National Agency for Environmental Protection and Protected Areas

ENVIRONMENTAL NOTICE
No. 8 of 20.11.2025

Following the notification sent by ***SOUTH WIND SRL through Lăcrămioara Diaconu-Pinţea, with registered address in Bucharest, str. Comana, nr. 4, sector 1,*** registered with A.P.M. Constanta with no. 6182RP/21.07.2023 and subsequent additions, regarding the environmental protection approval of * **LAND USE DEVELOPMENT PLAN – WIND FARM 48CE, TRANSFORMER STATIONS, ELECTRICAL CONNECTION NETWORKS, CONSTRUCTION AND MODERNISATION OF COMMUNICATION AND ACCESS ROADS, located outside the built-up area, in the commune of Cerchezu, County of Constanta *,** following the analysis of the documents submitted, the completion of all procedural stages in accordance with Government Decision No. 1076/2004 on establishing the procedure for conducting environmental assessments for plans and programmes, Government Emergency Ordinance no. 57/2007 on the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna, as amended and supplemented, based on the provisions of Act no. 226/2013 on the approval of Government Emergency Ordinance no. 164/2008 for the amendment and completion of Government Emergency Ordinance No. 195/2005 on environmental protection and based on Government Emergency Ordinance No. 68/2019 on establishing measures at the level of central public administration and amending and supplementing certain normative acts and the Environmental Report, Government Decision No. 311/2025 on the organisation and functioning of the National Agency for the Environment and Protected Areas, as well as informing the public through repeated announcements and consulting them during the public debate on 11 July 2025, the following is issued:

NOTICE

for * **LAND USE DEVELOPMENT PLAN – WIND FARM 48CE, TRANSFORMER STATIONS, ELECTRICAL CONNECTION NETWORKS, CONSTRUCTION AND MODERNISATION OF COMMUNICATION AND ACCESS ROADS, located outside the built-up area, in the commune of Cerchezu, County of Constanta *,**
promoted by ***SOUTH WIND SRL*,**
developed by general designer – **ARHICO CONSULTING S.R.L./ALL ARHITECTURA SRL**,
specialist designer **– ALL ARHITECTURA SRL**
for the purpose of adopting **the Land Use Development Plan** by local authorities**.**

The plan went through the cross-border procedure in accordance with Government Decision no. 1076/2004 on establishing the procedure for conducting environmental assessments for plans and programmes and Law no. 22/2001 ratifying the Convention on Environmental Impact Assessment in a Transboundary Context, adopted in Espoo on 25 February 1991, which was completed with the response of the Bulgarian State, sent by MMAP letter no. 44182/30.09.20205 registered with DJM Constanta under no. 5856/06.10.2025;

In accordance with Act no. 22/2001 ratifying the Convention on Environmental Impact Assessment in a Transboundary Context, adopted in Espoo on 25 February 1991, wind farms fall under Annex 1, point 22 - *large installations for the use of wind energy for electricity production (wind farms);*

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The Land Use Development Plan was initiated with a view to establishing the conditions for location, dimensioning, technological compliance and urban planning regulations for *the "48 Wind farm (46) wind power plants approx. 316.8MW (303.6MW), transformer stations, electrical connection networks, construction and modernisation of communication and access routes".*

Following the approval of TRANSGAZ SA no. 34618/948/10.05.2023 for the plan in question, it was necessary to abandon two sites, namely wind farms T17 and T23, which did not comply with the legal distances from the identified main pipelines, and thus, in order to comply with the conditions imposed by the Transgaz approval, the number of wind farms is 46.

Justification of the need for the plan :
The necessity and opportunity of the land use development plan was based on the conclusions of the General Land Use Plan regarding the organisation of the administrative territory of the commune of Cerchezu, namely:

- stimulating the complex evolution of the commune by developing and implementing short-, medium- and long-term strategies for spatial, sustainable and integrated development;
- implementing new types of investments in the territory that contribute to the economic and social development of the commune;
- organising road and pedestrian traffic in line with the increase in traffic in the new areas included in the built-up area and its connections with the other functional areas of the localities;
- integration and harmonisation of new buildings and developments with the specific characteristics of the locality;
- capitalising on the natural environment and landscape and harmonising it with the proposed locations;
- ensuring infrastructure and technical and urban equipment in the new areas introduced into the built-up area.

