 1 to march 1 and outside of the flora vegetation period, e.g. form march 1 to October 31. If the conditions mentioned above will not be fulfilled, because of necessity of human lives and health protection or superior public interest, all the works conducted within the birds hatching period should be started before the birds hatching period, to avoid the nests formation within the area colliding with the investment. Moreover, all the works should be performed under the environmental and ornithological supervision. In despite of the above, the impact on the existing on the objective area and in its vicinity species of avifauna will include periodic, local and relatively of short duration scaring, what is unavoidable. However, the such impact will take place only during realization stage of the investment. Further to the above, it can be expected that during realization of the investment animals will not use this area, as the existence area. Realization of the works and investment activities will cause the migration of some fauna species, because of the noise, vibrations and intensive presence of the people. However, such migration will be of temporary character and it can be predicted that it will take place into the adjacent areas. Additionally, part of the species that are characterized by synantropization and large adaptation abilities to change the natural conditions, will stay within the near vicinity of the investment realization place, and the majority of them will come back after completion of the construction stage.
According to the above, such impacts will have short-time character and will be limited, and will not have essential consequences. The investment will not have the substantial negative impact on the environment, it will not cause any irreversible negative changes in the ecosystems in place and in near vicinity of the elements of this investment. The undertaking will not cause any depletion in biodiversity and worsening the conditions of the natural environment. During the usage of the investment, there will be necessary to conduct periodical mowing of the flood embankments and removal of the fauna within the crown of the flood embankments through the periodical mowing using the agricultural equipment and pasturage. The usage of the investment provided that the flood embankments will be mowed regularly and maintained in good technical condition will not have the negative impact on the environment, including subjects and goals of the nature 2000 areas. Moreover, separation with the flood embankment with height of 1.5 m of the meadows surrounding the villages and forming existence and reproduction area for birds from the buildings areas will have positive effect for avifauna, because of the protection against residential areas (limited scaring activities because of tje traffic and noise). Realization of the objective undertaking, e.g. the

reconstruction of the flood embankments will absolutely have an impact on the natural environment. However, this the public-purpose investment, which realization has to provide the anti-flood protection, and its realization is necessary, because of the safety requirements.
The investment works after fulfilling by the investor all the provisions defined in the information card regarding the realization of the investment will not cause the disappearance of the habitations and species protected on this areas, and the method of the work realization will not also cause the direct mechanical devastation of the protected and threated species of the existing flora and fauna, is spite of they are existing in the near vicinity of the objective flood embankments.
In the assessment of this organ, and taking into consideration character of the investment, e.g.reconstruction of the existing flood embankments, including adaptation of their parameters to the obligatory norms and regulations and usage of the activities mitigating the impact of the investment on the environment, it can be declared that analyzed undertaking will not have significant and negative impact also on the coherency and integrity of the Nature 2000 areas, because of the fact that realization of the works will not cause any destructions, mitigation of the area and disconnection of the natural ecological connections of the Nature 2000 areas. The cumulative impact of the objective investment on the other planned investments is also not considered and it will not take place.
On the basis of the analysis performed in the report and explanations presented in the supplement to the investment, there is no need to perform any natural compensations.

The project shall not be implemented within the area where environment quality standards have been exceeded i.e. such as industrial sites with developing heavy industry,causing significant gas or heavy metals emission or within areas with exceeded quality standards for ground and surface water.
The area to be used for the investment., in accordance with the information included in the submitted report, does not collide with the assigned conservator's protection areas i.e. Zzne W- III or positions marked with the following symbols AZP:46-05/l - AZP:46-05/5. The investment site is also located outside of the area of historical monuments subject to conservator's protection.
The investment site is located in the neighbourhood of the village of Chlewice, i.e. I.e. In the distance of 20 - 160 m.
The implementation of the investment is located outside of the areas adjacent to the lakes.
The planned project is not located within the area of spas or area under spa protection.
Due to the nature of the investment and its location, the range of its impact shall be of local character, related only with the investment implementation stage and it shall limit to the plots covered by the scope of the investment. However, the operations and maintenance of the modernised embankments in proper condition is aimed at flood protection of neighbouring areas. The operation of the embankments i.e. Their maintenance in proper condition shall be related with periodic grass mowing with the use of agricultural machines or equipment. Possible grass mowing with the use of equipment shall not cause severe impact on the environment, including people's health and life. The impact shall be short term, periodic and local. However, the permanent impact shall concern elimination of flooding of the village area.
Due to the nature, scope and the fact that the impact of the investment will be local, no cross-border environmental impact is assumed.
The impact of the investment shall be limited mainly to the investment stage. The separation, by the embankment with the average height of 1.5 m, of meadows surrounding the villages and constituting the habitat and breeding place for birds, shall have a permanent positive effect on avifauna die to shielding and insulation of the areas from residential places (limited scaring by traffic and noise). The transformation of land surface by construction of embankment shall constitute interference in the landscape. However, the interference shall of

