



**REGIONAL DIRECTOR FOR  
ENVIRONMENTAL  
PROTECTION IN GDAŃSK**

Gdańsk, November 29, 2023

RDOŚ-Gd-W00.420.40.2022.AM.32.  
*with acknowledgment of receipt*

**DECISION**

Pursuant to:

- Article 3a in conjunction with Article 14 section 1 of the Act of July 24, 2015 on the preparation and implementation of strategic projects in the field of transmission grids (consolidated text: Journal of Laws of 2023, item 1680, as amended), hereinafter referred to as the "PITG Act",
- Article 75 section 7 in conjunction with Article 71 section 2, Article 82 section 1 point 2 letters b), c) and Article 82 section 1 point 4 and 5 of the Act of October 3, 2008 on providing access to information about the environment and its protection, public participation in environmental protection and on environmental impact assessments (consolidated text: Journal of Laws of 2023, item 1094, as amended), hereinafter referred to as the "EIA Act",
- Article 104 of the Act of June 14, 1960 Code of Administrative Procedure (consolidated text: Journal of Laws of 2023, item 775, as amended), hereinafter referred to as the "CAP",
- Article 76 section 1 of the Act of December 17, 2020 on promoting electricity generation in offshore wind farms (consolidated text: Journal of Laws of 2023, item 1385, as amended), hereinafter referred to as the "POWF Act",
- § 3 section 1 point 7, § 3 section 1 point 54 letter b), § 3 section 1 point 62 and § 3 section 1 point 88 of the Ordinance of the Council of Ministers of September 10, 2019 on projects which may have significant environmental impact (Journal of Laws of 2019, item 1839, as amended) in conjunction with § 2 of the Ordinance of the Council of Ministers of August 10, 2023 amending the Ordinance on projects which may have significant environmental impact (Journal of Laws of 2023, item 1724), having considered the application filed by the Investor: MFW Bałtyk II sp. z o.o. and MFW Bałtyk III sp. z o.o., represented by Ms. Anna Marczak, ref. no. MFWBII-023/2022/AM; MFWBIII -030/2022/AM of May 30, 2022 (received on June 2, 2022), for issuing the decision on environmental conditions for the project named:

**"Grid connection infrastructure of the Bałtyk II OWF and Bałtyk III OWF offshore wind farms,"**

acting based on:

- environmental impact assessment report prepared by EKO-KONSULT Spółka z o.o., drafted in: Gdańsk, March 2023, hereinafter referred to as the "EIA report",
  - supplement to the environmental impact assessment report (received on July 3, 2023), ref. no. MFWBII-040/2023/AM, MFWBIII-048/2023/AM dated June 30, 2023,
  - decision of the Director of the National Water Management Authority Wody Polskie, Basin Area Management Authority in Koszalin, ref. no. SZ.ZZŚ.2.4360.175.2022.IW of July 11, 2022,
  - opinion of the Director of the National Water Management Authority Wody Polskie, Basin Area Management Authority in Koszalin, ref. no. SZ.ZZŚ.2.4360.175.2022.IW dated July 11, 2023, upheld in letter ref. no. SZ.ZZŚ.2.4901.83.2023.IW of April 25, 2023,
  - approval of the Director of the Maritime Office in Gdynia, ref. no. INZ.9202.44.2023.IK of May 15, 2023, upheld and detailed in letter ref. no. INZ.9202.105.2023.AC of July 21, 2023,
  - opinion of the State Border Sanitary Inspector in Gdynia, ref. no. SE.ZNS.80.4912.4.23 of May 8, 2023, upheld in letter ref. no. SE.ZNS.80.4912.14.23 of August 9, 2023,
  - opinion of the Commander of the Military Center for Preventive Medicine in Gdynia, ref. no. WOMPGdy-ZNiKS.5111.4.2023 of April 20, 2023, upheld in letter ref. no. WOMPGdy-ZNiKS.5111.4.2023 of July 12, 2023,
  - results of the procedure with public participation,
- having completed the environmental impact assessment for the project,

### I hereby decide that

- I. the following environmental conditions shall be specified for the implementation of the project named "Grid connection infrastructure of the Bałtyk II OWF and Bałtyk III OWF offshore wind farms".

#### 1) Type and location of the project.

The planned Project will cover two independent sets of power output equipment from the Bałtyk II OWF and Bałtyk III OWF with the infrastructure necessary for their implementation and operation, and optionally, a cable connection between the farms in question.

The planned Project will include the following elements:

- offshore part:
  - 2 submarine export cables at the section from the offshore substation in the Bałtyk II OWF area to the shore, with a length of approx. 60 km each,
  - 2 submarine export cables at the section from the offshore substation in the Bałtyk III OWF area to the shore, with a length of approx. 67 km each;
  - optionally, a cable connection between the Bałtyk II OWF and the Bałtyk III OWF with a length of approx. 30 km – corridor constituting a reserve for possible future laying of export cables and fiber optic cable;
  - crossing of all cable lines through the coastal zone using the HDD trenchless method between 236.5 and 237 km of the seashore;
- onshore part:
  - 4 underground cable lines at the section from the landfall to the planned onshore substations (OnS), with a length of approx. 8 km – 2 lines for each offshore wind farm;
  - 2 OnSs in the Pęplino area with a total area of 16 ha (8 ha each);
  - 2 high voltage underground cable lines from OnSs in the Pęplino area to the designated grid connection point in the Słupsk Wierzbicino NPS substation, with a length of approx. 6 km (one line for each substation).

Moreover, the Project will comprise the infrastructure necessary for the operation of the connections and offshore wind farms, i.e. fiber optic lines and the access road to the planned OnSs. Optionally, energy storage facilities may be built in the vicinity of the OnS in the next phase. The grid connection point of both farms to the NPS is the Słupsk Wierzbicino substation.

The planned grid connections from the Baltic II OWF and Baltic III OWF offshore wind farms are located within the exclusive economic zone, the adjacent offshore zone, the territorial sea and internal sea waters administered by the Maritime Office in Gdynia, in the infrastructure corridor designated in the Ordinance of the Council of Ministers of April 14, 2021 on the adoption of the spatial development plan for internal sea waters, the territorial sea and the exclusive economic zone at a scale of 1:200,000 – the so-called POM Plan. Moreover, an additional section between the areas of the Baltic II OWF and the Baltic III OWF is located in the exclusive economic zone and the adjacent offshore zone in the infrastructure corridor, in accordance with the POM Plan.

The length of the grid connection infrastructure (GCI) corridor in the offshore part is approx. 60 km (Bałtyk II OWF GCI) and approx. 67 km (Bałtyk III OWF GCI) plus an additional section between farm areas with a length of approx. 30 km. The maximum width of the corridor is approx. 1000 m, except for the southern part where the corridor narrows and then widens towards the coastline.

The onshore part of the sets of power output equipment will run in the areas of the Ustka and Słupsk municipalities (Słupsk district, Pomorskie voivodship), at a section of approx. 14 km, in a corridor with a width of approx. 60 m, with local widenings in the area of the landfall of the grid connection infrastructure and the planned locations of trenchless crossings under roads or other field obstructions.

#### **Offshore and onshore location of the planned Project**

1. **Table 1 – Offshore part** Table 1. **geographical coordinates determining the boundaries of the project** Grid connection from the **BALTYK II OWF** offshore wind farm

Point	Longitude (WGS84) [° ' "]	Latitude (WGS84) [° ' "]
1	16° 46' 37.71"	54° 34' 18.26"
2	16° 50' 42.69"	54° 37' 16.55"
3	16° 54' 47.93"	54° 51' 15.68"
4	16° 55' 19.40"	54° 53' 03.38"
5	16° 55' 33.72"	54° 53' 52.36"

6	16° 54' 53.92"	54° 58' 11.06"
7	16° 51' 10.79"	55° 01' 28.14"
8	16° 50' 26.36"	55° 02' 07.46"
9	16° 49' 58.84"	55° 05' 06.17"
10	16° 52' 02.38"	55° 06' 08.48"
11	16° 53' 51.03"	55° 05' 16.42"
12	16° 53' 13.82"	55° 04' 32.87"
13	16° 51' 55.53"	55° 03' 55.94"
14	16° 52' 10.10"	55° 01' 59.95"
15	16° 51' 49.78"	55° 02' 03.66"
16	16° 51' 35.53"	55° 02' 06.26"
17	16° 52' 37.93"	55° 01' 15.10"
18	16° 55' 49.46"	54° 58' 20.84"
19	16° 56' 30.13"	54° 53' 51.31"
20	16° 56' 19.31"	54° 53' 14.07"
21	16° 56' 08.91"	54° 52' 38.20"
22	16° 55' 50.33"	54° 51' 34.78"
23	16° 51' 50.95"	54° 37' 58.37"
24	16° 51' 12.00"	54° 37' 42.00"
25	16° 51' 10.03"	54° 36' 45.53"
26	16° 49' 54.99"	54° 35' 54.71"
27	16° 49' 56.12"	54° 35' 09.55"
Between points 1 and 27, the route along the boundary determined by the coastline referred to in Article 220 of the Act of July 20, 2017 – Water Law (Journal of Laws of 2023, item 1478, as amended)		

Table 2. Grid connection from the **BALTYK III OWF** offshore wind farm **together with a link** between the Bałtyk II OWF and Bałtyk III OWF farms:

Point ID	Longitude (WG584) [° ' "]	Latitude (WGS84) [° ' "]
1'	16° 46' 37.71"	54° 34' 18.26"
2'	16° 50' 42.69"	54° 37' 16.55"
3'	16° 54' 47.93"	54° 51' 15.68"
4'	16° 55' 19.40"	54° 53' 03.38"
5'	16° 56' 19.31"	54° 53' 14.07"
6'	17° 07' 32.02"	54° 55' 06.32"
7'	17° 13' 28.70"	54° 56' 05.43"
8'	17° 16' 57.43"	54° 56' 42.42"
9'	17° 15' 51.80"	54° 58' 50.80"
10'	17° 11' 28.64"	54° 58' 10.42"
11'	17° 10' 40.12"	54° 58' 00.56"
12'	17° 07' 31.85"	54° 58' 36.18"
13'	16° 52' 37.93"	55° 01' 15.10"
14'	16° 51' 10.79"	55° 01' 28.14"
15'	16° 50' 26.36"	55° 02' 07.46"
16'	16° 49' 58.84"	55° 05' 06.17"
17'	16° 52' 02.38"	55° 06' 08.48"
18'	16° 53' 51.03"	55° 05' 16.42"
19'	16° 53' 13.82"	55° 04' 32.87"
20'	16° 51' 55.53"	55° 03' 55.94"
21'	16° 52' 10.10"	55° 01' 59.95"
22'	16° 51' 49.78"	55° 02' 03.66"
23'	16° 51' 35.53"	55° 02' 06.26"
24'	17° 07' 49.15"	54° 59' 07.13"
25'	17° 10' 39.67"	54° 58' 34.43"
26'	17° 11' 14.79"	54° 58' 41.50"
27'	17° 15' 36.56"	54° 59' 21.89"

Point ID	Longitude (WG584) [° ' "]	Latitude (WGS84) [° ' "]
28'	17° 16' 20.04"	54° 59' 28.69"
29'	17° 19' 43.45"	55° 00' 20.72"
30'	17° 23' 38.22"	55° 00' 49.09"
31'	17° 24' 22.30"	54° 59' 03.73"
32'	17° 23' 33.54"	54° 57' 50.51"
33'	17° 22' 39.89"	54° 57' 32.87"
34'	17° 20' 19.87"	54° 56' 57.93"
35'	17° 18' 57.51"	54° 56' 52.93"
36'	17° 17' 50.31"	54° 56' 27.65"
37'	17° 17' 40.57"	54° 56' 47.38"
38'	17° 17' 55.01"	54° 56' 18.14"
39'	17° 13' 43.61"	54° 55' 34.40"
40'	17° 03' 14.58"	54° 53' 49.40"
41'	16° 56' 08.91"	54° 52' 38.20"
42'	16° 55' 50.33"	54° 51' 34.78"
43'	16° 51' 50.95"	54° 37' 58.37"
44'	16° 51' 12.00"	54° 37' 42.00"
45'	16° 51' 10.03"	54° 36' 45.53"
46'	16° 49' 54.99"	54° 35' 54.71"
47'	16° 49' 56.12"	54° 35' 09.55"
Between points 1 and 47, the route along the boundary determined by the coastline referred to in Article 220 of the Act of July 20, 2017 – Water Law (Journal of Laws of 2023, item 1478, as amended)		

Table 3 The offshore part of the project consists of **cadastral plots constituting internal sea waters**

Plot No.	Cadastral district	Municipality	District
394	Łędowno	Ustka	Słupsk
2858/1	Ustka	Ustka	Słupsk
2858/4	Ustka	Ustka	Słupsk

2. Table 4 **Onshore part – cadastral plots within the boundaries of the planned Project**

Plot No.	Cadastral district	Municipality	District		Plot No.	Cadastral district	Municipality	District
295/2	Bruskowo Leśnictwo	Słupsk	Słupsk		109/1	Bruskowo Małe	Słupsk	Słupsk
296	Bruskowo Leśnictwo	Słupsk	Słupsk		109/2	Bruskowo Małe	Słupsk	Słupsk
306/2	Bruskowo Leśnictwo	Słupsk	Słupsk		109/3	Bruskowo Małe	Słupsk	Słupsk
306/3	Bruskowo Leśnictwo	Słupsk	Słupsk		110/1	Bruskowo Małe	Słupsk	Słupsk
307/2	Bruskowo Leśnictwo	Słupsk	Słupsk		110/3	Bruskowo Małe	Słupsk	Słupsk
321	Bruskowo Leśnictwo	Słupsk	Słupsk		110/4	Bruskowo Małe	Słupsk	Słupsk
322	Bruskowo Leśnictwo	Słupsk	Słupsk		110/5	Bruskowo Małe	Słupsk	Słupsk
323/3	Bruskowo Leśnictwo	Słupsk	Słupsk		111/4	Bruskowo Małe	Słupsk	Słupsk
334	Bruskowo Leśnictwo	Słupsk	Słupsk		111/8	Bruskowo Małe	Słupsk	Słupsk
353	Bruskowo Leśnictwo	Słupsk	Słupsk		112/4	Bruskowo Małe	Słupsk	Słupsk
102/1	Bruskowo Małe	Słupsk	Słupsk		112/6	Bruskowo Małe	Słupsk	Słupsk
102/3	Bruskowo Małe	Słupsk	Słupsk		113/3	Bruskowo Małe	Słupsk	Słupsk
102/4	Bruskowo Małe	Słupsk	Słupsk		113/4	Bruskowo Małe	Słupsk	Słupsk
102/5	Bruskowo Małe	Słupsk	Słupsk		158/2	Bruskowo	Słupsk	Słupsk

102/6	Bruskowo Małe	Słupsk	Słupsk
102/7	Bruskowo Małe	Słupsk	Słupsk
103	Bruskowo Małe	Słupsk	Słupsk
104/1	Bruskowo Małe	Słupsk	Słupsk
104/2	Bruskowo Małe	Słupsk	Słupsk
104/3	Bruskowo Małe	Słupsk	Słupsk
105	Bruskowo Małe	Słupsk	Słupsk
106/1	Bruskowo Małe	Słupsk	Słupsk
106/2	Bruskowo Małe	Słupsk	Słupsk
107/2	Bruskowo Małe	Słupsk	Słupsk
107/3	Bruskowo Małe	Słupsk	Słupsk
108/4	Bruskowo Małe	Słupsk	Słupsk
108/6	Bruskowo Małe	Słupsk	Słupsk
147	Bruskowo Małe	Słupsk	Słupsk
148	Bruskowo Małe	Słupsk	Słupsk
97	Bruskowo Małe	Słupsk	Słupsk
99/3	Bruskowo Małe	Słupsk	Słupsk
99/4	Bruskowo Małe	Słupsk	Słupsk
100/1	Bruskowo Małe	Słupsk	Słupsk
100/2	Bruskowo Małe	Słupsk	Słupsk
101/1	Bruskowo Małe	Słupsk	Słupsk
101/2	Bruskowo Małe	Słupsk	Słupsk
108/3	Bruskowo Małe	Słupsk	Słupsk
108/5	Bruskowo Małe	Słupsk	Słupsk

	Wielkie		
158/3	Bruskowo Wielkie	Słupsk	Słupsk
163/3	Bruskowo Wielkie	Słupsk	Słupsk
163/4	Bruskowo Wielkie	Słupsk	Słupsk
164/19	Bruskowo Wielkie	Słupsk	Słupsk
273	Bruskowo Wielkie	Słupsk	Słupsk
274	Bruskowo Wielkie	Słupsk	Słupsk
275	Bruskowo Wielkie	Słupsk	Słupsk
160/4	Bruskowo Wielkie	Słupsk	Słupsk
165	Bruskowo Wielkie	Słupsk	Słupsk
166	Bruskowo Wielkie	Słupsk	Słupsk
276	Bruskowo Wielkie	Słupsk	Słupsk
234/1	Wielichowo	Słupsk	Słupsk
325	Wielichowo	Słupsk	Słupsk
14/1	Duninowo PGR	Ustka	Słupsk
24/7	Duninowo PGR	Ustka	Słupsk
24/8	Duninowo PGR	Ustka	Słupsk
25/2	Duninowo PGR	Ustka	Słupsk
25/3	Duninowo PGR	Ustka	Słupsk
25/7	Duninowo PGR	Ustka	Słupsk
28/6	Duninowo PGR	Ustka	Słupsk
29/4	Duninowo PGR	Ustka	Słupsk
32	Duninowo PGR	Ustka	Słupsk
33	Duninowo PGR	Ustka	Słupsk
6/14	Duninowo PGR	Ustka	Słupsk
6/21	Duninowo PGR	Ustka	Słupsk

Plot No.	Cadastral district	Municipality	District
6/3	Duninowo PGR	Ustka	Słupsk
7	Duninowo PGR	Ustka	Słupsk
77	Duninowo PGR	Ustka	Słupsk
78/10	Duninowo PGR	Ustka	Słupsk
79/10	Duninowo PGR	Ustka	Słupsk
79/7	Duninowo PGR	Ustka	Słupsk
79/8	Duninowo PGR	Ustka	Słupsk
80	Duninowo PGR	Ustka	Słupsk
79/5	Duninowo PGR	Ustka	Słupsk
79/9	Duninowo PGR	Ustka	Słupsk
113/2	Łędowno	Ustka	Słupsk
113/3	Łędowno	Ustka	Słupsk
114/3	Łędowno	Ustka	Słupsk
115/5	Łędowno	Ustka	Słupsk
117/5	Łędowno	Ustka	Słupsk
118/13	Łędowno	Ustka	Słupsk
118/14	Łędowno	Ustka	Słupsk
119/5	Łędowno	Ustka	Słupsk
119/6	Łędowno	Ustka	Słupsk
119/7	Łędowno	Ustka	Słupsk
155/1	Łędowno	Ustka	Słupsk
155/2	Łędowno	Ustka	Słupsk
156	Łędowno	Ustka	Słupsk
158	Łędowno	Ustka	Słupsk
160	Łędowno	Ustka	Słupsk
162/1	Łędowno	Ustka	Słupsk
162/2	Łędowno	Ustka	Słupsk
171	Łędowno	Ustka	Słupsk
173	Łędowno	Ustka	Słupsk
174	Łędowno	Ustka	Słupsk
176	Łędowno	Ustka	Słupsk
177	Łędowno	Ustka	Słupsk
178	Łędowno	Ustka	Słupsk
179	Łędowno	Ustka	Słupsk
180	Łędowno	Ustka	Słupsk
190	Łędowno	Ustka	Słupsk
206	Łędowno	Ustka	Słupsk
207	Łędowno	Ustka	Słupsk
208	Łędowno	Ustka	Słupsk
211/1	Łędowno	Ustka	Słupsk
226	Łędowno	Ustka	Słupsk
233	Łędowno	Ustka	Słupsk
237/3	Łędowno	Ustka	Słupsk
237/4	Łędowno	Ustka	Słupsk
248	Łędowno	Ustka	Słupsk
249	Łędowno	Ustka	Słupsk
26/1	Łędowno	Ustka	Słupsk
264	Łędowno	Ustka	Słupsk
297	Łędowno	Ustka	Słupsk
298/1	Łędowno	Ustka	Słupsk
303/1	Łędowno	Ustka	Słupsk
308/2	Łędowno	Ustka	Słupsk
315	Łędowno	Ustka	Słupsk
318	Łędowno	Ustka	Słupsk
321	Łędowno	Ustka	Słupsk
322	Łędowno	Ustka	Słupsk
323	Łędowno	Ustka	Słupsk
329	Łędowno	Ustka	Słupsk
332	Łędowno	Ustka	Słupsk
334	Łędowno	Ustka	Słupsk
336	Łędowno	Ustka	Słupsk
357/11	Łędowno	Ustka	Słupsk
357/24	Łędowno	Ustka	Słupsk
357/7	Łędowno	Ustka	Słupsk
357/8	Łędowno	Ustka	Słupsk
358/105	Łędowno	Ustka	Słupsk
358/131	Łędowno	Ustka	Słupsk
358/132	Łędowno	Ustka	Słupsk
358/86	Łędowno	Ustka	Słupsk
359	Łędowno	Ustka	Słupsk

Plot No.	Cadastral district	Municipality	District
89/5	Łędowno	Ustka	Słupsk
90/6	Łędowno	Ustka	Słupsk
90/7	Łędowno	Ustka	Słupsk
90/8	Łędowno	Ustka	Słupsk
237/1	Łędowno	Ustka	Słupsk
148/3	Peplino	Ustka	Słupsk
148/4	Peplino	Ustka	Słupsk
149/2	Peplino	Ustka	Słupsk
170	Peplino	Ustka	Słupsk
181	Peplino	Ustka	Słupsk
183/2	Peplino	Ustka	Słupsk
185/2	Peplino	Ustka	Słupsk
186	Peplino	Ustka	Słupsk
187	Peplino	Ustka	Słupsk
188	Peplino	Ustka	Słupsk
189	Peplino	Ustka	Słupsk
190	Peplino	Ustka	Słupsk
191	Peplino	Ustka	Słupsk
192	Peplino	Ustka	Słupsk
193	Peplino	Ustka	Słupsk
194	Peplino	Ustka	Słupsk
195	Peplino	Ustka	Słupsk
201/2	Peplino	Ustka	Słupsk
202/3	Peplino	Ustka	Słupsk
203/2	Peplino	Ustka	Słupsk
205/2	Peplino	Ustka	Słupsk
206/2	Peplino	Ustka	Słupsk
207/4	Peplino	Ustka	Słupsk
208/4	Peplino	Ustka	Słupsk
209/4	Peplino	Ustka	Słupsk
210/2	Peplino	Ustka	Słupsk
211/3	Peplino	Ustka	Słupsk
212/1	Peplino	Ustka	Słupsk
213/4	Peplino	Ustka	Słupsk
214/2	Peplino	Ustka	Słupsk
215/2	Peplino	Ustka	Słupsk
217/1	Peplino	Ustka	Słupsk
218/2	Peplino	Ustka	Słupsk
219/2	Peplino	Ustka	Słupsk
220/2	Peplino	Ustka	Słupsk
222/2	Peplino	Ustka	Słupsk
223/2	Peplino	Ustka	Słupsk
224/7	Peplino	Ustka	Słupsk
224/8	Peplino	Ustka	Słupsk
225	Peplino	Ustka	Słupsk
226	Peplino	Ustka	Słupsk
227	Peplino	Ustka	Słupsk
228	Peplino	Ustka	Słupsk
229	Peplino	Ustka	Słupsk
230	Peplino	Ustka	Słupsk
231	Peplino	Ustka	Słupsk
233	Peplino	Ustka	Słupsk
234	Peplino	Ustka	Słupsk
235	Peplino	Ustka	Słupsk
236/1	Peplino	Ustka	Słupsk
236/2	Peplino	Ustka	Słupsk
237	Peplino	Ustka	Słupsk
238	Peplino	Ustka	Słupsk
239	Peplino	Ustka	Słupsk
240/4	Peplino	Ustka	Słupsk
333	Peplino	Ustka	Słupsk
276/3	Peplino	Ustka	Słupsk
277	Peplino	Ustka	Słupsk
278	Peplino	Ustka	Słupsk
279	Peplino	Ustka	Słupsk
280	Peplino	Ustka	Słupsk
283/1	Peplino	Ustka	Słupsk
283/3	Peplino	Ustka	Słupsk
284	Peplino	Ustka	Słupsk
285/1	Peplino	Ustka	Słupsk

363	Lędowo	Ustka	Słupsk
64	Lędowo	Ustka	Słupsk
89/4	Lędowo	Ustka	Słupsk

285/2	Peplino	Ustka	Słupsk
292/10	Peplino	Ustka	Słupsk
292/11	Peplino	Ustka	Słupsk
292/12	Peplino	Ustka	Słupsk
292/14	Peplino	Ustka	Słupsk
292/15	Peplino	Ustka	Słupsk
292/18	Peplino	Ustka	Słupsk
292/2	Peplino	Ustka	Słupsk
292/3	Peplino	Ustka	Słupsk
292/8	Peplino	Ustka	Słupsk
292/9	Peplino	Ustka	Słupsk
295/4	Peplino	Ustka	Słupsk

**2) The specific conditions of using the area at the stage of construction and operation or usage of the project, with particular focus on the necessity of protecting outstanding natural values, natural resources and monuments, as well as on reducing nuisance to neighboring areas:**

1. Trees and shrubs in forest areas shall be cleared outside the bird nesting season, i.e. outside the period from March 1 to August 31 (confirmed by an ornithologist, as the breeding periods may start later or end sooner); individual trees and shrubs may be cleared all year round under the supervision of an ornithologist who will carry out field verification and confirm that there is no nesting.
2. As part of compensation measures, nesting boxes will need to be placed in adjacent woodland and scrub areas. The locations of boxes shall be consulted with the local Forest District and with the environmental supervision, that is an ornithologist. The boxes should be placed at such a height as to prevent penetration of boxes by people and predators; no branches should rest on the box which could help small mammals get inside.
3. Tree clearing in wooded areas with identified breeding habitats of bats should be carried out outside the breeding period and the peak of activity, i.e. outside the period from June 1 to September 15, and under environmental supervision by a chiropterologist. Trees may be cleared outside this period provided that chiropterological supervision is ensured and the trees are checked to confirm that they are not occupied by bats.
4. In order to compensate for lost habitats of bats by clearing trees, 10 Stratmann-type bat boxes (4 boxes for each 1 ha of forest) made of wood or sawdust concrete shall be installed in close proximity to each other, at a height of 4-5 m above the ground; ensure that the inlet to the box is unobstructed, not blocked by branches. The boxes shall be located both inside the forest and at its perimeter, in the immediate vicinity of the planned Project. The location of the boxes should be indicated by an expert chiropterologist.
5. Trees and bushes located within the impact range of the investment project and not intended for clearing shall be protected during the construction period against mechanical damage, e.g. by using drainage pipes/tires or straw mats to cover the trunk and boarding, the height of which, depending on the tree height, should be 1.5–2 m; if protected lichen species are present on the trees, the boarding should be replaced with nets surrounding the tree trunk so as not to damage the lichen sites. Any broken branches shall be immediately cut and damaged areas shall be protected with agents preventing the development of pathogens. Shrubs to be preserved shall be fenced and boarded up to a height determined individually for each shrub.
6. Breeding habitats of amphibians at km 43.6 and km 47.2–47.3 (in accordance with the project chainage presented in the EIA Report) shall be destroyed in the period from October 16 to February 28. If the timing is different, specimens of herpetofauna shall be trapped and relocated to replacement habitats. These activities shall be performed under the herpetological supervision.
7. In places where open trenches are carried out during migration and reproduction of amphibians and reptiles (from March 1 to October 15), temporary herpetological fencing shall be placed in places where open trenches are carried out; fencing should be made on both sides of the trench and access roads in the form of mesh fences with a mesh diameter of no more than 10 mm or plastic foil, 50 cm high, including an overhang. The effectiveness of the applied solutions should be monitored during construction by herpetological supervision; the construction site in the period from March 1 to October 15 should be controlled by herpetological supervision (tightness of fences, confirmation of migration periods, inspection of buckets and frequency of trapping of amphibians and reptiles).
8. At the stage of implementation of the project in the onshore part, permanent environmental supervision shall be implemented. The environmental supervision should include:

- a. training for employees to supervise the construction site;
  - b. protective indications during the performance of the works;
  - c. inspections of construction sites;
  - d. supervision over the implementation of the provisions of the decision on environmental conditions in the scope of compliance with the agreed conditions for the implementation of the investment project and supervision over the implementation under other permits resulting from the Nature Conservation Act, confirmed by entries in the construction log.
9. All construction works should be performed under environmental supervision in the scope of ichthyology, ornithology, herpetology and botany.
  10. The access routes to the planned onshore infrastructure shall be run using existing roads as the first choice.
  11. Onshore construction works, which are a source of noise, particularly in the vicinity of buildings, shall be carried out during daytime (from 6:00 a.m. to 10:00 p.m.), excluding periods of construction, where continuity of works is technologically required (e.g. casting of foundations, concrete works, works related to the trenchless crossing through the coastal zone) and excluding transport of oversize elements necessary for the implementation of the project.
  12. Site back-up facilities, material and equipment base, waste collection place shall be located taking into account protection of trees, shrubs and wetland areas (meadows, pastures, drainage ditches), i.e. outside these areas.
  13. During the execution of trenches for the investment project, attention shall be paid to drainage facilities (ditches, underground pipelines). In the event of damage or destruction, repairs are required. Repairs should be performed under the supervision of persons holding licenses in this field.
  14. The project should be implemented and operated in a manner that does not pose a threat to people and the environment.
  15. Equipment and machines should be regularly inspected and serviced, and their selection should have the least impact on the environment. This applies both to the number of devices used, as well as their noise impact or the quality of pollutants generated during operation. Activities in the project area should be controlled to minimize the entry of, among others, TBT into the Baltic Sea waters.
  16. Special care shall be taken when using any type of machinery on the construction site; check whether the machinery and other technical equipment used for construction meet the established environmental protection requirements allowing for their production or marketing; proper organization of works shall be carried out so that no soil contamination and pollution occurs as a result of disorder, inadequate protection of materials, machinery, equipment and vehicles against breakdowns.
  17. At the construction stage, the construction site (including vessels) and technical back-up facilities shall be provided with technical measures for containment, removal or neutralization of oil derivative pollutants or released waste; any leakages of oil derivative substances shall be immediately removed or neutralized; used sorbent shall be disposed of. In the event of soil contamination, the contaminated area shall be rehabilitated through a qualified company.
  18. Repair sites, construction machinery refueling sites and mechanical equipment operating sites shall be protected from possible contamination of the soil and water environment by hardening and sealing the area and equipping refueling points with sorbents of oil derivative substances.
  19. Appropriate level of treatment and disposal method of oily waters should be ensured.
  20. The site back-up facilities/construction site shall be located outside the service corridor, excluding a part of the service corridor being a part of the plot 237/3 cadastral district Lędowo, Ustka municipality, described as subunit 237a in the forest management plan and limited by the following coordinates:
 

54° 34'41.817"N	16° 48'24.510"E
54° 34'42.071"N	16° 48'24.410"E
54° 34'41.523"N	16° 48'20.612"E
54° 34'41.758"N	16° 48'20.531 "E

 within the boundaries of which it is allowed to carry out temporary construction works under the following conditions:
    - it is not allowed to locate any fixed structures in this area,
    - the possibility of using the indicated area for a temporary construction site does not constitute a consent to move the northern boundary of the planned trenches for cable couplings to the land-side boundary of the service corridor,
    - the indicated area shall be marked and fenced off in a manner that does not raise any



- doubts from the remaining part of the service corridor,
  - any necessary removal of shrubs shall be agreed upon with the Manager of the Ustka Coast Security Region. Clearing of trees in the areas of the service corridor outside the indicated area is not allowed,
  - equipment and machines used for the implementation of the project should be regularly inspected and serviced so as to pose the least possible hazard to the environment. This applies both to the number of devices used and the quality of pollutants generated during operation,
  - in case of failure of the equipment used for the performance of works, the contractor should have equipment and means that enable temporary containment of oil derivative leaks or technical fluids used for the performance of works against their spread in the waterside strip area,
  - materials used for the implementation of the investment project and stored in the indicated area should not pose any hazard to the environment. The place of their storage should be protected against generation of pollutants to the adjacent areas of the service corridor,
  - the relevant authorities and services shall be immediately informed about the occurrence of pollutants posing a hazard to the environment,
  - vehicle traffic related to the operation of the construction site may not take place outside the indicated area,
  - the investor is obliged to clear the area after completion of construction works, including to dispose of residues from previous facilities and to plant trees in the service corridor in order to restore the natural character of the service corridor.
21. Prior to performing works generating underwater noise or water turbidity, a soft-start procedure (gradual increase in noise intensity) shall be used, allowing fish, birds and mammals to escape from the area directly covered by the activities performed.
  22. In order to protect migratory diadromous fish, works (except for HDD drilling) related to burial/driving and operation of the dredger/refueler, including dumping of excavated material, shall be carried out outside the protection period for migration of Atlantic salmon, sea trout and river lamprey from September 15 to November 15 and from March 1 to April 15, in a 4-nautical mile wide coastal zone, except when ichthyological supervision finds that migration is delayed or completed earlier.
  23. It is required to have arrangements regarding possible collisions of the project in question with other designed or existing linear facilities.
  24. Burial of the submarine cable shall be carried out using the water jetting method, and where this is not possible, the method of mechanical cutting or ploughing shall be used.
  25. Within the Coastal Waters of Baltic Sea PLB990002 Natura 2000 site, it is recommended to increase the pace of works in months outside the migration and wintering period of birds.
  26. Offshore execution works and service works (not applicable to the removal of failures) shall be carried out outside the period of concentration of wintering and migrating populations of waterbirds, i.e. outside the period from November 1 to April 30.
  27. Within the Słupsk Bank PLC990001 Natura 2000 site, all works should be performed outside the migration and wintering periods of birds, which falls from October 1 to April 30, except when ornithological supervision finds that migration is delayed or completed earlier.
  28. During the performance of works after dusk, the sources of strong light on vessels used during the implementation of the project should be limited to the necessary level resulting from the applicable occupational safety regulations and standards.
  29. The sources of strong light directed upwards shall be reduced at night, in particular during bird migration periods, i.e. from March 1 to May 31 and from July 31 to November 15.
  30. Works related to burial/driving of cables and dredging works (excluding execution of a trenchless crossing) in the coastal zone up to 4 NM outside the spawning migration period, i.e. outside the period from September 15 to November 15 and from March 1 to April 15.
  31. Due to the planned HDD trenchless crossing no water shall be taken from Struga Łędowska and other watercourses/ditches entering the Modła Lake – natural habitat 3150. Trench drainage water or drilling fluid shall not be discharged to watercourses flowing into this lake. Water shall be taken from tankers or water supply pipelines.
  32. A plan for handling hazardous items shall be prepared, both in the context of offshore works (e.g. rules of performing works in the vicinity of potentially hazardous items) and in relation to possible removal or bypassing of places where such items are located.
  33. A coordination center should be provided for supervising the construction, operation, and decommissioning of the project named: "Grid connection infrastructure of the Bałtyk II OWF and

Bałyk III OWF offshore wind farms" (hereinafter referred to as: Bałyk II OWF and Bałyk III OWF GCI).

34. Information campaigns among residents and fishermen in the areas of implementation and impact of the project concerning the nature and scope of the project, and related nuisances and methods of their elimination should be conducted.
35. Information on the planned scope of works, traffic intensity, and the need to exercise caution in the area of the construction site should be made public.
36. Solutions allowing for maintaining the continuity of use of tourist and recreational areas should be applied.
37. Appropriate storage and transport conditions for the components of the Bałyk II OWF and Bałyk III OWF GCI should be ensured.
38. It is essential to check the seabed to precisely determine the location of facilities that could pose a hazard to other users of the maritime areas, and inform the competent services about the existing hazards and act according to applicable guidelines.
39. In order to limit the negative impact on protected species of vascular plants, they shall be relocated, including after prior obtaining the so-called derogation decision in relation to the following protected species of plants from the families: *Orchidaceae* (broad-leaved helleborine), *Caprifoliaceae* (common honeysuckle); Replanting should be performed to habitat-identical or habitat-like patches (under the supervision of a botanist), optimally between April 15 and May 31 (or any other period indicated by a botanist).

Table 5. Plant species to be metaplanted:

No.	TI corridor chainage	Geographical coordinates of the site locations (N latitude, E longitude)	Species	Type of impact	Mitigation measures/derogations
1	from 35.1 to 35.4, from 36.2 to 36.9	Location of species site patches: from 54°34'43.236"N, 16°48'23.616"E to 54°34'31.536"N, 16°48'27.583"E; from 54°34'8.26"N, 16°48'27.85"E to 54°33'48.373"N, 16°48'14.62"E	Common honeysuckle <i>Lonicera periclymenum</i>	Destruction of several sites of the species in connection with the construction site and the construction strip	Metaplantation subject to availability of replacement habitats
2	47,6	Single sites of the species and one species site patch occur in the vicinity of the PSE Wierzbicino substation; below please find the locations of single sites: 54°30'13.482"N, 16°53'30.893"E; 54°30'12.929"N, 16°53'30.346"E; 54°30'12.804"N, 16°53'29.352"E; 54°30'12.434"N, 16°53'29.349"E; and of the species site patch: from 54°30'12.684"N, 16°53'38.587"E to 54°30'12.357"N, 16°53'39.048"E	Broad-leaved helleborine <i>Epipactis helleborine</i>	The sites (up to approx. 30 specimens) will be destroyed as a result of execution of trenches and entry to the PSE Słupsk Wierzbicino substation	Metaplantations

### 3) Requirements regarding environmental protection necessary to be taken into account in the building permit design:

1. Width of the service corridor during laying of the cable for one submarine cable, where interference with the seabed will take place: approx. 5 m. A greater interference with the seabed is permitted in the section of the corridor where a submarine trench is planned in the area of the HDD exit up to the exit behind the last sandbar with a maximum length of 800 m in a strip of approximately 20 m per cable.
2. Burial depth of the submarine cable: up to 3 m. A greater trench depth of up to 4-5 m is permitted along the corridor section if the HDD trenchless crossing method used does not extend beyond the last sandbar.
3. A trenchless technology shall be used for the execution of underground power cables at the section from the offshore and onshore coupling southwards, at the onshore section within the service corridor.
4. In the area of offshore Natura 2000 sites, where there are large clusters of boulders, which cannot be bypassed by adjusting the cable route, alternative methods of cable protection, i.e. laying cables on the seabed and protection by covering them with rip-rap, shall be used.
5. In the Słupsk Bank PLC990001 Natura 2000 site, in the area of natural habitat 1110 – sandy

submarine banks, at the section of cable crossing through this habitat, alternative methods of cable protection, i.e. rip-rap, concrete mattresses, shall not be used.

6. A trenchless method shall be used for the purpose of landfall of cables, taking into account the need to provide the shore erosion protection system and the dynamic conditions of the coastal zone. Additionally, due to the coastline changing processes, the depth of their burial in the ground should be selected so that during the operation of the grid connection infrastructure, as a result of the impact of natural hydro -, litho- and, morphodynamic processes, the cable will not be exposed in an unplanned manner. The drilling process itself should not damage the root system of dune vegetation and the protective forest in the service corridor.
7. In the area of the planned OnSs, a (internal) rainwater drainage system equipped with oil derivative substance separators shall be designed.
8. Equip the OnSs with drainage systems.
9. Equip transformers with oil pans linked to a rainwater pre-treatment (oil separation) system; for batteries, use electrolyte containment trays or cuvettes in case of battery splitting; the substations shall be equipped with portable sets of sorbents and agents for the purpose of controlling spilled and leaking hazardous substances, which are adjusted to the size of the facility and the number of instruments containing such substances; gray and black water shall be discharged to sanitary sewers or a cesspit.
10. Large boulders and clusters of rocks where valuable phytobenthos communities were found along the route of the grid connection cables from the Bałtyk II OWF offshore wind farm in the following locations shall be bypassed:
  - 54°57'38.104"N, 16°55'41.638"E (IPZ\_p01 substation),
  - 54°58'7.392"N, 16°55'34.279"E (IPZ\_p06 substation),
  - 54°58'56.642"N, 16°55'1.805"E (IPZ\_p09 substation),If it is not possible to bypass the aforementioned areas, an alternative solution shall be consulted with a marine biology specialist and documented in the construction documentation.
40. Mussel communities (i.e. boulders and clusters of rocks) shall be bypassed:
  - along the route of the grid connection cables from the Bałtyk II OWF:
    - 55°5'30.988"N, 16°53'4.19"E - 54°56'51.845"N, 16°55'34.337"E (from the OffS to 11 BII),
    - 54°39'2.667"N, 16°51'41.412"E - 54°37'59.353"N, 16°51'20.792"E (from 26 to 28 km).
  - along the route of the grid connection cables from the Bałtyk III OWF:
    - 54°56'47.484"N, 17°17'56.025"E - 54°55'59.654"N, 17°14'31.537"E (0 BIII – 4 BIII),
    - 54°55'23.337"N, 17°10'55.829"E - 54°54'47.339"N, 17°7'20.013"E (8 BIII – 12 BIII),
    - 54°39'2.667"N, 16°51'41.412"E - 54°37'59.353"N, 16°51'20.792"E (26–28 km).
  - along the route of the connector cables between the Bałtyk II OWF and Bałtyk III OWF offshore wind farms:
    - 55°1'41.2"N, 16°52'29.051 "E - 55°1'20.439"N, 16°54'22.833"E (IP 29 working square),
    - 55°1'20.439"N, 16°54'22.833"E - 55°0'59.614"N, 16°56'16.579"E (IP 37 working square),
    - 55°0'59.614"N, 16°56'16.579"E - 55°0'38.769"N, 16°58'10.293"E (IP 46 working square)

If it is not possible to bypass the aforementioned places, an alternative solution shall be consulted with a marine biology specialist and documented in the construction documentation.

#### 4) Requirements to counter the effects of industrial failures:

The planned project does not meet the criteria referred to in the Ordinance of the Minister of Development of January 29, 2016 on types and volumes of hazardous substances present in the plant, decisive for the classification of a plant as a plant of increased or high risk of major industrial accident (*consolidated text: Journal of Laws of 2016, item 138*).

#### 5) Position regarding the cross-border environmental impact in relation to the projects with the performed procedure concerning cross-border environmental impact:

In connection with the type and location of the project, the possibility of the planned project impact on the areas located outside Poland is excluded both at the stage of execution and operation. Therefore, the local authority does not find any premises to carry out the cross-border environmental impact assessment procedure.

#### II. The following obligations shall be imposed on the Investor:

##### 1. Obligations of the applicant related to monitoring of the project environmental impact:

- a) Noise measurements at the boundary of noise-protected areas shall be performed, at the

nearest points of the noise-protected development located in each direction from the substation, in accordance with the reference methodology for noise measurements in the environment. Carry out the first series of measurements (background measurement) after the building permit has been granted, but before the start of construction works or after the project has been implemented with the equipment switched off. The second series of measurements shall be carried out up to three months after the construction and putting into operation of the designed facilities, under full operation conditions, at the same measurement points. These measurements should be made under conditions as identical as possible to those under which the first series of measurements were made. Control measurements should be performed for daytime and nighttime.

The results of the aforementioned noise measurements shall be submitted to the Regional Director for Environmental Protection in Gdańsk, the Pomorskie Voivodeship Inspector of Environmental Protection within three months from the measurements being taken.

- b) monitoring including inspections within the service corridor in forest areas (i.e. areas where afforestation cannot be reintroduced):
- for the expansion of invasive plant species, monitoring should be carried out once a year for three consecutive growing seasons. If an outbreak of invasive plants is identified (mainly *Conyza canadensis*, *Solidago canadensis*, *Solidago gigantea*, *Heracleum sosnowskyi*, *H. mantegazzianum*, *Impatiens glandulifera*, *Reynoutria japonica*, *Reynoutria sachalinensis*, *Acer negundo*, *Prunus serotina*, *Quercus rubra*, *Robinia pseudoacacia*), the plants and their seedlings shall be uprooted and then disposed of in accordance with the municipality's bio-waste regulations. (An outbreak of invasive plants is considered to be a grouping of more than 10 specimens in the area of 10 m<sup>2</sup>).
  - in terms of inhabitation of bat and bird nesting boxes in the first and third year after completion of the construction; the inspections shall be performed after the breeding period (with cleaning of the boxes).