The land on which the investment proposed by the land use development plan is to be carried out is privately owned by natural/legal persons with whom the beneficiary of the investment, SOUTH WIND SRL, has concluded surface rights contracts.
According to CU No. 129/28.11.2022, issued by the County of Constanta Council, the current use of the land is "arable", and the destination established by the approved urban planning and land use plans is ***"land outside the built-up area (TDE) - agricultural and electricity production area - wind farm and related constructions***", with permitted functions: agriculture, electricity production from renewable sources, traffic and related installations.
The total area of the proposed plan is **3,027.77 ha**.
The area studied for the implementation of the project includes agricultural land intended for arable land and land for special purposes - service roads in the public domain of the administrative-territorial division of Cerchezu commune, administered by the Local Council of Cerchezu commune and the public domain of county interest.

The functional zoning of the studied **land** has determined the following regulations:

- compliance with the boundaries of the plots according to the parcel plans approved by the OCPI;

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- location of wind farms in compliance with the provisions of the Local Urban Planning Regulations related to the land use development plan;
- strict compliance with existing service roads and modernisation of access roads on the site

The land use development plan in question regulates the T-A, SS, D-A, and R-A zones.
The following functional regulatory zones will be established on the studied land:

- T-A – area for the location of wind turbines, electrical networks, assembly platforms, access roads and agricultural land. These are the lands on which the 46 turbines, electrical networks, assembly platforms and permanent access roads to/from the wind farms are located.
- SS – area for the location of transformer stations, electrical networks, and permanent access roads to/from transformer stations located on agricultural land. These are the areas where the three transformer stations, electrical networks, and access roads/dirt roads are located.
- D-A – area for the construction of access roads on agricultural land, electrical networks – underground electrical lines, access platforms, parking lots
- R-A – area for the location of road connections on agricultural land.

The location where the investment covered by this documentation is to be developed consists of the plots shown in the following table:

Investments	Plots	
Wind farms (Turbines)	• T1 power plant – A 439/2/15 • T15 power plant – A 208/1/20 • T2 power plants - A 411/1/10 • T16 power plant – A 208/1/13 • T3 power plant – A 439/1/16 • T17 power plant – A 78/22+A 78/23 - cancelled • T4 power plant – A 439/3/3 • T18 power plant - A 177/23 • T5 power plant – A 208/2/3 • T19 power plant – A 177/10 • T6 power plant – A 430/2/15 • T20 power plant – A 169/27 • T7 power plant – A 98/2/4/2 • T21 power plant – A 359/12 • T8 power plant – A 430/1/17 • T22 power plant – A 359/3 • T9 power plant – A 98/1/8	• T14 power plant – A 174/11 • T28 power plant – A 363/2/30; • T29 power plant – A 367/49; • T30 power plant – A 72/34; • T31 power plant – A 367/12/2 • T32 power plant – A 9/12 lot1, A9/12 lot2, A9/12 lot3 • T33 power plant – A 78/10; • T34 power plant – A 1/20/1, A 1/20/2 • T35 power plant – A 277/2/11 • T43 power plant – A 338/2/6 • T36 power plant – A 277/2/3 • T44 power plant – A 338/3/5; • T37 power plant – A 124/11 • T45 power plant – A 335/1/3; • T38 power plant – A 250/26 • T46 power plant – A 314/1/18/1, A 314/1/18/2; • T39 power plant – A 251/28/1 • T47 power plant – A 314/1/12 • T40 power plant – A 250/10 • T48 power plant – A 411/2/4; • T41 power plant – A 338/1/21

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Investments	Plots	
	• T23 power plant – A 359/25 – cancelled • T10 power plant – A 207/7 • T24 power plant – A 363/2/9 • T11 power plant – A 195/25 • T25 power plant – A 363/1/23 • T12 power plant – A 208/2/21 • T26 power plant – A 72/4 • T13 power plant – A 179/10/1 • T27 power plant – A 90/9	• T42 power plant – A 379/7/5
Transformer stations	• SS01 - A5/28 • SS02 - A251/1/26– cancelled • SS03 - A177/16 - newly proposed (near turbine T19)	• SS03 – A367/48+49 will be subject to another authorisation procedure • SS04 - A207/11
Site organisation (temporary)	• OS1 – A251/1/31 • OS2 - A367/15 • OS3 - A250/9	
Access roads built on plots	• A163/18/2 • A277/4/7 • A251/31	