little significance due to the limited height of the embankment. Due to the nature of the planned works and resulting failure to apply any chemical, toxic
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inflammable and other hazardous substances is not assumed that directly at the construction site during works there could occur a severe threat for environment.
Due to the local scale and insignificant impacts of the investment on the environment, the project shall have no accumulated effect with other projects or human activity.
The operations of the embankments shall be limited to periodical mowing i.e. removal of bushes and possibly tress within the crown of the embankments on their slopes.
The impact of the investment on the environment shall occur mainly at the implementation stage due to gas, dust emission to the environment, nose emission to the environment, generation of waste and household waste waters. However, both at the construction stage and operational stage, the investment shall not create severe threat for natural environment due to the fact that equipment with law emission ratio shall be used for the investment implementation. Moreover, the emission of pollution to the air shall be limited by proper works organisation, proper operation of the equipment and maintaining it in good technical order. Moreover, the investor obliged themselves to avoid spilling fuel during transportation, operation of machines and equipment, equipping the site yard with sorbents for the oil-based substances and immediate removal of possible leakages of oil-based substances as well as managing the polluted spoil manner in accordance with binding regulations as well as to store lubricate and fuel substances within property prepared stations with relevant tightness level. The handling of the waste generated at the stage of project implementation shall be compliant with binding regulations. During the investment implementation household waste water shall be generated and handed over tot he waste water treatment plant. The operational stage of the investment shall not be related with emission of gas, dust or noise emission to the air. The operation shall not generate waste or shall be related with generation of household waste water or technological sewage. Rain water shall be discharged in the surface manner.
The impact on natural environment shall be minimised by many actions proposed by the investor, among others, trees and bushes feeling shall be performed outside of the breeding season for birds i.e. in the period from 1st October to 1st March and the vegetation period from 1st March to 31st October. Prior to works commencement the investor shall obtain a consent as mentioned in the Art. 56 of the Act of April 16, 2004 on nature protection (Journal of Laws No. 151, item 1220), of a competent local director for environment protection and the General Director for Environment Protection for intentional avifauna scaring and bothering concerning the avifauna under partial and strict protection within the areas of the projects impact range.
In relation with the need to conduct planned works, there shall appear during the implementation stage, impacts on particular environment components, including emission of dust and gas pollution to the air and emission of noise to the environment, or removal of vegetations growing in the place of the planned embankment.
The possible impact of the investment on the environment shall be of short term, periodic nature related with works implementation stage, and the said impact shall be reversible and shall cease after works completion. The permanent impact shall concern the creation of the structure in the landscape. However, the embankment due to its limited height shall not substantially disturb the landscape assets. Moreover, the embankment shall create flood protection for the village of Chlewice. At the same time there will be impact on environment which shall not be
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Significant or shall have influence on bio-variety of the said areas, or cause natural habitats and valuable fauna and flora species.
If the investor follows the conditions of investment implementation and indicated works concept as indicated by them, the impact shall be of short term and limited spatial nature. The impact of the investment on the environment shall be limited mainly to the investment stage.
There is no need to create an area of limited use for the said investment in accordance with the Art. 135 of the Act of April 27, 2001 Environment Protection Law (Journal Of Laws No. 25, item 150 as amended.).