The results of the aforementioned inspections shall be submitted to the Regional Director for Environmental Protection in Gdańsk within four months from their execution.

- III. It shall be pointed out that the environmental impact assessment of the project does not indicate the need to conduct an environmental impact assessment as part of the procedure for issuing a building permit.

The local authority does not deem it necessary to reassess the environmental impact of the project in question. The information contained in the environmental impact assessment report is sufficient to determine the conditions for the building permit design.

The above does not preclude a reassessment of the project environmental impact if:

- an authority planning to undertake the project submits an application to the authority competent to issue a decision (referred to in Article 72 section 1 point 1, 10, 14 and 18 of the EIA Act);
- the authority competent to issue the aforementioned decision determines that the application for the decision has been amended in relation to the requirements specified in the decision on environmental conditions.

- IV. Pursuant to Article 76 section 1 of the POWF Act and Article 25 section 1 of the PITG Act, this decision shall be immediately enforceable.

- V. The characteristics of the planned project are attached as Appendix No. 1 to this decision.

### STATEMENT OF GROUNDS

On June 2, 2022, the Regional Director for Environmental Protection in Gdańsk received the application of the Bałtyk II & Bałtyk III OWF Investor represented by Ms. Anna Marczak, ref. No.: MFWBII-023/2022/AM; MFWBIII-030/2022/AM of May 30, 2022 for issuing the decision on environmental conditions for the project named: "Grid connection infrastructure of the Bałtyk II OWF and Bałtyk III OWF offshore wind farms,"

Pursuant to Article 3 point 13 of the Act on promoting electricity generation in offshore wind farms, the above-mentioned project is a project that is classified as a separate set of equipment and structures attached to, as well as not permanently attached to the ground, including the bottom, used for power export from the offshore wind farm from the terminals of the high voltage side of the transformer or

transformers located in the substation or substations located in the Polish maritime areas to the ownership boundary location specified in the preliminary connection conditions or connection conditions.

Pursuant to Article 3a of the Act on preparation and implementation of strategic transmission grid projects, the provisions of the Act also apply to projects involving a set of power output equipment within the meaning of the Act on promoting electricity generation in offshore wind farms, but the investor for these projects is the generating entity.

Pursuant to Article 14 section 1 of the Act on preparation and implementation of strategic transmission grid projects, the decision on environmental conditions for the implementation of a strategic transmission grid project is issued in accordance with the provisions of the EIA Act, subject to the provisions of this Act.

The application for an environmental decision was appended with the following,

- 1) Project Information Sheet (6 copies + CD version), hereinafter referred to as the PIS;
- 2) a map, in paper and electronic form, in a scale ensuring legibility of the presented data, with marked planned area where the project will be implemented and marked planned area referred to in Article 74 section 3a second sentence, together with the indicated distance referred to in Article 74 section 3a point 1 (i.e. 100 m from the boundaries of the area where the project will be implemented);
- 3) a map presenting topographical and elevation data, prepared in a scale enabling detailed presentation of the route of the boundaries of the area covered by the application and covering the area referred to in section 3a, second sentence (i.e. the area on which the project will have an impact);
- 4) a power of attorney to represent the Company;
- 5) a proof of payment of stamp duty for issuance of the decision (PLN 205) and power of attorney.

Moreover, on June 14, 2022, the Applicant submitted a supplement to the above-mentioned application (letter ref. No.: MFWBIA-038/2022/AM; MFWBIII-045/2022/AM dated June 14, 2022) with information that the number of parties to the procedure exceeds 10.

Pursuant to Article 74 section 1 point 5 and section 1a of the EIA Act, it is not required to submit, together with the application for the issue of the decision on environmental conditions for the project in question, a map excerpt and extract of the local spatial development plan and extracts end excerpts from the land register. Moreover, the project in question does not belong to the projects for which it is required to attach to the application the cost-benefit analysis referred to in Article 10a section 1 of the Act of April 10, 1997 – Energy Law (Journal of Laws of 2022, item 1385, as amended).

The project covered by the application is classified pursuant to § 3 section 1 point 7, § 3 section 1 point 54 letter b), § 3 section 1 point 62 and § 3 section 1 point 88 of the Ordinance of the Council of Ministers of September 10, 2019 on projects which may have significant environmental impact in conjunction with § 2 of the Ordinance of the Council of Ministers of August 10, 2023 amending the Ordinance on projects which may have significant environmental impact (Journal of Laws of 2023, item 1724) as:

- *industrial development, including development with photovoltaic or storage systems, together with accompanying infrastructure, with the footprint area of at least: 1 ha in areas other than those mentioned in letter a* – as part of the planned project, two onshore substations with a maximum area of 16 ha will be constructed, outside of areas covered by forms of nature conservation;
- *roads with a hard surface with the total length of the project exceeding 1 km other than those mentioned in § 2 section 1 points 31 and 32, or bridge structures within a hard-paved road, excluding the alteration of roads or bridge structures used for servicing substations and located outside the areas covered by the forms of nature conservation referred to in Article 6 section 1 points 1–5, 8 and 9 of the Act of April 16, 2004 on nature conservation* – as part of the planned project, a paved access road to the onshore substation with a length exceeding 1 km will be constructed;
- *change of forest, other land with a dense area of at least 0.10 ha covered with forest vegetation – trees and shrubs and forest ground cover – or idle lands into agricultural land or deforestation aimed at changing the manner of use of the land with an area of at least 1 ha, other than those mentioned in letters a-d* – implementation of the planned Project in the onshore area will require permanent deforestation in an area of more than 1 ha;
- *overhead power lines with a rated voltage of not less than 110 kV other than those listed in § 2 section 1 point 6* – the construction of sections of the grid connection infrastructure between the onshore substation and the Słupsk Wierzbicino NPS station as 400 kV overhead power lines with a length of no more than 6 km should be assumed as an option;

Pursuant to Article 71 section 2 point 2 of the EIA Act, for planned “projects that may significantly impact the environment” it is required to obtain a decision on environmental conditions.

The project being the subject of the application is a project implemented in the offshore area of the Republic of Poland and onshore. Therefore, pursuant to the wording of Article 75 section 7 of the EIA Act, the authority competent to examine the case in question is the Regional Director for Environmental Protection in Gdańsk.

The parties were notified of the submission of the application and initiation of the procedure by letter ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.1 of June 15, 2022 and, taking into account the provisions of Article 74 section 3 of the EIA Act – by notice ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.3 of June 15, 2022.

On June 23, 2022, the Investor submitted to this authority an application for changing the scope of the application of May 30, 2022 by adding two cadastral plots to the list of plots within the limits of possible impact of the planned project, i.e. 39/5 and 39/7, cadastral district Duninowo PGR, Ustka municipality. The parties to the procedure were notified about the above by letter ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.6 of June 28, 2022 and, taking into account the provisions of Article 74 section 3 of the EIA Act – by notice ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.7. of June 15, 2022.

The information about the above application was included in the publicly available Ekoportal data list (<http://www.ekoportal.pl>) under number 207/2022, kept pursuant to Article 22 of the above-mentioned EIA Act.

Under the provision referred to above and Article 64 sections 1 and 1a of the EIA Act, the obligation to carry out the environmental impact assessment for the planned project that may significantly impact the environment is determined, by way of decision, by the authority competent for issuing decisions on environmental conditions:

- considering jointly the criteria specified in Article 63 section 1 of the EIA Act;
- having received the opinion of: 1) the State Sanitary Inspectorate authority referred to in Article 78, in the case of projects requiring decisions referred to in Article 72 section 1 points 1–3, 10–19 and 21–29 and the resolution referred to in Article 72 section 1b; 2) the director of the maritime office – when the project is implemented in the maritime area, 3) the authority competent for issuing an integrated permit pursuant to the Act of April 27, 2001 – Environmental Protection Law, if the planned project is classified as the plant referred to in Article 201 section 1 of this Act; 4) the authority competent for issuing a water assessment referred to in the provisions of the Act of July 20, 2017 – the Water Law.

Pursuant to Article 6 of the EIA Act, the requirement for approval or providing opinion does not apply if the authority in charge of the procedure is also the approving authority or authority providing the opinion. In this case, the authorities competent to give opinions/approvals are: Director of the National Water Management Authority Wody Polskie, Wody Polskie Basin Area Management Authority in Koszalin, Commander of the Military Center for Preventive Medicine in Gdynia, State Border Sanitary Inspector in Gdynia and Director of the Maritime Office in Gdynia.

In consequence of the foregoing, this authority, acting pursuant to Article 64 section 1 point 2, Article 6a and Article 78 section 1 and 4 of the EIA Act, by letter ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.2 of June 15, 2022, applied to the State Border Sanitary Inspector in Gdynia, Commander of the Military Center for Preventive Medicine in Gdynia, Director of the Maritime Office in Gdynia and Director of the National Water Management Authority Wody Polskie, Wody Polskie Basin Area Management Authority in Koszalin for issuing an opinion on the necessity to carry out an environmental impact assessment of the planned project.

The State Border Sanitary Inspector in Gdynia in letter ref. No. SE.ZNS.80.4910.15.22 of June 30, 2022 (received on July 5, 2022), expressed an opinion that, as quoted: *“the environmental impact assessment should be carried out and the report should be prepared within the statutory scope”*. The opinion of the State Border Sanitary Inspector was fully accepted when determining the scope of the Environmental Impact Assessment Report.

By letter No. 1231/22 dated June 30, 2022 (receipt date: fax – July 5, 2022 / original – July 14, 2022), the Commander of the Military Center for Preventive Medicine in Gdynia decided: *“to express the opinion that for the project named “Grid connection infrastructure of the Bałtyk II OWF and Bałtyk III OWF*

*offshore wind farms" it is necessary to prepare an environmental impact assessment report."* The opinion of the Commander of the Military Center for Preventive Medicine in Gdynia was taken into account when determining the scope of the Environmental Impact Assessment Report.

The Director of the Maritime Office in Gdynia, in the letter ref. No. INZ.8103.89.2022.MG of July 14, 2022 (received on July 20, 2022), decided: *"to assess the project covered by the application as the one requiring an environmental impact assessment"*. The opinion of the Director of Maritime Office in Gdynia was fully taken into account when determining the scope of the Environmental Impact Assessment Report.

The Director of the National Water Management Authority Wody Polskie, Wody Polskie Basin Area Management Authority in Koszalin, by letter No. SZ.ZZŚ.2.4360.175.2022.IWz of July 11, 2022 (received on July 19, 2022) expressed an opinion that, as quoted: *"I do not find it necessary to carry out an environmental impact assessment for the above-mentioned project on the condition of water resources and the risk of achieving environmental objectives."* Substantiating its position, the authority indicated that due to the scope and nature of the planned project, it is not necessary to carry out an environmental impact assessment for the project in question. The project does not violate the conditions specified in Ordinance No. 3/2014 of the Director of the Regional Water Management Authority in Szczecin of June 3, 2014 on determining the conditions of using waters of the Lower Oder and Przymorze Zachodnie water regions (Journal of Laws of Zach. Voivodeship 2014, item 2431; Journal of Laws Lub. Voivodeship 2014, item 1139; Journal of Laws Pom. Voivodeship of 2014, item 2237, as amended). Moreover, the implementation of the project, with reference to the achievement of environmental objectives, will not cause significant changes in the operation of the surface water body, and no permanent, negative, biological, hydromorphological and physical and chemical changes in the waters of this area will occur. At the same time, the manner of management and use of the drainage area will be maintained. During the implementation of the project, there will be essentially no change in the method of regulating water conditions in the area in question. The project will not have a negative impact on ecological potential and chemical composition of waters at the stage of project implementation and operation. At the same time, the authority found that the objective of the project did not infringe the objective of the Water Framework Directive. In view of the above, the Director of the National Water Management Authority Wody Polskie, Wody Polskie Basin Area Management Authority in Koszalin decided that the project in question, both during the construction and operation phases, will not have a negative impact on the water and soil environment, and thus there will be no degradation of underground and surface waters caused by any pollutants, as well as no deterioration of the ecological potential and chemical condition of the surface water body and the quantitative and chemical condition of the groundwater body. Moreover, finding that there is no need to carry out an environmental impact assessment of the project in question, the authority imposed on the Investor the conditions of the project implementation and the requirements necessary to be complied with in the environmental decision, that is:

1. Special care shall be taken when using any type of machinery on the construction site; check shall be carried out whether the machinery and other technical equipment used for construction meet the established environmental protection requirements allowing for their production or marketing; proper organization of works shall be carried out so that no soil contamination and pollution occurs as a result of disorder, inadequate protection of materials, machinery, equipment and vehicles against breakdowns.
2. The construction site should be equipped with means for neutralization of spilled oil derivative substances, and in case of emergency leakage of oil derivative substances, the leakage should be removed, e.g. using sorbents. Used sorbent should be disposed of. In the event of soil contamination, the contaminated area shall be rehabilitated through a qualified company. Equipment and devices should not be repaired and refueled at the construction site;
3. The construction site should be equipped with a portable sanitary facility in which gray and black water will be collected in a tight holding tank, regularly emptied by authorized entities;
4. Waste from the construction site should be collected in a separate place with a tight substrate and regularly handed over for disposal;
5. In case of drainage of construction trenches, a water permit should be obtained.
6. During the execution of trenches for the investment project, attention should be paid to drainage facilities (ditches, underground pipelines). In the event of damage or destruction, repairs are required. Repairs should be performed under the supervision of persons holding licenses in this field.

The Regional Director for Environmental Protection did not take into account the following conditions in

this decision due to the fact that the issues included therein are regulated in the following regulations:

- point 3 in the Ordinance of the Minister of Labor and Social Policy of September 26, 1997 on general provisions on occupational health and safety (*consolidated text: Journal of Laws of 2003, No. 169, item 1650, as amended*), governing, among others, the necessity to provide sanitary facilities and amenity rooms on the construction site;
- point 4 in the Waste Act (*consolidated text: Journal of Laws of 2023, item 1587, as amended*);
- point 5 in the Water Law, section IX (*consolidated text: Journal of Laws of 2023, item 1478, as amended*).

At the same time, this authority did not agree to the part of the condition in point 2 reading as follows: *"equipment and devices should not be repaired and refueled on the construction site"*. This requirement is unrealistic in practice. Refueling or minor repairs are carried out on each major construction site. For example, crawler excavators or soil compactors are not transported to a fuel station each time. The local authority allowed for the performance of the above activities, at the same time indicating that it is necessary to protect repair sites, places of refueling construction machines and places of use of mechanical equipment against possible contamination of the soil and water environment by hardening and sealing the ground and equipping refueling sites with sorbents of oil derivative substances.

Subject to the conditions indicated in Article 63 section 1 of the EIA Act, the Regional Director for Environmental Protection in Gdańsk, by decision ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.9. of August 4, 2022 (*Ekopoortal*, under number 383/2022) identified the need to carry out an environmental impact assessment for the project in question and determined the scope of the report in accordance with Article 66 of the EIA Act in accordance with the assessment of the impact on Natura 2000 sites pursuant to Article 6.3 of Council Directive 92/43/EEC in the scope of the impact of the project on the subjects of protection of Natura 2000 sites Coastal Waters of the Baltic Sea PLB990002, Słupsk Bank PLC990001, as well as species under legal protection, with particular emphasis on:

- a) description of the planned project, in particular: characteristics of the entire project and conditions of land use during the performance of works related to its implementation and operation; main characteristic features of technological processes, including cable burial method; expected types and amounts of pollutants resulting from the project implementation;
- b) analysis of the impact of the planned process options of the project on individual elements of the environment;
- c) environmental characteristics of the project site and the area within the range of its impact, including the species of plants, fungi and animals and their habitats, subject to protection pursuant to the provisions of the Act of April 16, 2004 on nature conservation (*consolidated text: Journal of Laws of 2022, item 916*), as well as species and habitats of species included in Annex I to the Directive of the EP and of the Council 2009/147/EC and habitats included in Annex I and species included in Annex II to the Habitats Directive 92/43/EEC, being the subject of protection in sites Słupsk Bank PLC990001 and Coastal Waters of the Baltic Sea PLB990002, including the presentation of issues in graphic and cartographic form;
- d) assessment of the direct and indirect impact of the project and technologies used therein on the condition and preservation of, at the stage of its implementation and operation:
  - species and their habitats and natural habitats that are subject of protection in Natura 2000 sites: Słupsk Bank PLC990001 and Coastal Waters of the Baltic Sea PLB990002;
  - natural habitats, habitats of species protected under the above-mentioned Act on nature conservation, present and likely to be present in the project site and in its vicinity;
- e) characteristics of project's direct and indirect environmental impact, in particular on the objectives of protection of the Natura 2000 sites: Słupsk Bank PLC990001 and Coastal Waters of the Baltic Sea PLB990002;
- f) characteristics of direct and indirect impact of the project on the objectives of protection of the Natura 2000 sites:
  - Przymorskie Błota PLH220024, located approx. 300 meters west of the planned project,
  - PLH320068 Lake Wicko and Modelskie Dunes, located approx. 1.4 km west of the planned project,
  - Słupia Valley PLH220052, located approx. 1.5 km east of the planned project;
- g) assessment of the impact of the project (at the stage of its implementation and operation) after the application of all possible measures mitigating the negative impact, including the assessment of significance of impacts for the individual subjects of protection in the above-mentioned Natura 2000 site, as well as the possibility to implement protective measures and achieve the protection objectives set out in the protection task plans for these areas;
- h) description of the hydrological system of the site covered by the project and within the range of



- the project impact, including an analysis of the impact of the project on this system;
- i) analysis of the cumulative impact of the project along with other planned and implemented projects of similar nature, located in the vicinity, on the individual elements of the environment including the following Natura 2000 sites: Słupsk Bank PLC990001 and Coastal Waters of the Baltic Sea PLB990002;
- j) presentation of a proposal for monitoring the impact of the planned project at the stage of its operation, in particular on the objectives and subjects of protection of the above-mentioned Natura 2000 sites and their integrity;
- k) assessment of the impact of the planned project on the Seashore Strip Protected Landscape Area to the west of Ustka;
- l) inventory of trees and bushes subject to clearance;
- m) analysis of the project impact on monuments, tourism and sailing;
- n) presentation of a detailed description of methods and materials used to prepare the environmental impact assessment report;
- o) analysis of the impact of the planned project on ecological corridors located within its impact range;
- p) analysis of possible social conflicts related to the project implementation – determining whether the option selected for implementation is optimal not only for the Investor, but also for the owners of neighboring real properties and determining how the Investor is going to counteract social conflicts in relation to the planned project.

Additionally, the environmental impact assessment included the scope indicated by the Director of the Maritime Office in Gdynia and the Commander of the Military Center for Preventive Medicine, including the following information:

- Director of the Maritime Office in Gdynia:
  - a) analysis of the impact of the construction and operation of the connection infrastructure for electricity from the Bałtyk II OWF and Bałtyk III OWF on the forms of nature conservation, within the range of the project impact;
  - b) analysis of the impact of the planned works on the coastal zone at the place of cable landfall, including the morphodynamic and lithodynamic processes taking place in the coastal zone and on the condition of the sea shore protection system;
  - c) analysis of the cumulative impact of the planned project along with other designed, implemented and existing projects in the vicinity of the project in question, inter alia, offshore wind farms, cables, other infrastructure;
  - d) presentation of procedure in the case of emergency situations during the project implementation.
- Commander of the Military Center for Preventive Medicine:
  - a) description of the planned project, in particular:
    - the characteristics of the entire project and the conditions of land use during the construction and operation or use stages;
    - defining the expected environmental impact of each option being analyzed, including the potential case of serious industrial accident as well as potential transborder environmental impact;
  - b) presentation of the issues in the cartographic form in the scale corresponding to the subject and specificity of the issues being analyzed in the report, also enabling a comprehensive presentation of the conducted analyses of the environmental impact of the project;
  - c) a non-technical summary of the information contained in the report, in relation to each report part;

The parties to the procedure were notified of the above with notice ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.10 of August 4, 2022.

Acting pursuant to Article 63 sections 5 and 6 of the EIA Act, the local authority, by virtue of decision ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.12 of September 27, 2022, suspended the procedure until the applicant submitted the environmental impact assessment report. The parties to the procedure were notified of the above with notice ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.13 of September 27, 2022.

On March 23, 2023, by letter ref. No. MFWBIA-019/2023/AM; MFWBIII-022/2023/AM of March 22, 2023, the Investor submitted to the case file the Environmental Impact Assessment Report for the project named: "Grid connection infrastructure of the Bałtyk II OWF and Bałtyk III OWF offshore wind farms"

The EIA report was entered in the publicly available Ekoportal list (<http://www.ekoport.pl>) under

the number 258/2023.

At the same time, in the above-mentioned letter, the Investor informed that it specified in more detail the route of the planned project in the onshore part, therefore the plots within project boundaries and within impact boundaries were changed.

Subsequently on March 29, 2023, in letter ref. No. MFWBIA-024/2023/AM; MFWBIII-028/2023/AM, following the above-mentioned letter of March 22, 2023, the Investor corrected Appendices No. 4 and 5 to the above-mentioned letter, constituting respectively:

- updated Appendix No. 4 to the application for the decision on environmental conditions – Plots within project boundaries and geographical coordinates of the offshore project;
- updated Appendix No. 5 to the application for the decision on environmental conditions – List of onshore cadastral plots within the project's impact boundaries – the area located at a distance of 100 m from the project boundaries.

In view of the above, by decision ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.16 of April 5, 2023, the local authority resumed the suspended procedure.

The parties to the procedure were notified of the above with notice ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.18 of April 5, 2023.

By letter ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.20 of May 30, 2023, the local authority requested the applicant to submit supplements and clarifications to the EIA report. By Letter ref. No.: MFWBIA-040/2023/AM, MFWBIII-048/2023/AM dated June 30, 2023, the Investor submitted relevant explanations.

Pursuant to Article 62 of the EIA Act, in the process of the project environmental impact assessment, the following shall be determined, analyzed and assessed:

- 1) the direct and indirect impact of the given project on:
  - a) environment and people, including human health and living conditions,
  - b) tangible property,
  - c) monuments,
  - ca) landscape, including cultural landscape,
  - d) interaction between the elements referred to in letters a-ca.
  - e) availability of mineral deposits,
- 1a) risk of serious failures as well as natural and construction disasters;
- 2) possibilities and methods of preventing and reducing the negative impact of the project on the environment,
- 3) required scope of monitoring.

As part of the assessment of the project's impact on the Natura 2000 site, the project's impact on Natura 2000 sites is determined, analyzed and assessed while taking into account also the project's cumulative impact with other implemented, executed or planned projects.

In accordance with the definition contained in Article 3 section 1 point 8 of the EIA Act, such an assessment includes in particular: 1) verification of the project environmental impact report, 2) obtaining opinions and agreements required by law, 3) ensuring the possibility of public participation in the procedure. The above activities are the main determinants for the submission of evidence in this case.

Pursuant to Article 77 section 1 points 2 and 4 of the EIA Act, the approval is not required unless the authorities have previously expressed their opinion that there is no need to carry out an environmental impact assessment. In view of the above, in letter ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.16 of April 5, 2023, the local authority requested the Director of Maritime Office in Gdynia, Commander of the Military Center For Preventive Medicine in Gdynia and the State Border Sanitary Inspector in Gdynia to agree on the conditions for the implementation of the project in question.

With the submitted EIA report, the Investor specified in more detail the route of the planned project in the onshore part, therefore the plots within project boundaries and within impact boundaries were changed. Moreover, the new water management plan in the Oder River basin area adopted by the Ordinance of the Minister of Infrastructure on November 16, 2022 entered into force on February 23, 2023 (Journal of Laws 2023.335). Therefore, in letter ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.17 dated April 5, 2023, the local authority applied to the Director of the National Water Management Authority Wody Polskie, Wody Polskie Basin Area Management Authority in Koszalin for an opinion/approval, including the current data.

Director of the National Water Management Authority Wody Polskie, Wody Polskie Basin Area Management Authority in Koszalin, in letter ref. No.: SZ.ZZŚ.2.4901.83.2023.IW of April 25, 2023 (date of receipt May 8, 2023) presented its position of July 11, 2022 and assessed the project impact on water bodies taking including the current data.

The parties to the procedure on initiating the suspended procedure and applying to the Director of Maritime Office in Gdynia, the Commander of the Military Center For Preventive Medicine in Gdynia and the State Border Sanitary Inspector in Gdynia, as well as to the Director of the National Water Management Authority Wody Polskie, Wody Polskie Basin Area Management Authority in Koszalin were notified by notice ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.18 of April 5, 2023.

The Commander of the Military Center for Preventive Medicine in Gdynia, by letter ref. No. WOMPGdy-ZNiKS.5111.4.2023 of April 20, 2023, gave a positive opinion on the conditions for project implementation and, by letter ref. No. WOMPGdy-ZNiKS.5111.4.2023 of July 12, 2023, maintained his position.

In letter ref. No. SE.ZNS.80.4912.4.23 of May 8, 2023, the State Border Sanitary Inspector in Gdynia reviewed the conditions for project implementation and in letter ref. No. SE.ZNS.80.4912.14.23 of August 9, 2023 maintained his position:

1. The equipment and infrastructure should be designed according to the rules of minimizing the environmental impact, in particular in terms of safety principles, emission of noise, electromagnetic radiation, emission of substances into the air and ensuring proper hygienic and health conditions and fire safety.
2. A coordination center should be provided for supervising the construction, operation, and decommissioning of the project named: "Construction of grid connection infrastructure of the Bałtyk II OWF and Bałtyk III OWF offshore wind farms" (hereinafter referred to as: Bałtyk II OWF and Bałtyk III OWF GCI).
3. The project should be implemented and operated in a manner that does not pose a threat to people and the environment.
4. Proper organization and construction schedules should be provided, suitable welfare facilities for employees with appropriate sanitary equipment should be organized.
5. Construction works should be performed using contractors with appropriate experience and licenses and trained personnel.
6. The equipment should be operated by persons with specialist training in the operation of the equipment, in the general and detailed OH&S rules.
7. Appropriate, regular training of vessel crews and employees and subcontractors participating in the construction and operation of the Bałtyk II OWF and Bałtyk III OWF GCI should be conducted.
8. Construction works should be performed in weather conditions allowing for precise completion of works in accordance with the adopted technology.
9. Sea operations plans and search and rescue plans, as well as evacuation and safety plans and strategies to prevent hazards, including construction disasters, should be developed.
10. Works should be performed using operational equipment, proper maintenance and service of construction machines and equipment should be ensured and proper technical condition of equipment should be maintained during operation time.
11. Measures should be taken reducing the project's environmental impact (in particular electromagnetic ones, vibrations and noise), especially in the vicinity of the existing and potential residential development.
12. Works that are a source of high noise should be carried out only during daytime, excluding periods of construction, where continuity of works is technologically required (casting of foundations, concrete works, sea – shore drilling works) and excluding transport of oversize components of the offshore substation's equipment.
13. Information campaigns among residents and fishermen in the areas of implementation and impact of the project concerning the nature and scope of the project, and related nuisances and methods of their elimination should be conducted.
14. Information on the planned scope of works, traffic intensity, and the need to exercise caution in the area of the construction site should be made public.
15. Safety zones should be designated and properly marked and areas temporarily or permanently out of service should be secured.
16. Solutions allowing for maintaining the continuity of use of tourist and recreational areas should be applied.

17. Appropriate storage and transport conditions for the components of the Bałtyk II OWF and Bałtyk III OWF GCI should be ensured.
18. Materials and equipment should be used that meet relevant standards and have certificates permitting their use in an appropriate type of environment.
19. Procedures should be developed for transferring and storing of substances that may be a source of pollution.
20. Separate collection of waste (including hazardous ones) should be ensured during construction and service works.
21. Vessels and power substation should be equipped with means for clean-up of spills of oil derivative substances or released waste.
22. Collection and disposal of sanitary sewage should be ensured in a manner adequate to the place of its generation.
23. Appropriate level of treatment and disposal method of oily waters should be ensured.
24. It is essential to check the seabed to precisely determine the location of facilities that could pose a hazard to other users of the maritime areas, and inform the competent services about the existing hazards and act according to applicable guidelines.
25. Process commissioning and handover for operation should be carried out after obtaining all required acceptances and permits.
26. Regular periodic inspections should be carried out regarding individual components of the Bałtyk II OWF and Bałtyk III OWF GCI and the infrastructure should be maintained in good technical condition.
27. Emergency response plans during project operation time should be developed.

The Regional Director for Environmental Protection did not take into account the following conditions in this decision due to the fact that the issues included therein are regulated in the following regulations:

- points 1, 11, 19 and 25 in the Act of April 27, 2001 – Environment Protection Law (*Journal of Laws of 2022, item 2556, as amended*);
- points 1, 25 and 27 in the Act of August 24, 1991 on fire protection (*Journal of Laws of 2022, item 2057, as amended*);
- points 1 and 27 in the Regulation of the Minister of Labor and Social Policy of September 26, 1997 on general occupational health and safety regulations (*consolidated text: Journal of Laws of 2003 No. 169, item 1650 as amended*);
- points 4, 5, 8, 9, 15, 25, and 26 of the Act of July 7, 1994. Construction Law (*consolidated text: Journal of Laws of 2023, 682, as amended*);
- point 6 in the Regulation of the Minister of Labor and Social Policy of September 26, 1997 on general occupational health and safety regulations (*consolidated text: Journal of Laws of 2003 No. 169, item 1650 as amended*);
- points 6 and 7 of the Labor Code of June 26, 1974 (*consolidated text: Journal of Laws of 2023, item 1465*) including secondary legislation;
- point 6 in the Act of the Minister of Energy of August 28, 2019 on occupational health and safety while operating power equipment (*consolidated text: Journal of Laws of 2021, item 1210*),
- point 6 in Chapter 7 of the Regulation of the Minister of Infrastructure of February 6, 2003 on occupational health and safety during construction works (*Journal of Laws No. 47, item 401*) concerning requirements for machines and other technical equipment used during construction works;
- point 7 in the Act of August 18, 2011 on maritime safety (*Journal of Laws of 2023, No. 1666, as amended*) including secondary legislation, including in the Regulation of the Minister of Maritime Economy and Inland Navigation of April 23, 2018 on the training and qualifications of marine crew members (*Journal of Laws of 2023, item 1383*);
- point 10 in Chapter 7 of the Regulation of the Minister of Infrastructure of February 6, 2003 on occupational health and safety during construction works (*Journal of Laws No. 47, item 401*) concerning requirements for machines and other technical equipment used during construction works;
- points 10, 25, 26 in the Act of December 21, 2000 on technical inspection (*consolidated text: Journal of Laws of 2023, item 1622*) and of the Regulation of the Council of Ministers of December 7, 2012 on types of technical equipment subject to technical inspection (*Journal of Laws of 2012, item 1468*);
- point 15 in the Regulation of the Minister of Infrastructure of February 6, 2003 on occupational health and safety during construction works (*Journal of Laws No. 47, item 401*);
- points 9 and 15 in the Act of August 18, 2011 on maritime safety (*Journal of Laws of 2023,*

- 1666, as amended) including secondary legislation;
- point 18 in Article 20 section 1 and section 4 of the Act of December 21, 2000 on technical inspection (*consolidated text: Journal of Laws of 2023, item 1622*),
- point 19 in the Act of August 19, 2011 on the transport of hazardous goods (*Journal of Laws of 2022, 2147, as amended*) and in the Regulation of the Minister of Health of August 25, 2015 on the method for marking places, pipelines, containers and tanks used for storing or containing hazardous substances or hazardous mixtures (*Journal of Laws of 2015, item 1368*);
- point 20 in the Waste Act of December 14, 2012 (*Journal of Laws of 2023, item 1587, as amended*);
- point 22 in the Regulation of the Minister of Labor and Social Policy of September 26, 1997 on general occupational health and safety provisions (*consolidated text: Journal of Laws of 2003, No. 169, item 1650, as amended*), regulating, among other things, the need to provide sanitary facilities and amenity rooms at the construction site;
- point 22 in Article 83 of the Act of July 20, 2017. Water Law (*Journal of Laws of 2023, item 1478, as amended*), regulating the wastewater handling procedure;
- point 22 of the International Convention for the Prevention of Pollution from Ships MARPOL. As of December 31, 2015 (*Journal of Laws of 2016, item 761, as amended*).

The Director of the Maritime Office in Gdynia, by virtue of decision ref. No.: INZ.9202.44.2023.IK of May 15, 2023, approved the terms and conditions of implementation of the project in question and in the letter, ref. No.: INZ.9202.105.2023.AC of July 21, 2023 sustained and clarified his position.

- I. General conditions for all stages of the project implementation:
  1. All works shall be carried out in accordance with the prohibitions and restrictions laid down in the Regulation of the Council of Ministers of April 14, 2021 on the adoption of a spatial development plan for internal sea waters, territorial sea and exclusive economic zone at a scale of 1:200000 (*Journal of Laws of 2021, item 935, as amended*), in particular in accordance with the Detailed Decisions constituting Appendix No. 2 to the Regulation or its amendment.
  2. Plans for safe construction and operation of the connection infrastructure should be studied for the duration of the project.
  3. Rescue plans and training for crews should be developed, including the rules for verification by regular exercises, in particular establishing the procedures for the use of own rescue units as well as external units.
  4. Equipment and machines should be regularly inspected and serviced, and their selection should have the least impact on the environment. This applies both to the number of devices used, as well as their noise impact or the quality of pollutants generated during operation. Activities in the project area should be controlled to minimize the entry of, among others, TBT into the Baltic Sea waters.
  5. The Investor should be obliged to prepare a plan for handling hazardous items, both in the context of offshore works (e.g. rules of performing works in the vicinity of potentially hazardous items) and in relation to possible removal or bypassing of places where such items are located.
- II. Detailed conditions:
  1. Requirements regarding environmental protection necessary to be taken into account in the building permit design:
    - a) It is necessary to use a trenchless method for the purpose of landfall of cables, taking into account the need to provide the shore erosion protection system and the dynamic conditions of the coastal zone. Additionally, due to the coastline changing processes, the depth of their burial in the ground should be selected so that during the operation of the grid connection infrastructure, as a result of the impact of natural hydro -, litho- and, morphodynamic processes, the cable will not be exposed in an unplanned manner. The drilling process itself should not damage the root system of dune vegetation and the protective forest in the service corridor.
    - b) Prior to the commencement of the planned works, the Investor shall submit the geocentric geodetic coordinates of the project to the Hydrographic Office of the Polish Navy in Gdynia (HOPN) and notify in advance of the commencement of works, the expected date of their completion and the scope of works in order to implement Article 25 of the Act on maritime areas. Moreover, immediately after completion of the construction works, the Investor should submit to the HOPN and the Maritime Office in Gdynia the as-built documentation containing geocentric geodetic coordinates of the route of power cables together with the depth of water above it (and the level of cavities in the seabed – if applicable to the embedded section) to update nautical charts and nautical publications.
    - c) The cable lines should be laid under the seabed surface, and if this is not possible due to environmental or technological reasons, other permanent protection measures should be used.

In the water region POM.45.E designated by the Regulation of the Council of Ministers of 14 April 2021 on the adoption of the spatial development plan for internal sea waters, the territorial sea and the exclusive economic zone at a scale of 1:200,000, other protection permanently allowing a safe use of anchored fixed nets should be used.

- d) In the water sub-region 27.505.C designated by the Regulation of the Council of Ministers of 14 April 2021 on the adoption of the spatial development plan for internal sea waters, the territorial sea and the exclusive economic zone at a scale of 1:200,000, cable lines should be laid at least 3 meters below the average depression in the bottom of sandbars, perpendicular to the coast if possible.

2. At the stage of project implementation:

- a. The site back-up facilities/construction site should be located outside the service corridor, excluding a part of the service corridor being a part of the plot 237/3 cadastral district Lędowo, Ustka municipality, described as subunit 237a in the forest management plan and limited by the following coordinates:

54° 34'41.817"N      16° 48'24.510"E

54° 34'42.071"N      16° 48'24.410"E

54° 34'41.523"N      16° 48'20.612"E

54° 34'41.758"N      16° 48'20.531"E

within the boundaries of which it is allowed to carry out temporary construction works under the following conditions:

- It is not allowed to locate any fixed structures in this area.
  - The possibility of using the indicated area for a temporary construction site does not constitute a consent to move the northern boundary of the planned trenches for cable couplings to the land-side boundary of the service corridor.
  - The indicated area shall be marked and fenced off in a manner that does not raise any doubts from the remaining part of the service corridor.
  - Any necessary removal of curvatures shall be agreed upon with the Manager of the Ustka Coast Security Region. Clearing of tress in the areas of the service corridor outside the indicated area is not allowed.
  - Equipment and machines used for the implementation of the project should be regularly inspected and serviced so as to pose the least possible hazard to the environment. This applies both to the number of devices used, as well as the quality of pollutants generated during operation.
  - In case of failure of the equipment used for the performance of works, the Contractor should have equipment and means that enable temporary containment of oil derivative leaks or technical fluids used for the performance of works against their spread in the waterside strip area.
  - Materials used for the implementation of the project and stored in the indicated area should not pose any hazard to the environment. The place of their storage should be protected against generation of pollutants to the adjacent areas of the service corridor.
  - The relevant authorities and services should be immediately informed about the occurrence of pollutants posing a hazard to the environment.
  - Vehicle traffic related to the operation of the construction site may not take place outside the indicated area.
  - The Investor is obliged to clear the area after completion of construction works, including to dispose of residues from previous facilities and planting trees in the service corridor in order to restore the natural character of the service corridor.
- b. Prior to performing works generating underwater noise or water turbidity, a soft-start procedure (gradual increase in noise intensity) should be used, allowing fish, birds and mammals to escape from the area directly covered by the activities performed.
- c. All construction works should be performed under environmental supervision in the scope of ichthyology, ornithology, and botany.
- d. Within the Słupsk Bank Natura 2000 site, all works should be performed outside the migration and wintering periods of birds, which falls from October 1 to April 30, except for the situation when the ornithological monitoring finds a delay in migration or its earlier completion.
- e. Within Coastal Waters of Baltic Sea Natural 2000 site, it is recommended to increase the pace of works in months outside the migration and wintering period of birds.
- f. During the performance of works after dusk, the sources of strong light on vessels used during the implementation of the project should be limited to the necessary level resulting from the applicable occupational safety regulations and standards.

- g. In order to protect migratory diadromous fish, works (except for HDD drilling) related to burial/driving and operation of the dredger/refueler, including dumping of excavated material, should be carried out outside the protection period for migration of Atlantic salmon, sea trout and river lamprey from September 15 to November 15 and from March 1 to April 15, in a 4-nautical mile wide coastal zone, except when ichthyological supervision finds that migration is delayed or completed earlier.
- h. It is required to have arrangements regarding possible collisions of the project in question with other designed or existing linear facilities.

The Regional Director for Environmental Protection in Gdańsk did not take into account the following conditions in this decision due to the fact that the issues included therein are regulated in the following regulations:

- points 1.1., 11.1.c, and 11.1.d in the *Regulation of the Council of Ministers of April 14, 2021 on the adoption of a spatial development plan for internal sea waters, the territorial sea and the exclusive economic zone at a scale of 1:200,000 (Journal of Laws of 2021, item 935, as amended)*, in particular with the Detailed Decisions constituting Appendix No. 2 to the Regulation or its amendment;
- point I.2 in Article 21 a section 1 of the Act of July 7, 1994. Construction Law (*consolidated text: Journal of Laws of 2023, item 682, as amended*);
- point I.2 of the Regulation of the Minister of Energy of August 28, 2019 on occupational health and safety while operating power equipment (*consolidated text: Journal of Laws of 2021, item 1210*);
- point I.3 in Article 113 b section 1 point 4 of the Act of August 18, 2011 on maritime safety (*consolidated text: Journal of Laws of 2023, 1666, as amended*);
- point II.1.b in the Act on maritime areas (Act of March 21, 1991 on maritime areas of the Republic of Poland and maritime administration – *consolidated text: Journal of Laws of 2023, item 960, as amended*) and maritime safety (Act of August 18, 2011 on maritime safety – (*consolidated text: Journal of Laws of 2023, item 1666, as amended*)).

Pursuant to Article 33 section 1 points 1, 3, 4, 5, 6, 7, and 8 of the EIA Act, before issuing and amending decisions requiring public participation, the authority competent to issue the decision shall, without undue delay, make public information on: commencing the environmental impact assessment of the project, the subject of the decision to be issued in the case, the authority competent to issue the decision and the authorities competent to issue the opinion and make arrangements, the possibilities of becoming familiar with the necessary documentation of the case and the place where it is available for review, the possibility of submitting comments and applications, the manner and place of submitting comments and applications, indicating at the same time a 30-day deadline for their submission, the authority competent to consider comments and applications.

Pursuant to Article 79 section 1 of the EIA Act, prior to issuing the decision on environmental conditions, the authority competent to issue this decision ensures the possibility for the public to participate in the procedure under which the environmental impact assessment is to be conducted.

In view of the above provisions, the Regional Director for Environmental Protection in Gdańsk, by means of announcement ref. No. RDOŚ-Gd-W00.420.40.2022.AM.26 of August 09, 2023, published the information referred to in Article 33 section 1 points 1, 3, 4, 5, 6, 7, and 8 of the EIA Act, including, i.a., information on the commencement of the environmental impact assessment and on the possibility of becoming familiar with the necessary documentation of the case (including the submitted EIA report and its appendices, supplements to the application and explanations of the Investor) by all the parties concerned at the registered office of the authority or on the website indicated within 30 days – from August 17, 2023 to September 16, 2023.

The above-mentioned announcement was published on the website of the authority ([www.rdos.gdansk.gov.pl](http://www.rdos.gdansk.gov.pl)) and on the notice board in the registered office of the authority, as well as at the request of the authority in the Office of the Municipality of Słupsk and the Office of the Municipality of Ustka.

On August 28, 2023, the local Authority receiver letter form Marbet Will Sp. z o. o. requesting that the following conditions be imposed on the applicant for the decision on environmental conditions:

at the design, execution and production phases, technologies and solutions that do not cause any water consumption shall be applied, including by acquiring components with parameters equivalent to concrete produced without the use of water, and in their absence, technologies minimizing water consumption shall be applied,

- at the design, execution and production phases, technologies and solutions using waste in more

than half of the composition shall be applied, including by acquiring components with parameters equivalent to concrete produced in more than half of the waste, and in the absence thereof, technology minimizing the accumulation of natural aggregates and raw materials shall be applied;

- at the design, construction and production phase, use waste, recycled and ecological materials, including through the acquisition of materials that meet the requirements of the so-called circular economy, i.e. production with the use of recycled aggregates and waste and characterized by the possibility of reuse,
- at the design, execution and production phases, technologies and solutions using waste in more than half of the composition shall be applied, including by acquiring components with parameters equivalent to concrete produced in more than half of the waste, and in the absence thereof, technology minimizing the accumulation of natural aggregates and raw materials shall be applied,
- during the implementation phase, technologies that do not cause any water consumption should be used, and if this is not possible, water for on-site concrete batching plants should be supplied from the existing groundwater intakes.

The local authority submitted the comments made to the Investor (letter ref. No.: RDOŚ-Gd – WOO.420.40.2022.AM.28 of August 30, 2023), with a request to respond to the above-mentioned issues. Having analyzed the reply submitted by the Investor on September 20, 2023 (letter ref. No.: MFWBII-051/2023/EM MFWBIII-058/2023/EM of September 18, 2023) and the documentation collected earlier, including the EIA report, the local authority states that the issues raised in the above-mentioned letter were discussed in detail in the EIA report. According to the EIA report, the implementation of the project will involve temporary transformation and occupation of the site. The construction of the project will have a moderate impact on changes in the ground surface. Referring to the above suggestions indicated by Marbet Wil Sp. z o. o., this authority indicates that the EIA report presents estimated quantities and types of raw materials, materials, fuel and water, which are necessary for the construction of the planned project.

According to the attached documentation, during construction works, water will be used, among others, for production of drilling fluid, which is one of the key elements in HDD directional drilling technology. The Investor anticipates that during the performance of the pilot drilling, bentonite mud will be injected into the borehole. As it follows from observations of the construction industry market, trenchless crossings are mostly made based on bentonite muds that stabilize the borehole walls, reduce the friction coefficient, cool down the drilling tools and enable the transport of excavated material from the borehole. In this respect, it is currently not possible to use solutions that do not cause any water consumption. Moreover, the construction stage also includes water consumption for maintenance and sanitary purposes. In this respect, it is not possible to perform construction works that will not cause water consumption.