Access to the site is provided by the national road (DN), municipal roads (DC) and existing service roads (De) listed below:

Road type	Site access
National road	DN38 Constanta – Negru Voda
County road	DJ391 Mangalia – Negru Vodă – Cobadin – Tuzla
Existing municipal roads	DC13, DC16, DC17, DC18, DC19
Existing service roads	De 357, De 64, De 68, De 77, De 75/20, De 78/3, De 87, De 78/1, De 94/1, De 163/1, De 181, De 176, De 168, De 173, De 169/1, De 172, De 208/1/1, De 198, De 195/16, De 98/1/1, De 98/2/1, De 430/1/1, De 430/2/1, De 432, De 440, De 439/2/1, De 411/1/1, De 439/1/1, De 224/4, De 251/1, De 130/2, De 250/1, De 130/1, De 129, De 128, De 125, De 271, De 258/10, No. 379/2/1, No. 361, No. 356/1, No. 356, No. 356/2, No. 339/1, No. 339, No. 337, No. 336, No. 314/1/1, No. 315, No. 277/8, No. 277/7.
Access roads built on plots	A163/18/2, A277/4/7 and A251/31.

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County road DJ 391 is an asphalt road, municipal roads are partially asphalted and all other service roads are dirt roads.
As the access roads are not suitable for heavy traffic, they need to be upgraded to ensure the necessary turning radius for the trailers used to transport the components of the wind turbines. Access and connecting roads will be built on the sites between the wind turbines and the assembly and maintenance platforms.

The site is bordered by:

- North: boundary of the Independența local administrative division – privately owned agricultural land;
- South: border with Bulgaria;
- East: border of the Chirnogeni and Negru Vodă administrative-territorial division – privately owned agricultural land;
- West: border of Independența and Dumbrăveni administrative-territorial division – privately owned agricultural land.

The distances to the nearest localities to the studied area are:

- 1 km from Cerchezu T5;
- 1 km from Măgura T35;
- 1.1 km from Viroaga T32;
- 1.3 km from Căscioarele T27;
- 1.56 km from the Bulgarian town of Iovkov T3;
- 2.1 km from the Bulgarian town of Kraiste T47;
- 3.98 km from Negru Vodă T9;
- 5.5 km from Independența T32;
- 5 km from Olteni T32.

Territorial summary of the land use development plan

Functional area ZA	Existing		Proposed	
	ha	%	ha	%
Wind farm area	-	-	254.17	8.40
Agricultural land area	2,908.24	96.05	2,652.37	87.6
Transformer station area	-	-	1.70	0.05
Pasture area	64.00	2.11	64	2.11
Unproductive land area	1.87	0.06	1.87	0
Irrigation canal area	11.77	0.4	11.77	0.4
Paved road area	-	-	26.0	0.86

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Major traffic area DJ+DC	5.24	0.17	5.24	0.1
Road maintenance area	36.65	1.21	10.65	0.35
Total area studied	3,027.77	100	3,027.77	100

Physical changes resulting from the implementation of the land use development plan:
The construction of the wind farm will lead to the permanent occupation of certain areas of land:

- 255.87 ha for the mounting of wind turbines and complementary constructions and transformer stations
- 36.65 ha permanently occupied by service roads (10.65 ha) and developed roads (26 ha).

For each plot on which wind turbines will be installed, a request will be made during the DTAC phase for the permanent removal from agricultural use of the areas occupied by the base of the tower, the access roads to the power plants and the maintenance platforms. The wind farm will lead to the permanent removal from agricultural use of an area of approximately 30 ha and the temporary removal from agricultural use of an area of approximately 70 ha.
Each wind turbine operates independently of the others, depending on the wind speed range for which it was designed. The wind turbines are designed to operate at wind speeds of 3-4 m/s, with a nominal wind speed of 15 m/s, and are shut down at speeds above 25 m/s.
Three implementation stages are planned for the wind farm:

- the execution period;
- the operation period;
- decommissioning period (closure, demolition).