No liquidation of the said flood embankments is assumed.
On the basis of the analysis of the documentation attached to the application, including the report on environment impact assessment and its annexes, the impact and potential threats related with the implementation and operation of the project, for the environment were specified . On the basis of the information included in the said documents, the conditions for project implementation and operation ensuring environment protection were specified. Therefore, it may be stated that the planned project shall not cause breaching of the binding norms for environment protection nor worsen the existing environment conditions provided that the technical and technological parameters for which the analysis attached to the application, was conducted, and while meeting a number of recommendations specified in the report, which were also taken into account in this decision. No need to conduct again the environment impact assessment at the stage of the construction permit decision.
The investor in the application of June 16, 2011 for issuing the decision on environmental conditions applied for immediate enforcement clause, saying that it is an important social interest related with human life and property protection of the resident of Chlewice village in relation with the maintained flood risk of Chlewice. However, in accordance with the decision of the Voivodeship Administrative Court in Krakow of February 22, 2011, ref. no: II SA/Kr 880/10, the decision has the feature of “enforceability” if due to its content it is fit for execution. It means that the attribute of “enforceability” of the decision is immanently connected with the content of the decision and not the widely understood consequences of the decision. In relation with the fact that the decision on environmental conditions by nature is not enforceable, hence the decision did not granted the immediate enforcement clause.

In consideration of the above, the above decision has been made.

This decision has been issued based on:
- Art. 104 of the Act of 14 June 1960 – the Code of Administrative Proceedings (Journal of Laws of 2000, No. o98, item 1071, as amended), stating that a public administrative body shall settle a case with a decision, unless the provisions of the Code provide for otherwise or unless the decision settle the merits of the case in full or end the proceedings in a given instance otherwise;
- Art. 71 clause 2 point 2 of the Act of 3 October 2008 on disclosing information on the environment and environmental protection, community contributions to the environmental protection and the environmental impact assessments (Journal of Laws No. 199, item 1227, as amended), stating that the decision on environmental constraints shall determine the environmental constraints of a project and that it shall be required for projects that may always potentially and significantly affect the environment;
- Art. 75 clause 1 point 1i of the Act referred to above, stating that the competent regional director for environmental protection shall be competent to issue a decision on the environmental constraints for projects consisting in the investments within the meaning of the Act of 8 July 2010 on specific principles for investments within the scope of flood embankment structures;
- Art. 82 of the Act of 3 October 2008 on disclosing information on the environment and environmental protection, community contributions to the environmental protection and the environmental impact assessments (Journal of Laws No. 199, item 1227, as amended), stating that the body issuing the decision on environmental constraints issued following the environmental impact assessment shall include the constraints for the planned investment;
- Art. 85 of the Act referred to above, stating that the decision on the environmental constraints shall be justified;
- § 3 clause 1 point 65 of the Ordinance of the Council of Ministers of 9 November 2010 on projects that may significantly affect the environment (Journal of Laws No. 213, item 1397), i.e. flood embankment structures with the exclusion of flood embankment modification comprising sealing the embankment body and foundations to limit the risk that the embankment mat get washed out or broken during a flood wave passing, as well as comprising the water balancing or drainage, deemed to consist in the water management

allowing their application for shipping operations.

Information

In consideration of the above, the decision has been issued as provided for in the sentence.

Each party shall have the right to file an appeal against this decision with the General Director for Environmental Protection in Warsaw through the Regional Director for Environmental Protection in Szczecin within 14 days from the delivery hereof.

Appendices:
Description of the planned investment pursuant to Art. 82 clause 3 of the Act of 3 October 2008 on disclosing information on the environment and environmental protection, community contributions to the environmental protection and the environmental impact assessments (Journal of Laws No. 199, item 1227, as amended).

Copy to:
1. Provincial Melioration and Water Facilities Board for Zachodnioporskie Province, Al. Papieża Jana Pawła II no. 42, 72-415 Szczecin,
2. Other parties to the proceedings pursuant to Art. 49 of the Act of 14 June 1960 – the Code of Administrative Proceedings (Journal of Laws No. 98, item 1071, as amended).