The submitted documentation indicates that water for the needs of construction works will not be taken from the Łędowska Struga River, the Modła Lake and smaller watercourses and ditches entering the Modła Lake, located in the area of the project corridor. For the needs of construction works, no new underground water intakes will be executed either. Water will be supplied from existing sources through third parties.

In the decision on environmental conditions, the local authority does not impose the use of specific products and technologies, giving the possibility of free operation on market principles. However, construction materials with appropriate certificates are required, which will not have a significant negative impact on the environment. This includes, inter alia, the possibility of using materials produced with the use of waste. The reuse and recycling of products reduces the use of natural resources, the degradation of the environment, habitats and helps to reduce the loss of biodiversity. Additionally, in letter of September 18, 2023, the Investor assured that it had taken into account the possibility of using such products at the design stage.

The parties to the procedure were informed, pursuant to Article 10 of the Code of Administrative Procedure, that the evidence gathering was completed, the case files are available for review and the parties could provide its comments on the gathered evidence and materials by letter ref. No. RDOŚ-Gd-WOOO.420.40.2022.AM.29 and in announcement ref. No. RDOŚ-Gd-WOO.420.40.2022.AM.30 of October 09, 2023. The above-mentioned announcement was published on the website of the authority ([www.rdos.gdansk.gov.pl](http://www.rdos.gdansk.gov.pl)) and on the notice board in the registered office of the authority, as well as at the request of the authority in the Office of the Municipality of Słupsk and the Office of the Municipality of Ustka.



When assessing all the evidence gathered in this case, the Regional Director for Environmental Protection in Gdańsk determined as follows:

The planned Project will cover two independent sets of power output equipment from the Bałtyk II OWF and Bałtyk III OWF with the infrastructure necessary for their implementation and operation, and optionally, a cable connection between the farms in question. The set of equipment for power output from the Bałtyk II OWF with the infrastructure necessary for its implementation and operation will be provided by MFW Bałtyk II Sp. z o.o. However, the set of equipment for power output from the Bałtyk III OWF with the infrastructure necessary for its implementation and operation, as well as the optional cable link between the Bałtyk II OWF and Bałtyk III OWF will be provided by MFW Bałtyk III Sp. z o.o. The course and technical parameters of the planned Project depend on the location and parameters of the wind farms from which the generated energy is to be output and the place and conditions of connection to the NPS – in accordance with the agreements on connection of the planned OWFs to the transmission network concluded between the Companies and Polskie Sieci Elektroenergetyczne S.A. (PSE S.A.).

The planned Project will include the following elements:

- offshore part:
  - 2 high voltage AC submarine export cables at the section from the offshore substation in the Bałtyk II OWF area to the shore, with a length of approx. 60 km each,
  - 2 high voltage AC submarine export cables at the section from the offshore substation in the Bałtyk III OWF area to the shore, with a length of approx. 67 km each;
  - optionally, a cable connection between the Bałtyk II OWF and the Bałtyk III OWF with a length of approx. 30 km – corridor constituting a reserve for possible future laying of export cables and fiber optic cable;
- crossing of all cable lines through the coastal zone using the HDD trenchless method between 236.5 and 237 km of the seashore (according to the chainage of the Maritime Office);
- onshore part:
  - 4 high voltage underground cable lines from the landfall to two planned onshore substations (OnS) with a length of approx. 8 km – 2 lines for each OWF;
  - 2 OnSs in the Pęplino area with a total area of 16 ha (approx. 8 ha each);
  - 2 high voltage underground cable lines from OnSs in the Pęplino area to the designated grid connection points in the Słupsk Wierzbicino NPS substation, with a length of approx. 6 km (one line for each substation).

Moreover, the Project will include infrastructure necessary for servicing the grid connections and offshore wind farms, i.e. fiber optic lines which may constitute an integral part of the submarine cables; (onshore these will be laid in a trench next to power cables) and an access road to the planned OnSs in the area of Pęplino. Optionally, energy storage facilities may be built in the vicinity of the OnS in the next phase.

It is assumed that both grid connections will be implemented at the same time to minimize the costs and impacts of the construction phase. However, this does not exclude the possibility of implementing grid connections separately.

The cables will be routed from the sea to the shore using the HDD trenchless method. The length of the grid connection infrastructure (GCI) corridor in the offshore part is approx. 60 km (Bałtyk II OWF GCI) and approx. 67 km (Bałtyk III OWF GCI) plus an additional section between farm areas with a length of approx. 30 km. The maximum width of the corridor is 1000 m, except for the southern part where the corridor narrows and then widens towards the coastline.

The onshore part of the sets of power output equipment will run in the areas of the Ustka and Słupsk municipalities (Słupsk district, Pomorskie voivodship), at a section of approx. 14 km, in a corridor with a width of approx. 60 m, with local widenings in the area of the landfall of the grid connection infrastructure and the planned locations of trenchless crossings under roads or other field obstructions. The actual occupation of the area at the construction and operation stages within the corridor will be much smaller. Onshore power cables will be laid in a trefoil formation in up to four cable circuits. Fiber optic cables will be laid in each cable circuit.

The grid connection infrastructure also includes OnSs (one substation as part of each grid connection). The planned substations will be located on plots No. 148/3 and 148/4, Pęplino cadastral district, Ustka municipality. The section connecting each planned OnSs with the NPS substation will be an underground power line. The terminal point of the planned project is the feeder clamps at the PSE S.A. Słupsk Wierzbicino substation.

For the purposes of operation, monitoring, and operation of offshore wind farms, together with the sets of power output equipment, an operation and maintenance base will be organized in Łeba. The base will consist of an office, a dispatch room and a warehouse with coastal facilities. The organization of the base in Łeba is not covered by the scope of this procedure. It will be a separate action of the Investor.

The location of the planned Project is a result of conditions resulting from earlier stages of spatial planning at sea and already obtained decisions and conditions for onshore connection and the progress of works on technical designs and obtaining permits of owners.

The planned Project is planned mainly in agricultural and forest areas outside residential development areas. In the coastal zone (the area of the Ustka municipality), these are partially areas managed by the Maritime Office in Gdynia, and partially restricted areas owned by the Polish Army and State Forests. In the area of the Słupsk municipality, the route runs mainly through forest areas of the State Forests.

The planned Project will cross in total 8 public roads, 2 railway lines (one of them is a non-existent historical railway line "Szlak zwiniętych torów"), 2 bike routes and 2 watercourses: Struga Łędowska and Pogorzeliczka.

#### Offshore part:

In the maritime area, cable lines will be routed from the offshore substation (OffS) in the Bałtyk II OWF area and from the OffS in the Bałtyk III OWF area, then the corridors from both farms will coincide and connect below the Słupsk Bank into one corridor to the landfall to the west of Ustka.

The planned grid connections from the Baltic II OWF and Baltic III OWF offshore wind farms are located within the exclusive economic zone, the adjacent offshore zone, the territorial sea and internal sea waters administered by the Maritime Office in Gdynia, in the infrastructure corridor designated in the Ordinance of the Council of Ministers of April 14, 2021 on the adoption of the spatial development plan for internal sea waters, the territorial sea and the exclusive economic zone at a scale of 1:200,000 (Journal of Laws 2021.935, as amended) – the so-called POM Plan. Moreover, an additional section between the areas of the Baltic II OWF and the Baltic III OWF is located in the exclusive economic zone and the adjacent offshore zone in the infrastructure corridor, in accordance with the POM Plan.

The boundaries of the corridor inside which the Project will be located at sea are determined by geographical coordinates (in the WGS84 system), separately for the Baltic II OWF GCI and for the Baltic III OWF GCI together with the planned link between the farms. The interface point between the offshore and onshore parts is determined by the southern boundaries of the cadastral plots constituting internal sea waters, i.e.: 394 Łędowo cadastral district (Ustka municipality) and 2858/4 Ustka cadastral district (City of Ustka).

Moreover, the planned Project is located in water sub-region 36 Open Waters of the Bornholm Basin and 38 Polish Coastal Waters of the Bornholm Basin in accordance with the division of the Baltic Sea into water regions for which the environmental status is determined in accordance with HELCOM and the Marine Strategy Framework Directive.

#### Onshore part:

The interface between the offshore part and the onshore part, i.e. the so-called landfall of cable lines, shall be located between 236.5 and 237 km of the seashore (according to the chainage of the Maritime Office), crossing the waterside strip established by the order of the Director of Maritime Office in Gdynia in accordance with the Act of March 21, 1991 on maritime areas of the Republic of Poland and maritime administration (Journal of Laws 2023.960, consolidated text, as amended), consisting of:

- service corridor – that constitutes a zone of mutual direct impact of the sea and land intended for maintaining the shore in a condition that complies with the requirements of environmental safety and protection,
- protective strip – covering an area in which human activity has a direct influence on the condition of the service corridor.

In the zone directly adjacent to the shore, the cable route crosses the restricted areas established by Decision No. 80/MON of the Minister of National Defense of June 8, 2022 on the establishment of restricted areas by the Ministry of National Defense. These are the following plots: 357/8, 357/24, 359, 89/4, 89/5, 90/6, 113/2, 113/3, 114/3, 115/5, 117/5, Łędowo cadastral district, Ustka rural municipality.

The cables will be routed from the sea to the shore using the trenchless HDD technology.

The Project will be located onshore within the boundaries of the corridor running through cadastral plots located in the Ustka rural municipality (cadastral districts: Łędowo, Duninowo, Duninowo PGR and Pęplino) and in the Słupsk rural municipality (cadastral districts: Bruskowo Leśnictwo, Wielichowo,

Bruskowo Wielkie, and Bruskowo Małe).

The corridor runs partially through forests managed by the Regional Directorate of State Forests in Szczecinek within the boundaries of the Ustka, Modlinek, and Pęplino Forest Districts, through restricted areas identified by the Ministry of National Defense and through agricultural areas.

The grid connection infrastructure from the Bałtyk II and Bałtyk III OWFs also includes two OnSs located in the area of Pęplino village on plots No. 148/3 and 148/4, Pęplino cadastral district, Ustka municipality. The section connecting the OnSs with the PSE S.A. Słupsk Wierzbicino substation will be an underground power line with a length of approx. 6 km. The terminal point of the planned Project is the feeder clamps at the PSE S.A. Słupsk Wierzbicino substation.

Table 6: Basic parameters of the planned Project divided into connection with the Bałtyk II OWF and Bałtyk III OWF

Parameter	Value/description	
	Bałtyk II OWF GCI	Bałtyk III OWF GCI
Length of the power connection in the offshore area	approx. 60 km	approx. 67–97 km (including 30 km of the connection between the BII OWF and the BIII OWF)
Length of the power connection in the onshore area	approx. 14 km	
Type of power cables in the offshore area	Multi-core submarine cables in alternating current technology (HVAC)	
Type of power cables in the onshore area	Direct burial export cables consisting of 3 separate single-core cables in alternating current technology (HVAC)	
Voltage of power cables between offshore and onshore substation	220 kV	
Voltage of power cables between the onshore substation and the Słupsk Wierzbicino substation	400 kV	
Maximum number of cables in the offshore area	2 multi-core cable lines	2 multi-core cable lines
Maximum number of cable lines in the onshore area	2 cable lines, each consisting of 3 separate single-core cables	2 cable lines, each consisting of 3 separate single-core cables
Method of routing cable lines from the offshore area to the onshore area	HDD (optionally HDD with short section of deeper cable foundation – to landfall behind the last sandbar)	

The surface area of the corridor inside which the planned Project will be implemented in the offshore part is approx. 174.63 km<sup>2</sup> and in the onshore part – approx. 1.83 km<sup>2</sup>. The corridor in the offshore part is approx. 1,000 m wide (except for the southern part, where the corridor extends towards the coastline). In the onshore part, the corridor has a width of approx. 60 m with local widenings (up to approx. 50–100 m) in places of planned trenchless crossings. Additionally, the area covered by the request covers the onshore construction site of the trenchless crossing through the coastal zone and two OnSs.

The area of direct interference with the seabed related to seabed preparation, cleaning, and laying of cables will occupy only a strip with a width of approx. 5 m for each cable and will be in total approx. 1.55 km<sup>2</sup> for 4 cable lines. The estimated average width of the trench for one cable will be approx. 1.5 m. Moreover, small parts of the seabed will be occupied periodically for vessel anchoring.

In case of the execution of trenchless crossing using the HDD technology, a short section of underwater trench with a depth of 4–5 m is optionally considered (maximum length of 800 m – to landfall behind the last sandbar). In this short section, interference with the seabed may be greater (in a strip with a width of approx. 20 m per single cable) and cover the area of up to approx. 0.064 km<sup>2</sup>. Then, the total area of interference with the seabed will be maximum approx. 1.61 km<sup>2</sup>.

In the onshore part, the occupation of the area during the construction phase will be related to the implementation of the following elements of the planned Project:

- cable line landfall – construction site with the maximum area occupancy of up to 0.85 ha;
- construction strip of underground cable lines with a width of approx. 30–32 m (in places of possible trenchless crossing widened to approx. 50–100 m);
- two onshore substations (OnS), each with an area of approx. 8 ha;

- access road to the OnS with a length of approx. 1.5 km.

During the operation phase, the area occupancy will be smaller than during the construction phase and will cover only the direct vicinity of the cable route, where certain restrictions are introduced to protect the cables against damage, and the OnS area together with the access road. According to the POM Plan, in the maritime areas designated for laying linear elements of the technical infrastructure it is required to have a safety zone around them established by a locally competent Director of the Maritime Office, in which anchoring shall be prohibited, excluding emergency anchoring and anchoring related to installation and service works. In the case of land along the cable route, this will be a strip with a width of from approx. 10 m to approx. 31 m for both grid connections, depending on the cable corridor section.

It is assumed that the cable will be buried at an average depth of approx. 1.5 m. The requirements included in the POM Plan related to the sandbar zone crossing (shallow coastal zone) in which it is required to lay new linear elements of the technical infrastructure at least 3 m below the average depression in the bottom of intersandbar chutes will be taken into account for the cable landfall section at the stage of designing the cable line trajectory.

Table 7. Anticipated cable burial depths depending on the type of seabed and method of use

<b>Seabed type and method of use</b>	<b>Assumed cable burial depth</b>
Shallow coastal zone – to landfall behind the last sandbar*	min. 3 m according to the POM Plan
Navigation route – Słupsk Bank TSS	approx. 2–2.5 m
Other route sections	approx. 1–1.5 m

The cables will be laid at a safe distance from each other, which will allow to maintain an appropriate maneuvering space for vessels performing service or repair works. The distance between cables for the same grid connection is approx. 25 m, whereas between cables of individual grid connections it varies depending on the width of the route section.

The burial of the power cable in the seabed can be performed using two methods:

- SLB (Simultaneous Lay and Burial) – based on simultaneous laying and burying of the cable in the bottom sediment,
- PLB (Post Lay Burial) – based on burying the cable after it has been laid on the seabed.

In the case of the SLB method, the cable-laying vessel (CLV) will be used for laying cables. The cable laying speed is controlled by the burial speed, which depends on the characteristics of the seabed. During the operation, a long period of favorable weather conditions is required, which will allow for laying and burying the entire cable line.

The PLB method, preferred by the Investor due to, among others, lower dependence on weather conditions, requires the use of two different vessels, i.e. vessels for laying (e.g. a cable-laying vessel or a towed cable-laying barge) and vessels for cable burying – most often it is a service vessel equipped with a device for burying/sinking cables.

The Investor considers using two cable burial technologies:

- water jetting – preferred,
- mechanical cutting – optional in the case of challenging soil conditions.

The scope of applicability of the above-mentioned technologies is determined by the seabed geological conditions.

If boulder fields that cannot be bypassed are encountered, the cable will be laid on the seabed and protected against damage (it will not be sunk into the seabed).

The water jetting consists in pumping sea water under pressure under the seabed surface to the required depth. The substrate water jetting occurs as a result of a combination of high-flow and low-pressure water streams (e.g. for fluidization and moving grain sediments) and low-flow/high-pressure water streams (e.g. for cutting and moving clay lumps). In the trench, the cable, under its own weight, collapses in fluidized sediment and is automatically buried.

The mechanical cutting consists in making a trench using self-propelled equipment equipped with wheels or cutting chains, equipped with buckets for transporting the extracted material. When excavating the trench in the subsoil, a narrow gap is formed into which the cable is lowered. The method of mechanical cutting may require additional activities related to backfilling the trench, depending on the required depth of the cover.

The Investor is considering the use of crawler vehicles, moving on the seabed, equipped with water jetting and/or cutting tools which can be operated and controlled from a support vessel by means of a cord cable or constitute self-propelled vehicles controlled by the operator from the vessel's deck.

Cable laying on the seabed. In places where the possibility of burying the cable using the aforementioned technologies will be limited, i.e.: fields of boulders, cobbles or gravel, or very hard seabed, with insufficient thickness of sediments, where trench may be impracticable or uneconomical; areas with high sediment mobility (fields of ripplemarks, sand waves) where high dynamics of water may expose cables; point of connection to the OffS to protect the cable against potential seabed scouring in its vicinity, it is considered to use alternative methods of cable protection than seabed burial, i.e.:

- rip-rap,
- concrete mattresses.

The assumed total duration of works related to laying 4 submarine cables is approx. 130–140 days. Laying of a single cable takes a maximum of approx. 35 days, whereas the phase of laying submarine cables is divided into two stages: seabed preparation (approx. 3–5 days), cable laying and burial (approx. 25–30 days).

In the case of 2 cable lines connecting the Bałtyk II OWF with the Bałtyk III OWF, it is assumed that the laying of cables will take approx. 30 days.

Vessels to be used for laying submarine cables during one installation campaign are the following:

- cable-laying vessel,
- a vessel for digging trenches,
- auxiliary vessels – (4 vessels).

Optionally, if it is necessary to dig 4 deeper trenches in the shallow coastal zone (to landfall behind the last sandbar), this may additionally extend the time of works to 8 days (per cable). It is planned to use a small dredger for deeper trenches.

#### Preparatory works:

Seabed preparation includes activities related to cleaning and preparation of cable routes for efficient and collision-free installation. Preparatory actions will include:

- unexploded ordnance (UXO) and chemical warfare agents (CWA) screening;
- possible changing of the designed cable route or removal of identified unexploded ordnance and chemical warfare agents;
- removal of inactive cables – if they will interfere with the planned Project;
- removal of boulders or correction of the designed cable route;
- removal of various types of obstacles such as fishing nets, loose conductors from the cable route.

Preliminary identification of natural and anthropogenic obstacles in the maritime area under analysis was carried out in 2015 by the Maritime Institute in Gdańsk. No potentially hazardous objects such as torpedoes and mines and wreck-like objects were found, and anthropogenic objects present on the GCI route selected by archaeologists for visual inspection were only fragments of damaged fishing gear.

#### Cable laying in the seabed:

Submarine power cables will be transported from the manufacturer to the port that constitutes the main logistics facilities or directly from the manufacturer to the cable installation maritime area. Cables will be delivered on a CLV specially prepared for this purpose. The installation process, for each cable separately, will take place in stages including:

- cable launching with the use of floaters in the area of the trenchless landfall section,
- pulling the cable through the trenchless section to the shore,
- laying the cable on the seabed along the planned route,
- pulling the cable into the OffS,
- sinking/burying the cable in the seabed.

#### Cable laying in the sea/land crossing zone:

The cables will be routed from the sea to the shore using the HDD trenchless method, and the technical solutions for execution of the crossing will be selected on the basis of the results of geotechnical surveys, other local conditions, including the length of the crossing and access to the equipment of the contractor for construction works.

HDD technology with a drilling length of no more than 1.5 km will be applied, whereas the onshore section will not be shorter than 120 m. The cable foundation depth in the offshore part was assumed in

accordance with the POM Plan – at least 3 m below the average depression of the bottom of the intersandbar chutes. It is assumed that the trenchless crossing will exit behind the last sandbar. However, if, due to technical reasons, process or other conditions related, for example, to the location of the construction site, the trenchless crossing will exit before the last sandbar; a deeper underwater trench will be executed at this section of the shoreline – up to the depth of 5 m. It is assumed that this trench will not be longer than approx. 800 m. The HDD method consists in making horizontal directional drilling with a special control head routed towards the designed exit point. Execution of the HDD includes the following stages: pilot drilling, borehole widening, jacking pipe installation, cable pulling through the installed pipes. The surface area of the construction site intended for cable landfall using the HDD technology will be approx. 8,500 m<sup>2</sup>. The Investor also considers drilling from the marine barge towards the land.

Due to the significant length of directional drilling, in the case the trenchless crossing extends beyond the last sandbar, the Investor takes into consideration the use of a deeper underwater trench (in accordance with the arrangements of the POM Plan – minimum 3 m below the inter-sandbar pit). It was assumed that a deeper trench (up to approx. 5 m) can be executed at a maximum distance of approx. 800 m – to exit behind the last sandbar. Trench will be dug in two stages. In the first stage, the seabed will be deepened to a depth of approx. 3 m using a dredger. In the second stage, in the previously prepared trench, in the 1.5 m wide seabed strip, a trench will be dug with a depth of approx. 2 m where the cable will be buried using the jetting method. The excavated material is planned to be stored in small piles within the boundaries of the TI corridor at a depth of approx. 10–12 m (between 32 and 30 km of the TI corridor route).

#### Onshore cable line laying:

As part of the planned Project, 4 submarine and onshore cable connection stations will be constructed. These are rectangular concrete structures with a side length of a maximum of several meters and a depth of approx. 2 m. In addition, the equipment necessary for the proper operation of the cable system, e.g. cable draw pits with earthing/crossbonding boxes and for the connection of telecommunication cables, will be installed in the immediate vicinity of the connection.

Methods of laying the underground cable line:

- Buried cable line – cables laid in the trench in a wavy line, if possible, on a dense bedding layer with a thickness of at least 0.2 m. When laying multi-circuit lines in one trench, the line circuits should be separated from each other with concrete protective slabs. The minimum horizontal distance between the circuits will be determined by calculation of thermal interaction between the circuits. After laying the cables, they should be covered with a filling layer of at least 0.2 m in height over the upper surface of the line circuit uppermost power cable placed in the trench. A material being a mix of sand and cement is to be used as bedding. The structure of the filling material and bedding cannot cause damage to the cable sheath surface. The remaining area of the trench should be filled with natural soil cleaned of rubble and stones, which should be compacted in order to prevent soil collapse. Concrete protective slabs should be placed on the filling layer above the cable line. A caution cable marker tape is to be placed above the cable.
- Cable line laid in cable conduits – the conduits are stiffening elements of the cable section being routed, limit the possibility of mechanical damage, and protect the cable insulation. They are most often used in places where the cable line crosses other facilities, such as roads, tracks, other elements of underground infrastructure, civil structures, etc. Cable conduits can be made using open pit method, ramming, or directional drilling. Smooth-walled casing pipes made of high-density plastic and featuring circumferential stiffness of the pipe suitable for its location should be used for execution of the cable conduits. One cable is laid in one cable conduit. When pulling the cable, care should be taken not to let natural soil or dirt penetrate into the conduit. It is allowed to fill the cable conduits with a material with appropriate resistivity and thermal conductivity, e.g. bentonite. For each section of the cable line circuit in conduits, it is allowed to provide at least one spare conduit, the ends of which should be also protected against penetration of water and foreign materials.
- Cable line laid in a cable duct – This solution is mainly used in the areas of substations. The dimensions of cable ducts are selected individually for specific cable lines, taking into account the possibility of heat output. Cables belonging to one line circuit are laid in one cable duct, allowing for laying more while ensuring that the current circuits do not affect each other. The cables are fixed by means of dedicated holders in such a way as to ensure their longitudinal movement under the influence of temperature changes. The cable ducts are provided with natural ventilation ensuring appropriate conditions for cable cooling. A cable duct located above

the groundwater level should have an absorptive bottom, and a duct located below the groundwater level or in an area featuring unfavorable soil conditions (impermeable soil) should be equipped with a drainage system. Cables laid in a duct should have a flame retardant sheath.

- Cable line laid in a cable circuit/tunnel – Requirements concerning the dimensions of cable circuits or tunnels, their design, the method of cable laying and fixing, determination of forced cooling conditions, accessibility for the operating personnel are specified individually for a particular cable line solution. Cable tunnels should be provided with rainwater and groundwater drainage systems, whereas cable entries and exits should be provided with commercially available systems providing protection i.a. against water ingress and natural ventilation ensuring appropriate cooling conditions for the cables, in accordance with the assumptions made for calculation of long-term current-carrying capacity of the line.

The underground cable line will mostly be laid using the open-cut method, consisting of the following phases:

- tree and shrub cutting from the construction strip;
- digging trenches and installing trench support systems;
- execution of bedding and laying of the cable line system together with the earthing system and necessary infrastructure and erection elements, i.e.: fiber optic line, cable connection sealing, and terminations;
- partial backfilling of cable lines with a mixture of sand and cement, and then partial backfilling of cable lines;
- placement of protective concrete slabs (laid horizontally in the ground above the cables, on the filling made of sand and cement mixture material, below the caution tape and vertically, between cables belonging to different circuits located in the same trench);
- laying of caution tape;
- trench closing together with restoration of the soil profile and appropriate compaction;
- land leveling and reinstatement.

Cable laying shall be executed in such a way as to prevent their damage by excessive bending. If it is necessary to reduce the friction force of the sliding cable by the inner surface of the sleeve, a sliding material should be inserted into the sleeve which will not adversely affect the cable sheath or outer sheath. In addition, bentonite will be used, which increases the current-carrying capacity of the cables placed in the conduits and stiffens their laying.

Construction works should be performed in a construction strip with a width of approx. 30–32 m with local widenings in the area of trenchless crossings of approx. 50–100 m and a widening in the area of connection of submarine cables with onshore cables. In this strip, a temporary road and a place for temporary storage of parent rock and topsoil separately should be designated. The estimated trench depth is approx. 1.3–5 m, depending on the area topography, hydrogeological conditions, etc. (unless local conditions indicate the necessity to dig deeper trenches, e.g. when solving the problem of collisions with underground field obstructions).

It is expected that depending on the soil conditions, the construction stage will last approx. 14 months.

Within the boundaries of the construction strip in sections laid in an open trench, tree cutting will be necessary, whereas permanent deforestation caused by the risk of cable damage by root systems and their possible failure will include, depending on the GCI section, the strip from approx. 10 to approx. 31 m. The remaining part of the construction strip may be reforested after completion of the construction process. At the sections where the cables will be laid in the ground using trenchless methods, it will not be necessary to remove phanerophytes. In this context, it is essential to ensure permanent access to the submarine and onshore cable connection stations and transition joint bays.

Underground cable lines should be laid in a dry trench. If it is necessary to drain the trenches, pumps, wellpoints or additional drainage trenches should be provided. Regardless of the selection of the trench drainage technology, the pumped out water will be discharged outside the construction site to the existing watercourses running in the vicinity of the planned project and in accordance with the applicable provisions of law. Water from draining the trenches should be distributed (sprayed) on adjacent soils, if possible, upon the consent of the land owner. The drainage works will be performed ahead of a given section until the cable lines are laid and backfilled.

#### Access roads at the construction stage:

A temporary road with a width of approx. 6 m from which works related to the digging of the trench and laying of the cable as well as transport of materials, raw materials, and construction equipment will

be performed. Access to the construction strip should be provided using the existing circulation system. If delivery of materials and equipment is not possible using the existing roads, they are to be delivered using temporary roads constructed for the duration of the planned Project implementation. In the transport zone, along the axis of the planned cable circuits, the pavement will be partially hardened to enable movement of construction machines and means of transport. After completion of the construction works, the areas designated for temporary roads should be restored to their original condition.

#### Onshore substations:

It is planned to construct two electrically separated OnS with a total area of 16 ha in the area of Peplino village – one for the operation of the Bałtyk II OWF and one for the operation of the Bałtyk III OWF. The planned substations will be located on plots No. 148/3 and 148/4, Peplino cadastral district, Ustka municipality. Works related to the construction of the OnS should be performed in accordance with the construction design documentation approved at the stage of the building permit, containing a set of required approvals. Preparatory works will consist in preparation of the access road, cabling of the existing medium voltage overhead line passing through the substation area, removal of the top soil layer and, possibly, leveling of the area. For the purpose of access to the construction site, the Investor is planning to use the existing access road to the MÓWI POLAND S.A. Duninowo factory and, further towards the south-east, to construct a hardened access road to the substation site.

The construction of substations involves typical civil and erection works:

- earthworks, trenches, leveling,
- preparation of internal roads and welfare facilities,
- trenches for infrastructure,
- construction of formwork, foundations and concrete floors,
- erection of power transformer stands and reactors,
- installation of high voltage instrumentation and connections,
- installation of fuel tanks for emergency generators (if required) and a fire water tank,
- paving of roads and parking spaces,
- preparation of lawns with a 20–30 cm humus layer,
- Installation of fencing and gates.

Preparation of the area for the OnS will take approx. 6 months. It is not planned to cut trees due to the agricultural nature of the area – mainly arable land and grassland. The preparatory period will be followed by earthworks, construction of buildings, foundations, etc. and installation of equipment. It is estimated that the construction time will be approx. 2 years.

Due to the necessity of access to the Project site, a paved access road will be constructed to enable permanent access to the planned OnSs.

The planned project is planned in such a way as to minimize the negative impact on the environment. This applies mainly to the selection of cable landfall, which significantly allowed to limit the impact on protected habitats related to the coastal zone and to plan an underground cable line along the entire length. Construction of underground cable lines along the entire route of the planned infrastructure is a more expensive solution decided by the Investor in order to limit permanent interference with the site and landscape. Optioneering considered as part of the project includes:

Location options – Location of the planned Project depends primarily on the initial and final point, which were decided at the stage preceding the obtaining of the environmental decision – the initial point resulting from the location of the Bałtyk II OWF and Bałtyk III OWF, approved by the issued permits for erection and use of artificial islands, structures and devices, and the final point determined by the conditions for connection to the NPS issued by PSE S.A. and the signed connection agreement. The planned Project is compliant with the arrangements of the POM Plan and implements the terms and conditions of using water regions specified therein. A particularly important aspect of location optioneering is the place of cable landfall. Due to the need to ensure stability of the seashore, the landfall will be made using the trenchless method. For the purposes of the Project, two location options of the landfall and cable infrastructure route in the area of the waterside strip were analyzed: western and eastern ones. The option preferred by the Investor (applied for implementation) is the eastern option. In the proposed option, as a result of the analyses carried out, the considered shore crossing technologies were limited to horizontal directional drilling (HDD) and horizontal directional drilling (HDD) combined with offshore trench. In the western (alternative) option, due to the limitations concerning the location of the construction site (presence of a closed military proving ground) and the related necessary length of drilling, it is not possible at this stage to exclude the use of two additional technologies of trenchless shore crossing: the microtunneling or Direct Pipe (DP) method. The western landfall would be related to the necessity to construct a longer trenchless crossing; the construction site of such a



crossing would take more than two times more land.

Technological options – The main technological options for power output from offshore wind farms concern the selection of cables or an onshore overhead line. Carrying out the planned Project onshore is based on laying cables underground and this is the preferred option. A possible alternative is the 400 kV overhead power line between the OnS and the PSE S.A Słupsk Wierzbicino substation (at a section of approx. 6 km). Moreover, the selection of location of trenchless crossings through terrain obstructions and coastal zone and the selection of trenchless crossing technology are important for the analysis of environmental impacts. For further conceptual and design works, the HDD method was selected, which involves the smallest interference with the forested coastal zone. The estimated occupation of the area for the HDD construction site is two and three times smaller than for other methods, i.e. the microtunneling and Direct Pipe method.

Reasonable alternative option – The reasonable alternative option consists of the option of landfall more westwards (western option) using the HDD trenchless method and construction of the 400 kV overhead line at the section from the LSE substation to the PSE substation, instead of the underground cables proposed by the Investor. Construction of the 400 kV mid-forest overhead line in the alternative option would be related to cutting in a 35 m wide strip, at a section of approx. 6 km and creation of a 70 m wide service corridor during the operation phase (35 m each from the line axis in both directions). The overhead power line is a source of electromagnetic field and noise emissions.

The most environmentally advantageous option was the cable landfall in the eastern option and power output from the OWF only with underground cables with the power output of 220 kV and 400 kV, i.e. the applicant's option, however, provided that all measures proposed in this Report are implemented to mitigate the potential negative impact of the construction and operation phase, both in the offshore and onshore part.

#### **Impact of the project on the marine environment (at the construction and operation stage):**

Potential impacts of the planned Project concern mainly the construction phase and are related to:

- necessary interference with the seabed causing temporary disturbance of bottom sediments and increase of suspended matter content in water during construction works related to burial/sinking of cables;
- periodic emission of underwater noise from vessels and equipment necessary for laying and sinking of cables in the seabed;
- periodic emissions of flue gas into the atmosphere from vessels involved in preparatory works (seabed cleaning), laying of cables, burying/sinking of cables and execution of a trenchless crossing;
- restrictions on the movement of vessels, including fishing vessels from Ustka and vessels moving along the Słupsk Bank TSS.

#### **Impact on the seabed topography, geological structure and quality of sea waters:**

The construction of the planned Project will involve a change in the seabed topography due to:

- preparation of the seabed, laying and sinking/burying of cables,
- the use of alternative cable protection methods (in places where obstacles such as stone and boulder clusters cannot be avoided),
- sedimentation of sedimentary material raised and moved during cable burying/sinking works,
- anchoring of vessels.

During construction works, the seabed topography will be disturbed as a result of execution of trenches with an average depth of 1.5 m and trench width of 1.5 m, in which cables will be buried. In the context of the above disturbances, the most sensitive area is the sandbar zone, which is subject to systematic wave motion and continuous seabed transformation. Therefore, a trenchless crossing using the so-called HDD method was planned in this section. A fragment of this zone may optionally be within the reach of construction works when the trenchless crossing does not extend beyond the last sandbar. Then, at a maximum section of up to 800 m, it will be necessary to execute deeper trenches – up to 5 m. Taking into account all impacts on the topography of the water region bottom within the area of the planned Project, it was found that they will be local, limited directly to the place of works, and any resulting disturbance of the seabed surface will be short-term and reversible with the participation of natural hydrodynamic processes. In places where the nature of the seabed will prevent the execution of the trench (e.g. stones, boulder clusters), the cable will be laid on the seabed and protected by e.g. a rip-rap or concrete mattress. In this section, the nature of the seabed will change and local inequalities will occur, but they will be insignificant in relation to the relief and nature of the surrounding seabed.

Laying/sinking the cable using the jetting method preferred by the Investor will cause disturbance of

bottom sediments and their propagation until they fall down. When sinking one cable, at a speed of 250 and 350 m of the cable per hour, the sediment will deposit within the trench boundaries (near sandy soils) and its thickness will not exceed 1 mm. Within the sections made of clayey, silty and loam sediments, the spatial extent of the deposition area will range from 2 to 5 km from the cable axis, where up to a maximum of approx. 0.1–0.2 mm of sediment will be deposited. If the cable laying/sinking is carried out under better conditions (reduced wind and wave motion), the deposition area will be smaller.

At the stage of preparatory and construction works, pits will be created in the seabed at stopover sites of vessels installing elements of the grid connection infrastructure. These disturbances will be local – point (up to a maximum depth of 3 m – depending on the type of sediments), short-term and reversible. No impact on the seabed is expected during the operation phase of the planned Project.

Laying and sinking cables in the seabed involves disturbance of bottom sediments and shallow geological structure and local change of physical and chemical properties of sediments due to:

- cable sinking/burying,
- sedimentation of sedimentary material raised and moved during works related to seabed preparation and cable burying/sinking,
- the use of alternative cable protection methods (in places where obstacles such as stone and boulder clusters cannot be avoided),
- execution of a trenchless crossing through the coastal zone,
- optionally – storage of excavated material.

During the works related to sinking/burying cables in the seabed, sediments of various genesis and structure will be disturbed to the depth of approx. 1.5 m. They will be disturbed, their structure and physical and chemical properties will change (e.g. by remobilization of biogenic substances and pollutants), and then they will be lifted into the water column and dissipated in the form of suspended matter, which will be deposited again on the seabed after completion of the works. During the sinking of a total of 6 cables using the jetting method, approx. 570,000 Mg of dry sediment mass will be moved, of which approx. 10% to 35% of the excavated material will go into the water column. Higher values apply to the sections of the TI corridor where sediments with a high content of silty and clayey fractions occur in the deep structure. These sections are approx. 44% of the length of the entire IP route. In the remaining part of the route, mainly made of sandy sediments, approx. 10% of excavated material. The analysis of modeling results showed that depending on the properties of bottom sediments, the maximum water turbidity range will come from approx. 1 km to approx. 8 kilometers, with the concentration of suspended matter usually not exceeding 10 mg/l. Turbidity of water with a concentration of more than 30 mg/l will occur in the nearest vicinity of the trench. The maximum turbidity time will not exceed 16 h. After completion of the works, the suspended matter will deposit on the seabed with a maximum thickness of 1 NM. Bearing in mind that the cables will not be laid at the same time (probably one after the other), the turbidity level in the water column during burial of one cable will be much lower. The suspended matter cloud will move along with the progress of works, and the concentration of suspended matter in the water column in places where the cable will be buried will gradually decrease. Agitation (disturbance) of bottom sediments, related, among others, to cable sinking, will favor the transfer of pollutants from sediments to the water column. In the surface sediments of the planned Project, both concentrations of heavy metals and other pollutants (including PAHs and PCBs) occur at a very low level, and the content of biogenic substances is typical for sediments of the southern Baltic Sea. The emission of the above-mentioned substances into the water column, which may occur in connection with laying 6 cables, will be insignificant compared to the annual load transported by rivers to the Baltic Sea. Therefore, it is expected that during construction works there will be no deterioration of water quality.

The crossing of the planned connections from the Bałtyk II OWF and the Bałtyk III OWF through the coastal zone will be made using the HDD trenchless method. Sediments will be disturbed along the drilling route and the continuity of lithologically different layers will be interrupted.

The operation of the planned Project will be related to a slight increase in the temperature of bottom sediments in the direct vicinity of the cables, due to the temperature emission generated by the cables during the transmission of electricity from offshore wind farms. If the cable is buried to the assumed depth from approx. 1 m to a maximum of 5 m, sediments will be heated in the direct vicinity of the cable. The further away from the cable, the lower the temperature will be. When burying the cable to a depth of approx. 1–1.5 m, in the superficial layer of sediments (at a depth of approx. 20 cm from the seabed surface), which is particularly sensitive due to benthic organisms present in it, the temperature will increase slightly by approx. 2°C. As a result of close contact with sea water and bottom water flows, the sediment temperature will be effectively lowered to sea water temperature. If alternative methods of cable laying are used (e.g. covering with a mattress or rip-rap), similarly as in the case of burying the cable, the temperature of the live wire will be reduced to the sea water temperature.

During the construction phase, the main impacts on water will be related to a temporary increase in the suspended matter level in water in the area of cable sinking using the jetting method. The maximum water turbidity range will be from approx. 1 km to approx. 8 kilometers, with the concentration of suspended matter usually not exceeding 10 mg/l. Turbidity of water with a concentration of more than 30 mg/l will occur in the nearest vicinity of the trench. The maximum turbidity time will not exceed 16 h. After completion of the works, the suspended matter will deposit on the seabed with a maximum thickness of 1 NM. Agitation (disturbance) of bottom sediments facilitates the passage of pollutants from the sediments into the water column. Due to the fact that in the surface sediments of the planned Project, both concentrations of heavy metals and other pollutants occur at a low level, it is expected that during the construction works there will be no deterioration of water quality. Potential impacts of the planned Project during the operation phase were analyzed in terms of their impact on water temperature. As a result of heat emission by cables, sediments and bottom waters may be heated. At the same time, the analysis of thermal impacts included in the EIA report showed that the bottom waters will not be heated, both in the case of burying cables at a depth from approx. 1 to approx. 5 m as well as if the cables are laid on the seabed surface and covered with a rip-rap or concrete mattress.

#### Impact on living nature:

##### Phytobenthos and Macrozoobenthos:

At the stage of construction works, in connection with seabed preparation, laying and then sinking/burying (and optionally storage of excavated material) of cables, the structure of the seabed and the sediments covering it will be disturbed and, consequently, habitats, both phyto and zoobenthic, will be destroyed. At the time of burying/sinking of cables and optional discharge of excavated material, sediment resuspension and remobilization of pollutants will occur, which may potentially affect the condition of water and thus living organisms living therein. Changes in environmental conditions will entail periodic changes in the availability of food resources (hindering/limiting feeding grounds) and will contribute to temporary changes in habitats. During the performance of works, noise and flue gas emissions will occur, and the vessels involved in the works will constitute a spatial barrier on bird migration routes and diadromous fish migration routes, which occur in the coastal zone in the GCI area.

The operation stage will mainly involve emission of electromagnetic field and temperature generated by submarine cables. The use of alternative cable protection methods – rip-rap or concrete mattresses – will contribute to destruction of the existing habitats and creation of artificial reefs in their place. In the place of storage of excavated material, benthic habitats will be backfilled and temporarily destroyed. The habitats lost at the construction stage will be gradually restored, and due to the abundance of species in the vicinity of the GCI, the settling and reaching a similar maturity of the habitat will take approx. 5–6 years, although the first signs of recolonization of zoobenthos specimens will probably be visible within a few or several weeks, and the first macroalgae are expected already in the first growing season.

Areas of the highest natural value within the GCI corridor due to the presence of rare and protected plants (red alga *Furcellaria lumbricalis* fork beetle and banded wee *Ceramium diaphanum* and two other rare species in the Polish maritime areas: *Coccotylus truncatus* and *Rhodomela confervoides*) and locally high degree of macroalgae coverage of the seabed are only located within the corridor intended for the construction of the grid connection with the Bałtyk II OWF at the section from km 7 BII to 12 BII and in the stony area from km 3.5 BII to the shallowest part of the buffer zone of the Bałtyk II OWF area. The most valuable vegetation communities are concentrated in three locations along the Bałtyk II GCI route, where the coverage reaches 80–90%. Within the boundaries of the GCI corridor connecting the Bałtyk III OWF offshore wind farm with the land, no valuable sites were found in the context of phytobenthos.

Potential impacts of the construction phase of the planned Project on phytobenthos and macrobenthos will be related to:

- disturbance of sediment structure/destruction of habitats,
- increase in suspended matter concentration,
- remobilization of pollutants from sediments.

During construction works related to seabed preparation and burying/sinking of cables, phytobenthos will be removed and, due to the storage of excavated material, it will be backfilled. This may lead to periodic reduction of biomass and temporarily deteriorate living conditions and limit the food base for invertebrates, fish and birds. These changes will be most visible in the immediate place of activities, i.e. in the trench area (with a width of up to 1.5 m for each cable line), and to a lesser extent in the area where works related to seabed clearing will be carried out (a strip with a width of up to approx.

5 m for each cable line).

During construction works, during disturbance of the sediment, organic matter, biogenic substances and impurities accumulated in the sediment are released into the water column and will be transported away from the place of works, in the prevailing direction of currents, and then deposited on the seabed in the form of a several millimeter-thick layer. The increase in the amount of suspended matter in the water column and its deposition affect the light penetration and, consequently, the primary production, e.g. in red algae.

During the operation of the planned Project, when burying cables in the seabed, the impact on phytobenthos will be neutral, as the existing habitat conditions will not change. Negative impacts may occur only in small areas of the seabed in places where alternative methods of cable protection in the form of rip-rap or concrete mattresses are used; such methods are considered in the case of hard seabed, where it will not be possible to lay cables in the seabed. After creating a rip-rap or using a concrete mattress, this new, artificially created habitat will be colonized by both primary and secondary producers. The growth of the stony seabed with phytobenthos may start already in the first growing season. However, the restoration of phytobenthos communities consisting of rare and protected species and/or species characterized by a high degree of seabed coverage with macroalgae will most probably take several years.