The study area is located in south-eastern Romania, in the administrative territory of County of Constanta, in its western part, in the immediate vicinity of the border with Bulgaria. The study area is bordered by the localities of Negru Vodă (to the east), Căsoaiele and Viroaga (to the north) and Măgura (to the east), while in the south and south-west, the study area is bordered by the state border. The study area is predominantly agricultural, with patches of natural grassland used for grazing domestic animals. The study area does not intersect with any protected natural areas, the closest ones being presented below.
In the vicinity of the land use development plan, within a distance of less than 5 km, three natural areas of community interest have been identified:

- 1 area located on Romanian territory ROSAC0071(ROSCI0071) Dumbrăveni - Urluia Valley - Vederoasa Lake at a distance of approximately 2.79 km from the land use development plan boundary-
- 2 areas located on Bulgarian territory -BG0000569 Kardam (Bulgaria) located at a distance of approximately 410 m from the land use development plan boundary and BG0000570 Izvorovo – Kraishte located at a distance of approximately 3.64 km from the land use development plan boundary).

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Within the Plan implementation area, at distances ranging from 5 to 20 km, there are 5 protected natural areas:

- 5 protected natural areas for birdlife:
  - ROSPA0166 Plopeni-Chirnogeni, located 6.21 km from the land use development plan boundary
  - ROSPA0036 Dumbrăveni, located 7.07 km from the land use development plan boundary
  - ROSPA0094 Hagieni Forest, 18.39 km from the land use development plan boundary
  - ROSPA0151 Ciobăniţa-Osmancea, located 18.55 km from the land use development PLAN boundary
  - ROSPA0001 Aliman – Adamclisi, 19.12 km from the land use development plan boundary
- 2 protected natural areas of community interest:
  - ROSAC0157 Hagieni Forest - Cotul Văii, 13.81 km from the land use development plan boundary,
  - BG0000130 Kraymorska Dobrudzha (Bulgaria) at a distance of 11 km from the land use development plan boundary

The Stereo 70 coordinates of the turbines are shown below:

No.	Turbine name	Stereo 70 coordinates Turbines	
		X	Y
1	TI	260601.000	752013.000
2	T2	260707	750672
3	T3	259835	752,274
4	T4	261,197	751,392
5	T5	264,646	749,693
6	T6	262,150	752015
7	T7	261952	753483
8	T8	262717	752,561
9	T9	262762	753716
10	T10	263532.000	752025.000
11	T11	264,174	753,446
12	T12	264,090	751,209
13	T13	265301	753474.000
14	T14	265151	752426
15	T15	264,856	750708
16	T16	265,248	750123

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17	T17	Turbine cancelled TRANSGAZ SA notice no. 34618/948/10.05.2023	
18	T	265938	752798.00
19	T19	266,232	752,217
20	T20	265,754	750,950
21	T21	267,573	754,183
22	T22	267,319	753,366
23	T23	Turbine cancelled TRANSGAZ SA notice no. 34618/948/10.05.2023	
24	T	268239.00	752788.00
25	T25	267,693	752,097
26	T26	267999	751307
27	T27	266844	750857.000
28	T28	268622	751,970
29	T29	268897	751221,000
30	T30	268322	750535.000
31	T31	269,067	749,761
32	T32	270336	747,726
33	T33	266,498	753,304
34	T34	267,816	746,256
35	T35	266,888	745,036
36	T36	267012	745651.000
37	T37	266552	746818
38	T38	265560.00	747,640.00
39	T39	265007	748,383
40	T40	264501	747,360.00
41	T41	263530	746,832
42	T42	262,344	747,153
43	T43	263,300	746,135
44	T44	263249	745,344
45	T45	264,212	743,776
46	T46	265013	743344.000
47	T47	264628	742,443
48	T48	261159	750,175

Stereo 70 coordinates of the studied area for land use development plan

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Point no.	X	Y
1	270944.2377	747607.8404
2	270391.0451	748053.3920
3	270394.1193	748078.0458
4	270358.6748	748156.1177
5	270320.0654	748236.3293
6	270205.3187	748569.1232
7	270157.7298	748549.2505