Description of the investment.
Appendix to the decision on environmental constraints dated February 2012, case ref. no.: WOOŚ-TŚ.4233.7.2011.DK.16, issued for the investment entitled: **"Flood embankment – Chlewice – Porzecze – Backwater embankment of Odra River at Myśla River".**

The said investment comprises the construction of a new water facility – the backwater flood embankment of Odra River at the estuary of Myśla River, aimed to protect the buildings within the Chlewice village as well as the adjacent agricultural land.
Two flood facilities are projected: i.e. two sections of the flood embankment (section M and section O) covering the Southern and Northern part of the Chlewice village. The embankment referred to in the preceding sentence shall meet at the cross-section of a district road: before the entrance to Chlewice (East) and behind the buildings in Chlewice (West, before the bridge on Myśla River). The M section of the embankment – South from Chlewice, is parallel to Myśla River along the village buildings, while the O section of the embankment – North from Chlewice, is almost parallel to the district road along the village buildings. The embankment to be construed meet on the district road, i.e. on the North-East edge of Chlewice buildings, on the existing road's ordinate, as well as at the South edge of the Chlewice buildings, linked with a portable flood bank.
The planned investment is located in Boleszkowice commune on the following land plots: 76, 112, 113, 131, 147, 148, 103/6, 24, 25/1, 25/2, 26/5, 26/6, 27/1, 103/3, 32, 33, 50, 64, 57/1, 66/3, 74/2, 75, 100, 99, 98/2, 96/2, 94, 90/1, 88, 85/1, 84/3, 84/2, 83, 82/2, 82/3, 81, 80/4, 80/1, and 79/1 within the cadastral district Chlewice as well as on the following land plots: 103/1 and 121/1 within the cadastral district Namyślin.
The embankment route will start from the first building of Chlewice from Namyślin, along Myśla River up to the bridge in the district road controlled by the Starost of Myślibórz (land plot no. 76 within the cadastral district Chlewice) and will further surround the buildings (to the West, and the to the North-West along the edge of the village) up to the commune road from Chlewice to Porzecze (land plot no. 50). The next section of the embankment will be on the East, facing the MV power supply line and the forest, closing the protected area with the district road entering Chlewice from Namyślin. The embankment of the South of the said

district road is 1008 m long, while on the North of the road it is 1328 m long.
The construction of the said facilities shall provide flood protection. Based on the Ordinance of the Minister of Environment of 20 April 2007 on the technical conditions to be met by hydraulic facilities and the location thereof (Journal of Laws of 2007, No. 86, item 579), the planned flood embankment was classified under class III hydraulic structures.
Pursuant to the applicable provisions of law and having in mind the height of possible flood level as well as the decline of the water level along 5 km long section from the water gauge to the facility cross-section, the top ordinate along the embankment length of approx. 12.70 m above the seal level as consequently the average embankment height of 1.5 m were adopted for class III structures. The remaining parameters of the embankment body include:
- the embankment top width of 3 m (to maintain the embankment accessibility for maintenance and repair purposes),
- the slope inclination of 1:3 (the same for upstream and downstream slope).

The following tasks are provided for under the flood protection project:
1. Geodetic restoration and preservation of the embankment route, restoration of the cross-sections and locations of the remaining facilities.
2. Mowing and cutting off the plants from the whole area under the embankment body foundations extended by 1.0 m on both sides.
3. Cutting off the colliding trees and bushes by grubbing-up and land cleaning following such grubbing-up.
4. Removal of the 20 cm deep fertile soil layer having previously grinded the sod from the surface to be covered with the embankment, as well as removal of the planted soils (including the grinded sod) behind the construction site.
5. Soil compaction pursuant to the requirements for class III facilities pursuant to the PN-B-12095:1997 standard, as well as construction of the filtration screen.
6. On the sections covered with turf in the surface layer: removal of the soil turf on a 2.0 m belt and filling the excavation with a sand soil from the deposits. Turf removal and re-use of the turf mixed with the removed fertile soil in the embankment cover layer.
7. Filling process, i.e. construction of the embankment and embankment passages.
8. Performance of the portable flood bank and the sump well with a pipeline.
9. Finishing and preservation works.