The surveys carried out by the Investor in the analyzed water region covered by the application for the environmental decision indicate the occurrence of a total of 34 macrozoobenthos taxons. From 3 to 18 taxa were recorded at the individual stations in the soft seabed. These are typical values for the southern part of the Baltic Sea. In single samples from the rocky seabed from the Bałtyk II OWF area, 9 to 11 macrozoobenthos taxons were marked. A larger number of taxons (18) was found on the sandy and stony seabed of the Słupsk Bank 98, and 28 macrozoobenthos taxons in a large area of the Słupsk Bank boulder site 99. The taxonomic composition, abundance and biomass of macrozoobenthos in the area of the planned project are typical for the shallow water and medium deep seabed zone of the open part of the southern Baltic Sea. No protected species were found in the macrozoobenthos in the surveyed area. In the GCI area from the Bałtyk II OWF, there was a rare species of *Eurydice pulchra* crustacean, which is listed in the red list of endangered species in the Baltic Sea as a species for which there is too little data, but at the same time it is believed that there is an existing hazard. The presence of this rare species in the Gdańsk Bay was found only in the vicinity of the Orłowski cliff. Special attention should be paid to areas with high zoobenthos biomass as potential places of intensive biogeochemical transformations taking place in sediments and benthic water and feeding grounds for fish and/or benthivorous birds, e.g. long-tailed duck and velvet scoter. The main food for these birds is clams. The list of clams that played the most important role in the structure consisted of four species: three species burying themselves in the sediment: *Mya arenaria*, *Macoma balthica*, *Cerastoderma glaucum* and mussels *Mytilus trossulus* on the hard seabed.

In the surveyed areas of the planned GCI Project, two species of clams dominated the soft seabed in terms of biomass: *Mya arenaria* and *Macoma balthica*, while on the rocky seabed there were clusters of mussel *Mytilus trossulus*. Macrofauna biomass in the GCI area ranged from 1.5 to 1,034.7 gm<sup>-2</sup> (average 115.8 gm<sup>-2</sup>). The biomass was dominated by clams (93% of the total macrozoobenthos biomass). The most valuable section, due to the highest biomass of macrozoobenthos on the soft seabed, was the section from 15 BII to 1 (common chainage). Moreover, mussel complexes were observed in the areas of rocks and boulders present within the GCI corridor.

When laying and sinking cables, benthic communities will be removed in a strip with a width of approx. 5 m for each cable. These changes will be most visible in the immediate place of operations, i.e. in the area of the trench with a width of approx. 1.5 m and a depth of 1.5 m for most of the route. In total, the impact related to the seabed disturbance will concern less than 2.5% of the seabed surface (in the GCI corridor), where a large biomass of benthic animals was found. After completion of the construction works, the first re-colonization will take place – probably within a few or a dozen weeks. The structure and function of benthic communities of the soft seabed can be expected to be restored after several years after the works are ceased. Indirectly, the impact on benthic organisms will be related to the increase in suspended matter concentration and its sedimentation on the seabed in the vicinity of the works performed; however, due to the small scale of the impact of water turbidity on the seabed (deposition of sediments on the seabed in the form of a several millimeter-thick layer) and spatial extent limited mainly to the work zone, this impact was considered insignificant.

Turbidity of the water column may also occur as a result of storage of excavated material from dredging of trenches in the shallow coastal zone. The resulting suspended matter may have an impact on benthic organisms, in particular on filter feeders. However, taking into account the fact that the turbidity of the

water column will be small, within the boundaries of the GCI corridor, limited to the duration of the works, and the planned discharge point is located outside valuable areas of mussel groups, this impact should not have a negative impact on the aforementioned organisms in this part of the seabed.

During the operation of submarine cables, impacts on macrozoobenthos may occur related to:

- reef effect – development of a new habitat in connection with the use of alternative methods of cable protection in the form of rip-rap or concrete mattresses,
- emission of electromagnetic field by cables,
- heat emission by power cables.

Creating a rip-rap or using a concrete mattress on the soft seabed will locally change the habitat type. The new substrate will be inhabited by species typical of the rocky seabed.

In the phase of operation of the planned Project, in connection with power transmission through power cables, heat will be emitted to the environment. As a result, sediments will be heated, which may potentially affect benthic organisms living in them. Due to the widespread presence of benthic fauna in benthic sediments, a layer of sediments up to the depth of approx. 20 cm under the seabed surface is of vital importance. The analysis of model tests for Baltic sediments for the cable buried at a depth of 1.5 m showed that directly above the buried cable, at a depth of approx. 20 cm counting from the seabed surface, the sediment temperature will not increase above 2°C. In the seabed areas where the cable will be laid on the surface and covered with a mattress or rip-rap, there will be no excessive heating of the seabed surface. Constant contact of the cable with seawater will reduce its temperature to seawater temperature.

#### Ichthyofauna:

In the survey carried out in the coastal zone, 27 fish species with variable abundance and distribution in individual survey seasons were recorded. Among pelagic fish, 7 species were recorded, 4 of which are classified as marine ichthyofauna, and 3 (European smelt, whitefish and sea trout) are classified as diadromous fish, spawning in fresh waters. On the other hand, demersal fish were represented by 20 species, including 14 marine species, one diadromous species (vimba bream) and 5 freshwater species. 2 species of demersal fish under partial species protection in Poland were recorded: sand goby (*Pomatoschistus minutus*) and straightnose pipefish (*Nerophis ophidion*). In the GCI area, spawning takes place in one pelagic species – herring and 5 demersal species (lesser sand eel, great sand eel, hooknose, lumpfish and turbot), while 4 species (round goby, sand goby, viviparous eelpout and shorthorn sculpin) may also potentially use this area as spawning ground; however, there are no data confirming this, as exploratory fishing was carried out outside the spawning season of these species. Among the identified pelagic species in the GCI area, commercial catches include herring, sprat, mackerel and sea trout. Whereas, among demersal species, commercial catches in the GCI area include cod, flounder, plaice and slopes, and in the coastal zone also perch, pikeperch and common bream.

Potential impacts of the construction phase of the planned Project on ichthyofauna will be related to the following factors:

- increase in suspended matter concentration in water when digging trenches for cables trench (cable sinking);
- remobilization of potential pollutants contained in benthic sediments;
- noise and vibrations from equipment and vessels performing works;
- possible creation of a mechanical barrier along the migration route of diadromous fish;
- periodic habitat changes and deterioration of habitat quality.

The impact on individual fish species will vary depending on the degree of sensitivity of specific life stages to a given stress factor.

The main factor affecting ichthyofauna will be disturbance of the seabed sediments as a result of laying cables and related temporary increased concentration of suspended matter in the water column. Reactions of juvenile and adult fish to increasing concentration of suspended matter include, in turn: avoidance of the zone by fish, disturbed orientation, impairment of the functioning of the breathing apparatus and, in extreme cases, mortality of individuals. Moreover, an increase in suspended matter concentration may result in deterioration of feeding conditions and reduction of the food base in this group of fish (e.g. as a result of covering the seabed with sedimenting suspended matter and reducing the number of benthic organisms). In the case of roe, larvae and early fry stages, increased concentrations of suspended matter may cause the death to spawn and increased mortality of juvenile forms. Moreover, the impact of suspended matter depends on the exposure time and other environmental factors, such as temperature or oxygen concentration in water, as well as the system of sea currents affecting the rate and directions of suspended matter propagation and dispersion.

During cable burial works, the maximum range of suspended matter propagation will occur only in the bottom water layer, which may potentially affect fish species living at the seabed. In the case of diadromous migratory fish, which mainly use the central and surface layer of water, the impact will be smaller. After completion of the works, a layer with a thickness of no more than 1 mm will be deposited on the seabed surface. Therefore, the impact of suspended matter deposited on the seabed on spawning grounds and fish food base will be local and insignificant.

Moreover, an important impact of the construction phase will be the increased noise emission by the equipment and vessels used for the works. Taking into account the sensitivity of individual groups of fish to increased noise level, it can be assumed that the impact of this factor will be the highest for fish with swim bladders: cod, herring, sprat, which show the greatest sensitivity to sounds. The level of sensitivity of Atlantic salmon and sea trout to noise is lower. On the other hand, benthic species: European flounder, plaice and turbot, as well as protected species (sand goby, common goby, common seasnail) show lower sensitivity to noise impact. The construction phase also involves an increase in vessel traffic intensity. The planned GCI crosses the routes of spawning and feeding migrations of fish species of economic importance. Therefore, the performance of works related to laying/sinking cables and potential storage of excavated material may periodically constitute an underwater physical barrier to fish migration. The barrier effect will be caused jointly by increased vessel traffic in a given area, increased water turbidity and underwater noise emissions. Negative effects of the works (especially in the coastal zone, in autumn) will be felt for spawning migration of Atlantic salmon and sea trout, especially in relation to the population using the Słupia River as a breeding site. An action to eliminate this negative impact is the appropriate selection of time frames for the performance of selected works in the coastal zone, except for the spawning period.

Disturbance of the seabed structure and temporary removal of benthic habitats within the trench area will cause local disturbance of habitats and ichthyofauna spawning grounds along the entire cable burial route. Particularly valuable ichthyofauna habitats are located in the Słupsk Bank area.

Potential impacts of the operation of the planned Project on ichthyofauna will be related to the occurrence of permanent magnetic field emissions. The noise level generated by the functioning GCI can be defined as negligible, as the cables will be buried in the seabed or covered with rip-rap or concrete mattresses.

The impact of electromagnetic field on ichthyofauna is poorly surveyed and the results of reaction tests of individual species are ambiguous. The potential impact includes natural magnetic field disturbances caused by electromagnetic field emission around transmission cables. Presumably, these impacts may cause a disturbed orientation, as a consequence, a change in the route of feeding and spawning migrations of fish. For most fish species found in the survey, sensitivity to electromagnetic field impact was assessed as low and moderate. With respect to diadromous fish species, such as Atlantic salmon or sea trout, the impact of the magnetic field on migration routes will be marginal, as these fish move in the water column, usually at a significant distance from the seabed. Therefore, the impact of the electromagnetic field was considered insignificant.

#### Marine mammals:

In the area of Polish maritime areas, the following species of marine mammals may occur: gray seal, harbor seal, ringed seal, and harbor porpoise. All species of marine mammals occurring naturally in the territory of the Republic of Poland are under strict species protection. For the purposes of the planned Project, the Investor carried out surveys of the presence of marine mammals in the area of the Bałtyk II OWF and Bałtyk III OWF. Surveys carried out as part of monitoring activities and for the purposes of implementation of projects related to offshore wind energy indicated the rare detection/observation of marine mammals in the area of the planned Project and adjacent waters. The data used confirm the occasional presence of porpoises in the waters of the Polish Baltic Sea. Marine mammals are likely to use the area of the planned Project and adjacent waters, covered by monitoring surveys, incidentally as an area of migration related to searching for food. The seashore is used very occasionally by Baltic seals as a resting place. However, the number of observations collected is small. No regular areas of molting, resting, feeding or reproduction of marine mammals were found in the area of the planned Project.

Potential impacts of the construction phase of the planned Project on marine mammals will be related to the following factors: noise and vibrations, increased vessel traffic (spatial blockade), increase in suspended matter concentration, hindering/limiting feeding grounds, remobilization of pollutants from sediments. Of the above-mentioned analyzed impacts, only noise and vibrations were considered as moderately negative. The remaining ones were assessed as insignificant.

During the GCI construction phase underwater noise and vibrations will be generated as a result

of traffic of smaller and larger vessels involved in construction works. According to the noise emission forecasts, the highest noise level will be generated by a large cable-laying vessel. The works will be temporary and will not significantly increase the current background noise. However, in response to the generated noise, the scaring away and disturbance of single individuals of marine mammals may take place, as well as temporary scaring away of fish, which may affect the temporary availability and/or abundance of food for marine mammals in the Project area. After the works are stopped, the background noise conditions will be similar to those before their commencement, which will enable the use of the area by the existing species of marine mammals.

Potential impacts of the submarine cable operation phase will cause permanent impacts in the form of magnetic field emission. Periodically, GCI inspections will be carried out (once every 5 years, with the first three inspections planned in the first, third and fifth year after the completion of the construction) using seismic methods and will be a source of noise of short duration. In view of the occasional presence of marine mammals in the area of the planned Project, this impact was considered to be insignificant.

#### Seabirds:

The analyzed water region is used by seabirds as a overwintering area or as a stop during migration. The surveys conducted indicate that the dominant species in the area of the GCI corridor was the long-tailed duck, and the highest concentrations of the long-tailed duck were found within the Słupsk Bank area. Moreover, the following species of seabirds may potentially occur in the area of the planned Project: velvet scoter, common scoter, black-throated diver, red-throated diver, grebe and European herring gull.

Potential impacts of the construction phase of the planned Project on seabirds will be related to: scaring away of birds wintering and resting in the water region during migration periods as a result of increased vessel traffic, increase in suspended matter concentration in the water column, related to construction works, emission of noise from vessels and equipment necessary to lay and bury the cable line, emission of flue gas from vessels involved in construction works. Installation of transmission cables will result in scaring away migratory and wintering birds in the area of works, thus resulting in their relocation to other parts of the water region. The period of occurrence of migratory and wintering birds in the analyzed area is from October to the end of April. This impact was determined as short-term, as it will cease immediately after the completion of the construction and the increased vessel traffic related to construction works will not differ significantly from the standard traffic in the water region in question. The presence and movement of vessels will be the main source of underwater noise and, at the same time, the main cause of disturbance of seabirds in the water region covered by the construction of the grid connection infrastructure. However, the scaring effect will be local, short-term and reversible, as this impact will cease immediately after the completion of construction works. As part of limiting the negative impact on avifauna, it was ordered to perform installation works in the period from May to the end of September, which will eliminate the possibility of impact on migratory and wintering birds in the above-mentioned area.

The potential impact on seabirds during the operation phase of the planned Project will be related to the local change of habitats/feeding grounds. Destruction of benthic communities in the cable laying/sinking strip will result in temporary limitation of the feeding grounds of birds, mainly long-tailed ducks. Due to the proximity of water regions with abundant food base, this impact was considered insignificant.

#### Impact on atmospheric air:

During the construction phase, the only source of emission of gaseous pollutants into the air will be the combustion engines of vessels and equipment used for laying, sinking/burying cables and optionally for dredging. Combustion engines of vessels shall constitute a source of exhaust gas emissions, in particular: nitrogen oxides (NO), which are dominated by nitrogen dioxide (NO<sub>2</sub>), sulfur oxides (SO), with predominance of sulfur dioxide (SO<sub>2</sub>), carbon oxides and non-methane volatile organic compounds (NMLZO), hydrocarbons and dusts. The size and spectrum of flue gas emissions will depend primarily on the number and size of vessels involved in the works and their involvement in terms of time and space. The quality of the emitted flue gas will be determined by the quality of fuel used by vessels.

The analysis included in the EIA Report did not show any significant negative impact of the project.

The project at the operation stage will not be a source of CO<sub>2</sub> emissions into the atmosphere and will not cause any strengthening of the effect of progressive climate changes. The planned Project is an important element in the process of reducing the impact on the climate by enabling the transmission of renewable electricity from offshore wind farms, which is supposed to reduce the consumption of fossil

fuels. Therefore, the planned Project will have a positive impact on the cleanliness of the atmosphere and on the climate during its operation phase. It will not cause negative impacts, as the control of the cable burial and protection status, which involves vessel sailing and emission from engines, is planned to be performed in the first, third and fifth year, and then every 5 years, from the moment of completion of construction works.

#### Impact on the background noise:

During the construction phase, the main source of noise will be vessels and underwater vehicles used for seabed preparation, laying and burying/sinking of the cable, as well as for dredging and storage of excavated material (optional). It is planned to engage 1 cable-laying vessel, 1 trench vessel and 4 support vessels to lay one cable line. It is estimated that it will take approx. 35 days to lay a single cable line. In the case of a transition piece between the BII OWF and the BIII OWF 2 lines will be laid within approx. 30 days. If a shorter HDD trenchless crossing is executed, which will require deeper trenches (up to the exit beyond the last sandbar), the time of works may be extended to approx. 8 days per cable. Then, a small dredger is planned to be used for the above-mentioned works. In the case of vessels, a noise level in the range from 152 dB re 1  $\mu$ Pa at a distance of 1 m from the source for a small vessel to 192 dB re 1  $\mu$ Pa at a distance of 1 m from the source for a large vessel, e.g. a cable-laying vessel, should be expected. In the case of dredging works related to execution of deeper trenches in the coastal zone and storage of excavated material, the noise generated by the dredger shall not exceed 110 dB. When burying cables into the seabed, the noise (sound pressure) levels reach 178 dB re 1  $\mu$ Pa at a distance of 1 m from the source. At a distance of 160 m from the location of the trench, at a depth of 2 m, the sound pressure level decreases and it is 123 dB re 1  $\mu$ Pa. The noise emitted during the works is variable and depends on the physical properties of the seabed in which the cable is buried.

During the operation phase of the planned Project, the source of noise will be the vessels used for technical inspections. Inspections of the cable burying/protection status will be performed by the Investor with the use of seismoacoustic methods, in the first, third and fifth year, and then every 5 years, from the moment of completion of construction works. Catamarans are planned to be used for the above-mentioned purpose. Considering the above, both the intensity of vessel traffic and the level of generated noise will be occasional, short-term and reversible. The impact was assessed as negligible.

#### Waste management:

At the stage of construction works, it is expected that the waste will be generated by vessels and installation equipment and by vessel crews.

Table 8: List of maximum estimated amounts of waste generated during the construction phase of the offshore part of the planned project

Waste code (*hazardous waste)	Waste type	Estimated maximum quantity [Mg/year]
<b>13</b>	<b>Waste oils and liquid fuel waste (except for edible oils and groups 05, 12, and 19)</b>	
<b>13 01</b>	<b>Waste hydraulic oils</b>	
13 01 09*	Mineral-based chlorinated hydraulic oils	0.05
13 01 10*	Mineral-based non-chlorinated hydraulic oils	0.05
13 01 11*	Synthetic hydraulic oils	0.05
<b>13 02</b>	<b>Waste engine, gear and lubricating oils</b>	
13 02 04	Mineral-based chlorinated engine, gear and lubricating oils	0.05
13 02 05	Mineral-based non-chlorinated engine, gear and lubricating oils	0.05
13 02 06	Synthetic engine, gear and lubricating oils	0.05
13 02 07	Readily biodegradable engine, gear and lubricating oils	0.05
13 02 08	Other engine, gear and lubricating oils	0.05
<b>13 04</b>	<b>Bilge oils</b>	
13 04 03*	Bilge oils from seagoing vessels	0.10
<b>13 05</b>	<b>Oil/water separator contents</b>	
13 05 02	Sludge from oil/water separators	0.05
13 05 06*	Oil from oil/water separators	0.05
13 05 07*	Oily water from oil/water separators	0.05
<b>13 07</b>	<b>Liquid fuel waste</b>	
13 07 01*	Fuel oil and diesel oil	0.05
13 07 02*	Petrol	0.05
<b>13 08</b>	<b>Waste not included in other subgroups</b>	



Waste code (*hazardous waste)	Waste type	Estimated maximum quantity [Mg/year]
13 08 80	Oily solid waste from ships	0.02
<b>14</b>	<b>Waste organic solvents, refrigerants and propellents (excluding groups 07 and 08)</b>	
<b>14 06</b>	<b>Waste organic solvents, refrigerants and foam/aerosol propellents</b>	
14 06 02*	Other chlorinated solvents and solvent mixtures	0.05
14 06 03*	Other solvents and solvent mixtures	0.05
<b>15</b>	<b>Packaging waste; sorbents, wiping cloths, filter materials and protective clothing not specified in other groups</b>	
<b>15 01</b>	<b>Packaging waste (including separately collected municipal packaging waste)</b>	
15 01 01	Paper and cardboard packaging	0.20
15 01 02	Plastics packaging	0.20
15 01 03	Wooden packaging	0.20
15 01 04	Metal packaging	0.20
15 01 05	Multi-material packaging	0.20
15 01 06	Mixed packaging waste	0.20
15 01 07	Glass packaging	0.10
15 01 09	Textile packaging	0.10
<b>15 02</b>	<b>Sorbents, filter materials, wiping cloths and protective clothing</b>	
15 02 02*	Sorbents, filtering materials (together with oil filters not included in other groups), wiping fabrics (e.g. rags and cloths) and protective clothing contaminated with hazardous substances (e.g. PCBs)	0.10
15 02 03*	Sorbents, filter materials, wiping cloths (e.g. rags, cloths) and protective clothing other than those mentioned in 15 02 02	0.10
<b>16</b>	<b>Waste not included in other groups</b>	
<b>16 06</b>	<b>Batteries and accumulators</b>	
16 06 01*	Batteries and rechargeable batteries containing lead	0.10
16 06 02*	Nickel-cadmium batteries and rechargeable batteries	0.10
16 06 04	Alkaline batteries (excluding 16 06 03)	0.10
16 06 05	Other batteries and accumulators	0.10
<b>16 81</b>	<b>Waste generated in consequence of accidents and force majeure events</b>	
16 81 01*	Waste displaying hazardous properties	0.001
16 81 02	Waste other than that mentioned under 16 81 01	0.001
<b>19</b>	<b>Waste from systems and equipment used for waste management, water treatment plants and treatment of potable water and water for industrial purposes</b>	
<b>19 08</b>	<b>Waste from wastewater treatment plants not included in other groups</b>	
19 08 05	Stabilized municipal wastewater sludges	1
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>	
<b>20 01</b>	<b>Municipal waste sorted and selectively collected (except for 15 01)</b>	
20 01 01	Paper and cardboard	0.10
20 01 02	Glass	0.10
20 01 08	Biodegradable kitchen waste	0.20
20 01 29*	Detergents containing hazardous substances	0.10
20 01 30	Detergents other than those mentioned in 20 01 29	0.20
20 01 33*	Batteries and accumulators including those mentioned in 16 06 01, 16 06 02, or 16 06 03, and unsorted batteries and accumulators containing these batteries	0.01
20 01 34	Batteries and accumulators other than those mentioned in 20 01 33	0.01
20 01 35*	Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components (1)	0.05
20 01 36	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	0.05
<b>20 03</b>	<b>Other municipal waste</b>	
20 03 01	Unsorted (mixed) municipal waste	0.10

The generated waste will be stored on vessels in accordance with the marine pollution prevention plan in force on each vessel, drawn up in accordance with the requirements of the Act of March 16, 1995 on the prevention of marine pollution from ships (Journal of Laws of 2023, item 1072).

The collection of waste from vessels will take place in ports. The waste will be handed over to authorized entities in accordance with the port plan for the management of waste and cargo residues from vessels.

## **Impact of the project on the terrestrial environment (at the construction and operation stage):**

### **Impact on ground surfaces:**

The construction of the planned Project will involve a periodical change of the topography in the coastal zone and dunes due to: construction of the HDD crossing launch pit, leveling works for the site back-up facilities in the area of cable landfall, construction of offshore and onshore cable connection sites.

The main impacts of the construction phase on the ground surface and the topography outside of the coastal zone will be related to:

- execution of open-cut trenches necessary to lay cable lines and entry and exit pits at the sections planned to be crossed using trenchless methods (roads, local railway line, wetlands or areas of natural value),
- construction of temporary access roads along the axis of the planned cable tracks and maneuver yards and a permanent access road to the onshore substation,
- land leveling for onshore substations.

Construction of the underground cable line will involve temporary occupation of the area for the construction and erection strip with a width of approx. 30–32 m (including necessary widening, e.g. for the purpose of making trenchless crossings and widening in the area of cable landfall), which will be directly related to construction works. In this strip, a trench with a depth of approx. 3 m and width approx. 10 m will be constructed. It is also allowed to make deeper trenches due to the crossing with underground infrastructure and to make narrower (several) trenches due to staging of works.

In the place of planned smaller trenchless crossings (crossings of roads, watercourses and local railway line), the width of land occupancy will be up to approx. 50–100 m and extension in the area of connection of offshore cables with onshore cables due to the necessity to construct launch and reception pits.

It is assumed that the construction of approx. 1 km of the route section (open-cut trench) will last approx. 12 weeks. Trenches will be made for approx. 11 km section of the underground cable line route, i.e. approx. 80% of the connection route.

During construction works, the excavated soil will be stored in such a way as not to disturb water conditions on neighboring plots and not to adversely affect the transformation of natural topography. The excavated soil will be divided into a surface (organic) layer and remaining soil. It will be covered with foil to prevent weed infestation. Then, after proper cleaning (removal of larger stones and plastics), it will be used to backfill the trenches with an appropriate compaction factor. The excess soil (approx. 19,000 m<sup>3</sup>) generated as a result of filling the trench with technical infrastructure and sand and cement mixture will be transported to the designated storage place.

According to the EIA report, the management of potential excess earth masses will be compliant with the Waste Act and the Regulation of the Minister of the Environment of November 10, 2015 on the list of types of waste that natural persons or organizational units other than entrepreneurs may recycle for their own needs and permissible methods of their recovery.

As part of the planned Project, crossings will be made using trenchless methods through areas of natural value and difficult to cross with an open trench (e.g. Struga Łędowska, regional road, local railway line). Temporary access roads will also be provided in the construction corridor. After completion of the construction works, the areas designated for temporary roads should be restored to their original condition. Some of these roads (i.e., approx. 1.5 km) will be used as permanent access roads. Temporary roads will be paved with aggregate or precast slabs. The selection of the material to be constructed will be adapted to the type of substrate and loads of machines that will move around them. Moreover, in places where, due to the topography and land development, the crossing will not be possible, it is planned to place maneuver yards enabling vehicle turning.

At the operation stage of the planned Project, no impacts that may have a negative impact on the ground surface and the topography are expected also in the coastal zone and the dune strip. In accordance with the EIA Report, at the operation stage of the planned Project, no impacts that may have a negative impact on the soils along the route of the planned GCI are expected, as the functioning of underground cables is maintenance-free and does not require any interference with the soil. The implementation of the planned Project will not lead to deterioration of the soil structure and decrease of agricultural production. It is expected that the land on agricultural land below the soil vegetation layer will not change its intended use for non-agricultural purposes or exclude it from production. In connection with the operation of the underground cable line, heat will be emitted into the ground. The performed calculations show that the thermal impact of cables introduces slight temperature changes at the ground surface in the area above the laid cables. Therefore, the impact of cables on soils during the operation

phase may be considered insignificant.

Permanent transformation of soils will take place in the area of the planned offshore and onshore cable connection sites, onshore substations and permanent access roads. The construction of the onshore substation will exclude the possibility of further agricultural use of black soils and brown soils, II, IIIa and IIIb of valuation class present here.

#### Impact on water:

The planned Project is located within the boundaries of the area of special flood hazard due to the coastal location and presence of the fixed service corridor (up to km 35.12 of the GCI corridor). It was specified by order No. 12 of the Director of Maritime Office in Gdynia of November 9, 2021 on defining the boundaries of the fixed service corridor on the premises of the City and Municipality of Ustka. Fixed service corridor constitutes a zone of mutual impact of the sea and land and it is the area intended for maintaining the shore in a condition that complies with the requirements of safety and environmental protection.

In the coastal zone, the planned Project is fragmented within the boundaries of areas of particular flood risk (construction site for cable landfall and offshore and onshore cable connection sites). A trenchless crossing through the coastal zone practically eliminates flood hazards from the sea side.

The implementation of the planned Project does not pose a threat to the achievement of environmental objectives indicated in the "Water Management Plan in the area of the Oder River Basin" adopted by the Regulation of the Minister of Infrastructure of November 16, 2022 (Journal of Laws 2023.335). In accordance with the above-mentioned Regulation, the project in question will be located:

- in the area of groundwater body, groundwater body code GW600010, which is characterized by good chemical and quantitative condition. The overall condition for the groundwater body was determined as good. Assessment of the risk of failing to meet the environmental objective is not threatened. The environmental objectives for the groundwater body are: good chemical condition and good quantitative condition,
- in the area of the surface and coastal water body called the "Polskie wody przybrzeżne basenu Bornholckiego", code CW60001WB3. It is a natural water body, which is characterized by bad ecological status and chemical status below good. Generally bad status. The environmental objectives for the above-mentioned surface water body are moderate ecological status and good chemical status. The assessment of the risk of failure to achieve the environmental objective is at risk. Deadline for achieving the environmental objective by 2027; priority substances introduced by Directive 2013/39/EU – by 2039,
- in the area of the surface water body Pogorzeliczka, code RW6000104716129. The surface water bodies have the status of natural water bodies characterized by bad ecological status and chemical status below good. The general condition of waters was defined as bad with a risk of failure to achieve environmental objectives. Environmental objectives are good ecological status; ensuring the passability of the watercourse for ichthyofauna migration, provided that the diadromous indicator D and the chemical condition are monitored: for mitigated indicators (benzo(a)pyrene(w)) below good status, for other indicators – good status,
- in the area of the surface water body Moszczeniczka, code RW60001046729. The surface water bodies have the status of natural water bodies for which the chemical and ecological status has not been determined. The environmental objectives for the surface water body are: good ecological status; ensuring the passability of the watercourse for migration of economically important species at the section of the Moszczeniczka main watercourse within the surface water body (for migratory trout) and good chemical condition. The assessment of the risk of failure to achieve the environmental objective is at risk,
- in the area of the surface water body Potyń, code RW6000134716 has the status of natural water bodies with moderate ecological status and good chemical status. The general condition of waters was defined as bad with a risk of failure to achieve environmental objectives. Environmental objectives are good ecological status and chemical status: for mitigated indicators (benzo(a)pyrene(w)) below good status, for other indicators – good status,
- in the area of the surface water body Modła, code LW90084. The surface water body has the status of natural water bodies characterized by good chemical condition. Assessment of the risk of failing to meet the environmental objective is not threatened. The environmental objectives are good ecological status and good chemical status.

The impact of the construction phase of the planned Project on water resources will involve the necessity to cross watercourses (Struga Lędowska and Pogorzeliczka) and ditches, drainage of

trenches and leveling and hardening of the area.

The impacts of the construction phase on the Lędowska stream will be local and short-term and will not disturb the hydrological conditions of the Modła Lake with the use of a trenchless crossing. Pollution of soil and water is unlikely and applies only to a short-term construction stage of underground cable lines. Moreover, the application of the proposed solutions will limit the possibility of creation of a depression cone and drying of the hydrogenic soils present here. Due to the uniqueness and sensitivity to changes in water conditions of the Modła Lake, it is forbidden to collect water necessary for drilling mud (due to the planned HDD trenchless crossing) from the Modła Lake and to discharge water to this Lake and adjacent watercourses. The construction equipment used may additionally pose a potential risk of pollution caused by equipment failure and leakage of hazardous substances from construction vehicles and machines. In this respect, it is essential to ensure its proper condition and only equipment in good technical condition should be allowed for works.

Pogorzeliczka may be crossed with an open trench, as this does not require any interference with the watercourse along the entire width of the construction corridor, but on the width of approx. several meters. In case of difficulties in crossing the watercourse with an open trench and land drainage, it is allowed to use HDD method. The conducted assessment showed that the impact of the construction phase on Pogorzeliczka will be local and short-term.

Construction of underground cable lines will involve leveling of the area. The planned leveling will be of local nature and will not contribute to changes in the infiltration process of rainwater and thaw water.

The impact of the construction phase of the planned Project on underground waters will require drainage of trenches (up to approx. 4 km of the route in the northern part of the GCI). In such a case, pumps, wellpoints or additional drainage trenches will be used. Drainage water will be discharged outside of the construction site to the existing drainage ditches (outside of the area of Struga Lędowska) upon the consent of the receiver administrators and in accordance with the applicable provisions of law.

The impact of the construction phase of the planned Project on water resources will be moderate, with the proviso that the works in the area of Struga Lędowska should be carried out using the proposed solutions: it is forbidden to collect water necessary for drilling mud from the Modła Lake and to discharge water to this Lake and adjacent watercourses.

To sum up, the construction phase will affect surface waters to a small extent mainly by introducing paved surfaces (access road to the onshore substation and connection points of offshore and onshore cables, buildings within the onshore substation) and limiting infiltration of rainwater in this place. This impact was assessed as negligible.

The operation phase of the planned Project is a virtually maintenance-free process with respect to the underground cable line, limited to service and maintenance works, mainly in the places of cable connection, i.e. the so-called cable joints and connection sites of offshore and onshore cables. In this respect, the impact on surface water quality will involve potential pollution as a result of accidental leakages from machines and vehicles in connection with service works. Maintenance and service works of the systems and equipment will be carried out with the use of technically efficient equipment and with the use of appropriate protections in accordance with the provisions of law and internal guidelines of the Investor.

Potential impacts on water will affect only two planned onshore substations and their operation.

During the operation phase, the water demand of the onshore substation for welfare and fire protection purposes will be low (estimated at approx. 0.3 m<sup>3</sup>/day). It is expected that the water supply source will be the water supply pipeline. During the operation of the planned project, precipitation water, gray and black water will be generated on the premises of the onshore substation.

Precipitation water from the onshore substation paved areas will be collected and discharged to a receiver in accordance with the Water Law. The functioning of the onshore substation may involve an accidental leakage of insulating oils, electrolytes, foam-forming extinguishing agents, fuel to the power generator set into the ground and possible penetration into surface waters. In order to prevent potential failures, it is planned to equip the transformers with oil pans connected with the rainwater pre-treatment system (oil separation). For batteries, it is planned to use trays or cuvettes capturing electrolyte in case of their leakage. Moreover, the substation will be equipped with portable sets of sorbents and agents for the purpose of controlling spilled and leaking hazardous substances, which is adjusted to the size of the facility and the number of instruments containing such substances.

Gray and black water generated in the amenity building serving the planned onshore substations will be generated in small quantities (several people will be permanently present in the substation) and will be discharged to the sanitary sewerage system or to the septic tank.

#### Project impact on the natural environment:

### Vegetation:

During the survey, 11 species of vascular plants of natural value were found in the Investor's option, including 11 taxons subject to legal protection. Apart from valuable species of vascular plants, the biological survey showed the presence of 12 species under partial protection of bryophytes. No bryophytes species under strict protection were found. The area of the onshore corridor of the planned grid connection is characterized by a variety of moss species typical for the forests of the Gdańsk Pomerania. All moss species are common taxons.

The survey of natural habitats in the area of the onshore corridor showed the presence of 9 natural habitats. Their conservation status and prospects are diverse, but they are an important component of Pomerania biodiversity and vegetation of the coastal zone of the southern Baltic Sea.

In the northern and southern part of the planned connection infrastructure there are forests – the characteristics of the environmental status for forests showed that in the corridor of the planned Project the route of which passes through forest areas there are mainly forests and fresh forests. In total, within the boundaries of the GCI corridor, there is approx. 49 ha of forests administered by the State Forests, but the scope of necessary clearing for construction purposes will be smaller.

Three species of macrofungi of natural value, including one species – chaga – *Inonotus obliquus* subject to partial protection were found within the corridor of the planned Project, in the Investor's option. No species under strict protection were found.

The surveyed area is also characterized by significant wealth and diversity of lichen (lichenobiota), with a large share of valuable (protected, rare, endangered) species. During the survey, eight lichen species of natural value were found within the GCI corridor in the Investor's option, including two species subject to strict legal protection: cartilage lichen (*Ramalina fraxinea*) and even-topped branch-moss (*Ramalina fastigiata*), five species subject to partial legal protection.

The main impacts of the construction phase on vegetation and natural habitats will involve temporary occupation of the area for the construction corridor with a width of approx. 30–32 m (locally enlarged in the area of trenchless crossings and extension in the area of cable landfall), including the construction of temporary paved roads with a length of approx. 13 km and fixed with a length of approx. 1.5 km (to the offshore and onshore cable connection station and the onshore substation). At a section of approx. 11 km, i.e. approx. 80% of the route, an open-cut trench will be constructed, its width will be approx. 10 m and depth approx. 3 m. This will be an area where the top layer of soil will be destroyed, and trees and shrubs will be removed.

In connection with the implementation of the planned Project, cutting will take place in the construction corridor, the area of which will amount to maximum 23.1 ha. In the northern part of the GCI, forest felling will occur at a section of approx. 2 km (between 35 and 37 km), and in the southern part at the section of approx. 5.5 km (between 42.4 and 47.5 km). The total area of 14.32 ha felling does not reflect the actual land cover due to the lack of data on forests in the Forest Databank and the presence of closed areas along the GCI route.

The construction phase also involves the operation of construction vehicles and machines as well as the emission of noise and dust. The construction equipment used may additionally pose a potential risk of pollution caused by equipment failure and leakage of hazardous substances. In this respect, it is essential to ensure its proper condition and only equipment in good technical condition should be allowed for works. During the construction phase, due to the participation of heavy equipment, losses and abrasions may occur in the trunk area at a height of 2–4 m. In order to prevent this, mitigation measures related to the protection of trees occurring along the construction corridor were proposed.

After completion of the construction phase, the site will be restored to its original condition, excluding the fixed service corridor with a width of 20 m for the 400 kV line and 10–31 m for the 220 kV line, which will be permanently deforested. Agricultural areas will return to their original condition and will be used for agricultural purposes. In order to limit the impact on protected species, metaplantation of Orchis and common honeysuckle was proposed. The impact of the construction phase of the planned Project on vegetation and habitats will be moderate due to transformation and occupation of the area and removal of vegetation and natural habitats in the construction corridor. The impact of the operation phase of the planned Project on vegetation and habitats will be moderate and will mainly involve the change of species composition and the possibility of occurrence of invasive plant species. In order to limit the impact of the operation phase on vegetation and habitats, it is proposed to include the fixed service corridor in the as-built environmental monitoring for the expansion of invasive plant species.

### Invertebrates:

Within the corridor of the planned Project and in the area of potential impact of the grid connection, two invertebrate species under partial species protection and species of the genus *Bombus* sp. were

found in the Investor's option. They include: red wood ant (*Formica rufa*), Talitrus saltator (*Talitrus saltator*) and bumblebees (*Bombus* sp.). The most frequently found species was the red wood ant (7 sites). The presence of other species was determined on the basis of individual findings. During the construction phase, invertebrates will be scared away and their habitats will probably be destroyed. The species found during the wildlife survey may be considered common on a national scale (red wood ant, bumblebees). The impact of the construction phase and the operation of the planned Project on the fauna of invertebrate animals will be insignificant.

#### Ichthyofauna:

Struga Łędowska, which is characterized by constant water flow, is of the greatest importance for ichthyofauna in the corridor of the planned Project. However, poor species composition and low fish abundance were demonstrated here. These include northern pike (*Esox lucius*) and tench (*Tinca Tinca*), as well as three-spined stickleback (*Gasterosteus aculeatus*). In other watercourses, fish may occur periodically, mainly in estuaries.

Due to the poor composition of the Struga Łędowska ichthyofauna, no significant impacts of the planned Project on ichthyofauna should be expected at any of its stages.

#### Herpetofauna:

The conducted wildlife survey showed that two representatives of reptiles (sand lizard – three sites, grass snake – two sites) and five representatives of amphibians were found in the area of the GCI corridor. The groups of amphibian species found include brown frogs (including common frog and moor frog) and a complex of green frogs and common toad. Except for moor frog, which is under strict species protection, all identified species are partially protected. Three species and representatives of the green frog complex are listed in the Annexes to the EU Habitats Directive. The most common species in the area of the planned Project were the species included in the group of brown frogs and the complex of green frogs.

Habitats and breeding sites of herpetofauna that are located in the construction corridor and will be destroyed will be the most exposed to impacts related to construction works include: common toad *Bufo bufo*, moor frog *Rana arvalis*, common frog *Rana temporaria*, brown frogs not classified as *Rana* sp., complex of green frogs *Pelophylax esculentus* complex, sand lizard *Lacerta agilis*. However, it should be noted that some of the breeding sites will be crossed using the trenchless method, which will significantly reduce the impact on herpetofauna, especially in the area of 39 km. Moreover, preparatory and earthworks will hinder or prevent migration of amphibians to breeding sites and/or overwintering areas.

In order to reduce the risk of destruction or deterioration of the quality of these habitats and in order to reduce the mortality of amphibians during the construction phase, it is necessary to introduce protective measures, which include:

- placement of temporary protective fencing, i.e. during migration and reproduction of amphibians and reptiles (from March 1 to October 15) on both sides of the construction corridor, in places where open trenches are carried out,
- in spring (from March 1 to April 30) and autumn (from August 15 to October 15), in places of intensive migration of amphibians on animal migration routes, apart from the protective fence, a system of buckets sunk into the ground, distributed along the fence, should be used.

The construction phase should be supervised by a herpetologist. If habitats of amphibians are destroyed, it will be necessary to catch herpetofauna and move it to substitute habitats.

#### Avifauna:

The conducted wildlife survey showed that 21 breeding sites of 10 bird species were confirmed in the area of the GCI corridor. Including sites of black woodpecker (*Dryocopus martius*), red-backed shrike (*Lanius collurio*), woodlark (*Lullula arborea*), red-breasted flycatcher (*Ficedula parva*) and common crane (*Grus grus*), i.e. valuable species listed in Annex I to the EU Birds Directive.

Impacts during the construction phase will consist mainly in the transformation of the environment as a result of destruction of habitats, e.g. by deforestation of the construction corridor, construction of new access roads, occupation of land for the onshore substations and fragmentation of habitats caused by deforestation and construction of access roads. These impacts will be moderate.

Provided that mitigation measures are applied, the implementation of the planned Project will not have a negative impact on any of the identified species and their habitats, as well as on the condition of their populations both at the national and regional scale. In order to minimize the negative impact of the

planned Project on the populations of breeding birds: felling of trees and shrubs should be carried out outside of the bird nesting season, i.e. outside of the period from March 1 to August 31 (confirmed by an ornithologist, as the nesting periods may commence later or earlier), at the construction stage, measures should be taken to minimize and prevent the nesting of the sand martin *Riparia riparia*. In the case of cutting trees with destruction of habitats of birds inhabiting hollows, compensating actions will be necessary, consisting in hanging bird nesting boxes in the adjacent forest areas and trees and shrubs outside of forests.

The planned Project consisting of underground cable lines in the long term will not cause negative impacts on breeding, wintering and migratory birds, in particular on avifauna of the nature reserve "Lake Modła" and ecological corridors. During the operation phase of the planned Project, potential impacts on birds may involve a change of habitat conditions and cyclical removal of vegetation and maintenance works. These impacts will be insignificant.

#### Terrestrial mammals:

Two species of mammals under partial species protection, including one listed in Appendices II and V of the EU Habitats Directive – European beaver *Castor fiber* – were found within the corridor of the planned Project and in the area of potential impact in the Investor's option. Among valuable species, squirrel was most commonly encountered. In addition, 686 observations of representatives of 13 species of mammals that crossed the survey area during migration were made.

During the construction phase, mammals will be scared away and their habitats will likely be destroyed, which will be restored. Small mammals occupying various microhabitats that will be removed during the construction will be the most exposed to works related to the construction phase. Earthworks will temporarily hinder migration of mammals, especially ungulates.

During the operation phase of the planned Project, potential impacts on mammals may involve scaring during service works and cyclical clearance of greenery. After completion of construction works, the area of the planned Project and the boundaries of the fixed service corridor with a width of 20 m for the 400 kV line and 10–31 m for the 220 kV line will be subject to succession processes. New habitats will be created that can be used by animals, which will mitigate the effects of land transformation and fragmentation during construction. The route of the underground cable will not be fenced, therefore it will not constitute an obstruction during migration of mammals. No negative impacts on mammalian species are expected, related to the emission of magnetic fields and heat, which will not differ significantly from the background radiation. Also the noise generated by the onshore substation, which will be much lower than e.g. traffic noise, will not have a significant impact on the discussed group of animals. The project, in the long-term, will not cause negative impacts for mammals.

#### Chiroptero fauna:

Four bat species, two of which were found in the Investor's option, were found within the corridor of the planned Project and in the area of potential impact. All of them are under strict species protection in Poland and are listed in Annex IV to the EU Habitats Directive. Four potential breeding sites of the Nathusius' Pipistrelle and four hiding places that are hibernation sites of the common scoter were found. Four confirmed places constituting overwintering areas for bats are located within the corridor of the planned Project in the Investor's option and in the impact area.

The impact on chiroptero fauna can be minimized by carrying out construction works outside of the bat wintering period, i.e. from April 1 to November 15, or carrying out works under the supervision of a chiropterologist.

Moreover, during the construction phase, bats may be incidentally scared away and their habitats destroyed. Parts of the forest where swarmings of soprano pipistrelles was found (36.6 km GCI) will be the most exposed to impacts. In order to minimize the impact, tree cutting from wooded areas should be carried out outside of the breeding period and the peak of activity, i.e. outside of the period from June 1 to September 15 and under environmental supervision of a chiropterologist. Moreover, in order to compensate for lost habitats due to cutting trees, four bat boxes should be hung, for each 1 ha of forest or trees and shrubs outside of forests. Boxes for bats should be hung. The boxes should be located both inside of the forest and at its edge, in the direct vicinity of the planned Project.

#### Impact on atmospheric air:

The planned Project will have an impact on the air purity during the construction phase due to: flue gas emissions from equipment and vehicles on the construction site, fugitive dust emissions (dusting from heaps and ground roads).