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8	270048.5907	748708.4373
9	269941.6743	748863.8882
10	269898.2020	748821.8247
11	269857.1855	748797.3205
12	269856.6513	748804.9087
13	269780.4532	748831.2560
14	269667.1504	748859.7471
15	269611.2508	748867.8976
16	269402.8665	748999.6187
17	269291.6559	749047.0593
18	268636.8039	749321.8232
19	268622.5939	749388.4911
20	269283.6228	749492.8115
21	269,266.3669	749598.0810
22	270171.9450	749643.8490
23	270177.4040	750021.1160
24	269200.9950	749996.8830
25	269185.5062	750091.3726
26	269516.6814	749985.8215
27	268393.5802	750854.5711
28	269031.6191	750955.2631
29	269054.5853	750803.9316
30	269510.3207	750824.1059
31	269400.3603	751592.2191
32	268950.9022	751573.4452
33	268892.1903	751945.4641
34	268849.7380	752271.2959
35	268230.9494	752199.0446
36	268187.9675	752505.2154
37	268809.7998	752577.8308
38	268739.1850	753119.6330
39	268111.9952	753046.3363
40	268069.3682	753349.9466
41	268694.8238	753423.0418
42	268683.0785	753496.7245
43	269087.9915	753474.9684
44	269098.7770	753938.3433
45	267933.6724	754005.2395
46	267846.1381	754657.9743

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47	267554.580	754644.7100
48	267480.9780	754639.1546
49	267215.8300	754619.6300
50	267263.4049	754240.5581
51	267350.9597	753649.1510
52	266827.0041	753575.8338
53	266744.7076	754176.0328
54	266720.9320	754173.0760
55	266701.1850	754247.8240
56	266104.7701	754161.3471

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57	266109.6452	754128.0605
58	265,492.1395	754,037.6214
59	265504.0020	753960.5840
60	236788.0998	753686.3682
61	263922.8793	752657.6822
62	263247.4305	752564.8980
63	263216.2495	752587.7906
64	263084.2559	753582.3485
65	263061.5280	753579.0650
66	262991.9307	754154.7371
67	262387.0706	754068.3384
68	262415.0960	753836.7370
69	261813.6875	753754.7858
70	261816.5440	753731.1720
71	261209.1828	753648.3200
72	261276.2112	747228.5580
73	262488.7961	753260.9611
74	262475.9330	753367.2690
75	263040.9576	753447.8537
76	263104.9560	752948.6555
77	262534.76	752878.0990
78	262545.2874	752803.2717
79	261951.0980	752723.9506
80	261948.7335	752741.1068
81	261330.6132	752657.5471
82	261459.0227	751644.9890
83	262054.7051	751725.5182
84	262103.5333	751364.3314
85	262053.3554	751309.7903
86	261924.6926	751294.5863
87	261469.1022	751565.5081
88	261186.8420	751736.8990
89	260981.6260	751868.9380
90	260919.0530	751921.4350
91	260897.8420	751973.9320
92	260857.0215	752320.2312
93	260173.3947	752234.4048
94	260130.9335	752572.6405

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95	259,462.1605	752488.6845
96	259680.2362	751944.2008
97	260180.2309	752006.9690
98	260311.2610	751047.4896
99	260843.1219	751114.3088
100	260891.7512	751074.2186
101	260906.0473	750978.6111
102	260107.9477	750878.3430
103	260520.9804	750059.5446
104	260662.5797	749776.8369

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105	261155.9676	749838.8233
106	261195.8529	749884.2960
107	261290.1250	749949.0906
108	261393.6042	749993.9505
109	261664.6410	750136.3190
110	261606.3314	750525.8117
111	261009.6566	750447.9858
112	260919.2256	751052.7686
113	261515.8065	751130.5824
114	262184.4219	751230.5246
115	262116.6852	751733.8408
116	262714.4380	751813.6285
117	262649.0329	752250.8946
118	263172.8577	752315.7125
119	263301.6263	751369.4138
120	263344.0345	751374.6729
121	263412.5472	750813.5558
122	264023.4060	750884.4630
123	264084.6367	750361.8693
124	264670.6770	750537.9141
125	264721.4515	749995.9259
126	264136.4079	749920.0111
127	264197.5596	749398.0926
128	264244.2280	749422.2320
129	264244.1960	749467.3020
130	264233.8960	749545.8780
131	264256.6110	749545.8780
132	264415.6040	749458.5610
133	264507.7370	749394.8250
134	264616.1450	749405.8570
135	265035.2333	749460.3411
136	265035.2780	749547.7500
137	265026.9670	749577.7980
138	265021.8030	749627.8910
139	265395.4672	749675.9919
140	265459.3013	749265.4249
141	265322.2850	749266.3260
142	265306.9830	749147.3060
143	265292.0390	749121.5420