Before the commencement of the embankment construction works, the investment location will be prepared mainly by removing the colliding plants, including trees and bushes. Such trees and bushes will be removed by grubbing-up. The Investor provides for no works within the immediate vicinity of Myśla River or any interference in the natural vegetation on the River banks, modification of the water flow conditions and existence of live organisms. The materials and equipment will be transported and accessed with the existing route systems and on the embankment top.
Pursuant to the Act of 18 July 2001 – the Water Resources Law (Journal of Laws of 2005, No. 239, item 2019, as amended), planting trees and bushes on the embankment and within 3 m from the embankment base shall be prohibited. Therefore, the trees growing within the line of the embankment base as well as within 3 m from the designed embankment based will be cut off within the investment, this includes the total of 140 trees according to the report submitted.
To ensure the appropriate embankment tightness, a tight screen will be developed with the deep hole soil mixing technology, consisting in the destruction of the existing soil layer and mixing it with an adhesive. The designed screen will be developed in the middle of the embankment up to 4.5 ÷ 9.0 m deep from the designed screen top ordinate (approx. 12.00 m above the sea level), i.e. up to the 7.50 ÷ 3.00 ordinate. The axis of the screen wall shall line up with the embankment axis. The designed screen constituting a homogenous, continuous wall, shall be approx. 35 cm. thick. The screen top section will be located approx. 0.70 m below the designed embankment top. Hence in some section the soil fails to meet the requirements for soils to be used to contribute in the development of filtration screens, the filtration screens in such sections will be developed with the diaphragm wall technology with full soil exchange, i.e. by removing the soil from the excavation and filling it with a hardening suspension meeting the requirements for strength and water permeability. Having met the full

strength, the screen's strength will be at least 0.5 MPa while its filtration ratio will be k<=1 x 10^{-8} m/s. The required elevation of the filtration screen up to the control water level (namely 0.4 m below the embankment top) will be developed of a rigid, 2.5 mm thick and approx. 60 cm wide PEDH film, anchored in the fresh concrete mixture up to approx. 30 cm. the film bands will be laid with overlap and welded.
Location, depth and type of the screen:
1. M section of the embankment:
a) from km 0+004.2 to km 0+150 along approx. 145.8 m and approx. 8.0 m depth – soil-concrete mixture,
b) from km 0+150 to km 320 along approx. 170 m and approx. 8.0 m depth – diaphragm wall,
c) from km 0+320 to km 0+360 along approx. 40 m and approx. 8.0 m depth – soil-concrete mixture,
d) from km 0+360 to km 0+430 along approx. 70 m and approx. 7.0 m depth – soil-concrete mixture,
e) from km 0+430 to km 0+600 along approx. 170 m and approx. 8.0 m depth – soil-concrete mixture,
f) from km 0+600 to km 0+750 along approx. 150 m and approx. 8.0 m depth – diaphragm wall,
g) from km 0+750 to km 0+795 along approx. 45 m and approx. 7.0 m depth – diaphragm wall.
2. O section of the embankment:
a) from km 0+008.2 to km 0+090 along approx. 81.8 m and approx. 9.0 m depth – soil-concrete mixture,
b) from km 0+090 to km 0+370 along approx. 280 m and approx. 8.0 m depth – soil-concrete mixture,
c) from km 0+370 to km 0+500 along approx. 130 m and approx. 7.0 m depth – soil-concrete mixture,
d) from km 0+500 to km 1+325 along approx. 825 m and approx. 4.5 m depth – soil-concrete mixture.
The total length of the designed filtration screen to be developed with the deep hole mixing technology (i.e. soil-concrete mixture) shall be approx. 1742.6 m, while the screen developed with the diaphragm wall technology with full soil exchange shall be approx. 365 m long.