Operation of equipment and vehicles powered by internal combustion engines results in emission of flue

gas containing pollutants such as NO<sub>x</sub>, PM<sub>10</sub>, volatile organic compounds (VOC) and carbon monoxide (CO). The emitted quantities depend on the engine type, operating pattern, operating history and fuel composition. Emission of pollutants into the air at the construction stage will result from the operation of groups of equipment operating simultaneously on small parts, so the emission will be spread over time and space. It is assumed that the construction of 1 km of the route section (open-cut trench) will last approx. 12 weeks. The highest pollutant concentration results from NO<sub>2</sub> emission, which is a natural consequence of diesel combustion.

In the case of construction machines used in trenchless technology, it is estimated that there will be a smaller negative environmental impact related to carbon dioxide emissions compared to traditional methods. When drilling in trenchless technology, much less diesel-powered equipment is needed, as mainly hydraulic power units and generator-driven pumps are used, and the excavator's operation time is limited.

Fugitive emission in the form of dust during the implementation of the planned Project may be caused by various activities: movement of vehicles on ground and gravel roads, earthworks. Fugitive dust emissions generated during construction works will be variable, depending on soil type, weather conditions and road pavement conditions. Construction works may contribute to a local and short-term increase in the concentration of this dust. Activities causing fugitive dust emission include: traffic of heavy vehicles on the construction site on dry or paved transport roads, earthworks, due to transport, storage and removal of soil, use of construction aggregate, due to transport, unloading, storage and use of dry and dusty materials (such as cement and sand).

During the operation phase, there will be no significant sources of emission of pollutants into the air, they will be related only to maintenance and service works and will be limited to specific locations. The impact on the climate during the operation phase will be positive. The implementation of the planned Project is closely related to the construction of the Bałtyk II and Bałtyk III offshore wind farms and cannot operate independently. Decisions on environmental conditions have been issued for the Bałtyk II and Bałtyk III offshore wind farms. Generation of electricity from wind farms being a non-emission and renewable energy source will significantly reduce emissions from coal combustion. It is estimated that the productivity of both farms will amount to approx. 10,660 GWh per year, with a maximum capacity of 1.2 GW of each farm. As a result of operation of both offshore wind farms, it will be possible to avoid the emission of pollutants to the atmosphere in the form of CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and dust.

#### Impact on acoustic climate:

The impact on the acoustic climate during the construction phase will be generated by vehicles and machines used during the construction, and its level will vary depending on the project implementation phase and the type of used equipment. The noise will be related to the transport of construction materials, equipment and people; it will affect both the areas of direct construction works and the areas in the vicinity of access routes. The construction phase of underground cable lines and onshore substation will be a source of temporary noise which will be generated by:

- preparatory works, organization of site back-up facilities, equipment base, deliveries of materials;
- tree cutting with grubbing up of roots for cable lines and access roads;
- earthworks carried out using excavators and consisting in digging a trench for cable lines;
- execution of directional drilling in trenchless locations;
- drainage of trenches with the use of wellpoints;
- earthworks carried out with bulldozers consisting in backfilling of the ditch and leveling of the area.

The construction duration will be up max. 1.5 years. Due to the linear nature of the project and the specificity of performing works in the open air, the noise will occur only in the section where the works are carried out and will subside as the construction works progress.

Sample noise levels (at a distance of 7 m from the operating equipment) emitted by construction equipment and machines are as follows:

- tracked excavator – 85 dB;
- bulldozer – 87 dB;
- power generator set – 80 dB.

As part of the planned Project, trenchless crossings will be made, which constitute an additional source of noise. Then, there is more machinery at the construction site than in the case of execution of the section using the open-cut method. Additionally, these are pumps with acoustic power of approx. 93 dB, device for drilling fluid recycling and recovery with acoustic power of approx. 99 dB, mixer for drilling fluid preparation with acoustic power of 89 dB and drilling rig with acoustic power of approx. 108 dB. The basic difference increasing the impact on the acoustic climate of trenchless methods is the necessity



of continuous operation (throughout the day).

Construction works will be carried out, in principle, entirely in the vicinity of forest and agricultural areas at a distance from the areas subject to legal acoustic protection. In the impact zone of the planned Project there are three residential buildings whose residents may be temporarily exposed to noise emission.

In order to reduce the nuisance of noise, it is proposed that at the sections of the route of connections adjacent to the residential development of Lędowa, Peplin and Gajek (km GCI: 37.7–38.2; 44.9–45.4; 45.6–46.1), construction works be performed only during daytime, excluding Sundays and public holidays (except for works that must be performed continuously, e.g. drilling).

Noise generated during the construction phase will be limited in time, short-term, direct and local.

The acoustic nuisance of the GCI of the Bałtyk II OWF and Bałtyk III OWF during the operation phase will involve the operation of the onshore substation substations. The area of the analyzed onshore substations is covered by the provisions of the local spatial development plan (Local Development Plan) in accordance with Resolution No. XLV.564.2018 of the Ustka Municipal Council of October 26, 2018 on the adoption of a local spatial development plan for a part of the area located within the Peplino cadastral district, Municipality of Ustka. In accordance with the above-mentioned Local Development Plan, the area of the planned substations are areas of location of power equipment for which no requirements with respect to the permissible noise level have been specified.

To the north-east of the area of the designed substations, in accordance with the local spatial development plan for the area covering the cadastral district of Peplino, Municipality of Ustka, there are agricultural, industrial and service areas (printing company) and a small part of the area intended for residential development.

The results of the model calculations showed that after construction and start-up, the functioning onshore substations with all of the equipment that the noise source continuously in operation (24 h/day) with maximum acoustic power will not result in exceeding the permissible sound level determined for nighttime (40 dB) and daytime (50 dB) in the area of the nearest existing protected development.

#### Waste management:

The planned Project in the onshore part involves the generation of waste at each of its stages.

The implementation of the planned Project will be a source of waste generated by typical construction works related to the execution of cable trenches and construction of onshore substations.

During the execution of the trenchless crossing from the sea to the shore, waste with code 16 10 02 *Aqueous liquid wastes other than those mentioned in 16 10 01* will be generated. The amount of waste will result from the adopted trenchless technology and is estimated at approx. 600 – 800 m<sup>3</sup>.

Table 9. List of maximum estimated amounts of waste generated during the construction phase of the onshore part

<b>Waste code</b> (*hazardous waste)	<b>Waste type</b>	<b>Estimated maximum quantity</b> <b>[Mg/year]</b>
<b>05</b>	<b>Wastes from petroleum processing, natural gas purification and pyrolytic treatment of coal</b>	
05 0117	Bitumen	0.04
<b>08</b>	<b>Waste from production, preparation, trading and application of protective coatings (paints, veneers and ceramic enamels), putties, glues, sealing agents and printing paints</b>	
08 01 11*	Waste paint and varnish containing organic solvents or other hazardous substances	0.25
08 01 12	Waste paint and varnish other than those mentioned in 08 01 11	<0.3
08 01 17*	Wastes from paint or varnish removal containing organic solvents or other hazardous substances	0.06
<b>13</b>	<b>Waste oils and liquid fuel waste (except for edible oils and groups 05, 12, and 19)</b>	
13 03 07*	Readily biodegradable engine, gear and lubricating oils	0.22
<b>15</b>	<b>Packaging waste; sorbents, wiping cloths, filter materials and protective clothing not specified in other groups</b>	
15 01 01	Paper and cardboard packaging	<1.9
15 01 02	Plastics packaging	<1.9
15 01 03	Wooden packaging	<3.7
15 01 04	Metal packaging	<1.9

Waste code (*hazardous waste)	Waste type	Estimated maximum quantity [Mg/year]
15 01 06	Mixed packaging waste	0.5
15 01 10*	Packages including hazardous substance residues or contaminated by such substances	5.5
15 02 02*	Sorbents, filtering materials (together with oil filters not included in other groups), wiping fabrics (e.g. rags and cloths) and protective clothing contaminated with hazardous substances (e.g. PCBs)	0.6
15 02 03	Sorbents, filter materials, wiping cloths (e.g. rags, cloths) and protective clothing other than those mentioned in 15 02 02	0.6
<b>17</b>	<b>Waste from construction, renovation and demolition of civil structures and road infrastructure (including soil and soil from polluted areas)</b>	
17 01 01	Concrete waste and concrete debris from demolitions and renovations	1.3
17 01 03	Tiles and ceramics	0.03
17 01 07	Mixtures of concrete, brick rubble, waste ceramics and equipment components	216
17 01 81	Waste from road repairs and reconstruction	6.2
17 02 01	Wood	75
17 02 03	Plastics	1.9
17 03 01*	Bituminous mixtures containing coal tar	1.5
17 04 01	Copper, bronze, brass	1.6
17 04 02	Aluminum	0.3
17 04 03	Lead	0.8
17 04 04	Zinc waste	0.01
17 04 05	Iron and steel	0.3
17 04 07	Mixed metals	7
17 04 11	Cables other than those mentioned in 17 04 10	1
17 05 04	Soil and stones other than those mentioned in 17 05 03*	160
17 06 04	Insulation materials other than those mentioned in 17 06 01 and 17 06 03	11
17 09 03*	Other construction and demolition wastes (including mixed wastes) containing hazardous substances	0.3
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>	
20 01 01	Paper and cardboard	<0.3
20 01 02	Glass	<0.3
20 01 21*	Fluorescent tubes and other mercury-containing waste	<0.06
20 01 39	Plastics	<0.3
20 01 40	Metals	<0.6
20 03 01	Unsorted (mixed) municipal waste	<2

During demolition works, waste from group 17 will be generated – wastes from the construction, renovation and demolition of buildings. The demolitions will concern only the old shooting range facility (35.6 km) and the 15 kV overhead line (41.9-42.4 km). During demolition works, waste will be generated, such as concrete and concrete debris, bituminous compounds, cables and wood, iron and steel.

Table 10. List of maximum estimated amounts of waste generated during the demolition works

Waste code (*hazardous waste)	Waste type	Estimated maximum quantity [Mg/year]
<b>17</b>	<b>Wastes from the construction and renovation of buildings</b>	
17 01 01	Concrete waste and concrete debris from demolitions and renovations	58.0
17 02 01	Wood	1.0
17 02 02	Glass	0.5
17 02 03	Plastics	0.01
17 04 01	Copper, bronze, brass	0.01
17 04 05	Iron and steel	18.0
17 04 11	Cables other than those mentioned in 17 04 10	0.01
17 05 03*	Soil and stones containing dangerous substances (e.g. PCB)	0.01
17 05 04	Soil and stones other than those mentioned in 17 05 03	0.01
17 06 04	Insulation materials other than those mentioned in 17 06 01 and 17 06 03	0.01
17 09 03*	Other construction and demolition wastes (including mixed wastes) containing hazardous substances	0.15

According to the EIA report, all generated waste will be:

- sorted in containers on site and transported to the local collection plant by specialized external companies – in accordance with the permits for waste transport and handling, hazardous waste should be collected in marked, closed and leak-tight containers;
- wastewater will be collected in tanks. Further handling of wastewater will be carried out by companies holding relevant permits.

Transport and further waste management will be the responsibility of specialized companies – in accordance with the permits for waste transport and management. All generated waste and wastewater shall be collected and then delivered to an approved treatment plant in accordance with legal requirements. No direct discharge of wastewater into the environment is planned.

During the operation phase of the planned Project, small amounts of waste will be generated as a result of operation of the OnS. These will include waste generated as a result of normal operation of the facilities, as well as waste generated during periodical maintenance and overhaul works.

Table 11. List of maximum estimated amounts of waste generated during one year of the operation phase in the onshore part

Waste code (*hazardous waste)	Waste type	Estimated maximum quantity [Mg/year]
<b>08</b>	<b>Waste from production, preparation, trading and application of protective coatings (paints, veneers and ceramic enamels), putties, glues, sealing agents and printing paints</b>	
08 01 11*	Waste paint and varnish containing organic solvents or other hazardous substances	<0.375
08 01 17*	Wastes from paint or varnish removal containing organic solvents or other hazardous substances	0.06
08 01 18	Wastes from paint or varnish removal other than those mentioned in 08 01 17	0.01
<b>13</b>	<b>Waste oils and liquid fuel waste (except for edible oils and groups 05, 12, and 19)</b>	
13 01 05*	Non-chlorinated oil emulsions	1.0
13 02 05*	Mineral-based non-chlorinated engine, gear and lubricating oils	1.0
13 03 07*	Readily biodegradable engine, gear and lubricating oils	0.2
13 05 02*	Sludge from oil/water separators	0.03
13 05 06*	Oil from oil/water separators	0.01
13 05 07*	Oily water from oil/water separators	<0.01
<b>15</b>	<b>Packaging waste; sorbents, wiping cloths, filter materials and protective clothing not specified in other groups</b>	
15 01 01	Paper and cardboard packaging	0.01
15 01 02	Plastics packaging	0.01
15 01 10*	Packages including hazardous substance residues or contaminated by such substances	0.5
15 02 02*	Sorbents, filtering materials (together with oil filters not included in other groups), wiping fabrics (e.g. rags and cloths) and protective clothing contaminated with hazardous substances (e.g. PCBs)	0.3
15 02 03	Sorbents, filter materials, wiping cloths (e.g. rags, cloths) and protective clothing other than those mentioned in 15 02 02	0.02
<b>16</b>	<b>Waste not included in other groups</b>	
16 01 07*	Oil filters	0.06
16 02 13*	Discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12	0.6
16 02 14	Used devices other than listed under 16 02 09 to 16 02 13	0.004
16 02 15*	Hazardous components removed from discarded equipment	0.004
16 02 16	Components removed from discarded equipment other than those mentioned in 16 02 15	0.004
16 05 04*	Gases in pressure containers (including halons) containing dangerous substances	0.02
16 06 01*	Batteries and rechargeable batteries containing lead	1.9
16 06 02*	Nickel-cadmium batteries and rechargeable batteries	0.3
16 06 04	Alkaline batteries (except 16 06 03)	0.1
<b>17</b>	<b>Waste from construction, renovation and demolition of civil structures and road infrastructure (including soil and soil from polluted areas)</b>	
17 01 03	Tiles and ceramics	0.01

17 04 01	Copper, bronze, brass	0.01
17 04 02	Aluminum	0.01
17 04 05	Iron and steel	0.01
17 04 11	Cables other than those mentioned in 17 04 10	2.0
17 09 03*	Other construction and demolition wastes (including mixed wastes) containing hazardous substances	0.004
17 09 04*	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 (SF6 waste)	0.01
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>	
20 0101	Paper and cardboard	<0.3
20 01 02	Glass	<0.3
20 0121*	Fluorescent tubes and other mercury-containing waste	<0.01
20 01 39	Plastics	<0.3
20 0140	Metals	<0.3
20 03 01	Unsorted (mixed) municipal waste	<0.6

The amount of waste generated during the OnS operation phase will be much smaller than during the construction phase. The onshore substation is a source of negligible amount of waste generated during its operation. Small amounts of waste classified both as hazardous and non-hazardous may be generated.

It is assumed that the need for maintenance repairs will not occur earlier than after a dozen or so years of operation. Waste generated during the operation phase shall be disposed for neutralization in containers prepared for this purpose by authorized companies.

#### Impact on landscape:

The impact of the planned Project on the landscape during the construction phase will be related to the necessity to remove trees and shrubs in the construction strip with a width of 30–32 m up to approx. 50–100 m and extension in the area of connection of offshore and onshore cables, construction works, the presence of construction machinery and equipment, executed trenches, and will cease after completion of the works. The route of the GCI corridor in the northern part will run partly along the road leading towards the beach, through patchily transformed woodland. In the area of 35.5 km there is a storage yard for debris, construction elements which, as part of the site preparation, will need to be cleaned up. A small section of the forest road is hardened.

After completion of the construction works, the areas along the trenches will be restored for their earlier use. However, due to permanent deforestation, the impacts will be long-term and permanent.

The OnSs will be constructed in the agro-industrial landscape. The OnSs will be constructed on agricultural land, in the close vicinity of the MOWI S.A. fish processing plant. The substations will be located more than 700 m to the south of the nearest buildings. Negative impacts will mainly concern onshore substations (OnS), which will become a permanent element of the agro-industrial landscape of the commune of Ustka, though they will not dominate the area's landscape.

The planned Project is located in the Protected Landscape Area of the Coastal Zone to the West of Ustka, between 35 and 37 km of the corridor, which is dominated by forests. The impact on the protected landscape area during the construction phase will mainly concern temporary transformation and occupation of the area, removal of vegetation and periodic scaring of fauna.

The applicable legal act in the Protected Landscape Area of the Coastal Zone to the West of Ustka is Resolution No. 259/XXIV/16 of the Parliament of the Pomorskie Voivodeship of July 25, 2016 on protected landscape areas in the Pomorskie Voivodeship which includes provisions resulting from the requirements of landscape protection. The geographical, natural and landscape specificity is the immediate vicinity of the sea and the associated diversified plant world from the pioneering coastal dune vegetation with protected sea holly (*Eryngium maritimum*), through wetland vegetation in the vicinity of the Modła Lake, up to forest communities, including mainly coastal coniferous woods. Two coastal lakes are typical of this landscape: Modła and Wicko. Pursuant to Article 24 section 2 point 3 of the Act of April 16, 2004 on nature conservation (*consolidated text: Journal of Laws of 2023, item 1336, as amended*), prohibitions do not apply to the implementation of public-purpose projects which, pursuant to Article 6 point 4a of the Act of August 21, 1997 on real property management (*consolidated text: Journal of Laws of 2023, item 344, as amended*), include the project in question.

In the protected landscape area, the major part of the project will be executed using the trenchless method.

The use of trenchless methods and the related lack of tree and shrub clearing will limit the impact of the operation of the planned Project on landscape.

#### Impact on the climate:

The implementation of the planned project will be related to:

- periodic local increase in greenhouse gas emissions during the project implementation phase (traffic of vehicles and machinery in the construction site, deforestation, waste generation);
- periodic increase in the energy demand for construction purposes, leading to an indirect increase in greenhouse gas emissions;
- greenhouse gas emissions related indirectly to the energy consumption of the project, e.g. in connection with the use of energy for production of materials, transport, etc.

During the GCI construction phase, the significance of the impact of the planned investment project on climate and greenhouse gases will be negligible, as there will be no factors that could have a noticeable impact on its change.

Mitigation measures, i.e. preventing or reducing greenhouse gas emissions (and thus mitigating climate change), mainly consist in increasing the share of energy from renewable sources in gross final energy consumption, improving energy efficiency, reducing the energy intensity of the economy, CO<sub>2</sub> sequestration. In the case of CO<sub>2</sub>, NO<sub>2</sub> and suspended particulate matter, standard mitigation measures consist in:

- performance of the works in the daytime in daylight,
- limiting the operation of vehicle engines to the necessary minimum,
- use of modern and efficient equipment,
- location of the project in places ensuring the optimum, in terms of pollution, manner of transport and its proper organization.

The planned Project during the construction phase will not have a significant impact on climate, with a minor impact on air purity. This impact will be short-term, direct, limited to the boundaries of the Project impact area, and restorable. Flue gas emissions during the construction of such projects are not standardized.

The impact on the climate during the operation phase will be positive. The implementation of the planned Project is closely related to the construction of the Bałtyk II and Bałtyk III offshore wind farms and cannot operate independently. Decisions on environmental conditions have been issued for the Bałtyk II and Bałtyk III offshore wind farms. Generation of electricity from wind farms being a non-emission and renewable energy source will significantly reduce emissions from coal combustion. It is estimated that the productivity of both farms will amount to approx. 10,660 GWh per year, with a maximum capacity of 1.2 GW of each farm. As a result of operation of both offshore wind farms, it will be possible to avoid the emission of pollutants to the atmosphere in the form of CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and dust.

#### Accidents:

In accordance with the definition of Article 3 point 23 of the Act of April 27, 2001 – Environmental Protection Law (*Journal of Laws of 2022 item 2556, as amended*) a major accident shall mean “*an event, in particular emission, fire or explosion, occurring during an industrial process, storage or transportation, in which one or more hazardous substances are used, leading to the immediate hazard to life or health of people or to the environment or the delayed occurrence of such a hazard.*” The planned Project will not be a place of usage or storage of substances determining the classification of the Project as a plant of increased or high risk of occurrence of a major industrial accident in accordance with the Ordinance of the Minister of Development of January 29, 2016 on types and volumes of hazardous substances present in the plant, decisive for the classification of a plant as a plant of increased or high risk of major industrial accident (*Journal of Laws 2016.138*).

#### Offshore part:

Potential major accidents that may occur during the construction, operation and decommissioning phases of the Project in the offshore part include:

- incidents at sea – collision, contact, stranding,
- spills of oil derivative substances,
- explosions of unexploded military ordnance as a result of accidental damage to undetected ammunition during installation works,
- mechanical damage to cable lines,
- release of municipal waste or domestic sewage,
- ingress of biocidal substances into water.

The assessment of the risk of occurrence of incidents at sea for the operation phase of the planned

Project showed that the probability of occurrence of incidents is extremely rare, i.e. one event is probable in the period of vessel operation (20 years) in a set of 5,000 vessels.

Spills of oil derivative substances may be mainly a result of failures of vessels: installation and service works as a result of their collision, contact, sinking, stranding (this risk was assessed above as extremely rare).

At the construction, operation and decommissioning phase of the Project, there is also a risk of oil derivative substances (mainly diesel oil) entering the sea during refueling of vessels. It is expected that refueling of installation and service vessels will take place in the harbor, at a specially designated quay, by means of fuel tankers.

Release of oil derivative substances, such as: diesel, hydraulic, transformer, lubricating oils, gasoline, may also result from leaks and spills from leaking systems.

The spill range depends on the type and amount of spilled substance, containment of the water body and real-time meteorological and hydrodynamic conditions. It is estimated that in the open sea, in unfavorable hydrometeorological conditions, the spill range of diesel oil of several hundred cubic meters amounts to 5–20 km. In order to counter these threats, all vessels should comply with the conditions resulting from the International Convention for the Prevention of Pollution from Ships, including in particular the procedures contained in the “National Plan for Combating Hazards and Pollution of the Marine Environment”.

Moreover, at the construction stage of the Project, there is a risk of release of hazardous substances to the sea from chemical weapons containers deposited on the seabed or to uncontrolled explosion of unexploded ordnance left over from military exercises and WWI and WWII. The above-mentioned events may occur during installation works as a result of mechanical impact on the above-mentioned objects or containers. In order to exclude the occurrence of the above-mentioned risk, the Investor carried out preliminary seabed surveys allowing to estimate the risk related to unexploded ordnance and chemical weapons. As a result of the preliminary investigation (bathymetric and sonar measurements), no objects with the characteristics of potentially hazardous torpedo-type objects were found. Prior to the commencement of installation works, the Investor shall carry out a detailed ferromagnetic investigation of the area where the cable will be laid and at anchoring points of installation vessels. Then, the Investor shall classify the objects found along the route of the connection infrastructure and shall decide whether to remove dangerous objects and dispose of them or to delineate the route of the connection infrastructure, bypassing the places where the objects classified as dangerous are found. Additionally, the Investor shall prepare a plan for handling potentially dangerous objects, train the personnel performing installation works in case of encountering potentially dangerous objects and equip them with resources and measures reducing the effects of contact with the above-mentioned objects.

At the operation stage of the Project, there is a risk of failure of the connection infrastructure consisting in: a phase short-circuit, a transient short-circuit and/or a phase break. The above-mentioned events may occur as a result of mechanical damage to the cable line during shipping activities as a result of anchoring vessels, and fishing activities during the use of bottom fishing gear, such as trawls and dredges. There is also a risk of failure of the connection infrastructure as a result of design errors (i.e. incorrect selection of materials, protections, calculation errors) and installation errors. In connection with the adopted technology of the connection infrastructure installation, taking into account all the requirements of the Polish maritime areas, in particular those concerning burial of the cable in the seabed at a depth of 1–3 m, permanent protection of the sections of the connection infrastructure not buried in the seabed and establishment of safety zones around the connection infrastructure, in which the prohibition to anchor vessels will apply, the risk of damage to the cable line as a result of mechanical damage to the cable shall be considered negligible.

In the maritime area, at the stage of construction, operation and decommissioning of the Project, there is a risk of release of municipal waste or domestic sewage generated by construction site employees and service technicians into the sea. The above-mentioned event may occur as a result of human error or failure of the collection equipment during the transfer of the above-mentioned waste and sewage from one vessel to another or to the shore. Due to the expected small amount of waste and sewage, it is considered that their possible discharge into the sea will not affect water quality.

The hulls of installation and service vessels shall be treated with anti-fouling coatings. The above-mentioned anti-fouling coatings include biocidal substances. These substances may penetrate into water and then settle in bottom sediments. However, it is considered that due to the number of installation vessels (i.e. 1 cable-laying vessel, 1 trenching vessel and 4 auxiliary vessels) and the number of service vessels (i.e. 4 catamarans) used consecutively during the construction, decommissioning and operation phases of the Project, the amount of biocidal substances that may enter

water is negligible. In order to prevent hazards related to penetration of biocidal substances into sea waters, the Investor shall deploy vessels with valid ship class certificates.

The potential risk of occurrence of a natural disaster at the stage of construction, operation and decommissioning of the external connection infrastructure of the B II and B III OWFs in the offshore part involves:

- seismic shocks,
- strong winds,
- icing.

The project implementation and impact area is located in aseismic and panseismic areas. Therefore, the risk of damage to the connection infrastructure in the offshore part as a result of seismic shocks is assessed as negligible. Wind is included among the factors that determine sea level and wave parameters, and, consequently, the amount of energy reaching the shore, the magnitude of currents and the intensity of sediment transportation, which have a direct impact on the processes that shape the coastal zone. In view of the above, it should be considered that strong winds could potentially be an indirect cause of exposure of the connection infrastructure in the coastal zone in the area from the boundary of the special flood hazard area to the depth of the containment zone in the sea, i.e. to a depth of approximately 7–9 m. In this zone, the bottom ordinate changes by  $\pm 1\text{--}2$  m as a result of sandbar migration. Due to the technology adopted for the installation of the connection infrastructure, taking into account all the requirements of the Polish maritime areas, in particular those concerning laying of the transmission infrastructure under the seabed at least 3 m below the average depression of the bottom of intersandbar channels, the risk of damage to the cable line as a result of strong winds shall be considered negligible.

Construction works shall be carried out only in hydrometeorological conditions enabling their safe performance, i.e. when the wind speed does not exceed 10 m/s (5 on the Beaufort scale, wave height up to approx. 2 m). Moreover, taking into account the technology adopted for the installation of the connection infrastructure, the risk of damage to the cable line as a result of icing shall be considered negligible.

#### Onshore part

The principal environmental hazards during the construction, operation and decommissioning of the GCI in the onshore part include:

- potential leakages of harmful substances (wastewater, oil-derivative products),
- emissions of gases to the atmosphere,
- fires.

The causes of emergency events for cables and onshore substation may be: material defects, damage to cables as a result of short-circuit, failure of process protections, leakages of power instrumentation, excessive pressure in power equipment, equipment malfunction.

Power cables and substations are also exposed to various types of external hazards, such as: flood washout and strong winds, mechanical damage, mechanical damage during construction works using heavy equipment, illegal human interference.

Possible accidents in the onshore part during the construction, operation and decommissioning of the Project involve accidental spills of oil derivative products generated as a result of an accident or mechanical failure of construction and service equipment. This involves contamination of soil and water with hazardous substances. Such situations should be eliminated by proper supervision over the operation of the machines and maintaining them in good technical condition. Water from excavations which, as a result of an unexpected accident, may be contaminated, e.g. with oil derivative substances, shall be extracted from the excavation, removed from the construction site and handed over for management/neutralization/cleaning to authorized subcontractors. Both during normal operation of the underground cable (operation stage) and in emergency operating conditions (e.g. short-circuit accompanied by immediate shutdown of the cable line by various types of protections), there are no emissions, fires or explosions. Nor are any hazardous substances released that could endanger human life or health or adversely affect the environment.

In case of minor mechanical damage, it is possible to repair the cable without the need to replace the entire section. During the use of the cable lines, periodic inspections are also performed by the owner in accordance with the applicable regulations. The potential effects OnS failures may involve:

- emissions of gaseous substances or combustion products into the atmosphere in case of fire,
- contamination of transformer trays and soil with oil and extinguishing agents.

Transformers contain coolant (mineral oil or ester oil, depending on the voltage level). Mineral oil may ignite in case of transformer failure and release contaminants into the environment. Possible leakages

from the transformers will be collected in transformer bunds to prevent release to the ground. Fires occurring at substations are a rare phenomenon, the use of state-of-the-art technology and warning systems fully prevents such events.

Failure of the substation may also result in emission of gaseous substances to the atmosphere due to leakage of power equipment (e.g. circuit breakers in switchgear) in SF<sub>6</sub> (sulfur hexafluoride) gas insulation, however, the amount of gas will be negligible. The use of state-of-the-art equipment and procedures prevents such events, while preventing gas emission into the air.

The risk of a natural disaster in the area of the planned Project is negligible due to its location:

- in a region with a very low probability of a severe seismic event,
- except for landslides and areas at risk of mass earth movements in accordance with the landslide protection system,
- outside flood hazard areas, except for the boundaries of the shore service corridor which is a special flood hazard area in accordance with Article 16 point 34 of the Water Law (Journal of Laws 2023.1478, consolidated text, as amended); the Investor envisages a trenchless method for crossing the coastal zone.

In the onshore part, the planned Project will be primarily an underground cable line, so there is no risk of a natural disaster either. The substations and overhead lines whose spans and columns may, in exceptional cases, be broken and tipped over in adverse weather conditions, such as hurricanes and icing, are characterized by a higher probability of damage. Local weather conditions, however, are taken into account in the selection of technologies and materials, so the possibility of a natural disaster is also minimal. The planned Project is adapted to weather conditions associated with climate change, so the risk related to possible natural disasters is negligible. During design, materials and instrumentation were adapted to monitor and forecast weather events. If any of the factors, however, affects the operation of the OnS or submarine and underground cables, its effects will be local, temporary and do not pose a threat to the environment, including people.

Due to its specificity (submarine and underground cable lines), the planned Project is not a potential source of construction disasters and threats to the immediate environment, including people. According to the definition, the probability of a construction disaster during the operation of the Project is negligible and involves possible unintended destruction of the OnS structure. The onshore substations will be constructed in a flat area without trees, outside the urbanized areas, which will facilitate failure-free implementation and will result in a minimum possibility of a construction disaster.

Design works related to the planned Project shall take into account the requirements of applicable regulations, standards, technical approvals and technical conditions. The Investor's planned use of modern technologies is intended to ensure safety and reliability of electricity transmission and meeting relevant environmental standards and requirements.

Moreover, the equipment related to the operation of the transmission infrastructure from the Bałtyk II OWF and the Bałtyk III OWF will have to be certified and approved by the Office of Technical Inspection (UDT). Its supervision allows to maintain safety and management standards during the implementation of the Project in order to eliminate the probability of any accident and construction disaster.

The proposed investment project is located in the area of the following wildlife corridors:

- the national corridor "Słowińskie Coast",
- the supra-regional Coastal Corridor,
- East Atlantic bird migration route.

The construction phase related to tree clearing, execution of trenches and laying of the cable line and construction of the OnS will temporarily interrupt spatial continuity of the above-mentioned corridors. The underground cable line will be constructed in sections of approx. 1 km and the construction site will not be fenced. The implementation of the planned Project related to the use of heavy-duty equipment emitting noise will result in migration of the species identified within the boundaries of the project to the neighboring areas. Both on the migration routes of mammals, amphibians, reptiles, and bird migration routes, construction works will be carried out only in short periods and on short sections, which will not significantly affect the conditions of animal migration. Construction works, including tree cutting, may periodically cause scaring of migrating animals. As the construction works will be generally carried out in the daytime, it is anticipated that scaring animals away will result in a small and short-term reduction in the functionality of wildlife corridors. Interruption of spatial continuity in the strip with a width of 30–32 m up to approx. 50–100 m and extension in the area of connection of offshore and onshore cables is a small area in relation to wildlife corridors, and tree cutting carried out in appropriate phenological periods will minimize potential impacts.



The construction works will not create a barrier effect within the range of the national corridor "Słowiński Coast", the supra-regional Coastal Corridor or the East Atlantic bird migration route. The impacts of the construction phase on wildlife corridors will be negative, direct, simple, short-term and reversible.

After completing the construction, the site will be subject to secondary succession processes and new open habitats will be created, which can be used by animals and birds, which will reduce the effects of transformation and fragmentation of the forest area. Location of the OnS is planned in the agro-industrial area, outside the boundaries of the Coastal Corridor.

The planned Project in the form of the underground cable line will not cause any impacts that could affect migration routes of birds or on other species of plants and animals. The planned Project will not constitute an obstacle to the migration of animals, therefore there will be no barrier effect.

In view of the above, due to the scale and nature of the project, as well as its location, the project is not expected to significantly affect the passability and continuity of the corridor.

The investment project in the offshore part will cross the Natura 2000 sites: Słupsk Bank PLC990001 and Coastal Waters of the Baltic Sea PLB990002. The closest Natura 2000 sites located at a distance of up to 5 km from the onshore part of the project are:

- approx. 300 m westwards – Przymorskie Błota PLH220024;
- approx. 1.4 km westwards – Wicko Lake and Modelskie Dunes PLH320068;
- approx. 1.5 km eastwards – Słupia Valley PLH220052.

The planned project crosses the Natura 2000 site – Słupsk Bank PLC990001 – at a length of approx. 51.5 km and the Natura 2000 site – Coastal Waters of the Baltic Sea PLB990002 – at a length of approx. 19.7 km. Within a radius of 5 km from the project location in the onshore part, there are the following Natura 2000 sites: Przymorskie Błota PLH220024 (300 m), Lake Wicko and Modelskie Dunes PLH320068 (at a distance of approx. 1.4 km) and Słupia Valley PLH220052 (at a distance of approx. 1.5 km).

Works during the submarine cable laying phase will include two stages: preliminary stage (seabed preparation) related to detection and removal of unexploded ordnance and chemical warfare agents, removal of inactive cables, displacement or removal of boulders and removal of obstacles such as fishing nets from the seabed, as well as the main stage related to cable launching, pulling, laying, drawing it into the offshore substation and sinking or burying.

According to the Standard Data Form (update: March 2023), the subjects of conservation in the **Słupsk Bank PLC990001 Natura 2000 site** are the following natural habitats: 1110 – sandy submarine banks permanently covered by shallow water and 1170 – rocky and stony seabed, reefs. The subjects of conservation are also migrating and wintering populations of the following bird species: black guillemot (*Cephus grylle*), long-tailed duck (*Clangula hyemalis*), and velvet scoter (*Melanitta fusca*). Threats to the area include, among others: sand and gravel extraction, wind energy generation, passive fishing, active fishing, navigation routes, and proving grounds. A draft conservation plan has been prepared for the Natura 2000 site – Słupsk Bank PLC990001.

The project in question will be partially implemented within the boundaries of natural habitat 1110 – sandy submarine banks permanently covered by shallow water. Performance of works at the construction stage will cause disturbance of this natural habitat at a section with a length of approx. 2.3 km. During the construction phase, interference with the area will be related to the necessity to clean the seabed in the region where the cable will be laid (removal of artifacts, boulders, etc.), and then to the execution of a trench with a width of approx. 1.5 m and depth of approx. 1.5 m, using water jetting method or, in the case of harder ground – mechanical cutting. Due to the diversified geological structure, confirmed by the surveys carried out for the purpose of the EIA report in question, the Investor allows for the use of different methods of cable burial at individual sections of the project. In accordance with the provision of the EIA Report, the local Authority imposed the condition that in the Natura 2000 site – Słupsk Bank PLC990001 – in the area of natural habitat 1110, sandy submarine banks permanently covered by shallow water, at the section of cable crossing through this habitat, alternative methods of cable protection, i.e. rip-rap and concrete mattresses, should not be used. The degree of the seabed structure disturbance in a given location will depend directly on its geological structure and the associated different susceptibility of the seabed to impact. Changes in the shape of the seabed surface and the ecosystem located on it in connection with the project implementation will be short-term and local, and the habitat itself will not be permanently destroyed. In the case of the planned project, it should be expected that natural leveling of morphological changes occurring at the construction stage, as well as regeneration/restoration of the natural habitat, will take place within up to two years after completion of the implementation activities. There will be no additional material loss for the project concerned – the

cable will be buried in the seabed, and the remaining sandy material will backfill a formed chase due to natural wave motion conditions. Most of the impacts at the offshore section related to the project under consideration will be limited to a narrow strip of bottom sediments with a maximum disturbance with a width of up to 5 m for each cable line. The submitted documentation indicates that the project was planned within the boundaries of the infrastructure corridor designated in the spatial development plan for Polish maritime areas, i.e. in the place where the interference with the habitat is the lowest. In the area of natural habitat 1110 – sandy submarine banks permanently covered by shallow water – no protected benthic species were found, and the low biodiversity of benthic groups of the surveyed corridor is characteristic for the open sea areas of the entire Polish coastal zone of the Baltic Sea. The impact related to the possible distribution of suspended matter in the midwater – regardless of hydrometeorological conditions – will be irrelevant for the identified benthic groups. The impact on benthos will be local and short-term. Significant concentrations of suspended matter exceeding the natural levels will be temporary and spatially limited to the area of performed works. In order to eliminate the effects of possible leakages of oil derivative substances, vessels should be provided with sorbents or other means for this purpose. Technologies and materials, the elements of which will not be covered with anti-fouling paint containing TBT, should be used. The scale of impacts of the project in question on benthic groups constituting a food base for birds being the subject of conservation in the above-mentioned Natura 2000 site, as well as possible cumulative impacts with other projects, will not have a significant impact on integrity, coherence, and the above-mentioned subject of conservation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 1110 – sandy submarine banks permanently covered by shallow water.

The project will be located at a distance of approx. 4.5 km from natural habitat 1170 – rocky and stony seabed, reefs. Due to the significant distance of the project concerned from this subject of conservation, it is not expected that the planned project may have a negative impact on the natural habitat 1170 – rocky and stony seabed, reefs.

According to the information contained in the submitted documentation, the project will not have a significant negative impact on other subjects of conservation of the above-mentioned Natura 2000 site, i.e.: black guillemot (*Cephus grylle*) and velvet scoter (*Melanitta fusca*). The predicted impact on the long-tailed duck (*Clangula hyemalis*) refers to the construction phase, i.e. periodic scaring of birds as a result of increased vessel traffic during cable laying and periodic restricted access to the food base (macrozoobenthos) as a result of water turbidity and depletion of the periodic food base as a consequence of disturbance of the seabed structure along the cable corridor. The resulting turbidity may cause temporary impact on feeding grounds of birds and, consequently, possible movements of birds within the water region. To exclude the possibility of scaring long-tailed ducks and other birds, the report suggested that works in the sea area should be performed outside the period of concentration of wintering and migrating waterbirds, i.e. outside the period from November 1 to April 30. The local Authority indicated the above constraint of the time limit for the performance of works as one of the conditions for the project implementation. At night, the sources of strong light directed upwards should be limited, in particular, during bird migration periods, i.e. from March 1 to May 31 and from July 31 to November 15, to minimize the effect of the lighthouse. Construction works should be executed with the use of modern vessels meeting modern noise emission standards. During the construction phase, the main sources of impact on the above-mentioned species will be: vessel traffic, noise and vibration emission, increase in suspended matter concentration in water, sedimentation of disturbed sediment, and interference with benthic habitat. However, it appears from the documentation submitted that these impacts will be local and short-term. During the implementation works, birds that may occur in the project area will move away from the project site. At the same time, it is essential to pay attention to limiting the performance of offshore works outside the period of concentration of wintering and migrating populations of waterbirds, i.e. outside the period from November 1 to April 30. Possible impacts will occur during the period of low abundance of birds for the protection of which the Natura 2000 site PLC990001 has been designated. Due to the potentially low abundance of black guillemot and velvet scoter during the performance of works, as well as their large dispersion in the water region where the project will be implemented, there will be no significant negative impact on black guillemot and velvet scoter as a result of the project implementation. Additionally, as the contents of the report indicate, the excavated soil storage site and the range of potential impact is outside the range of the preferred feeding grounds of the above-mentioned birds, which moreover these are located in the area where the abundance of these birds is low, therefore it will not limit the food base of ornithofauna. As a result of the applied mitigation measures and short-term impact on long-tailed ducks, which will be scared away from the area of performed activities during the works execution, and after their completion, the feeding ground (benthos) on the seabed will regenerate within up to two years, there will be no significant negative impact on the long-tailed duck as a result of the project implementation.

The conducted environmental impact assessment of the planned project shows that its implementation will not have a significant negative impact on individual subjects of conservation of the Natura 2000 site of the Słupsk Bank PLC990001, nor will it deteriorate the integrity of this area.

According to the Standard Data Form (update: February 2023), the subjects of conservation in the **Coastal Waters of the Baltic Sea PLB990002 Natura 2000 site** are wintering populations of the following bird species: razorbill (*Alca torda*), black guillemot (*Cepphus grylle*), long-tailed duck (*Clangula hyemalis*), black-throated diver (*Gavia ártica*), red-throated diver (*Gavia stellata*), European herring gull (*Larus argentatus*), common gull (*Larus canus*), velvet scoter (*Melanitta fusca*) and common scoter (*Melanitta nigra*), as well as the migrating population of common scoter (*Melanitta nigra*). Other human activities related to urbanization, industry, etc. pose a threat to the area. No conservation plan has been established for the Coastal Waters of the Baltic Sea PLB990002 Natura 2000 site. However, it should be emphasized that works are currently in progress to establish a conservation plan for the above-mentioned Natura 2000 site.

According to the information contained in the submitted documentation, the impact of the project on the subjects of conservation of the above-mentioned Natura 2000 site will be insignificant. During the construction phase, the main sources of impact on the above-mentioned species will be: vessel traffic, noise and vibration emission, increase in suspended matter concentration in water, sedimentation of disturbed sediment, and reduction of benthic habitats. However, it appears from the documentation submitted that these impacts will be local and short-term. At the construction stage, the construction works in the offshore part should be carried out under permanent ornithological supervision provided by specialists in this field. The works should be performed outside the period of increased concentration of wintering and migrating populations of the above-mentioned bird species, i.e. outside the period from November 1 to April 30. In addition, during the implementation works, the source of strong light directed upwards should be limited during the bird migration period, i.e. from March 1 to May 31 and from July 31 to November 15, to minimize the effect of the lighthouse. During the implementation works, birds that may occur in the project area will move away from the project site. Due to the potentially low population size of the above-mentioned species during the performance of works, as well as their large dispersion in the water region where the project will be implemented, there will be no significant negative impact on the subjects of conservation of the aforementioned Natura 2000 site as a result of the project implementation.

The conducted environmental impact assessment of the planned project shows that its implementation will not have a significant negative impact on individual subjects of conservation of the Natura 2000 site of the Coastal Waters of the Baltic Sea PLB990002, nor will it deteriorate the integrity of this area.

The construction works will also relate to the execution of the crossing through the coastal zone using the HDD trenchless method and works in the onshore part, covering the tree and shrub cutting from the construction strip, execution of trenches, laying of the cable line system with necessary elements, partial backfilling of cable lines, closing of the trench together with restoration of the soil profile, land leveling and reinstatement. Moreover, it is planned to construct two electrically separated onshore substations with a total area of approx. 16 ha.

The area covered by the request for the decision on environmental conditions is located at a distance of approx. 580 m east of the Przymorskie Błota PLH220024 Natura 2000 site.

According to the Standard Data Form (update: January 2023), the subjects of conservation in the **Przymorskie Błota PLH220024 Natura 2000 site** are the following natural habitats: 3150 – old riverbeds and natural eutrophic water reservoirs with communities of *Nymphaeion*, Potamion, 6410 – Molinia meadows (*Molinion*) of variable moisture content, 6510 – lowland and mountain fresh meadows used extensively (*Arrhenatherion elatioris*), 7110 – active raised bogs, 7120 – degraded raised bogs still capable of natural and stimulated regeneration, 7140 – transitional peat bogs and quaking bogs (mostly with *Scheuchzeria-Caricetæ* vegetation), 7150 – depressions on peat substrates of the *Rhynchosporion*, 9190 – acid oak forest (*Quercion robori-petraeae*), 91D0 – swamp woods and forests (*Vaccinio uliginosi Betuletum pubescentis*, *Vaccinio uliginosi Pinetum*, *Pino mugo-Sphagnetum*, *Sphagno girgensohnii-Piceetum*) and birch and pine swamp boreal forests, 91F0 – oak-elm-ash forests riparian forests (*Ficario-Ulmetum*). Threats to the area include, among others: forest cutting, change of species composition (succession), natural eutrophication, drying of sea, estuary, and wetland areas, removal of dead and dying trees, poaching, trampling and excessive use, contamination of surface waters (limnic, terrestrial, sea and brackish waters), waste and solid waste, other man-made changes in water conditions, silting and accumulation of organic matter. For the Przymorskie Błota PLH220024 Natura 2000 site, a conservation measures plan was established by order of the Regional Director for Environmental Protection in Gdańsk and Regional Director for Environmental Protection in Szczecin on September 25, 2014 (*Official Journal of the Pomorskie Voivodeship of 2014, item 3239*). Within the

boundaries of the Przymorskie Błota PLH220024 Natura 2000 site, there is a nature reserve "Zaleskie Bagna" for which a conservation plan has been established (order of the Regional Director for Environmental Protection in Gdańsk of March 12, 2014, *Official Journal of the Pomorskie Voivodeship of 2014, item 1322*). The objectives of conservation measures for individual subjects of conservation of the Przymorskie Błota PLH220024 Natura 2000 site are presented below, resulting from the above-mentioned CMP order and the conservation plan for the above-mentioned nature reserve:

### **3150 Old riverbeds and natural eutrophic water reservoirs with communities of Nymphaea, Potamogeton**

Objective of conservation measures resulting from the Conservation Measures Plan:

1. Preservation of the habitat in a non-deteriorated conservation status U1.

Assessment: The conducted environmental impact assessment of the project showed that the closest natural habitat 3150, to which Struga Łęowska enters (at km 37.2 of the grid connection infrastructure corridor), is Modła lake and it is located at a distance of approx. 1 km west of the cable route. Due to the implementation of the project, there will be no change in the water management system in the catchment area of this watercourse due to the application of the trenchless method when crossing watercourses and drainage channels, which are hydrographically related to the area of occurrence of this natural habitat. At the investment project implementation stage, permanent environmental supervision will be provided. In connection with the planned HDD trenchless crossing, a condition was imposed not to collect water from Struga Łęowska and other watercourses/ditches flowing to Modła lake – natural habitat 3150 – and not to discharge water from drainage of trenches or drilling fluid to watercourses flowing to this lake, and to collect water from tankers or water supply pipelines. On the other hand, the construction site will be equipped with sorbents to reduce and remove oil spills that could enter the water and ground environment. The objective of conservation measures, consisting in preserving the habitat in a non-deteriorated condition, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 3150.

### **6410 Molinia meadows (Molinia) of variable moisture content**

Objective of conservation measures resulting from the Conservation Measures Plan:

1. Supplementation of knowledge on the distribution and condition of the habitat in the area.

Assessment: The environmental impact assessment of the project and the documentation in the possession of the local Authority "*Documentation of the Conservation Measures Plan for the Przymorskie Błota PLH220024 Natura 2000 site in the Pomorskie and Zachodniopomorskie voivodeships*" (Warsaw, 2013) show that no patches of habitat 6410 were found in the area of the above-mentioned Natura 2000 site. However, the "*Complement of the knowledge of natural habitats 6410 and 6510 Przymorskie Błota PLH220024 Natura 2000 site*", (Polkowo, 2021) demonstrates that the closest natural habitat 6410 is located at a distance of approx. 1.3 km west of the cable route. Due to the distance from the project and its implementation, there will be no change in the water management system within and near this habitat due to the use of the trenchless method when crossing watercourses and drainage channels. At the investment project implementation stage, permanent environmental supervision will be provided. The site back-up facilities and the material base should be located outside waterlogged areas, taking into account plantings and shrubs. The construction site should also be equipped with sorbents to reduce and remove oil spills that could enter the water and ground environment. The objective of conservation measures, consisting in supplementing the knowledge on the distribution and condition of this natural habitat, will not be threatened as a result of the implementation of the project. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 6410.

### **6510 Lowland and mountain fresh meadows used extensively (Arrhenatherion elatioris)**

Objective of conservation measures resulting from the Conservation Measures Plan:

1. Supplementation of knowledge on the distribution and condition of the habitat in the area.

Assessment: The environmental impact assessment of the project and the documentation in the possession of the local Authority "*Documentation of the Conservation Measures Plan for the Przymorskie Błota PLH220024 Natura 2000 site in the Pomorskie and Zachodniopomorskie voivodeships*" (Warsaw, 2013) show that no patches of habitat 6510 were found in the area of the above-mentioned Natura 2000 site. However, the "*Complement of the knowledge of natural habitats 6410 and 6510 Przymorskie Błota PLH220024 Natura 2000 site*", (Polkowo, 2021) demonstrates that the closest natural habitat 6510 is located at a distance of approx. 680 km west of the cable route. Due to the distance from the project and its implementation, there will be no change in the water management system within and near this habitat due to the use of the trenchless method when crossing watercourses and drainage channels. At the investment project implementation stage, permanent environmental supervision will be provided. The site back-up facilities and the

material base should be located outside waterlogged areas. The construction site should also be equipped with sorbents to reduce and remove oil spills that could enter the water and ground environment. The objective of conservation measures, consisting in supplementing the knowledge on the distribution and condition of this natural habitat, will not be threatened as a result of the implementation of the project. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 6510.

#### **7110 – High peat bogs with peat-forming vegetation (live)**

Objectives of conservation measures resulting from the Conservation Plan:

1. Restoring and maintaining the open (woodless) nature of the best preserved peat land phytocenoses.
2. Preservation of the unreduced habitat areas.
3. Improvement of habitat conditions enabling maintenance of appropriate parameters of the structure and function of natural habitats.

Assessment: The conducted environmental impact assessment of the project showed that natural habitat 7110 occurs only within the boundaries of the "Zaleskie Bagna" natural reserve, which is located at a distance of approx. 2.9 km west of the cable route. The objectives of conservation measures, including the maintenance of an unreduced area of habitats, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7110.

#### **7120 Degraded raised bogs still capable of natural and stimulated regeneration**

No objectives of conservation measures have been defined for natural habitat 7120.

Assessment: The conducted environmental impact assessment of the project showed that in accordance with the "*Documentation of the Conservation Measures Plan for the Przymorskie Błota PLH220024 Natura 2000 site in the Pomorskie and Zachodniopomorskie voivodeships*" (Warsaw, 2013), no sites of this natural habitat were found within the boundaries of the above-mentioned Natura 2000 site. However, due to the project implementation, there will be no change in the water management system in the area and vicinity of this habitat as a result of the use of the trenchless method when crossing watercourses and drainage channels. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7120.

#### **7140 Transitional peat bogs and quaking bogs (mostly with *Scheuchzeria-Caricetea* vegetation)**

Objectives of conservation measures resulting from the Conservation Measures Plan:

1. Maintaining the hydration degree at the FV level.
2. Inhibition of invasion of rushes species, trees and shrubs.

Objectives of conservation measures resulting from the Conservation Plan:

1. Restoring and maintaining the open (woodless) nature of the best preserved peat land phytocenoses.
2. Preservation of the unreduced habitat areas.
3. Improvement of habitat conditions enabling maintenance of appropriate parameters of the structure and function of natural habitats.

Assessment: The conducted environmental impact assessment of the project showed that the data held by the local Authority, i.e. from the "*Documentation of the Conservation Measures Plan for the Przymorskie Błota PLH220024 Natura 2000 site in the Pomorskie and Zachodniopomorskie voivodeships*" (Warsaw, 2013) demonstrates that the nearest natural habitat 7140 is located at a distance of approx. 2.8 km west of the cable route. The objectives of conservation measures, including maintaining the hydration degree at the FV level and maintaining the unreduced area of habitats, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7140.

#### **7150 – Depressions on peat subsoil with vegetation from *Rhynchosporion* compound**

No objectives of conservation measures have been defined for natural habitat 7150.

Assessment: The conducted environmental impact assessment of the project showed that the "*Documentation of the Conservation Measures Plan for the Przymorskie Błota PLH220024 Natura 2000 site in the Pomorskie and Zachodniopomorskie voivodeships*" (Warsaw, 2013) demonstrated that the nearest natural habitat 7150 is located at a distance of approx. 4.4 km west of the cable route. However, the implementation of the project will not change the hydrological system that may affect the conservation status of the habitat due to the use of the trenchless method when crossing watercourses and drainage channels. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7150.

#### **9190 Acid oak forest (*Quercion roburi-petraeae*)**

No objectives of conservation measures have been defined for natural habitat 9190.

Assessment: The conducted environmental impact assessment of the project showed that in

accordance with the "Documentation of the Conservation Measures Plan for the Przymorskie Błota PLH220024 Natura 2000 site in the Pomorskie and Zachodniopomorskie voivodeships" (Warsaw, 2013), no sites of this natural habitat were found within the boundaries of the above-mentioned Natura 2000 site. However, the implementation of the project will not change the hydrological system that may affect the conservation status of the habitat due to the use of the trenchless method when crossing watercourses and drainage channels. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 9190.

**91D0 Swamp woods and forests (*Vaccinio uliginosi Betuletum pubescentis*, *Vaccinio uliginosi Pinetum*, *Pino mugo-Sphagnetum*, *Sphagno girgensohnii-Piceetum*) and birch and pine swamp boreal forests**

Objectives of conservation measures resulting from the Conservation Measures Plan:

1. Maintaining the hydration degree at the FV level as counteracting the peat muck-forming process and further eutrophication.
2. Improvement of indicators: vertical vegetation structure and dead wood lying or standing > 3 m long and 30 cm thick up to the value exceeding 1 pc/ha (as far as natural deadwood separation processes allow).

Objective of conservation measures resulting from the Conservation Plan:

1. Improvement of habitat conditions enabling maintenance or restoration of natural succession processes, and thus improvement of structure and function parameters.

Assessment: The conducted environmental impact assessment of the project showed that according to the "Documentation of the Conservation Measures Plan for the Przymorskie Błota PLH220024 Natura 2000 site in the Pomorskie and Zachodniopomorskie voivodeships" (Warsaw, 2013) it follows that the nearest natural habitat 91D0 is located at a distance of approx. 3.2 km west of the cable route. The implementation of the project will not change the hydrological system that may affect the conservation status of the habitat due to the use of the trenchless method when crossing watercourses and drainage channels. The objectives of conservation measures, including maintaining the hydration degree at the FV level and improving habitat conditions, will not be threatened as a result of the project implementation. In view of the above and the distance from the habitat, it is not expected that the planned project may have a negative impact on the natural habitat 91D0.

**91F0 Oak-elm-ash forests riparian forests (*Ficario-Ulmetum*)**

Objective of conservation measures resulting from the Conservation Measures Plan:

1. Preservation of the habitat at a favorable conservation status (FV).

Assessment: The conducted environmental impact assessment of the project showed that the "Documentation of the Conservation Measures Plan for the Przymorskie Błota PLH220024 Natura 2000 site in the Pomorskie and Zachodniopomorskie voivodeships" (Warsaw, 2013) demonstrates that the closest natural habitat 91F0 is located at a distance of approx. 2.5 km west of the cable route. The implementation of the project will not change the hydrological system that may affect the conservation status of the habitat due to the use of the trenchless method when crossing watercourses and drainage channels. The objective of conservation measures, including preserving the habitat in a favorable conservation status, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the natural habitat 91F0.

Direct threats to subjects of conservation in the Przymorskie Błota PLH220024 Natura 2000 site, related to the project in question, may consist in direct transformation of natural habitats. Transformations of natural habitats may involve: cutting, executing trenches, and occupation of the area for power or construction infrastructure. Indirect threats may involve changes in the water regime of watercourses and channels. These changes may affect significant distances, depending on the topography and hydrological connections. In relation to the location of the project outside the habitats at a significant distance of the subjects of conservation in the above-mentioned Natura 2000 site from the project and taking mitigation measures during its implementation, there will be no change in the water management system within and near this habitat due to the use of the trenchless method when crossing watercourses and drainage channels. In addition, environmental supervision should be carried out on an ongoing basis during the project implementation, and the site back-up facilities and material base should be located away from waterlogged areas, plantings, shrubs, and natural habitats. The construction site should be equipped with sorbents to reduce and remove oil spills that could enter the water and ground environment. The conducted environmental impact assessment of the planned project shows that its implementation will not have a significant negative impact on individual subjects of conservation of the Natura 2000 site of the Przymorskie Błota PLH220024, nor will it deteriorate the

integrity of this area.

According to the Standard Data Form (update: March 2023), the subjects of conservation in the **Lake Wicko and Modelskie Dunes PLH320068 Natura 2000 site** are the following natural habitats: 1130 – estuaries, 1150 – coastal lagoons, 2110 – initial stages of coastal white dunes, 2120 – coastal white dunes (*Elymo-Ammophiletum*), 2130 – coastal gray dunes, 2170 – coastal dunes with willow bog bushes, 2180 – mixed forests and coniferous forests on coastal dunes, 3150 – old riverbeds and natural eutrophic water reservoirs with communities of *Nympheion*, *Potamion*, 7140 – transitional peat bogs and quaking bogs (mostly with *Scheuchzerio-Caricetae* vegetation), 9110 – acid beech forest (*Luzulo-Fagetum*), 9190 – acid oak forest (*Quercion robori-petraeae*) and 91D0 – swamp woods and forests (*Vaccinio uliginosi Betuletum pubescentis*, *Vaccinio uliginosi Pinetum*, *Pino mugo-Sphagnetum*, *Sphagno girgensohnii-Piceetum*) and birch and pine swamp boreal forests. The subject of conservation also covers the species: toadflax (*Linaria loeselii*). Threats to the area include, among others: biocenotic evolution and succession, groundwater abstraction, abandonment of pastoralism and lack of grazing, roads and motorways, dispersed development and non-native invasive species. No conservation measures plan has been established for the Lake Wicko and Modelskie Dunes PLH320068 Natura 2000 site.

The draft “Annex to the Forest Management Plan of the Ustka Forest District (scope of conservation measures for the Lake Wicko and Modelskie Dunes PLH320068 Natura 2000 site)” prepared for the period from January 1, 2018 to December 31, 2027 on the basis of the forest status as of January 1, 2022 (Szczecinek 2022) shows that the closest subject of conservation of the above-mentioned Natura 2000 site is natural habitat 2180 – mixed forests and coniferous forests on coastal dunes (forest address 11-20-1-03-100 -a -00), located at a distance of approx. 2.8 km west of the cable route. The threats to this habitat are forest cutting, removal of dead and dying trees and improper conservation measures. The listed threats are not related to the project in question. Moreover, in the onshore part of the project in the implementation option, the construction of the cable at the section located closest to the Lake Wicko and Modelskie Dunes PLH320068 Natura 2000 site will be carried out on significant sections or entirely using the trenchless method. Due to the above, the above-mentioned subjects of conservation will not be affected by the construction works related to trench execution and cutting.

The conducted wildlife survey shows that in the area of the project and in the region of its possible direct and indirect impact, no toadflax, being the subject of conservation in the above-mentioned Natura 2000 site, was found. Therefore, the possibility of direct and indirect impact of the project stages on this species and its habitats is excluded.

The conducted environmental impact assessment of the planned project shows that its implementation will not have a significant negative impact on individual subjects of conservation of the Natura 2000 site of the Lake Wicko and Modelskie Dunes PLH320068, nor will it deteriorate the integrity of this area.

According to the Standard Data Form (update: July 2023), the subjects of conservation in the **Slupia Valley PLH220052 Natura 2000 site** are the following natural habitats: 3110 – lobelia lakes, 3140 – hard-water oligo- and mesotrophic reservoirs with underwater meadows of (*Charactera spp.*), 3150 – old riverbeds and natural eutrophic water reservoirs with communities of *Nympheion*, *Potamion*, 3160 – natural dystrophic water reservoirs, 3260 – lowland and submontane rivers with groups of waders (*Ranunculion fluitantis*), 6120 – xeric sand calcareous grasslands (*Koelerion glaucae*), 6430 – mountainous herbs (*Adenostylion alliariae*) and riverside herbs (*Convolvuletalia sepium*), 6510 – lowland and mountain fresh meadows used extensively (*Arrhenatherion elatioris*), 7110 – active raised bogs, 7120 – degraded raised bogs still capable of natural and stimulated regeneration, 7140 – transitional peat bogs and quaking bogs (mostly with *Scheuchzerio-Caricetea* vegetation), 7150 – depressions on peat substrates of the *Rhynchosporion*, 7230 – mountain and lowland alkaline peat bogs of bog-spring, sedge and mossland types, 9110 – acid beech forest (*Luzulo-Fagetum*), 9130 – fertile beech (*Dentario glandulosae Fagenion*, *Galio odorati-Fagenion*), 9160 – sub-atlantic broadleaved forest (*Stellario-Carpinetum*), 9170 – central European and subcontinental broadleaved forest (*Galio-Carpinetum*, *Tilio-Carpinetum*), 9190 – acid oak forest (*Quercion robori-petraeae*), 91D0 – swamp woods and forests (*Vaccinio uliginosi Betuletum pubescentis*, *Vaccinio uliginosi Pinetum*, *Pino mugo-Sphagnetum*, *Sphagno girgensohnii-Piceetum*) and birch and pine swamp boreal forests, 91E0 – willow, poplar, alder and ash wetlands (*Salicetum albo-fragilis*, *Populetum albae*, *Alnenion glutinoso-incanae*) and alder carr. The subject of conservation also covers the following species: European fire-bellied toad (*Bombina orientalis*), beaver (*Castor fiber*), spined loach (*Cobitis taenia*), European bullhead (*Cottus gobio*), varnished hook-moss (*Hamatocaulis vernicosus*), European river lamprey (*Lampetra fluviatilis*), brook lamprey (*Lampetra planeri*), large white-faced darter (*Leucorrhinia pectoralis*), European otter (*Lutra lutra*), large copper (*Lycaena dispar*), green snaketail (*Ophiogomphus cecilia*), European

bitterling (*Rhodeus amarus*), salmon (*Salmo salar*), northern crested newt (*Triturus cristatus*), thick shelled river mussel (*Unio crassus*), narrow-mouthed whorl snail (*Vertigo angustior*) and Desmoulin's whorl snail (*Vertigo moulinsiana*). Threats to the area include, among others: trampling, excessive use, hiking, horse riding and driving on non-motorized vehicles, forest cutting, fishing, abandonment of pastoralism, lack of grazing, erosion, suspended matter culture, contamination of surface waters (limnic, terrestrial, and brackish waters), dams, embankments, artificial beaches – generally, biocenotic evolution, succession, and reduction or loss of specific habitat features. For the Natura 2000 site of the Słupia Valley PLH220052, a draft order on establishing a Conservation Measures Plan (website of the RDEP in Gdańsk <https://www.gov.pl/web/rdos-gdansk/plh220052-dolina-slupi>) was prepared. Within the boundaries of the Słupia Valley PLH220052 Natura 2000 site, there is a nature reserve of Dolina Huczka, for which a conservation plan has been established (order of the Regional Director for Environmental Protection in Gdańsk of January 8, 2021, *Official Journal of the Pomorskie Voivodeship of 2021, item 386*). The following are temporary conservation objectives, constituting the objectives of conservation measures included in the draft order of the CMP, and the objectives of conservation measures, resulting from the above-mentioned conservation plan for the above-mentioned nature reserve, for individual subjects of conservation of the Słupia Valley PLH220052 Natura 2000 site:

### 3110 – Lobelia lakes

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 54.97 ha.
2. Improvement of the conservation status of the following lakes: Herta PLH220052\_3110\_6, Godzierz Wielka PLH220052\_3110\_2, Krosnowskie PLH220052\_3110\_5, Czarne near Borzytuchom, PLH220052\_3110\_4 from U2 (bad) to U1 (unsatisfactory) by improving the parameter “structure and functions” in the scope of indicators “water transparency”, “water color” and “characteristic combination of communities” to at least U1, meaning respectively:
  - 1) For the indicator “water transparency”, the visibility of the Secchi disk above 1.5 m;
  - 2) for the “water color” indicator, a blue color with a yellowish-green or greenish shade;
  - 3) for the “characteristic combination of communities” indicator, presence or dominance of *the Isoeto-Lobelietum* complex.
3. Improvement of the conservation status of Okoniewskie PLH220052\_3110\_3 and Czarnowie (Czarne near Unichowo) PLH220052\_3110\_1 to the favorable condition (FV), including maintenance or improvement of the parameters “habitat area” and “structure and function” for all indicators. This means achieving or maintaining respectively:
  - 1) For the indicator “water transparency”, the visibility of the Secchi disk above 1.5 m;
  - 2) none or only single individuals of “species indicative of habitat degeneration”;
  - 3) “water pH” between 4.5 and 8.5;
  - 4) “electrolytic conductivity” of less than 250 microsiemens/cm;
  - 5) for the “water color” indicator, a blue color with a yellowish-green or greenish shade;
  - 6) for the “characteristic combination of communities” indicator, presence or dominance of *the Isoeto-Lobelietum* complex.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area, maintaining an appropriate combination of communities and maintaining or improving other indicators in the area, will not be endangered as a result of project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 3110.

### 3140 – Hard-water oligo- and mesotrophic reservoirs with underwater meadows of *Charcteria* spp.

No objectives of conservation measures have been defined for natural habitat 3140.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 3140.

### 3150 – Old river beds and natural eutrophic water reservoirs *Nympheion, Potamion*

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 467.91 ha, taking into account natural processes.
2. Improvement of the conservation status of the habitat in the area from the unsatisfactory condition (U1) to the favorable condition (FV) by:
  - 1) Maintaining the conservation status in the favorable condition (FV), i.e. maintaining all indicators at the current level for old river beds.



- a) old river bed 1 near the Słupia River near Słupsk (plots 57 and 60, cadastral district 19, Słupsk Municipality); PLH220052\_3150\_15,
  - b) old river bed 2 near the Słupia River near Słupsk (plots 62, 68, 72, cadastral district 19, Słupsk Municipality); PLH220052\_3150\_16,
  - c) old river bed 3 near the Słupia River near Słupsk (plot 44, cadastral district 19, Słupsk Municipality); PLH220052\_3150\_17,
  - d) old river bed 1 near the Słupia River near Kobylnica (plots 62, 68, 72, cadastral district 19, Słupsk Municipality); PLH220052\_3150\_18,
  - e) old river bed 1 near the Słupia River near Lubuń (plot 19, cadastral district Lubuń, Municipality of Kobylnica); identifier PLH220052\_3150\_19;
- and lakes:
- f) natural lake to the east of lake Unichowskie; PLH220052\_3150\_7;
- 2) Improvement of the conservation status in the area from unsatisfactory condition (U1) to favorable condition (FV) for lakes:
- a) a nameless reservoir located south of lake Godzierz Wielka; PLH220052\_3150\_3,
  - b) Mądrzechowskie lake; PLH220052\_3150\_4,
  - c) a nameless reservoir south of lake Kisewko; PLH220052\_3150\_13.
- For this purpose, the habitat area parameter should be maintained in the favorable condition (FV), while the structure and function parameter should be maintained at least in the unsatisfactory condition (U1), i.e.:
- d) characteristic combination of communities within the transect at least at the level of U1, i.e. no nymfeids or elodeides or both present, but then the share of rigid hornwort is at least 25%,
  - e) species indicating habitat degeneration: No alien and invasive species (favorable condition FV) – at all sites,
  - f) water color: maintaining a favorable (FV) indicator value at all sites (“slightly green, poorly transparent, brownish transparent”), allowing for deviations resulting from natural processes,
  - g) transparency: favorable condition (FV), i.e. visibility of the Secchi disk > 2.5 m or to the bottom at at least 75% of the sites,
  - h) water pH: maintained in the range from 6.5 to 7.9 (FV favorable assessment) at at least 75% of the sites,
  - i) conductivity: not significantly deteriorated compared to the current condition, remaining below the < value of 300  $\mu$ S/cm (FV favorable assessment) – all sites.
- The parameter of the conservation prospect should be maintained at least at the unsatisfactory level (U1), i.a. by adapting fisheries, spatial management and land development methods to the needs of their protection.
- 3) Improvement of the conservation status from unsatisfactory condition (U1) to favorable condition (FV) for the following lakes:
- a) Nożynko lake; identifier PLH220052\_3150\_1,
  - b) Głębokie lake; identifier PLH220052\_3150\_5,
  - c) Żukowskie lake; identifier PLH220052\_3150\_6,
  - d) Skotawsko Małe lake; identifier PLH220052\_3150\_8,
  - e) Skotawsko Duże lake; identifier PLH220052\_3150\_9,
  - f) Unnamed lake south of the Skotawsko Duże lake; identifier PLH220052\_3150\_10,
  - g) Kisewko lake; identifier PLH220052\_3150\_12,
  - h) unnamed water body at the Skotawa river at the road to Dobieszewo; identifier PLH220052\_3150\_14.
- For the above-mentioned sites, improvement of the indicator assessment – a characteristic combination of communities within the transect from unsatisfactory assessment (U1) to favorable assessment (FV), meaning high phytocenotic diversity of communities and presence of nympheids and elodeides.
- For stations:
- i) Nożynko lake; identifier PLH220052\_3150\_1,
  - j) Głębokie lake; identifier PLH220052\_3150\_5,
  - k) Żukowskie lake; identifier PLH220052\_3150\_6,
- Improvement of the indicator assessment – transparency from the unsatisfactory assessment (U1) to the favorable one (FV), which means achieving the visibility of the Secchi disk to the bottom or depth of more than 2.5 m, and improvement of the parameter of conservation prospects from the unsatisfactory assessment (U1) to the favorable one

(FV), i.a. by adapting fisheries, spatial management and land development methods to the needs of their protection.

For stations:

- l) Skotawsko Małe lake; identifier PLH220052\_3150\_8,
- m) Skotawsko Duże lake; identifier PLH220052\_3150\_9,
- n) Unnamed lake south of the Skotawsko Duże lake; identifier PLH220052\_3150\_10,
- o) Kisewko lake; identifier PLH220052\_3150\_12,
- p) unnamed water body at the Skotawa river at the road to Dobieszewo; identifier PLH220052\_3150\_14.

Improvement of the indicator assessment – water color from the unsatisfactory assessment (U1) to the favorable one (FV), which means a slightly green, poorly transparent or brownish transparent color, among others by adjusting fisheries, spatial management and land development methods to the needs of their protection.

- 4) Improvement of conservation status from bad condition (U2) to unsatisfactory condition (U1) for lakes:
  - q) Unichowskie lake; identifier PLH220052\_3150\_2,
  - r) Duże lake near Borzytuchom; identifier PLH220052\_3150\_11.

For the above-mentioned sites, improvement of the structure and function parameter and maintaining prospects from bad assessment (U2) to at least unsatisfactory assessment (U1) by ensuring that their hydrochemical and hydrological conditions are not disturbed, adaptation of fisheries, spatial management and land development methods to the needs of their protection.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area and maintenance or improvement of other indicators in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 3150.

### **3160 – Natural, dystrophic water reservoirs**

Temporary conservation objectives:

- 1. Maintaining the habitat surface area at the level of at least 1.32 ha.
- 2. Improvement of the conservation condition in the area from unsatisfactory condition (U1) to favorable condition (FV). In particular, maintaining the following lakes in a non-deteriorated conservation status: natural lakes north of the following lakes Głębokie; identifier PLH220052\_3160\_1, a nameless lake south of Gałąźnia Mała; identifier PLH220052\_3160\_2. For this purpose, the habitat area parameters, structure and function as well as prospects of favorable condition (FV) should be maintained, among others, by ensuring that their hydrochemical and hydrological conditions are not disturbed, adapting fisheries, spatial management and land development methods to the needs of their protection.
- 3. The indicators of the structure and function parameter should be maintained at least at the current level, i.e.:
  - 1) Characteristic species – maintaining at least the U1 indicator rating, i.e. possible decrease in the number of species and the area occupied by them (however not higher than 20%);
  - 2) native expansive species – maintaining the FV indicator assessment within all habitat sites in the area, i.e. no expansive species;
  - 3) alien invasive species – maintaining the FV indicator assessment for all habitat sites in the area, i.e. no alien and invasive species; small presence of *Elodea canadensis* is allowed;
  - 4) water color – maintaining the FV indicator assessment within at least 90% of all habitat sites in the area, i.e. 50 mg PT/dm<sup>3</sup> < (or a brown, clear or slightly turbid water color);
  - 5) conductivity (electrolytic conductivity) – maintaining at least the U1 indicator assessment within all habitat sites in the area, i.e. conductivity of 100–500 µS/cm;
  - 6) water pH – maintaining the FV indicator assessment within at least 90% of all habitat sites in the area, i.e. pH 3–7;
  - 7) drainage – maintaining the FV indicator assessment within all habitat sites in the area, i.e. none;
  - 8) Hydrochemical Dystrophy Index (HDI) – maintaining the FV indicator assessment within all habitat sites in the area, i.e. > 50 (clear dystrophy process).

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area and maintenance of other indicators in the area, will not be endangered as a result of project implementation. Therefore, it is not expected that the planned

project may have a negative impact on natural habitat 3160.

### **3260 – Lowland and submontane rivers with groups of waders *Ranunculon fluitantis***

#### **Temporary conservation objectives:**

1. Maintaining the habitat surface area at the level of at least 224.54 ha.
2. Maintaining the habitat status in the area in a status not worse than unsatisfactory (U1) by:
  - 1) Maintaining the favorable conservation status (FV) for the site in Słupia Kamieńc PLH220052\_3260\_6 by maintaining the favorable conservation status of all parameters and individual indicators at at least the current level, i.e. characteristic species – *Trichinella*: preservation of natural species composition (favorable condition FV), with the proviso that fluctuations in the amount of *Trichinella* caused by natural processes, including fluctuations in the river bed shading, are acceptable;
  - 2) other characteristic species: preservation of natural species composition (favorable condition FV), with the proviso that fluctuations as a result of natural processes are acceptable;
  - 3) bed bottom material: maintaining at least 20% share of gravel and stony bottom, maximum 20% of muddy bottom (favorable condition FV); no trend of decay of gravel sections, e.g. as a result of deposition of finer sediments and collapse of gravels;
  - 4) ecological status assessment methods: Maintaining at least good ecological status (favorable condition FV) of all rivers;
  - 5) coverage of the transect by the Canadian waterweed: 0–2 degrees of the MMOR scale (unsatisfactory U1);
  - 6) flows: maintaining the current status > 80% of fast flow types (favorable condition FV);
  - 7) river water accumulation – no anthropogenic water accumulation (favorable condition FV), provided that it does not apply to natural water accumulation;
  - 8) Habitat Quality Assessment (HQA): Maintenance at a non-deteriorated level at the surveyed monitoring sites and at the level of > 70 for all rivers (favorable condition FV). Exclusion of intentional negative changes to any component of Habitat Quality Assessment (e.g. woody debris in the river, riverside and mid-channel bars, erosion cutbanks);
  - 9) natural fluctuations in the quantity and arrangement of these components are acceptable;
  - 10) Habitat Modification Score (HMS): maintenance at level 1; exclusion of intentional introduction of new components increasing the indicator value;
  - 11) natural morphological components: Maintaining at least 3 components at the surveyed river section (favorable condition FV) at a non-deteriorated level. Exclusion of intentional negative changes in any of the natural components according to the RHS Manual (in particular: side, meander and mid-channel bars, eroding and stable cutbanks, islands, boulders, dead trees in the current), natural fluctuations in the quantity and distribution of these components are acceptable;
  - 12) river shading: maintaining the current status (favorable condition FV, i.e. max. 50% shading); natural fluctuations in shading due, on the one hand, to tree growth and, on the other hand, to natural disturbances destroying trees are acceptable;
  - 13) invasive species: none (favorable condition FV); not applicable to Canadian waterweed, which is the subject of a separate indicator;
  - 14) wastewater: none (favorable condition FV).
3. Achievement of the favorable condition (FV) for the Słupia Łubuń sites PLH220052\_3260\_4 and (Chwarstnica PLH220052\_3260\_10, by improving the assessment of the parameters of structure and function as well as the conservation prospects up to the FV value, including improvement of the “flow” indicators ratings up to the FV value for the site PLH220052\_3260\_4, meaning more than 40% of fast flows (rapid and fast-flowing) throughout the day and all days of the week and, for the site PLH220052\_3260\_4, improvement of the HMS value lower than or equal to 20 simultaneous with stabilization of flows in the river and, for the site PLH220052\_3260\_10, improvement of the HQA value higher than or equal to 50.
4. Improvement, for the sites of Słupia Gałąźnia Mała PLH220052\_3260\_3 and Słupia Łysomiczki PLH220052\_3260\_7, of the general assessment from the bad state U2 to at least unsatisfactory condition (U1) by improving the assessment for the parameters of the “conservation prospect” and the “structure and function” parameter, including the improvement of the ratings of the “flow rates” indicator to the FV value, meaning more than 40% of quick flows (rapid and fast-flowing) throughout the day and all days of the week and the HMS value lower or equal to 20 and at the same time stabilization of flows in the river. For the remaining sites, improvement to the favorable condition (FV) by improving the ratings of the parameters “structure and function” and “conservation prospect” to the FV status, including for the sites PLH220052\_3260\_1,

PLH220052\_3260\_8, PLH220052\_3260\_9, PLH220052\_3260\_10, PLH220052\_3260\_12, PLH220052\_3260\_13, the favorable condition (FV) of the Habitat Quality Assessment (HQA) and Habitat Modification Score (HMS) corresponding to a HQA value higher or equal to 50 and HMS lower or equal to 20 respectively should be maintained or achieved.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area and maintenance or improvement of other indicators in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 3260.

#### **6120 – Xeric sand calcareous grasslands (*Koelerion glaucae*)**

No objectives of conservation measures have been defined for natural habitat 6120.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 6120.

#### **6430 – Mountainous herbs and riverside herbs *Adenostylion alliariae*, *Convolvuletalia sepium***

Temporary conservation objectives:

1. Maintaining the habitat in the area as a commonly present component of ecotones and scrubs in river valleys. Maintaining the area and structure and function of the habitat by monitoring processes that may limit or eliminate habitat patches, such as intensification of agricultural use of existing wastelands, elimination of buffer zones and ecotones, development of wetlands and other areas.
2. Maintaining the ratings of structure and function indicators at the current level, i.e.:
  - 1) Characteristic species – maintaining the share of the *Calystegia sepium* species at least at the level of 15%;
  - 2) species richness – maintaining the U1 indicator assessment within all habitat sites in the area, i.e. from 10 to 20 species in phytosociological releve;
  - 3) natural status of the fluvial channel (no regulation) – improvement or maintenance of at least the U1 (unsatisfactory) indicator assessment within all habitat sites in the area, i.e. no regulation or traces of former regulation;
  - 4) alien invasive species – maintaining the assessment of the FV indicator, i.e. no habitat within all sites;
  - 5) expansive species of herbaceous plants – maintaining at least the current level (preventing its further deterioration) within all habitat sites in the area, i.e. predominance of *Urtica dioica* at the maximum level of 50%;
  - 6) natural habitat complex – maintaining the assessment of the U1 indicator within all habitat patches in the area, i.e. in the vicinity of patches there are semi-natural communities.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area and maintenance or improvement of other indicators in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 6430.

#### **6510 – Lowland and mountain fresh meadows used extensively *Arrhenatherion elatioris***

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 41.57 ha.
2. Improving the assessment of the overall conservation status of the habitat in the area from bad (U2) to at least unsatisfactory (U1) by maintaining or achieving, within the sites PLH220052\_6510\_3, PLH220052\_6510\_4 and PLH220052\_6510\_5, at least the unsatisfactory (U1) assessment of the "structure and function" parameter and maintaining at least unsatisfactory conservation status (U1) within the sites PLH220052\_6510\_1 and PLH220052\_6510\_2. To this end, indicator ratings should be maintained or improved:
  - 1) Spatial structure of habitat patches: improvement of the indicator assessment to the level U1 (unsatisfactory), i.e. the average degree of fragmentation within the PLH220052\_6510\_4 site; maintaining the indicator assessment at the level of U1 (unsatisfactory), i.e. average degree of fragmentation at the site PLH220052\_6510\_1, maintaining favorable indicator assessment (FV), i.e. lack or slight fragmentation at the sites PLH220052\_6510\_2, PLH220052\_6510\_3 and PLH220052\_6510\_5;
  - 2) characteristic species – maintaining the FV indicator assessment within the site PLH220052\_6510\_1, i.e. numerous characteristic species ( $\geq 4$ ) for the *Arrhenatherion* association (for the *Poa pratensis*-*Festuca rubra* community  $\geq 3$ ), maintaining the U1 assessment in the area, i.e. average characteristic/diagnostic species ( $\geq 3$ ) for the

*Arrhenatherion* association (for the *Poa pratensis*-*Festuca rubra* community  $\geq 2$ ) for the site PLH220052\_6510\_2. Improvement to at least unsatisfactory condition (U1), i.e. average characteristic/diagnostic species ( $\geq 3$ ) for the *Arrhenatherion* association (for the *Poa pratensis*-*Festuca rubra* community  $\geq 2$ ) within the area of site PLH220052\_6510\_3, PLH220052\_6510\_4 and PLH220052\_6510\_5;

- 3) the group of characteristic species includes, among others: *Arrhenatherum elatius*, *Rumex thyrsiflorus*, *Crepis biennis*, *Campánula patula*, *Galium mollugo*, *Galium album*, *Knautia arvensis*, *Tragopogón pratensis*, *Tragopogón orientalis*, *Geranium pratense*, *Pastinaca sativa*, *Festuca rubra*, *Poa pratensis*;
  - 4) dominant species – maintaining the U1 indicator assessment within all habitat sites in the area, i.e. meadow species predominate, admissible predominance of one species specific to the habitat  $> 50\%$  (from 4 on the B-B scale) of coverage (U1);
  - 5) alien invasive species – maintaining the FV indicator assessment within all habitat sites in the area, i.e. no or single individuals of species with low degree of invasiveness (FV);
  - 6) expansive species of herbaceous plants – maintaining the FV indicator assessment within the sites PLH220052\_6510\_1, PLH220052\_6510\_4 and PLH220052\_6510\_5, i.e. no highly expansive species or their total coverage  $< 20\%$  (e.g. *Deschampsia caespitosa*, *Holcus lanatus*, *Calamagrostis epigejos*, *Tanacetum vulgare*) and maintaining at least the U1 assessment within the sites PLH220052\_6510\_2 and PLH220052\_6510\_3, i.e. coverage of any highly expansive species does not exceed 10% and total coverage of expansive species  $< 50\%$ ;
  - 7) expansion of shrubs and tree growth – maintaining the FV indicator assessment within all sites in the area, i.e. covering of shrubs and tree growth  $< 5\%$ ;
  - 8) share of well preserved habitat patches: improvement of the indicator assessment to at least the unsatisfactory level (U1), i.e. patches well preserved constitute at least 50% of the transect area within the sites PLH220052\_6510\_3, PLH220052\_6510\_4 and PLH220052\_6510\_5, maintaining the assessment at the unsatisfactory level for the sites PLH220052\_6510\_1 and PLH220052\_6510\_2.
3. Maintaining or improving the “conservation prospect” parameter to a favorable value (FV) for all sites, including maintaining the area and structure and function of the habitat by protecting sites against transformation of the forms of use, inhibiting the expansion of trees and shrubs and restoring or maintaining mowing use.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area and maintenance or improvement of other indicators in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 6510.

#### **7110 – High peat bogs with peat-forming vegetation (live)**

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 4.35 ha, taking into account natural processes.
2. Improvement of the assessment of the overall status of the habitat in the area to the favorable condition (FV) by:
  - 1) Characteristic species: maintaining the current species composition, i.e. the favorable condition FV – presence of at least 3 bog moss species and 2 vascular plant species from among characteristic species, at all sites, subject to possible fluctuations as a result of natural processes;
  - 2) coverage and species structure of bog moss: maintaining at least the current species composition, i.e. the favorable condition FV – total coverage of bog moss above 50% at all sites; subject to possible fluctuations due to natural processes;
  - 3) alien invasive species: no invasive species (favorable condition FV) at all sites;
  - 4) native expansive species of herbaceous plants: maintaining at the site PLH220052\_7110\_2 at least the current unsatisfactory level U1, i.e. expansive species occupy up to 5% of the area and maintaining at other sites (PLH220052\_7110\_1 and PLH220052\_7110\_3) the favorable condition FV, i.e. no expansive species;
  - 5) adequate hydration: maintaining favorable indicator assessment (FV) at sites PLH220052\_7110\_2 and PLH220052\_7110\_3, i.e. water level in the piezometer equal to or below 10 cm, water always visible on the surface and improvement of the unsatisfactory assessment (U1) to the favorable level at site PLH220052\_7110\_1;
  - 6) peat bog surface structure (presence of valleys and tufts): maintenance of the current

- structure assessed as favorable (FV), i.e. well-developed tuft-valley raised bogs with numerous bog moss, moss from the family Polytrichum, shrubs and other vascular plants within the tufts, valleys well hydrated with bog moss and vascular plants at all sites;
- 7) peat acquisition: none at all sites (favorable condition FV);
  - 8) drainage facilities: none at all sites (favorable condition FV),
  - 9) presence of shrubs and trees: maintenance of the favorable condition (FV: covering of 10% < trees, 30% < shrubs) at the sites PLH220052\_7110\_1 and PLH220052\_7110\_3 and improvement of the indicator assessment from the unsatisfactory level (U1) to the favorable level (FV) at site PLH220052\_7110\_2.
3. Improvement of the "conservation prospect" parameter to the favorable condition for the site PLH220052\_7110\_1.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area, maintaining favorable species composition and maintaining or improving other indicators in the area, will not be threatened as a result of project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7110.

#### **7120 – Degraded raised peat bogs, but capable of natural and stimulated regeneration**

No objectives of conservation measures have been defined for natural habitat 7120.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7120.

#### **7140 – Transitional peat bogs and moors mostly with *Scheuchzeria* – *Caricetea* vegetation**

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 50.43 ha, taking into account natural processes.
2. Achievement of the habitat conservation status in the area at the favorable level (FV), including improvement of the parameters and indicators described below:
  - 1) Percentage of the area occupied by the habitat in the transect – maintaining the FV indicator assessment within at least 90% of the habitat sites in the area, i.e. above 90%;
  - 2) characteristic species – maintaining at least the FV indicator assessment within at least 90% of the area of the habitat sites in the area, i.e. above 6 characteristic species or less, but with coverage of characteristic species in the transect above 50%;
  - 3) dominant species – maintaining the FV indicator assessment within at least 60% of the area of the habitat sites in the area, i.e. dominant species characteristic for the habitat or lack of a dominant species, but dominant species are characteristic and maintaining at least the U1 indicator assessment within at least 20% of the habitat sites in the area, i.e. no clear dominant species, share of species characteristic for the habitat 7140 and others approximately equally;
  - 4) coverage and species structure of mosses – maintaining the FV indicator assessment within at least 80% of the area of habitat sites in the area, i.e. the total coverage of mosses over 50% of bog moss occupies a total of over 50% of the total area covered by all moss species;
  - 5) alien invasive species – maintaining the FV indicator assessment within all habitat sites in the area, i.e. none;
  - 6) expansive species of herbaceous plants – maintaining the FV indicator assessment within at least 80% of the area of habitat sites in the area, i.e. none or single occurrences;
  - 7) presence of shrubs and tree undergrowth – improvement from unsatisfactory condition (U1) or bad condition (U2) to favorable condition (FV), meaning none or single for the following sites: PLH220052\_7140\_3, PLH220052\_7140\_9, PLH220052\_7140\_13, PLH220052\_7140\_15, PLH220052\_7140\_18;
  - 8) hydration degree – maintaining the FV indicator assessment within at least 70% of the area of the habitat sites in the area, i.e. the water level measured in the piezometer – above, even or up to 10 cm below the peat bog area, including at site PLH220052\_7140\_14 by overhaul of the existing boom gate on the drainage ditch;
  - 9) peat acquisition – maintaining the FV indicator assessment within 90% of the habitat area in the area, i.e. none;
  - 10) drainage facilities – maintaining the FV indicator assessment within all sites, i.e. none.
3. Improvement or maintenance of the parameter "conservation prospect" at the favorable level (FV), meaning that no significant impacts of factors threatening the habitat protection for sites

occur and are not expected

PLH220052\_7140\_1

PLH220052\_7140\_3,

PLH220052\_7140\_4,

PLH220052\_7140\_5,

PLH220052\_7140\_6,

PLH220052\_7140\_8,

PLH220052\_7140\_10, PLH220052\_7140\_11.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area, maintenance of characteristic species and maintenance or improvement of other indicators in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7140.