Above the top surface, in relation to the development of the embankment ground in the first layer, the soil shall be placed evenly on both sides of the film extending (elevating) the screen up to the required level, so that the foil anchored vertically in the concrete is not folded during compaction. The soil removed from the embankment foundations shall be developed in the outer layer of the embankment: on the embankment slopes and top.
The slope and top supports will be developed by top soiling with approx. 10 cm thick layer, and then seeded with grass.
18 embankment passages including 5 passages through commune roads allowing access to agricultural land are designed. The passages will be developed through the following roads: 131, 148, 33, 50, 64 within the cadastral district Chlewice as well as within the following land plots: 112, 99, 98/2, 96/2, 94, 90/1, 88, 84/3, 84/2, 83, 82/2, 81, 82/3, 79/1, 80/1, 75, 103/3, 32, 27/1, 26/6, 25/1, 25/2, 24, 103/6 within the cadastral district Chlewice as well as land plots 103/1 and 121/1 within the cadastral district Namyślin.
The embankment top on the passages will be supported with full road slabs, while the embankment slope meeting the top will be supported with multi-hole slabs within a belt of approx. 0.75 m, on a geotextile surface. The multi-hole slabs will be anchored with fascine screws (2 pcs per 1 slab). Additionally, the passages will be supported in the same way as the embankment (top soiling with a 10 cm layer of humus and seeding grass).
In the spot where the M and O sections of the embankment meet (within the district road profile) a screen made of ready-made elements will developed to ensure tightness, corrosion-resistance and mechanical strength. The screen will be composed of aluminum beams (stop logs) with sealing and locking clamp, load bearing support, foundation rail with anchoring slab and wall joints (ready for assembly). Foundation filtration will be prevented by an approx. 12.6 m long tight wall made of approx. 7.9 mm thick and 9.0 or 7.5 m long sheet piles. A portable closure anchored in the approx. 40 cm thick concrete abutment reinforced

with steel bars and welded to the sheet piles.
A well with the diameter of approx. 1.2 m and approx. 1.68 m high is designed at the slope of the district road at the connection point with the O section of the embankment. The sump well will be developed for possible pumping of filtrations from the protected area. The well will be made of prefabricated rings with a bottom later, i.e. two recesses with the diameter of 400 mm. the well will be covered with a lid, i.e. a cast iron locked entrance. An approx. 12 m long pipeline with the diameter of 400 mm supplying the filtrations from the opposite side of the road will be connected to the well.

The report submitted provides for the following parameters:
2. M section of the embankment:
- embankment length 1008 m,
- average height of the embankment 1.81 m,
- net embankment volume 15447 m^3,
- area of the slopes 11099 m^2,
- area of the embankment foundations 15641 m^2,
- embankment passages 8 locations,
- filtration screen developed with deep hole mixing technology 3336.4 m^2,
- filtration screed developed with diaphragm wall technology 2875 m^2.
2. O section of the embankment:
- embankment length 1328 m,
- average height of the embankment 1.54 m,
- net embankment volume 15521 m^3,
- area of the slopes 12611 m^2,
- area of the embankment foundations 13400 m^2,
- embankment passages 10 locations,
- filtration screen developed with deep hole mixing technology 7598.7 m^2.
3. M and O sections of the embankment:
- portable 5.2 m in diameter and 1.55 m high flood bank – 1 piece,
- a 1.2 m in diameter and 1.8 m high sump well – 1 piece,
- grubbing-up of the trees – approx. 140 pieces in total,
- removal of approx. 20 cm thick fertile soil layer within the area of approx. 33713 m^2 (i.e. approx. 6742.6 m^3),
- gross embankment volume (body, passages, settlement) – 33268 m^3,
- seeding the embankment slopes, top and passages with grass – 25127 m^2.
According to the information included in the report submitted, the investor analyzed various variant of the investment. He finally selected variant A for construction, constituting also the most advantageous option in terms of the environmental protection aspects. Due to the investment objective, i.e. flood protection of the village, the technical parameters of the facility class were not subject to variation. The investor rejected also the location of the investment near riverbeds of Myśla and Odra Rivers resulting in cutting off the flooded areas from the river areas, requiring riverbed development and with limited flood protective efficiency (water impoundment in between the embankment), as a solution deemed to be disadvantageous for the environment.
In consideration of the above three variants of the spatial development of the embankment have been considered:
- variant A (the shortest) assuming protection for the Chlewice village exclusively with an embankment surrounding the village as well as some parts of the agricultural land immediately adjacent to the village buildings. The remaining agricultural land (protected in the case of variants B and C) remain unprotected. The total embankment length is approx. 2336 m and the area protected with the embankment covers approx. 25 ha. In this case, the embankment crosses agricultural land; one fragment of the embankment goes along a forest edge due to the collision with the existing MV power supply line and due to its height. The embankment route crosses the hard-surfaces district road in Chlewice as well as 5 commune roads: a road between Chlewice and Porzecze villages as well as access roads to the agricultural land;
- variant B (the longest) assuming the embankment route from Chlewice to Porzecze through agricultural land and across the area that is 10.00 m high in average, the embankment to be