#### **7150 – Depressions on peat subsoil with vegetation from *Rhynchosporion* compound**

No objectives of conservation measures have been defined for natural habitat 7150.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7150.

#### **7230 – Mountain and lowland alkaline peat bogs of bog-spring, sedge and mossland types**

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 9.60 ha, taking into account natural processes.
2. Improvement of the conservation status from the current bad condition (U2) to the favorable condition (FV) by improving the parameters of the conservation prospects and the specific structure and function by achieving the following indicator ratings:
  - 1) Percentage of the area occupied by the habitat in the transect: maintenance of the favorable condition (FV), i.e. 80–100% on at least 50% of the habitat area in the area;
  - 2) characteristic species: maintaining at least an unsatisfactory condition (U1), i.e. 4–8 characteristic species or covering the characteristic species in the 20–50% transect, subject to fluctuations due to natural processes in 75% of the habitat area in the area;
  - 3) dominant species: maintaining unsatisfactory condition U1, i.e. no clear dominant species, share of species characteristic of the habitat and others approximately equal to at least 50% of the habitat area in the area;
  - 4) moss coverage and species structure: maintaining at least unsatisfactory condition U1, i.e. total coverage of mosses within the range of 20–50%, brown mosses 20–70% of the total area occupied by all moss species) on at least 25% of the habitat area in the area;
  - 5) alien invasive species – none at all sites (favorable condition FV);
  - 6) expansive species of herbaceous plants: maintaining the favorable condition FV, i.e. no or single habitat on the entire area;
  - 7) pH range: maintaining the current favorable condition, i.e. pH of < 7 on at least 75% of the habitat area in the area;
  - 8) presence of shrubs and undergrowth: maintaining the favorable condition FV, i.e. none or single on at least 50% of the habitat area; improvement of the indicator from unsatisfactory condition (U1) and bad condition (U2) to the favorable level at sites PLH220052\_7230\_1 and PLH220052\_7230\_3;
  - 9) hydration degree: maintaining the favorable condition FV, i.e. the water level measured in the piezometer up to 2 cm above, even or up to 10 cm below the peat bog surface on at least 75% of the habitat surface in the area;
  - 10) peat acquisition: none (favorable condition FV) in the entire habitat area in the area;
  - 11) drainage facilities: maintaining the favorable condition (FV), i.e. lack or neutralized at least 50% of the habitat area in the area.
3. Improvement of the parameter "conservation prospect" to the level of the favorable FV, i.e. indicating that no significant impacts of hazardous factors occur and are not expected to occur, constitutes a habitat protection for habitat sites PLH220052\_7230\_1, PLH220052\_7230\_2.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the habitat area, maintenance of characteristic species and maintenance or improvement of other indicators in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 7230.

#### **9110 – Acid beech forest *Luzulo-Fagenion***

Temporary conservation objectives:

1. Maintenance of the habitat surface area at the current level of at least 270.32 ha.

2. Improvement of the overall assessment for the area to favorable value (FV), if natural processes allow it, by:
  - 1) Maintenance of the current favorable assessment (FV) of the "tree stand age" indicator within at least 90% of all patches in the area, i.e. more than 10% of trees older than 100 years;
  - 2) maintenance of the current favorable assessment (FV) of the "characteristic flora combination" indicator – i.e. typical, specific for a natural habitat within at least 75% of habitat patches and at least unsatisfactory U1, i.e. deformed in relation to that typical for a habitat – untypical, degraded, with synanthropic or nitrophilous species of <5% of coverage within at least 25% of sites;
  - 3) maintenance of the current favorable assessment (FV) of the "invasive non-native species in the undergrowth and ground flora" indicator – favorable FV, i.e. no invasive non-native species within at least 95% of patches in the area;
  - 4) maintenance of the current favorable assessment (FV) of the "expansive native species in the ground flora" indicator: i.e. no expansive species or single specimens of nitrophilous species in the ground flora within at least 95% of habitat patches in the area;
  - 5) maintenance of at least the current level, i.e. unsatisfactory (U1) or improvement to favorable status (FV) of the assessment of the "tree stand vertical and spatial structure" indicator within at least 90% of habitat patches in an area where the unsatisfactory status indicates a uniform tree stand with single trees of different ages with the same spatial compactness;
  - 6) maintenance of at least the current level, i.e. favorable status (FV) of the assessment of the "tree stand natural renewal" indicator, i.e. current, filling sites convenient for renewal, in particular natural gaps and clearances, with composition corresponding to the composition of the tree stand at cuttings not requiring artificial renewal on sites within at least 95% of the habitat patches in the area;
  - 7) maintenance of at least the current unsatisfactory (U1) level or improvement to favorable status (FV) of the "non-native species in the tree stand" indicator within at least 80% of habitat patches in an area where the favorable status FV indicates <5% of the surface share and unsatisfactory U1 – surface share of 5-15% and not restoring;
  - 8) improvement and maintenance of the assessment of the "dead large-size wood" indicator from unsatisfactory status U1 to favorable status FV within at least 80% of habitat patches, i.e. at least 5 pcs./ha, U1 – 3-5 pcs./ha;
  - 9) improvement and maintenance of the assessment of the "dead wood – total resources" indicator from unsatisfactory status (U1) to favorable status FV within at least 75% of habitat patches in the area where the favorable status FV indicates more than 20 m<sup>3</sup>/ha;
  - 10) improvement and maintenance of the assessment of the "tree microhabitats (biocenotic trees)" indicator from unsatisfactory status (U1) to favorable status FV within at least 75% of habitat patches in the area where the favorable status FV indicates more than 20 pcs./ha;
  - 11) improvement or maintenance in favorable status (FV) of the assessment of the "conservation perspective" parameter for at least 80% of the monitored habitat sites, including PLH220052\_9110\_1, PLH220052\_9110\_2, PLH220052\_9110\_3, PLH220052\_9110\_6, PLH220052\_9110\_11, PLH220052\_9110\_15, PLH220052\_9110\_17 sites.

Objectives of conservation measures:

1. Non-deterioration of the indicators of structure parameter and functions assessed as:
  - 1) U1/FV – vertical and spatial structure of the tree stand;
  - 2) U1 – dead, lying or standing wood >3 m and >50 cm thick;
  - 3) U1 – dead wood.
2. Maintaining the values of the structure parameter and function indicators that have been evaluated as FV:
  - 4) "Invasive non-native species in undergrowth and ground flora";
  - 5) "Tree stand natural renewal";
  - 6) "Tree stand age";
  - 7) "Geographically non-native species in the tree stand".

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives and objectives of conservation measures, including the surface area of the habitat, maintenance of an appropriate flora combination typical of the habitat and maintenance or improvement of other indicators in the area, will not be threatened as a result of the implementation of the project.



Therefore, it is not expected that the planned project may have a negative impact on natural habitat 9110.

### **9130 – Fertile beech *Dentario glandulosae-Fagenion*, *Galio odorati-Fagenion***

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 270.43 ha.
2. Improvement of the overall assessment for the area to the favorable condition (FV) by:
  - 1) Improvement from bad assessment value (U2) to unsatisfactory assessment value (U1) and from value (U1) to value (FV) of the assessment of “tree stand age” indicator (FV – more than 10% of trees older than 100 years, U1 – more than 50% of trees older than 50 years), “dead large-size wood” indicator (FV – more than 5 pcs./ha, U1 – 3-5 pcs./ha), “dead wood – total resources” indicator (FV – more than 20 m<sup>3</sup>/ha, U1 – 10-20 m<sup>3</sup>/ha) and “tree microhabitats (biocenotic trees)” indicator (FV – more than 20 pcs./ha, U1 – 10-20 pcs./ha) for at least half of the monitored sites, with no deteriorated assessment for any of the sites;
  - 2) improvement or maintenance in favorable status (FV) of the assessment of the “conservation perspective” parameter for at least 80% of the habitat sites, including PLH220052\_9130\_3, PLH220052\_9130\_4, PLH220052\_9130\_5, PLH220052\_9130\_6, PLH220052\_9130\_7, PLH220052\_9130\_8, PLH220052\_9130\_10, PLH220052\_9130\_11, PLH220052\_9130\_13, PLH220052\_9130\_14, PLH220052\_9130\_15, PLH220052\_9130\_16, PLH220052\_9130\_17, PLH220052\_9130\_18.
3. Maintenance of the indicators at the following level:
  - 1) “Characteristic flora combination” – at least unsatisfactory level U1, i.e. deformed in relation to a typical combination formed locally in natural beech forests within at least 85% of habitat patches in the area;
  - 2) “tree stand composition” – favorable level FV, i.e. ecologically present species of beech forests constitute <15% of the tree stand. Tree stand dominated (>50%) by beech forest species within at least 95% of habitat patches in the area;
  - 3) “invasive non-native species in the undergrowth and ground flora” – favorable level FV, i.e. none within at least 75% of habitat patches in the area;
  - 4) “expansive native species in the ground flora” – favorable level FV, i.e. no expansive species or single specimens of nitrophilous species in the ground flora within at least 95% of habitat patches in the area;
  - 5) “tree stand vertical and spatial structure” – at least unsatisfactory level U1, i.e. uniform tree stand with single trees of different age, with the same spatial compactness within all habitat patches in the area;
  - 6) “tree stand natural renewal” – at least favorable level FV, i.e. current, filling sites convenient for renewal, in particular natural gaps and clearances, with composition corresponding to the composition of the tree stand at cuttings not requiring artificial renewal on sites within at least 95% of the habitat patches in the area;
  - 7) “non-native species in the tree stand” – favorable level FV, i.e. <5%, i.e. at most locally or individually and not renewing within at least 75% of habitat patches in the area.

Objectives of conservation measures:

1. Non-deterioration of the indicators of structure parameter and functions assessed as:
  - 1) U1/FV – vertical and spatial structure of the tree stand;
  - 2) U1 – dead wood, lying or standing >3 m long and >50 cm thick;
  - 3) U1 – dead wood.
2. Maintaining the values of the structure parameter and function indicators that have been evaluated as FV:
  - 1) “Invasive non-native species in undergrowth and ground flora”;
  - 2) “tree stand natural restoration”;
  - 3) “tree stand age”;
  - 4) “geographically non-native species in the tree stand”.
  - 5) “ecologically non-native species in the tree stand”.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives and objectives of conservation measures, including the surface area of the habitat, maintenance of an appropriate flora combination typical of the habitat and maintenance or improvement of other

indicators in the area, will not be threatened as a result of the implementation of the project. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 9130.

#### **9160 – Sub-Atlantic broadleaved forest *Stellario-Carpinetum***

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 128.83 ha.
2. Improvement of the overall assessment for the area to the favorable condition (FV) by:
  - 1) improvement of the assessment of indicators from bad value (U2) to unsatisfactory value (U1) and from value (U1) to value (FV) of the “tree stand age” indicator (FV more than 10% by volume of trees older than 100 years, U1 – more than 50% of trees older than 50 years), “dead large-size wood” indicator (FV – more than 5 pcs./ha of fragments over 3 m long and over 50 cm in diameter, U1 3-5 pcs./ha), and “dead wood – total resources” indicator (FV – more than 20 m<sup>3</sup>/ha, U1 10-20 m<sup>3</sup>/ha) for at least half of the monitored sites, with non-deteriorated assessment for any of the sites;
  - 2) improvement or maintenance in favorable status (FV) of the assessment of the “conservation perspective” parameter for at least 80% of the habitat sites, including:  
PLH220052\_9160\_1,  
PLH220052\_9160\_1,      PLH220052\_9160\_3,      PLH220052\_9160\_4,  
PLH220052\_9160\_9,      PLH220052\_9160\_21,      PLH220052\_9160\_22,  
PLH220052\_9160\_24,      PLH220052\_9160\_25,      PLH220052\_9160\_29,  
PLH220052\_9160\_30,      PLH220052\_9160\_31,      PLH220052\_9160\_33,  
PLH220052\_9160\_34.
3. Maintenance of indicators:
  - 1) characteristic combination of ground flora – maintenance of at least unsatisfactory assessment of the indicator within at least 90% of the habitat surface in the area, i.e.: typical flora combination deformed in relation to that typical regionally. Characteristic and distinguishing species include, i.a.: *Galeobdolon luteum*, *Galium odoratum*, *Stellaria holostea*, *Carex sylvatica*, *Millium effusum*, *Pulmonaria obscura*. The tree stand of broadleaved forests is made up of beech, hornbeam, pedunculate oak, black alder present in various proportions. In addition, the admixture includes: sycamore maple, European white birch, common ash. The undergrowth layer is dominated by: hazel, beech, sycamore maple, hornbeam. In patches referring to *Ficario-Ulmetum* riparian forests or with past riparian forest genesis, ash is of higher dynamics;
  - 2) dominant species in individual phytocenose layers – maintenance of the FV/U1 assessment within at least 80% of the habitat sites in the area, i.e. in each layer of the group, species specific to the habitat (FV) or disturbed quantitative relations (U1) dominate;
  - 3) hornbeam share – maintenance of the FV assessment of the indicator for at least 80% of the habitat sites in the area, i.e. hornbeam share in the tree stand of >10%;
  - 4) share in the tree stand of deciduous species (without early-succession species) – maintenance of the FV/U1 assessment of the indicator for at least 90% of the habitat sites in the area, i.e. maintenance of the share at the level above 50%;
  - 5) share in the tree stand of early-succession species – maintenance of the FV/U1 assessment of the indicator for at least 90% of the habitat sites in the area, i.e. maintenance of the share of early-succession species (*Betula pendula*, *Populus tremula*) at the level of <10% (FV) or <30% (U1);
  - 6) invasive non-native species in the undergrowth and ground flora – maintenance of the FV assessment of the indicator within at least 85% of the habitat sites in the area, i.e. none or single;
  - 7) expansive native species (apofits) in the ground flora – maintenance of the FV assessment of the indicator within all habitat sites in the area, i.e. occasional share (mainly nitrophilous herbaceous species and blackberries);
  - 8) vegetation vertical and spatial structure – maintenance of favorable status (FV) within at least 20% of sites or improvement of the U1 assessment of the indicator within at least 80% of the habitat sites in the area, i.e. uniform old tree stand or diversified structure with compact old tree stand above 10%;
  - 9) natural tree stand renewal – maintenance or improvement of the U1 assessment of the indicator within all habitat sites in the area, i.e. occurs individually or without the hornbeam;
  - 10) geographically non-native species in the tree stand – maintenance of the FV assessment of the indicator within all habitat sites in the area, i.e. share of geographically non-native

- (i.a. *Quercus rubra*, *Picea abies*, *Larix sp.*) non-renewing species of <1% (FV);
- 11) ecologically non-native species in the tree stand – maintenance of the FV assessment of the indicator for at least 60% of the habitat sites in the area, i.e. share of ecologically non-native species (e.g. *Pinus sylvestris*) of <10%;
  - 12) destruction of the ground flora and soil related to harvesting – maintenance of the FV assessment of the indicator within all habitats in the area, i.e. no significant traces of ground flora destruction;
  - 13) other deformations – maintenance of the FV assessment within all habitat sites in the area, i.e. no deformations (FV).

Objectives of conservation measures:

1. No deterioration of values of the indicators of the structure parameter and functions, which were assessed as U1:
  - 1) “characteristic flora combination”;
  - 2) “tree stand age”;
  - 3) “tree stand natural restoration”;
  - 4) “wood microhabitats”.
2. Improvement of the indicators of the structure parameter and functions which were assessed as U2:
  - 1) “Tree stand vertical and spatial structure”;
  - 2) “dead wood, lying or standing” >3 m long and >50 cm thick;
  - 3) “dead wood”.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives and objectives of conservation measures, including the surface area of the habitat, maintenance of an appropriate flora combination typical of the habitat and maintenance or improvement of other indicators in the area, will not be threatened as a result of the implementation of the project. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 9160.

#### **9170 – Central European and subcontinental broadleaved forest *Galio-Carpinetum*, *Tilio-Carpinetum***

No objectives of conservation measures have been defined for natural habitat 9170.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 9170.

#### **9190 – Acid oak forest (*Quercion roburi-petraeae*)**

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 5.46 ha.
2. Improvement of the overall assessment for the area to favorable value (FV) by: the assessment of the indicators of the “structure and function” parameter for the “dead wood (total resources)” indicator, i.e. 10-20 m<sup>3</sup>/ha and “dead wood, lying or standing >3 m long and >50 cm thick”, i.e. 3-5 pcs./ha for PLH220052\_9190\_1, PLH220052\_9190\_2 sites.
3. Maintenance of indicators in the following condition:
  - 1) characteristic combination of ground flora – at least unsatisfactory U1, i.e. degraded in relation to that typical for the natural habitat within all habitat patches in the area;
  - 2) species dominating in individual phytocenose layers – at least unsatisfactory U1, i.e. in all layers species typical of the habitat prevail, whereas there are disturbed quantitative relations within all habitat patches in the area;
  - 3) share of oak in the tree stand – at least unsatisfactory U1, i.e. 40-70% within all sites;
  - 4) share of pine in the tree stand – favorable FV, i.e. <10% within all sites;
  - 5) ecologically non-native species in the tree stand – favorable FV, i.e. <10% within all sites;
  - 6) geographically non-native species in the tree stand – favorable FV, i.e. < 1% and not restoring within all sites;
  - 7) tree stand age (presence of old trees) – at least unsatisfactory U1, i.e. <10% of share of the volume of trees older than 100 years, but >50% of share of trees older than 50 years within all sites;
  - 8) vegetation vertical and spatial structure – at least unsatisfactory U1, i.e. uniform old tree stand or diversified structure with compact old tree stand occupying 10-50% of the surface area within all sites;
  - 9) expansive non-native species in the undergrowth and ground flora – favorable FV, i.e. none within all sites;

- 10) expansive native species (apofits) in the ground flora – favorable FV, i.e. at most single ones within all sites;
- 11) destruction of ground flora and soil related to wood harvesting – favorable FV, i.e. none within all sites.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Stupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the surface area of the habitat, maintenance of an appropriate flora combination typical of the habitat and maintenance or improvement of other indicators in the area, will not be threatened as a result of the implementation of the project. Therefore, it is not expected that the planned project may have a negative impact on natural habitat 9190.

**91D0 – Swamp woods and forests *Vaccinio uliginosi-Betuletum pubescentis*, *Vaccinio uliginosi-Pinetum*, *Pinomugo-Sphagnetum*, *Sphagno girgensohnii-Piceetumi* birch and pine swamp boreal forests**

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 18.96 ha, taking into account natural processes.
2. Improvement of the overall assessment in the area to value FV (favorable) by the improvement or maintenance of favorable status (FV) of the assessment of the “conservation perspective” parameter for all habitat patches in the area by excluding them from economic use (wood harvesting) as well as passive conservation and enabling spontaneous natural processes, including within protected areas and facilities or under internal regulations of land administrators, in particular maintenance of indicators in the following status:
  - 1) characteristic species – favorable status FV, i.e. present >60% of the list of characteristic species within at least 40% of the site and at least unsatisfactory U1, i.e. present 30-60% of the list of characteristic species within at least 60% of the sites;
  - 2) dominant species – favorable status FV, i.e. in all layers, the dominant species are species in the natural plant community, and the quantitative relations of their dominance are natural in at least 80% of sites and at least unsatisfactory status U1, i.e. in all layers, the dominant species are species that prevail in the natural plant community, but quantitative relations are disturbed within at least 20% of sites;
  - 3) invasive non-native species in the ground flora – favorable status FV, i.e. none within all sites;
  - 4) native expansive species of herbaceous plants – favorable status FV, i.e. none within at least 20% of sites and at least unsatisfactory status U1, i.e. present, but no more than 1 species, not very expansive in at least 80% of sites;
  - 5) hydration degree – favorable status FV, i.e. proper “swamp” hydration within at least 40% of sites and at least unsatisfactory status U1, i.e. slightly dried within at least 60% of sites;
  - 6) presence of peat moss – favorable status FV, i.e. prevailing in the ground flora, normal species diversity within all sites;
  - 7) tree stand age – at least unsatisfactory status U1, i.e. <20% share of trees older than 100 years, but >50% share of trees older than 50 years within at least 40% of sites;
  - 8) geographically non-native species in the tree stand – favorable FV, i.e. < 1% and not restoring within all sites;
  - 9) ecologically non-native species in the tree stand – favorable status FV, i.e. none within all sites;
  - 10) natural tree stand renewal – at least unsatisfactory status U1, i.e. single ones within all sites;
  - 11) occurrence of characteristic shrubs – favorable status FV, i.e. they occur with “normal” abundance within at least 20% of sites and at least unsatisfactory status U1, i.e. they are scarce within at least 40% of sites.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Stupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the surface area of the habitat, maintenance of an appropriate flora combination typical of the habitat and maintenance or improvement of other indicators in the area, will not be threatened as a result of the implementation of the project. Therefore, it is not expected that the planned project may have a negative impact on the natural habitat 91D0.

**91E0 – Willow, poplar, alder and ash wetlands *Salicetum albo-fragilis*, *Populetum albae*, *Alnenion glutinoso-incanae*, alder carr**

Temporary conservation objectives:

1. Maintaining the habitat surface area at the level of at least 625.60 ha, taking into account natural

processes.

2. Improvement of the overall assessment in the area to value FV (favorable) by:
  - 1) improvement from bad value (U2) to unsatisfactory value (U1) or from value (U1) to value (FV) of the "tree stand age" indicator (FV more than 20% by volume of trees older than 100 years, U1 – more than 50% of trees older than 50 years), "dead large-size wood, lying or standing" indicator (FV – more than 5 pcs./ha of fragments over 3 m long and over 50 cm in diameter, U1 3-5 pcs./ha), and "dead wood – total resources" indicator (FV – more than 20 m<sup>3</sup>/ha, U1 -10-20 m<sup>3</sup>/ha) for at least 40% of the monitored sites, with non-deteriorated assessment for any of the sites;
  - 2) improvement or maintenance in favorable status (FV) of the assessment of the "conservation perspective" parameter for at least 80% of habitat sites, including patches  
PLH220052\_91E0\_2, PLH220052\_91E0\_3, PLH220052\_91E0\_14,  
PLH220052\_91E0\_19, PLH220052\_91E0\_20, PLH220052\_91E0\_21,  
PLH220052\_91E0\_22, PLH220052\_91E0\_23, PLH220052\_91E0\_24,  
PLH220052\_91E0\_25, PLH220052\_91E0\_26, PLH220052\_91E0\_29,  
PLH220052\_91E0\_34, PLH220052\_91E0\_37, PLH220052\_91E0\_39,  
PLH220052\_91E0\_40, PLH220052\_91E0\_41, PLH220052\_91E0\_45,  
PLH220052\_91E0\_46, PLH220052\_91E0\_48, PLH220052\_91E0\_50,  
PLH220052\_91E0\_54, PLH220052\_91E0\_60, PLH220052\_91E0\_61,  
PLH220052\_91E0\_63, PLH220052\_91E0\_67, PLH220052\_91E0\_78,  
PLH220052\_91E0\_88, PLH220052\_91E0\_90.
3. Maintenance of indicators in the following condition:
  - 1) characteristic species – favorable status FV, i.e. flora combination typical of the riparian forest on at least 15% of the habitat sites in the area and at least unsatisfactory status U1, i.e. flora combination degraded, but based on species typical of the riparian forest on at least 85% of the habitat sites in the area;
  - 2) dominant species – favorable status FV, i.e. in all layers, species typical of the habitat dominate, whereas natural quantitative relations are maintained within at least 90% of the habitat sites in the area, geographically non-native species in the tree stand – favorable status FV, i.e. <1% and not renewing within all sites;
  - 3) invasive non-native species in the ground flora and undergrowth: favorable status FV, i.e. a maximum of 1 species present, few – occasionally in at least 75% of habitat sites in the area;
  - 4) native expansive species of herbaceous plants – favorable status FV, i.e. not very expansive within all sites;
  - 5) natural status of the fluvial bed – favorable status FV, i.e. no control of the watercourse within at least 75% of the habitat sites in the area;
  - 6) water regime – favorable status FV, i.e. normal flood dynamics and substrate water overload within all habitat sites in the area;
  - 7) vertical vegetation structure – at least unsatisfactory status U1, i.e. anthropogenically altered, but diversified within all sites;
  - 8) natural renewal – at least unsatisfactory status U1, i.e. occurs individually within all sites.

Objectives of conservation measures:

1. No deterioration of values of the indicators of the structure parameter and functions, which were assessed as U1:
  - 1) "dead wood, lying or standing" >3 m long and >50 cm thick;
  - 2) "dead wood" (total resources);
  - 3) "tree stand age";
  - 4) "vertical vegetation structure".
2. Maintenance of population status indicators, which were assessed as U1
  - 1) "relative abundance";
  - 2) "water regime".

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives and objectives of conservation measures, including the surface area of the habitat, maintenance of an appropriate flora combination typical of the habitat and maintenance or improvement of other indicators in the area, will not be threatened as a result of the implementation of the project. Therefore, it is not expected that the planned project may have a negative impact on the natural habitat 91E0.

#### **6216 – Slender green feather-moss *Hamatocaulis vernicosus***

No objectives of conservation measures have been defined for the slender green feather-moss.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this species. Therefore, it is not expected that the planned project may have a negative impact on the slender green feather-moss.

#### **1014 – Narrow-mouthed whorl snail *Vertigo angustior***

No objectives of conservation measures have been defined for the narrow-mouthed whorl snail.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Therefore, it is not expected that the planned project may have a negative impact on the narrow-mouthed whorl snail.

#### **1016 – Desmoulin's whorl snail *Vertigo moulinsiana***

Temporary conservation objectives:

1. Maintenance of the population of the species in the area and on the Grabówek site (PLH220052\_VerMou\_2) at the level of at least 10,000 – 100,000 individuals.
2. Improvement of the overall assessment of the conservation status on the Grabówek site (PLH220052\_VerMou\_2) and in the area from the bad value (U2) to at least unsatisfactory value (U 1), including the improvement to the U1 value of the “structure and function” parameter for the “vegetation” indicator (dominance of high-sedge rushes and their expansion to habitats of herbs and high rushes) “habitat fragmentation” indicator (slightly fragmented habitat) and to favorable value (FV) of the “conservation perspective” parameter by covering the site with active conservation procedures and formal and legal protection against transformation.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not interfere in any way with this area. Temporary conservation objectives, including the maintenance of population size and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the Desmoulin's whorl snail.

#### **1032 – Thick shelled river mussel *Unio crassus***

Temporary conservation objectives:

1. Maintenance of the population of the species in the area at the level of at least 100,000–300,000 individuals.
2. Improvement of the conservation condition in the area from unsatisfactory condition (U1) to favorable condition (FV). Including the improvement of the conservation status on PLH220052\_UniCra\_2, PLH220052\_UniCra\_3, PLH220052\_UniCra\_4 sites as regards the “water flow rate” auxiliary indicator for its stabilization below the value of 0.3 m/s and the “conservation perspective” parameter to FV value (favorable) by the improvement of the perspectives of maintenance of the species on all sites, including permanent limitation of the effects of negative impacts on physical parameters of water (flow rate, water temperature, bed erosion) related to the operation of the hydropower plant complex.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives, including the maintenance of population size and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the thick shelled river mussel.

#### **1037 – Green snaketail *Ophiogomphus cecilia***

Temporary conservation objectives:

1. Maintaining the abundance of the species in the Area at the level of at least 1000–10000 individuals.
2. Maintenance of the species on all monitored sites and improvement of the conservation status in the area from unsatisfactory status (U1) to favorable status (FV).
3. Improvement of the assessment of the “conservation perspective” parameter to favorable value (FV) on at least 70% of the monitored sites by the improvement of the effectiveness of enforcement of the requirements of national and international law concerning the protection of flowing waters, including the maintenance of appropriate hydromorphological conditions of watercourses and maintenance of the water purity status.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives, including the maintenance of population size and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the

project implementation. Therefore, it is not expected that the planned project may have a negative impact on the green snaketail.

#### **1042 – Large white-faced darter *Leucorrhinia pectoralis***

Temporary conservation objectives:

1. Maintaining the abundance of the species in the Area at the level of at least 500–5000 individuals.
2. Achievement of the favorable conservation status (FV) of the species, in particular: maintenance of the “population” parameter at a level that is at least unsatisfactory (U1), i.e. indicating the number of males in the range of 4-9 (moderate), density of molts of 0.1-9.9 (including low 0.1-4.9 or moderate 5-9.9) for at least 80% of the sites.
3. Improvement of the assessment of the “habitat” parameter from unsatisfactory status (U1) to favorable status (FV) on at least 50% of the sites, i.e. presence of at least 2 plant species/taxons on the site preferred by the species (listed in the monitoring methodology of the Chief Inspectorate of Environmental Protection (GIOŚ)), share of vegetation convenient for the species for at least 75% of the length or surface area of littoral plants or at least 50% of the water body surface area, within a radius of 100 m from the site, negligible share of intensively used areas ( $\leq 2\%$ ) and share of the natural environment of  $>25\%$ ; unsatisfactory status U1 (PLH220098\_LeuPec\_7), i.e. at least 2 plant species/taxons on the site preferred by the species (listed in the GIOŚ monitoring methodology), share of vegetation convenient for the species for  $<25\%$  of the length or surface area of littoral plants or  $<10\%$  of the water body surface area, within a radius of 100 m from the site, negligible share of intensively used areas ( $\leq 2\%$ ) and share of natural environment of  $<25\%$ .
4. Improvement of the assessment of the “conservation perspective” parameter to favorable value (FV) on all monitored sites by ensuring that hydrochemical and hydrological conditions on the sites are not disturbed or are improved, especially in drying facilities, and adaptation of business activity, including fishing, spatial, forest management and methods of land development in the surroundings to the needs of species conservation.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives, including the maintenance of population size and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the large white-faced darter.

#### **1060 – Large copper *Lycaena dispar***

Temporary conservation objectives:

1. Maintaining the abundance of the species in the Area at the level of at least 100–1000 individuals.
2. Maintenance of favorable (FV) conservation status of the species in the area, including the acreage and the structure and function parameter of the habitat by the maintenance of extensive grassland use on all sites of the species and limitation of processes and forms of activity that may eliminate species habitat patches in the area, such as intensification of agricultural use of the existing wastelands, elimination of buffer zones and ecotone zones, development of wetlands and other areas.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives, including the maintenance of population size and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the large copper.

#### **1096 – Brook lamprey *Lampetra planeri***

Temporary conservation objectives:

1. Maintaining the species and conditions for its occurrence in all watercourses in which it was found and at least 90% of the monitored sites.
2. Improvement of the assessment of the conservation status in the area to favorable value (FV), which means an increase in the assessment from U2 to U1 on at least 19 sites.
3. Improvement of the assessment of the “structure and function” parameter as regards the “hydromorphological quality” indicators for the favorable (FV) assessment (point indicator value 1 – 2.5) for PLH220052\_LamPla\_7, PLH220052\_LamPla\_8, PLH220052\_LamPla\_12, PLH220052\_LamPla\_21, PLH220052\_LamPla\_24, PLH220052\_LamPla\_25 sites and achievement of favorable status for the “presence of necessary microhabitats” indicator, i.e.

“presence of both spawning grounds and larvae growth sites” for at least 80% of all monitored sites.

4. Improvement of the assessment of the “conservation perspective” parameter to favorable status (FV), i.e. good conservation perspectives and no significant hazards for at least 90% of the monitored sites.

Those objectives should be achieved by the significant improvement of the effective enforcement of the requirements of national and international law on the protection of flowing waters, including the improvement of the hydromorphological conditions of watercourses, maintenance or improvement of the condition of water purity and improvement of the continuity of watercourses and removal of barriers hindering or preventing migration.

Objectives of conservation measures:

1. Improvement of population status indicators, which were assessed as U1:
  - 1) “relative abundance”;
  - 2) “age structure”.
2. Maintenance of the habitat indicator value:
  - 1) “Presence of necessary microhabitats”, assessed as U1 on at least the current level.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives and objectives of conservation measures, including the maintenance of the species and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the brook lamprey.

#### **1099 – European river lamprey *Lampetra fluviatilis***

No objectives of conservation measures have been defined for the European river lamprey.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site – Słupia Valley PLH220052. Possible impact on the above-mentioned subject of conservation may involve a barrier effect for species entering the Słupia River for spawning, including the European river lamprey (as a result of turbidity of water and undersea noise). Applying mitigation measures consisting in performance of works outside the spawning migration period and ichthyological supervision of the dates of performance of works, the project implementation phase will not have a significant negative impact on the above-mentioned subject of conservation. No significant impacts on the European river lamprey are expected during the grid connection operation phase. Therefore, it is not expected that the planned project may have a negative impact on the European river lamprey.

#### **1106 – Atlantic salmon *Salmo salar***

Temporary conservation objectives:

1. Improvement of the conservation status in the area to favorable status (FV) for all sites as regards the “habitat condition” parameter, in particular by the improvement of hydromorphological conditions of watercourses (hydromorphological quality indicator) to favorable value (FV) for PLH220052\_SalSal\_1, PLH220052\_SalSal\_2, PLH220052\_Sal\_5 sites, including maintenance of appropriate water heat, maintenance or improvement of water purity status as well as improvement of watercourse continuity and removal of barriers hindering or preventing migration, in particular the achievement of the assessment of at least unsatisfactory (U1) for the hydromorphological quality indicator (point indicator below 3.4), including the assessment of at least U1 for the “watercourse continuity” specific indicator, indicating free access to spawning grounds of individuals migrating from the sea, for all monitored sites. This objective should be achieved by permanent removal of damming in the plant in Krzynia at Słupia River and in Dolny Skaryszew at Skotawa River.
2. Improvement of the assessment of the “conservation perspective” parameter to at least unsatisfactory (U1) for all monitored sites.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site – Słupia Valley PLH220052. Possible impact on the above-mentioned subject of conservation may involve a barrier effect for species entering the Słupia River for spawning, including the Atlantic salmon (as a result of turbidity of water and undersea noise). Applying mitigation measures consisting in performance of works outside the spawning migration period and ichthyological supervision of the dates of performance of works, the project implementation phase will not have a significant negative impact on the above-mentioned subject of conservation. No significant impacts on the Atlantic salmon are expected during the grid connection operation phase. Temporary conservation objectives, including the improvement of the status of the habitat of the species being the subject of conservation in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the Atlantic salmon.



### **1149 – Spined loach *Cobitis taenia***

Temporary conservation objectives:

1. Maintaining the species and conditions for its occurrence in all watercourses in which it was found and at least 90% of the monitored sites.
2. Improvement of the assessment of the “structure and function” parameter in the scope of the “hydromorphological quality” indicator to the proper value (FV), which means obtaining the value of the assessment score of 1–2.5 for the sites PLH220052\_CobTae\_2, PLH220052\_CobTae\_3, PLH220052\_CobTae\_5, PLH220052\_CobTae\_7, PLH220052\_CobTae\_8, PLH220052\_CobTae\_10, PLH220052\_CobTae\_11.
3. Improvement of the assessment of the “conservation perspective” parameter to the favorable value (FV) for at least 50% of the monitored sites, meaning that the maintenance of the population at the site will be certain and there will be no significant hazards.

Those objectives should be achieved by improving the effective enforcement of the requirements of national and international law on the protection of flowing waters, including improving the hydromorphological conditions of watercourses, maintaining or improving the condition of water purity and improving the continuity of watercourses and removing barriers hindering or preventing migration.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives, including the maintenance of the species and the conservation status of the habitat of the species being the subject of conservation in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the spined loach.

### **1163 – European bullhead *Cottus gobio***

Temporary conservation objectives:

1. Maintaining the species and conditions for its occurrence in all watercourses in which it was found and at least 90% of the monitored sites.
2. Improvement of the conservation condition in the area from unsatisfactory condition (U1) to favorable condition (FV).
3. Improvement of the assessment of the “structure and function” parameter in the scope of the “hydromorphological quality” indicator to the favorable value (FV) (value of the assessment score of 1–2.5) for the sites PLH220052\_CotGob\_7, PLH220052\_CotGob\_14, PLH220052\_CotGob\_15, PLH220052\_CotGob\_23, PLH220052\_CotGob\_26, PLH220052\_CotGob\_27, PLH220052\_CotGob\_28 and the “microhabitat mosaic” indicator to the favorable condition FV (occurrence of both hiding places and spawning grounds and fish fry rearing sites) for at least 80% of the monitored sites. Maintaining or achieving at all monitored sites a favorable condition for the “stocking with cultivated species directly threatening the European bullhead” indicator (no stocking or stocking balanced with catches).
4. Improvement of the assessment of the “conservation perspective” parameter to the favorable value (FV) for at least 80% of the monitored sites, which means achieving the condition in which maintaining the population at the site will be certain and there will be no significant threats.

Objectives of conservation measures:

1. Maintaining the population index value:
  - 1) “relative abundance”, assessed as U1 at a minimum at current level.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives and objectives of conservation measures, including the maintenance of the species and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the European bullhead.

### **5439 – European bitterling *Rhodeus amarus***

Temporary conservation objectives:

1. Maintaining the species and conditions for its occurrence in all watercourses in which it was found and at least 80 % of the monitored sites.
2. Improvement of the conservation condition in the area from unsatisfactory condition (U1) to favorable condition (FV). Improvement of the assessment of the “structure and function” parameter in the scope of the “hydromorphological quality” indicator to the favorable condition (FV) (value of the assessment score of 1–2.5) at the sites PLH220052\_RhoAma\_3, PLH220052\_RhoAma\_4, PLH220052\_RhoAma\_7, the “degree of coastline water vegetation covering” from the bad value (U2) to the unsatisfactory value (U1) (10–50% coverage) for the

site PLH220052\_RhoAma\_5 and from the value (U1) to the value (FV) (over 50% coverage) for sites PLH220052\_RhoAma\_1, PLH220052\_RhoAma\_6, PLH220052\_RhoAma\_7, with no deteriorated assessment for any of the sites.

3. Improvement or maintenance of the assessment of the "conservation perspective" parameter to the favorable value (FV) for at least 80% of the monitored sites.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives, including the maintenance of the species and the conservation status of the habitat of the species being the subject of conservation in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the European bitterling.

#### **1166 – Northern crested newt *Triturus cristatus***

Temporary conservation objectives:

1. Maintaining the abundance of the species in the Area at the level of at least 100–1000 individuals.
2. Improvement of the assessment of the overall conservation status in the area to the favorable condition (FV), including achievement of the favorable condition for the sites PLH220052\_TriCri\_1, PLH220052\_TriCri\_6, PLH220052\_TriCri\_8 by maintaining the "structure and function" parameter at the favorable condition (FV), including improvement of the assessment of the "water body stability" indicators (maintaining or restoring the FV condition in which the water body does not dry out or dries out occasionally) and the "water body surface area" (maintaining or restoring the area in the range of 400–2000 m<sup>2</sup>) and improvement of the "protection perspective" parameter to the favorable condition (FV) for all sites indicating that there are no hazards that may significantly deteriorate the conservation status of the site.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives, including the maintenance of population size and the conservation status of the habitat of the species being the subject of conservation in the area, will not be threatened as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the northern crested newt.

#### **1188 – European fire-bellied toad *Bombina bombina***

No objectives of conservation measures have been defined for the European fire-bellied toad.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Therefore, it is not expected that the planned project may have a negative impact on the European fire-bellied toad.

#### **1337 – Eurasian beaver *Castor fiber***

Temporary conservation objectives:

1. Maintaining the population size of the species at the level of at least 200–400 individuals (50–100 families).
2. Maintaining a proper (FV) conservation status for all assessment parameters, in particular, by reducing or eliminating conflicts with business activity and protecting against damage, formal and legal protection of key sites in protected areas and facilities, preventing illegal destruction of dams, burrows, and beaver lodges.

Objectives of conservation measures:

1. Non-deterioration of the values of population and habitat status indicators of the species (FV).

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives and objectives of conservation measures, including the maintenance of population size and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the Eurasian beaver.

#### **1355 – European otter *Lutra lutra***

Temporary conservation objectives:

1. Maintaining the abundance of the species in the Area at the level of at least 30–50 individuals.
2. Maintaining a proper (FV) conservation status of the species in the area within the scope of all assessment parameters, in particular, by improving hydromorphological conditions of watercourses, maintaining or improving the condition of water purity, and improving the continuity of watercourses and removing barriers hindering or preventing migration, as well as combating poaching.

Assessment: The planned project is located outside the boundaries of the Natura 2000 site of the

Słupia Valley PLH220052 and will not have any impact on the species. Temporary conservation objectives, including the maintenance of population size and the conservation status of the habitat of the species being the subject of conservation in the area, will not be endangered as a result of the project implementation. Therefore, it is not expected that the planned project may have a negative impact on the European otter.

The conducted environmental impact assessment of the planned project shows that its implementation will not have a significant negative impact on individual subjects of conservation of the Natura 2000 site of the Słupia Valley PLH220052, nor will it deteriorate the integrity of this area. The planned project will not hinder the implementation of temporary conservation objectives and objectives of the conservation measures in the "Dolina Huczka" nature reserve located within the boundaries of the above-mentioned Natura 2000 site.

It follows from the environmental impact assessment carried out, including under Article 6.3 of the Habitats Directive, that after implementing, at the construction stage, of the mitigation measures set forth herein, the project planned to be implemented will not have a significant negative impact on the subjects of conservation of the above-mentioned Natura 2000 sites. There are also no grounds to presume that the implementation of the proposed project may result in the permanent loss or permanent fragmentation of habitats of species for which the above-mentioned Natura 2000 sites were designed. In the opinion of this Authority, the objectives of conservation measures for natural habitats and habitats of species subject to conservation in the Przymorskie Błota PLH220024 Natura 2000 site, as indicated in the conservation measures plan, have been maintained and the implementation of the proposed project, while meeting the conditions of this approval, will not pose a threat to the above-mentioned subjects of conservation of this area. In the opinion of this Authority, the objectives of conservation measures for habitats and species subject to conservation in the Słupia Valley PLH220052 Natura 2000 site, as indicated in the draft conservation measures plan being temporary conservation objectives, have been maintained and the implementation of the proposed project, while meeting the conditions of this approval, will not pose a threat to the above-mentioned subjects of conservation of this area. The project in question is also not in conflict with the objectives of conservation measures specified in the conservation plans for the "Zaleskie Bagna" and "Dolina Huczka" nature reserves. There are also no grounds to presume that the implementation of the project in question may have a significant impact on natural habitats and species and their habitats for the conservation of which Natura 2000 sites of the Słupsk Bank PLC990001 and Coastal Waters of the Baltic Sea PLB990002 have been designated.

#### Cumulative impact:

Grid connection infrastructure in the cable part will be implemented in the vicinity of two projects of similar nature:

- Grid connection infrastructure of the Bałtyk I OWF – project planned for implementation – The planned grid connection infrastructure of the Bałtyk I OWF will be located inside the same offshore corridor as the Bałtyk II OWF and Bałtyk III OWF GCI. The Investor is MFW Bałtyk I S. A. It is also the project of Equinor and Polenergia. At this stage, the exact route in the onshore part outside the place of trenchless crossing, which will be executed together with the Bałtyk II OWF and Bałtyk III OWF GCI, is not known.
- Construction of the grid connection infrastructure of the FEW BALTIC II – administrative procedure in progress – Environmental Impact Assessment Report has been prepared. The grid connection from the FEW Baltic II OWF runs parallel to the corridor of the Bałtyk II OWF and Bałtyk III OWF on the western side. After making the landfall, the grid connection from the FEW Baltic II OWF will move away from the planned Project towards the planned Krzemienica substation.

Moreover, in the area of the planned Project, 14 applications for issuing the decision on environmental conditions for other projects were proceeded at a distance of 100 m from the planned Bałtyk II OWF and Bałtyk III OWF GCI.

Linking of linear infrastructure into infrastructure corridors is an informed planning activity and it is beneficial from the point of view of seabed fragmentation. Negative impacts, however of short-term and local nature, may occur during the construction phase of the grid connections from offshore wind farms. The impacts of the construction phase will be minimized in the most critical place, i.e. in the coastal zone, by making an entry of cable lines to the shore both for the connections from the Bałtyk II OWF and Bałtyk III OWF as well as the Bałtyk I OWF. The projects planned or implemented onshore also involve the development of electric grids resulting from the political decision to develop offshore wind energy, including the extension of the existing Słupsk-Wierzbicino substation.

The nature of the planned Project results in a negligible negative impact during the operation phase, i.e. in a long-term, therefore, there should be no accumulation of negative impacts. Negative impacts of heat and magnetic fields emissions may accumulate as a result of laying several cable lines in one corridor. These impacts can be minimized by selecting the optimum cable technology. The impacts of the construction phase may accumulate, however, the Investor plans to reduce these impacts as much as possible by making simultaneous power output from both the Bałtyk II OWF and the Bałtyk III OWF, taking into account the potential possibility of making landfall of the grid connection from the Bałtyk I OWF during the construction.

#### Cross-border impact:

The assessment presented in the report showed that the impact of the planned project will be territorially limited – it will be a local impact. The possibility of a cross-border environmental impact has been excluded.

#### Impact of the project on human health and life and analysis of potential social conflicts:

##### Offshore part

The water region in the Project area is used for fishing, navigation, and maritime transport as well as for tourist and recreational purposes. In addition, it is used by the Polish Navy. The construction of cable lines will cause difficulties for: fishing, vessels navigating the TSS route, and the customary route to and from the ports of Gdynia and Gdańsk, Polish Navy, the population.

In the case of fishing during construction, to ensure a protection zone during cable installation, fragments of the following fishing squares will be excluded from fishing: BL5, BL6, BL7, BL8, BM7, BM8, BN7 and BN8. The direct area of interference of the Project with the seabed within 8 squares will constitute a maximum of 1.71 km<sup>2</sup>. Taking into account the duration of the difficulties and the small exclusion area (8 squares in relation to 123 fishing squares in the Polish maritime areas), it can be assumed that the difficulties related to the construction phase will be acceptable. In the case of vessels navigating the TSS route and the customary route to and from the ports of Gdynia and Gdańsk, during the construction phase they will have to make a modification of the navigation course due to the presence of vessels involved in the construction of cable lines, which may involve an increased use of fuel or an extension of the cruise time. Given the progressive nature of the works, the difficulties will be insignificant and the range of the impact on navigation will be local and short-term.

During construction works, at the stage of execution of the trenchless crossing, access to the coastal zone will be limited. Then, temporary exclusion from use of this zone, which is used for tourist and recreational purposes, may take place.

In conclusion, the above difficulties will be direct, short-term, simple, and reversible, as they will cease immediately after the completion of the construction phase.

During the operational phase, the impact on the use and development of the water region will result from the establishment by the Director of the Maritime Office in Gdynia of a protection zone for cable lines, within which prohibitions and restrictions on use will apply in order to protect submarine cables against damage or destruction. During the operation phase, periodic inspections of the cable lines will be carried out, at least once every 5 years, with the first three inspections scheduled for the first, third, and fifth years after completion of the construction. This type of works usually involves one vessel, therefore no impacts on navigation and other forms of use of the water region are expected.

Potential social conflicts may arise due to limited access of stakeholders to goods located in maritime areas along the cable corridor route or limitations related to the use of maritime space in the area of the planned Project. Taking into account the usage types of the areas located along the route of the planned Project, it may potentially be expected that social conflicts will occur resulting from the community's concerns about the occurrence of:

- limitations in conducting military activities,
- restricted access to fishing areas,
- restricted access to sand deposits,
- difficulties in vessel traffic on navigation routes, including restricted access to the port in Ustka,
- collision with the existing service infrastructure,
- negative impact of the planned Project on the marine environment and cultural areas/goods.

As part of the works on the EIA Report, an impact assessment of the planned Project on the forms of use of maritime areas was carried out. As a result of the assessment, no risk of occurrence of significant impacts of the planned Project on any of the above-mentioned usable areas was found. No impact of more than moderate significance was found during the construction and decommissioning phase of the planned Project, and no impact of more than insignificant was found during the operation phase.

### Onshore part

Potential impacts on people and their living conditions and material assets will be mainly related to the construction phase. Commencement of construction works in the onshore part is planned at the turn of 2024/2025. Construction works will last approx. 1.5 years. Therefore, impacts/nuisances for people may occur periodically and locally, such as:

- increase in the traffic volume of passenger vehicles and trucks, and related emissions of noise, pollutants into the atmosphere, and vibrations,
- periodic inflow of greater number of people (employees),
- increased use of road infrastructure,
- limitation of the use of agricultural and forest areas.

The planned Project covers the area of 7 localities, 3 of which are located in the Ustka municipality: Lędowo, Duninowo, Pęplino and 4 in the Słupsk municipality: Gajki, Wielichowo, Bruskowo Małe, Bruskowo Wielkie. Within the boundaries of the planned Project there is no residential development. However, in the area of potential impact of the planned Project, 3 single-family buildings were identified. Residential development locations identified in the close vicinity of the planned Project will be exposed to impacts of the construction phase of lesser intensity, related to the traveling jobsite related to laying cable lines. People living in these buildings will be temporarily exposed to such nuisances as:

- noise emission from the operation of machines and equipment working in the construction strip (excavators, loaders, trucks with cable reels, etc.);
- emission of vibrations at the place of execution of short trenchless sections (road and watercourse crossings);
- emission of dust pollutants (in windy weather during earthworks);
- emission of pollutants from oil combustion in engines of equipment and machines operating at the construction site;
- periodic difficulties in access to the real properties adjacent to the construction site.

These impacts will decrease with the progress of construction works.

The planned Project in the operation phase is practically maintenance-free; service works may be carried out periodically. During the operation phase, permanent impacts will occur due to noise emissions from the OnS and small heat emissions from underground cables. Moreover, during operation, the Project will have potential benefits for people, mainly socioeconomic ones related to improvement of energy security and financial benefits from land lending and taxes.

The results of the calculations indicate that regardless of the execution of cable lines (4 circuits operating at 220 kV or 2 circuits operating at 400 kV), the highest values of magnetic field intensity can be expected just above the ground surface (0.2 m AGL). At a height of 2 m AGL, these values will be more than three times lower. The conducted estimates clearly indicate that even at the maximum load of individual cable lines, the permissible value of magnetic field intensity (60 A/m) will not be exceeded above the ground level, in particular at the height of 2.0 m AGL. This means that the presence of people even directly above the cable lines is allowed without time limit.

The planned Project in the onshore part is located mainly in forest and agricultural areas. The coastal part is located in military restricted areas and within the boundaries of the protected landscape area. Potential conflicts due to location in the onshore area may concern:

- lack of consent of the Polish Navy Training Center to routing the infrastructure through restricted areas (HDD drilling is planned through a part of restricted areas, which will reduce the conflict),
- protest of the owners of the areas intended for the construction of the grid connection infrastructure and the OnS and the area of potential impact of the planned Project,
- protest by local residents about electromagnetic field and noise emission from substations at the operation stage and increased traffic and noise at the construction stage,
- protest of environmental organizations or residents against the location of the planned Project in the Seashore Strip Protected Landscape Area to the west of Ustka,
- potential negative attitude of the public towards local constraints.

Possible public interest may also concern the collision of the analyzed corridor for the grid connection infrastructure with elements such as monuments, protected habitats, and plant species, residential development, and other material assets that will be located in the immediate vicinity of the construction site. To reach out to the public so as to prevent possible conflict situations, the Investor conducted an education and information campaign concerning the Bałtyk II OWF and Bałtyk III OWF projects. The aim of the campaign was to familiarize all parties, in particular, local communities and users of the Baltic Sea, with offshore wind farm projects and increase the level of knowledge on the potential environmental impact of the project and mitigation measures aimed at limiting or eliminating this impact. As part of

social projects organized by the Investor, educational activities related to environmental protection and offshore wind energy are carried out. During the Project planning, a dialog with residents and other interested parties is conducted.

Formal consultations were conducted during this environmental impact assessment procedure. As part of the public consultations, one comment was received, to which local authority referred in this decision.

#### Impacts of the decommissioning phase:

The decommissioning process is an inverted construction process with the same logistics system. The impacts during the decommissioning phase of the GCI from the Bałtyk II OWF and Bałtyk III OWF will be similar to the impacts of the construction phase. Before the end of the Project operation, oils and lubricants will be removed from onshore substations for disposal. The substations will be dismantled and all parts recycled. Impacts related to the decommissioning of the OnS will be the same as for the construction phase. As a result of decommissioning of the facilities, the land will be reinstated in the original form – agricultural land. In the case of cables, after prior de-energizing and inactivation, two possible methods of decommissioning are planned, by leaving them in the ground or removing them. Discontinuation of the use of the GCI will result in no emissions of electromagnetic fields, heat, and noise.

It is expected that the impacts will be local, short-term, and reversible, as they will cease at the time of completion of construction works, as in the construction phase.

Impacts during the decommissioning phase will be similar to impacts during the construction phase. The exception are components such as landscape, for which the removal of the OnS will allow for reinstating the land to its primary function – agriculture – and people, for whom the impacts associated with heat, noise, and magnetic field emissions will be reduced. For the remaining components, the impacts of the decommissioning phase depend on the decision which will determine whether the cables are to be removed or left under the ground surface.

Conditions and obligations specified in point I.2 of this decision were imposed based on the conclusions and recommendations of the submitted EIA report and opinions of the cooperating authorities. The conditions specified for the project implementation stage were formulated taking into account the following obligations:

- ensure economical use of the area during project preparation and implementation (Article 74 section 1 of the Act of April 27, 2001 – Environmental Protection Law (*Journal of Laws of 2022, item 2556, as amended*)), hereinafter referred to as the “EPL”,
- consider the environmental protection on the area of works, in particular, protection of soil, vegetation, natural topography, and water conditions (Article 75 section 1 of the EPL);
- use and conversion of natural elements during the construction works only to the extent, to which it is necessary in connection with performance of a specific project (Article 75 section 2 of the EPL);
- conduct waste management in a manner ensuring protection of human life and health and the environment, in particular, in such a way that waste management does not cause a threat to water, air, soil, plants or animals (Article 16 point 1 of the Waste Act of December 14, 2021 (*consolidated text: Journal of Laws of 2023, item 1587, as amended*)).

The above requirements were specified taking into account the most important of all the identified emissions, the lack of management of which could be the source of negative impact on the environment, including human health or, in extreme cases, could lead to hazard to the environment. The provided conditions include the supervisory and preventive actions, and technical means of emissions management. The conditions specified for the building permit design constitute a direct guideline for the design engineer and are aimed at ensuring an economic use of environmental resources, minimization of emissions, proper management of emissions. The basis of the above guidelines shall cover, i.a.:

- principles of prevention, caution, and incurring costs of environmental impacts, resulting from Articles 6 and 7 of the EPL;
- prohibition of causing deterioration of the condition of the environment to a large extent or hazard to human life or health (Article 141 section 2 of the EPL);
- the obligation to comply with environmental quality standards and emission standards (Article 141 section 1 and Article 144 section 1 of the EPL);
- prohibition of operation of the plant resulting in introduction of gases or dusts to the air, noise emission and generation of electromagnetic fields to the extent causing exceeding of the environment quality standards outside of the area, to which the plant operator has the legal title (Article 144 section 2 of the EPL);

- prohibition to undertake activities which may, separately or as combined with other activities, significantly negatively affect the objectives of protection of the Natura 2000 site (Article 33 section 1 of the Environmental Protection Act);

Pursuant to Article 135 section 1 of the EPL, the creation of a limited use area is permissible provided that, in total: 1) the project concerns or concerned a wastewater treatment plant, municipal waste landfill, composting plant, transport route, airport, power line and substation, and radio communication, radio navigation and radio location systems; with this list being exhaustive; 2) the environmental review or the assessment of the project environmental impact or the post-execution analysis shows that despite the use of available technical, technological, and organizational solutions, the environmental quality standards cannot be met outside the area of the plant or other facility. The limited use area can be created only for power lines and substations, in the event of exceeding the standards concerning electromagnetic fields or noise in the environment. The analysis of magnetic fields shows that there will be no failure to meet the environmental quality standards in this respect. Similarly, in the case of a substation, it is not expected in a noise analysis that the above mentioned situation will occur. Therefore, there is no need to create a limited use area for this project.

Due to the necessity to assess the effectiveness of the applied prevention and mitigation measures, the obligation was imposed on the applicant to monitor changes in the environment caused by implementation of the project and operation of the plant in the scope specified in point II.1 of this decision. Pursuant to Article 82 section 1 point 5 of the EIA Act, the applicant was obligated to submit the post-execution analysis. The post-execution analysis will allow to confront, on the basis of the results of the conducted monitoring, the effects on the environment in relation to the arrangements and recommendations included in the report prepared in this procedure. The timing and scope of the post-execution analysis were linked with the obligations imposed on the applicant in terms of the environmental monitoring, at the same time including the period necessary to collect reliable data to enable the potential planning of any further measures aimed at reducing the negative environmental impact.

Having analyzed the scope of the planned project and identified its impact on the environment along with their scale, it was found that the planned project will not cause a cross-border environmental impact. Such impacts, taking into account the recommended actions in case of emergency situations, will not be caused by the identified possible unplanned situations. For these reasons, in this case it was not necessary to conduct the procedure on cross-border impact as referred to in Article 104 of the *EIA Act*, or to specify the conditions related to such impact in the contents of this decision.

Prior to the issue of the decision, by virtue of letter ref. No. RDOŚ-Gd-W00.420.40.2022.AM.30 of October 09, 2023, the parties to the procedure were informed pursuant to Article 10 of the Code of Administrative Procedure that the evidence gathering was completed, the case files were available for review and the parties could provide its comments on the gathered evidence and materials. At the same time, by way of announcement, the above-mentioned notification was published in the Public Information Bulletin of the Regional Director for Environmental Protection in Gdańsk and on the notice board of the authority and, at the request of the authority, it was published in the Public Information Bulletin of the Słupsk and Ustka Municipal Office. No comments or requests were received within the specified deadline.

The implementation of the project pursuant to this decision and the subsequent operation of the facilities resulting from the project does not absolve the Investor from the following obligation, regardless of the provisions of this decision:

- to follow the regulations concerning the technical conditions laid down under Article 7 of the Act of July 7, 1994 – Construction Law (*consolidated text, Journal of Laws of 2023, item 682, as amended*);
- to obtain the required permits, opinions and approvals;
- to perform the obligations resulting directly from the law, including, in particular, the obligations related to proper management of waters defined in the provisions of the Act of July 18, 2001 – Water Law (*consolidated text, Journal of Laws of 2023, item 1478, as amended*);
- in the field of proper operation of the equipment specified in the provisions of the Act of April 27, 2001 – Environmental Protection Law (*consolidated text, Journal of Laws of 2022, item 2556, as amended*); waste management, defined in the Act of December 14, 2012 (*Journal of Laws of 2023, item 1587, as amended*);

these obligations as existing and binding by law, are not subject to the re-imposition and disclosure in

the decision.

Therefore, the decision should be as aforementioned herein.

The decision is subject to announcement on publicly accessible data list.

Pursuant to Article 127 § 2 and 129 § 1 of the Code of Administrative Procedure, in conjunction with Article 127 section 3 of the EIA Act and Article 76 section 3 of the Act on promoting electricity generation in offshore wind farms, a party may appeal against this decision to the General Director for Environmental Protection through the Regional Director for Environmental Protection in Gdańsk, ul. Chmielna 54/57, 80-748 Gdańsk, within 14 days from the date of delivery of the decision to the party or within 30 days from the date of announcement or delivery of the notification of the decision.

Pursuant to Article 76 section 4 of the Act on promoting electricity generation in offshore wind farms, the appeal against the administrative decision shall contain objection to the decision, shall specify the essence and scope of the request being the subject of the appeal and shall indicate the evidence justifying the request.

For the issuance of this decision, a stamp duty in the amount of PLN 205 was paid (part I, item 45 of the Appendix to the Act of November 16, 2006 on stamp duty (*Journal of Laws of 2023, item 2111, as amended*)).

The decision on environmental conditions does not replace the permit issued pursuant to Article 56 of the Environmental Protection Act. Any possible destruction of habitats of species, specimens of species, nests of species, their scaring or relocation of protected species shall be subject to a permit pursuant to Article 56 of the Act on nature conservation.

Regional Director for Environmental  
Protection in Gdańsk

*Anna Tchórzewska*

To be received by

1. Investor through a proxy – Anna Marczak, ul. Krucza 24/26, 00-526 Warsaw; Parties to the procedure by means of a notice
2. to files, document prepared by Agata Mach, phone 58 68 36 812

Attn:

1. Director of the Maritime Office in Gdynia, ul. Chrzanowskiego 10, 81-338 Gdynia
2. State Border Sanitary Inspector in Gdynia, ul. Kontenerowa 69, 81-155 Gdynia
3. Military Center for Preventive Medicine, ul. Grudzińskiego 4, 81-125 Gdynia
4. National Water Management Authority WODY POLSKIE, Water Catchment Authority in Koszalin, 75-601 Koszalin, ul. Zwycięstwa 111





**REGIONAL DIRECTOR FOR  
ENVIRONMENTAL  
PROTECTION IN GDAŃSK**

**Appendix No. 1**

to Decision No. RDOŚ-Gd-W00.420.40.2022.AM.32.

**CHARACTERISTICS OF THE PROJECT**

The planned Project will cover two independent sets of power output equipment from the Bałtyk II OWF and Bałtyk III OWF with the infrastructure necessary for their implementation and operation, and optionally, a cable connection between the farms in question. The set of equipment for power output from the Bałtyk II OWF with the infrastructure necessary for its implementation and operation will be provided by MFW Bałtyk II Sp. z o.o. However, the set of equipment for power output from the Bałtyk III OWF with the infrastructure necessary for its implementation and operation, as well as the optional cable link between the Bałtyk II OWF and Bałtyk III OWF will be provided by MFW Bałtyk III Sp. z o.o. The course and technical parameters of the planned Project depend on the location and parameters of the wind farms from which the generated energy is to be output and the place and conditions of connection to the NPS – in accordance with the agreements on connection of the planned OWFs to the transmission network concluded between the Companies and Polskie Sieci Elektroenergetyczne S.A. (PSE S.A.).

The planned Project will include the following elements:

- offshore part:
  - 2 high voltage AC submarine export cables at the section from the offshore substation in the Bałtyk II OWF area to the shore, with a length of approx. 60 km each,
  - 2 high voltage AC submarine export cables at the section from the offshore substation in the Bałtyk III OWF area to the shore, with a length of approx. 67 km each;
  - optionally, a cable connection between the Bałtyk II OWF and the Bałtyk III OWF with a length of approx. 30 km – corridor constituting a reserve for possible future laying of export cables and fiber optic cable;
- crossing of all cable lines through the coastal zone using the HDD trenchless method between 236.5 and 237 km of the seashore (according to the chainage of the Maritime Office);
- onshore part:
  - 4 high voltage underground cable lines from the landfall to two planned onshore substations (OnS) with a length of approx. 8 km – 2 lines for each OWF;
  - 2 OnSs in the Peplino area with a total area of 16 ha (approx. 8 ha each);
  - 2 high voltage underground cable lines from OnSs in the Peplino area to the designated grid connection points in the Słupsk Wierzbicino NPS substation, with a length of approx. 6 km (one line for each substation).

Moreover, the Project will include infrastructure necessary for servicing the grid connections and offshore wind farms, i.e. fiber optic lines which may constitute an integral part of the submarine cables; (onshore these will be laid in a trench next to power cables) and an access road to the planned OnSs in the area of Peplino. Optionally, energy storage facilities may be built in the vicinity of the OnS in the next phase.

It is assumed that both grid connections will be implemented at the same time to minimize the costs and impacts of the construction phase. However, this does not exclude the possibility of implementing grid connections separately.

The cables will be routed from the sea to the shore using the HDD trenchless method. The length of the grid connection infrastructure (GCI) corridor in the offshore part is approx. 60 km (Bałtyk II OWF GCI) and approx. 67 km (Bałtyk III OWF GCI) plus an additional section between farm areas with a length of approx. 30 km. The maximum width of the corridor is approx. 1000 m, except for the southern part where the corridor narrows and then widens towards the coastline.

The onshore part of the sets of power output equipment will run in the areas of the Ustka and Słupsk municipalities (Słupsk district, Pomorskie voivodship), at a section of approx. 14 km, in a corridor with a width of approx. 60 m, with local widenings in the area of the landfall of the grid connection infrastructure

and the planned locations of trenchless crossings under roads or other field obstructions. The actual occupation of the area at the construction and operation stages within the corridor will be much smaller. Onshore power cables will be laid in a trefoil formation in up to four cable circuits. Fiber optic cables will be laid in each cable circuit.

The grid connection infrastructure also includes OnSs (one substation as part of each grid connection). The planned substations will be located on plots No. 148/3 and 148/4, Pęplino cadastral district, Ustka municipality. The section connecting each planned OnSs with the NPS substation will be an underground power line. The terminal point of the planned project is the feeder clamps at the PSE S.A. Słupsk Wierzbicino substation.

For the purposes of operation, monitoring, and operation of offshore wind farms, together with the sets of power output equipment, an operation and maintenance base will be organized in Łeba. The base will consist of an office, a dispatch room and a warehouse with coastal facilities. The organization of the base in Łeba is not covered by the scope of this procedure. It will be a separate action of the Investor.

The location of the planned Project is a result of conditions resulting from earlier stages of spatial planning at sea and already obtained decisions and conditions for onshore connection and the progress of works on technical designs and obtaining permits of owners.

The planned Project is planned mainly in agricultural and forest areas outside residential development areas. In the coastal zone (the area of the Ustka municipality), these are partially areas managed by the Maritime Office in Gdynia, and partially restricted areas owned by the Polish Army and State Forests. In the area of the Słupsk municipality, the route runs mainly through forest areas of the State Forests.

The planned Project will cross in total 8 public roads, 2 railway lines (one of them is a non-existent historical railway line "Szlak zwinionych torów"), 2 bike routes and 2 watercourses: Struga Łędowska and Pogorzeliczka.

#### Offshore part:

In the maritime area, cable lines will be routed from the offshore substation (OffS) in the Bałtyk II OWF area and from the OffS in the Bałtyk III OWF area, then the corridors from both farms will coincide and connect below the Słupsk Bank into one corridor to the landfall to the west of Ustka.

The planned grid connections from the Baltic II OWF and Baltic III OWF offshore wind farms are located within the exclusive economic zone, the adjacent offshore zone, the territorial sea and internal sea waters administered by the Maritime Office in Gdynia, in the infrastructure corridor designated in the Regulation of the Council of Ministers of April 14, 2021 on the adoption of the spatial development plan for internal sea waters, the territorial sea and the exclusive economic zone at a scale of 1:200,000 (Journal of Laws 2021.935, as amended) – the so-called POM Plan. Moreover, an additional section between the areas of the Baltic II OWF and the Baltic III OWF is located in the exclusive economic zone and the adjacent offshore zone in the infrastructure corridor, in accordance with the POM Plan.

The boundaries of the corridor inside which the Project will be located at sea are determined by geographical coordinates (in the WGS84 system), separately for the Baltic II OWF GCI and for the Baltic III OWF GCI together with the planned link between the farms. The interface point between the offshore and onshore parts is determined by the southern boundaries of the cadastral plots constituting internal sea waters, i.e.: 394 Łędowo cadastral district (Ustka municipality) and 2858/4 Ustka cadastral district (City of Ustka).

Moreover, the planned Project is located in water sub-region 36 Open Waters of the Bornholm Basin and 38 Polish Coastal Waters of the Bornholm Basin in accordance with the division of the Baltic Sea into water regions for which the environmental status is determined in accordance with HELCOM and the Marine Strategy Framework Directive.

#### Onshore part:

The interface point between the offshore part and the onshore part, i.e. the so-called landfall of cable lines, shall be located between 236.5 and 237 km of the seashore (according to the chainage of the Maritime Office), crossing the waterside strip established by the order of the Director of Maritime Office in Gdynia in accordance with the Act of March 21, 1991 on maritime areas of the Republic of Poland and maritime administration (Journal of Laws 2023.960, consolidated text, as amended), consisting of:

- service corridor – that constitutes a zone of mutual direct impact of the sea and land intended for maintaining the shore in a condition that complies with the requirements of environmental safety and protection,
- protective strip – covering an area in which human activity has a direct influence on the condition

of the service corridor.

In the zone directly adjacent to the shore, the cable route crosses the restricted areas established by Decision No. 80/MON of the Minister of National Defense of June 8, 2022 on the establishment of restricted areas by the Ministry of National Defense. These are the following plots: 357/8, 357/24, 359, 89/4, 89/5, 90/6, 113/2, 113/3, 114/3, 115/5, 117/5, Lędowo cadastral district, Ustka rural municipality.

The cables will be routed from the sea to the shore using the trenchless HDD technology.

The Project will be located onshore within the boundaries of the corridor running through cadastral plots located in the Ustka rural municipality (cadastral districts: Lędowo, Duninowo, Duninowo PGR and Pęplino) and in the Słupsk rural municipality (cadastral districts: Bruskowo Leśnictwo, Wielichowo, Bruskowo Wielkie, and Bruskowo Małe).

The corridor runs partially through forests managed by the Regional Directorate of State Forests in Szczecinek within the boundaries of the Ustka, Modlinek, and Pęplino Forest Districts, through restricted areas identified by the Ministry of National Defense and through agricultural areas.

The grid connection infrastructure from the Bałtyk II and Bałtyk III OWFs also includes two OnSs located in the area of Pęplino village on plots No. 148/3 and 148/4, Pęplino cadastral district, Ustka municipality. The section connecting the OnSs with the PSE S.A. Słupsk Wierzbicino substation will be an underground power line with a length of approx. 6 km. The terminal point of the planned Project is the feeder clamps at the PSE S.A. Słupsk Wierzbicino substation.

Table 1. Basic parameters of the planned Project divided into connection with the Bałtyk II OWF and Bałtyk III OWF

Parameter	Value/description	
	Bałtyk II OWF GCI	Bałtyk III OWF GCI
Length of the power connection in the offshore area	approx. 60 km	approx. 67 km – 97 km (including 30 km connection between the BII OWF and the BIII OWF)
Length of the power connection in the onshore area	approx. 14 km	
Type of power cables in the offshore area	Multi-core submarine cables in alternating current technology (HVAC)	
Type of power cables in the onshore area	Direct burial export cables consisting of 3 separate single-core cables in alternating current technology (HVAC)	
Voltage of power cables between offshore and onshore substation	220 kV	
Voltage of power cables between the onshore substation and the Słupsk Wierzbicino substation	400 kV	
Maximum number of cables in the offshore area	2 multi-core cable lines	2 multi-core cable lines
Maximum number of cable lines in the onshore area	2 cable lines, each consisting of 3 separate single-core cables	2 cable lines, each consisting of 3 separate single-core cables
Method of routing cable lines from the offshore area to the onshore area	HDD (optionally HDD with short section of deeper cable foundation – to landfall behind the last sandbar)	

The surface area of the corridor inside which the planned Project will be implemented in the offshore part is approx. 174.63 km<sup>2</sup> and in the onshore part – approx. 1.83 km<sup>2</sup>. The corridor in the offshore part is approx. 1,000 m wide (except for the southern part, where the corridor extends towards the coastline). In the onshore part, the corridor has a width of approx. 60 m with local widenings (up to approx. 50–100 m) in places of planned trenchless crossings. Additionally, the area covered by the request covers the onshore construction site of the trenchless crossing through the coastal zone and two OnSs.

The area of direct interference with the seabed related to seabed preparation, cleaning, and laying of cables will occupy only a strip with a width of approx. 5 m for each cable and will be in total approx. 1.55 km<sup>2</sup> for 4 cable lines. The estimated average width of the trench for one cable will be approx. 1.5 m. Moreover, small parts of the seabed will be occupied periodically for vessel anchoring. In case of the execution of trenchless crossing using the HDD technology, a short section of underwater

trench with a depth of 4–5 m is optionally considered (maximum length of 800 m – to landfall behind the last sandbar). In this short section, interference with the seabed may be greater (in a strip with a width of approx. 20 m per single cable) and cover the area of up to approx. 0.064 km<sup>2</sup>. Then, the total area of interference with the seabed will be maximum approx. 1.61 km<sup>2</sup>.

In the onshore part, the occupation of the area during the construction phase will be related to the implementation of the following elements of the planned Project:

- cable line landfall – construction site with the maximum area occupancy of up to 0.85 ha;
- construction strip of underground cable lines with a width of approx. 30–32 m (in places of possible trenchless crossing widened to approx. 50–100 m);
- two onshore substations (OnS), each with an area of approx. 8 ha;
- access road to the OnS with a length of approx. 1.5 km.

During the operation phase, the area occupancy will be smaller than during the construction phase and will cover only the direct vicinity of the cable route, where certain restrictions are introduced to protect the cables against damage, and the OnS area together with the access road. According to the POM Plan, in the maritime areas designated for laying linear elements of the technical infrastructure it is required to have a safety zone around them established by a locally competent Director of the Maritime Office, in which anchoring shall be prohibited, excluding emergency anchoring and anchoring related to installation and service works. In the case of land along the cable route, this will be a strip with a width of from approx. 10 m to approx. 31 m for both grid connections, depending on the cable corridor section.

It is assumed that the cable will be buried at an average depth of approx. 1.5 m. The requirements included in the POM Plan related to the sandbar zone crossing (shallow coastal zone) in which it is required to lay new linear elements of the technical infrastructure at least 3 m below the average depression in the bottom of intersandbar chutes will be taken into account for the cable landfall section at the stage of designing the cable line trajectory.

Table 2. Anticipated cable burial depths depending on the type of seabed and method of use

<b>Seabed type and method of use</b>	<b>Assumed cable burial depth</b>
Shallow coastal zone – to landfall behind the last sandbar*	min. 3 m according to the POM Plan
Navigation route – Słupsk Bank TSS	approx. 2–2.5 m
Other route sections	approx. 1–1.5 m

The cables will be laid at a safe distance from each other, which will allow to maintain an appropriate maneuvering space for vessels performing service or repair works. The distance between cables for the same grid connection is approx. 25 m, whereas between cables of individual grid connections it varies depending on the width of the route section.

The burial of the power cable in the seabed can be performed using two methods:

- SLB (Simultaneous Lay and Burial) – based on simultaneous laying and burying of the cable in the bottom sediment,
- PLB (Post Lay Burial) – based on burying the cable after it has been laid on the seabed.

In the case of the SLB method, the cable-laying vessel (CLV) will be used for laying cables. The cable laying speed is controlled by the burial speed, which depends on the characteristics of the seabed. During the operation, a long period of favorable weather conditions is required, which will allow for laying and burying the entire cable line.

The PLB method, preferred by the Investor due to, among others, lower dependence on weather conditions, requires the use of two different vessels, i.e. vessels for laying (e.g. a cable-laying vessel or a towed cable-laying barge) and vessels for cable burying – most often it is a service vessel equipped with a device for burying/sinking cables.

The Investor considers using two cable burial technologies:

- water jetting – preferred,
- mechanical cutting – optional in the case of challenging soil conditions.

The scope of applicability of the above-mentioned technologies is determined by the seabed geological conditions.

If boulder fields that cannot be bypassed are encountered, the cable will be laid on the seabed and protected against damage (it will not be sunk into the seabed).

The water jetting consists in pumping sea water under pressure under the seabed surface to the required depth. The substrate water jetting occurs as a result of a combination of high-flow and low-pressure water streams (e.g. for fluidization and moving grain sediments) and low-flow/high-pressure water streams (e.g. for cutting and moving clay lumps). In the trench, the cable, under its own weight, collapses in fluidized sediment and is automatically buried.

The mechanical cutting consists in making a trench using self-propelled equipment equipped with wheels or cutting chains, equipped with buckets for transporting the extracted material. When excavating the trench in the subsoil, a narrow gap is formed into which the cable is lowered. The method of mechanical cutting may require additional activities related to backfilling the trench, depending on the required depth of the cover.

The Investor is considering the use of crawler vehicles, moving on the seabed, equipped with water jetting and/or cutting tools which can be operated and controlled from a support vessel by means of a cord cable or constitute self-propelled vehicles controlled by the operator from the vessel's deck.

Cable laying on the seabed. In places where the possibility of burying the cable using the aforementioned technologies will be limited, i.e.: fields of boulders, cobbles or gravel, or very hard seabed, with insufficient thickness of sediments, where trench may be impracticable or uneconomical; areas with high sediment mobility (fields of ripple marks, sand waves) where high dynamics of water may expose cables; point of connection to the OffS to protect the cable against potential seabed scouring in its vicinity, it is considered to use alternative methods of cable protection than seabed burial, i.e.:

- rip-rap,
- concrete mattresses.

The assumed total duration of works related to laying 4 submarine cables is approx. 130–140 days. Laying of a single cable takes a maximum of approx. 35 days, whereas the phase of laying submarine cables is divided into two stages: seabed preparation (approx. 3–5 days), cable laying and burial (approx. 25–30 days).

In the case of 2 cable lines connecting the Bałtyk II OWF with the Bałtyk III OWF, it is assumed that the laying of cables will take approx. 30 days.

Vessels to be used for laying submarine cables during one installation campaign are the following:

- cable-laying vessel,
- a vessel for digging trenches,
- auxiliary vessels – (4 vessels).

Optionally, if it is necessary to dig 4 deeper trenches in the shallow coastal zone (to landfall behind the last sandbar), this may additionally extend the time of works to 8 days (per cable). It is planned to use a small dredger for deeper trenches.

#### Preparatory works:

Seabed preparation includes activities related to cleaning and preparation of cable routes for efficient and collision-free installation. Preparatory actions will include:

- unexploded ordnance (UXO) and chemical warfare agents (CWA) screening;
- possible changing of the designed cable route or removal of identified unexploded ordnance and chemical warfare agents;
- removal of inactive cables – if they will interfere with the planned Project;
- removal of boulders or correction of the designed cable route;
- removal of various types of obstacles such as fishing nets, loose conductors from the cable route.

Preliminary identification of natural and anthropogenic obstacles in the maritime area under analysis was carried out in 2015 by the Maritime Institute in Gdańsk. No potentially hazardous objects such as torpedoes and mines and wreck-like objects were found, and anthropogenic objects present on the GCI route selected by archaeologists for visual inspection were only fragments of damaged fishing gear.

#### Cable laying in the seabed:

Submarine power cables will be transported from the manufacturer to the port that constitutes the main logistics facilities or directly from the manufacturer to the cable installation maritime area. Cables will be delivered on a CLV specially prepared for this purpose. The installation process, for each cable separately, will take place in stages including:

- cable launching with the use of floaters in the area of the trenchless landfall section,
- pulling the cable through the trenchless section to the shore,
- laying the cable on the seabed along the planned route,
- pulling the cable into the OffS,

- sinking/burying the cable in the seabed.

#### Cable laying in the sea/land passage zone:

The cables will be routed from the sea to the shore using the HDD trenchless method, and the technical solutions for execution of the crossing will be selected on the basis of the results of geotechnical surveys, other local conditions, including the length of the crossing and access to the equipment of the contractor for construction works.

HDD technology with a drilling length of no more than 1.5 km will be applied, whereas the onshore section will not be shorter than 120 m. The cable foundation depth in the offshore part was assumed in accordance with the POM Plan – at least 3 m below the average depression of the bottom of the intersandbar chutes. It is assumed that the trenchless crossing will exit behind the last sandbar. However, if, due to technical reasons, process or other conditions related, for example, to the location of the construction site, the trenchless crossing will exit before the last sandbar; a deeper underwater trench will be executed at this section of the shoreline – up to the depth of 5 m. It is assumed that this trench will not be longer than approx. 800 m. The HDD method consists in making horizontal directional drilling with a special control head routed towards the designed exit point. Execution of the HDD includes the following stages: pilot drilling, borehole widening, jacking pipe installation, cable pulling through the installed pipes. The surface area of the construction site intended for cable landfall using the HDD technology will be approx. 8,500 m<sup>2</sup>. The Investor also considers drilling from the marine barge towards the land.

Due to the significant length of directional drilling, in case the trenchless passage exits before the last sandbar, the Investor is considering the use of a deeper subsea trench at the section of the coast between the HDD exit and the last sandbar (in accordance with the arrangements of the POM Plan – minimum 3 m below the inter-sandbar pit). It was assumed that a deeper trench (up to approx. 5 m) can be executed at a maximum distance of approx. 800 m – to exit behind the last sandbar. Trench will be dug in two stages. In the first stage, the seabed will be deepened to a depth of approx. 3 m using a dredger. In the second stage, in the previously prepared trench, in the 1.5 m wide seabed strip, a trench will be dug with a depth of approx. 2 m where the cable will be buried using the jetting method. The excavated material is planned to be stored in small piles within the boundaries of the TI corridor at a depth of approx. 10–12 m (between 32 and 30 km of the TI corridor route).

#### Onshore cable line laying:

As part of the planned Project, 4 submarine and onshore cable connection stations will be constructed. These are rectangular concrete structures with a side length of a maximum of several meters and a depth of approx. 2 m. In addition, the equipment necessary for the proper operation of the cable system, e.g. cable draw pits with earthing/crossbonding boxes and for the connection of telecommunication cables, will be installed in the immediate vicinity of the connection.

Methods of laying the underground cable line:

- Buried cable line – cables laid in the trench in a wavy line, if possible, on a dense bedding layer with a thickness of at least 0.2 m. When laying multi-circuit lines in one trench, the line circuits should be separated from each other with concrete protective slabs. The minimum horizontal distance between the circuits will be determined by calculation of thermal interaction between the circuits. After laying the cables, they should be covered with a filling layer of at least 0.2 m in height over the upper surface of the line circuit uppermost power cable placed in the trench. A material being a mix of sand and cement is to be used as bedding. The structure of the filling material and bedding cannot cause damage to the cable sheath surface. The remaining area of the trench should be filled with natural soil cleaned of rubble and stones, which should be compacted in order to prevent soil collapse. Concrete protective slabs should be placed on the filling layer above the cable line. A caution cable marker tape is to be placed above the cable.
- Cable line laid in cable conduits – the conduits are stiffening elements of the cable section being routed, limit the possibility of mechanical damage, and protect the cable insulation. They are most often used in places where the cable line crosses other facilities, such as roads, tracks, other elements of underground infrastructure, civil structures, etc. Cable conduits can be made using open pit method, ramming, or directional drilling. Smooth-walled casing pipes made of high-density plastic and featuring circumferential stiffness of the pipe suitable for its location should be used for execution of the cable conduits. One cable is laid in one cable conduit. When pulling the cable, care should be taken not to let natural soil or dirt penetrate into the conduit. It is allowed to fill the cable conduits with a material with appropriate resistivity and thermal conductivity, e.g. bentonite. For each section of the cable line circuit in conduits, it is allowed to provide at least one spare conduit, the ends of which should be also protected against

penetration of water and foreign materials.

- Cable line laid in a cable duct – This solution is mainly used in the areas of substations. The dimensions of cable ducts are selected individually for specific cable lines, taking into account the possibility of heat output. Cables belonging to one line circuit are laid in one cable duct, allowing for laying more while ensuring that the current circuits do not affect each other. The cables are fixed by means of dedicated holders in such a way as to ensure their longitudinal movement under the influence of temperature changes. The cable ducts are provided with natural ventilation ensuring appropriate conditions for cable cooling. A cable duct located above the groundwater level should have an absorptive bottom, and a duct located below the groundwater level or in an area featuring unfavorable soil conditions (impermeable soil) should be equipped with a drainage system. Cables laid in a duct should have a flame retardant sheath.
- Cable line laid in a cable circuit/tunnel – Requirements concerning the dimensions of cable circuits or tunnels, their design, the method of cable laying and fixing, determination of forced cooling conditions, accessibility for the operating personnel are specified individually for a particular cable line solution. Cable tunnels should be provided with rainwater and groundwater drainage systems, whereas cable entries and exits should be provided with commercially available systems providing protection i.a. against water ingress and natural ventilation ensuring appropriate cooling conditions for the cables, in accordance with the assumptions made for calculation of long-term current-carrying capacity of the line.

The underground cable line will mostly be laid using the open-cut method, consisting of the following phases:

- tree and shrub cutting from the construction strip;
- digging trenches and installing trench support systems;
- execution of bedding and laying of the cable line system together with the earthing system and necessary infrastructure and erection elements, i.e.: fiber optic line, cable connection sealing, and terminations;
- partial backfilling of cable lines with a mixture of sand and cement, and then partial backfilling of cable lines;
- placement of protective concrete slabs (laid horizontally in the ground above the cables, on the filling made of sand and cement mixture material, below the caution tape and vertically, between cables belonging to different circuits located in the same trench);
- laying of caution tape;
- trench closing together with restoration of the soil profile and appropriate compaction;
- land leveling and reinstatement.

Cable laying shall be executed in such a way as to prevent their damage by excessive bending. If it is necessary to reduce the friction force of the sliding cable by the inner surface of the sleeve, a sliding material should be inserted into the sleeve which will not adversely affect the cable sheath or outer sheath. In addition, bentonite will be used, which increases the current-carrying capacity of the cables placed in the conduits and stiffens their laying.

Construction works should be performed in a construction strip with a width of approx. 30–32 m with local widenings in the area of trenchless crossings of approx. 50–100 m and a widening in the area of connection of submarine cables with onshore cables. In this strip, a temporary road and a place for temporary storage of parent rock and topsoil separately should be designated. The estimated trench depth is approx. 1.3–5 m, depending on the area topography, hydrogeological conditions, etc. (unless local conditions indicate the necessity to dig deeper trenches, e.g. when solving the problem of collisions with underground field obstructions).

It is expected that depending on the soil conditions, the construction stage will last approx. 14 months.

Within the boundaries of the construction strip in sections laid in an open trench, tree cutting will be necessary, whereas permanent deforestation caused by the risk of cable damage by root systems and their possible failure will include, depending on the GCI section, the strip from approx. 10 to approx. 31 m. The remaining part of the construction strip may be reforested after completion of the construction process. At the sections where the cables will be laid in the ground using trenchless methods, it will not be necessary to remove phanerophytes. In this context, it is essential to ensure permanent access to the submarine and onshore cable connection stations and transition joint bays.

Underground cable lines should be laid in a dry trench. If it is necessary to drain the trenches, pumps, wellpoints or additional drainage trenches should be provided. Regardless of the selection of the trench drainage technology, the pumped out water will be discharged outside the construction site to the

existing watercourses running in the vicinity of the planned project and in accordance with the applicable provisions of law. Water from draining the trenches should be distributed (sprayed) on adjacent soils, if possible, upon the consent of the land owner. The drainage works will be performed ahead of a given section until the cable lines are laid and backfilled.

#### Access roads at the construction stage:

A temporary road with a width of approx. 6 m from which works related to the digging of the trench and laying of the cable as well as transport of materials, raw materials, and construction equipment will be performed. Access to the construction strip should be provided using the existing circulation system. If delivery of materials and equipment is not possible using the existing roads, they are to be delivered using temporary roads constructed for the duration of the planned Project implementation. In the transport zone, along the axis of the planned cable circuits, the pavement will be partially hardened to enable movement of construction machines and means of transport. After completion of the construction works, the areas designated for temporary roads should be restored to their original condition.

#### Onshore substations:

It is planned to construct two electrically separated OnS with a total area of 16 ha in the area of Peplino village – one for the operation of the Bałtyk II OWF and one for the operation of the Bałtyk III OWF. The planned substations will be located on plots No. 148/3 and 148/4, Peplino cadastral district, Ustka municipality. Works related to the construction of the OnS should be performed in accordance with the construction design documentation approved at the stage of the building permit, containing a set of required approvals. Preparatory works will consist in preparation of the access road, cabling of the existing medium voltage overhead line passing through the substation area, removal of the top soil layer and, possibly, leveling of the area. For the purpose of access to the construction site, the Investor is planning to use the existing access road to the MÓWI POLAND S.A. Duninowo factory and, further towards the south-east, to construct a hardened access road to the substation site.

The construction of substations involves typical civil and erection works:

- earthworks, trenches, leveling,
- preparation of internal roads and welfare facilities,
- trenches for infrastructure,
- construction of formwork, foundations and concrete floors,
- erection of power transformer stands and reactors,
- installation of high voltage instrumentation and connections,
- installation of fuel tanks for emergency generators (if required) and a fire water tank,
- paving of roads and parking spaces,
- preparation of lawns with a 20–30 cm humus layer,
- Installation of fencing and gates.

Preparation of the area for the OnS will take approx. 6 months. It is not planned to cut trees due to the agricultural nature of the area – mainly arable land and grassland. The preparatory period will be followed by earthworks, construction of buildings, foundations, etc. and installation of equipment. It is estimated that the construction time will be approx. 2 years.

Due to the necessity of access to the Project site, a paved access road will be constructed to enable permanent access to the planned OnSs.

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