based on a forested elevation of the area behind the Porzecze village and surrounding the village in the North, ending on an elevated area in the village center. The total embankment length is approx. 3280 m, while the area protected covers approx. 100 ha. The embankment route in this option cuts a large section of arable land as well as fragments of grass and sedge meadows on the alluvial fragments of the Odra River valley North-West from Chlewice.
- variant C (in between), assuming the embankment route starting at the district road in front of the buildings in Chlewice and surrounding the village in the East and South, i.e. from the Myśla River up to the road behind the buildings 50 m from the bridge on Myśla River. The embankment route further goes on the West and North side of the village up to the gravel and slag road connecting Chlewice and Porzecze villages. Then the embankment goes on the earth road up to the embankment end based on the forested elevated dunes reaching Porzecze. In the Porzecze village the embankment connects the elevated dunes with the elevated forested area. The total embankment length is approx. 3125 m, while the area protected covers approx. 50 ha.

Variant A selected by the investor is the most advantageous for the environment due to the following:
- the investment route crosses mineral soils in the immediate vicinity of the villages, and therefore the habitats of protected plants and animals as well as environmental habitats will not be damaged or restricted. In particular the investment will not interfere with the floodplain areas covered with natural and semi-natural communities, constituting a significant reproduction places for the population of corncrake and spotted crake (variant B),
- surrounding the village with flood embankment will significantly limit the anthropogenic interference in the floodplain areas near the village (with noise, dispersing, predation by pet animals),
- surrounding the village with the flood embankment will determine the boundaries of safe development of buildings, practically eliminating the risk of dispersing housing and leisure facilities in the area, preventing also the risk of secondary dangers resulting from the landscape modification, extinction or degradation of natural and semi-natural alluvial habitats, extending the impact of the noise, dispersing, pressure by predators living with humans,
- habitats of the protected species of *Carex arenaria* as well as endangered species of *Euphorbia palustris* will not be destroyed (variant B),
- the investment developed according to variant C would not interfere with habitats of various species of fauna and flora, just like the variant A of the investment, however, it might restrict the breeding area of birds protected under the Nature 2000 program, just like variant B.
Development and use of the investment will not require the use of surface or ground water resources. Only typical materials, raw materials and fuels for that type of investment will be used in the development stages, mainly soil used for the embankment body, grass for seeding the embankment slopes, humus, fertilizers, cement and concrete mixtures with appropriate attestation.
Construction works will be performed with machinery. The investment provides for the use of liquid fuels used for fueling construction machinery.
The embankment use will not require any raw materials, water, fuels or other materials.
Gas, dust and noise emissions in the environment will only happen during the investment development. The sources of gas, dust and noise emission will be the machinery, equipment and devices used for construction of the embankment. Furthermore, temporary pollution increase may cause earth movements during the works. The emissions will be local, short-term and ending together with the end of the construction of the investment. However, to limit the emission of pollutants into the atmosphere, the investor undertakes to organize the works with due diligence, use the equipment properly and in good operational condition.

Regional Environmental
Protection Director
in Szczecin

Szczecin, on 05 April 2012

WOOŚ-TS.4233.15.2011.DK.18

Provincial Melioration and Water Facilities Board for Zachodnioporskie Province,
Al. Papieża Jana Pawła II no. 42, 72-415 Szczecin

C E R T I F I C A T E

Pursuant to Art. 217 § 1, Art. 217 § 2 point 2 of the Act of 14 June 1960 – the Code of Administrative Proceedings (Journal of Laws of 2000, No. 98, item 1071, as amended), having considered the application filed on 2 April 2012 by the Provincial Melioration and Water Facilities Board for Zachodnioporskie Province, I hereby certify that neither of the parties to the proceedings filed an appeal against the decision of 27 February 2012, case ref. no. WOOŚ-TŚ.4233.7.2011.DK.16 on the environmental constraints for the investment entitled: “Flood embankment – Chlewice – Porzecze – Backwater embankment of Odra River at Myśla River” within 14 days from the delivery thereof.