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144	265266.6426	748921.5782
145	264768.7768	748975.5025
146	264568.4710	748995.1690
147	264415.9120	749005.7580
148	264327.7850	748981.0770
149	264294.5130	748981.1730
150	264465.4309	748416.1290
151	264440.5641	748406.0553
152	264450.8836	748380.5816
153	264610.6357	748448.9961

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154	264697.4797	748465.6097
155	264914.9540	747928.7722
156	265002.7030	747963.4990
157	265230.8578	747407.1674
158	264846.7332	747254.2835
159	264618.3130	747811.5081
160	264067.0350	747593.5850
161	264295.9790	747035.0844
162	264043.6307	746934.6453
163	236974.0493	746958.6768
164	263882.7136	747112.8100
165	263871.6529	747141.9398
166	263695.2418	747763.5907
167	263656.2378	747902.9247
168	263618.7102	748031.7793
169	263586.3713	748022.3609
170	263605.2116	747951.3397
171	263578.8208	747889.6150
172	262,380.1693	747423.2523
173	262170.1863	747964.9750
174	261810.7270	747825.2050
175	262024.3450	747274.1060
176	261936.3001	747239.8512
177	262355.5977	746413.7594
178	262980.4583	745139.5500
179	263671.7215	743732.8302
180	264182.4873	742706.7904
181	264431.9189	742003.2634
182	264940.7968	742327.7687
183	265061.2970	742610.3870
184	264857.0090	742699.8260
185	264885.0683	742765.6356
186	264321.8346	743012.0813
187	264448.0960	743308.2121
188	265011.3300	743061.7668
189	264975.2000	742977.0280
190	265179.4876	742887.5892
191	265532.8150	743716.2760
192	264797.2802	744038.4056

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193	264841.0874	744165.0738
194	264217.3330	744434.6199
195	264256.6869	744526.4910
196	264025.9932	744405.0703
197	263342.5369	745739.6108
198	263357.0248	745787.2710
199	263722.2408	745931.9369
200	263582.1190	746217.3690
201	263693.1400	746260.6710
202	263580.3291	746537.9363

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203	264025.6781	746711.6410
204	264104.0981	746686.5322
205	264136.3064	746634.1807
206.	264162.9241	746854.4024
207	264036.0420	746854.4024
208	264051.3740	746911.8972
209	265022.9398	747298.5845
210	265080.3726	747157.0669
211	265844.9799	747461.3620
212	265945.1053	747215.1721
213	265920.7483	747153.4271
214	265875.5792	747135.0170
215	265884.6376	747112.7923
216	266211.8072	747246.1412
217	266264.9648	747228.2846
218	266351.6010	747012.2677
219	265759.3574	746777.8339
220	265979.9785	746219.9566
221	265609.9280	746072.2525
222	265622.2624	745324.0007
223	265699.4179	745303.8245
224	265804.7966	745271.2732
225	265842.9757	745249.8953
226	265944.7748	745222.6846
227	266125.5320	745178.5487
228	266236.9377	745154.8246
229	266453.9175	745108.6246
230	266467.1080	745086.0210
231	266427.8444	744802.3959
232	266494.9770	744779.5880
233	266552.4010	744765.1040
234	266680.9140	744746.8980
235	266752.7410	744746.8980
236	266824.1530	744620.2720
237	266833.7617	744594.1258
238	266860.2590	744599.0170
239	266889.2820	744610.5850
240	266921.6420	744625.4440
241	266955.7000	744641.9770

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242	266,994.2483	744,661.9352
243	267002.1806	744804.6708
244	267367.0799	744656.3954
245	267510.4840	745,178,4290
246	267455.7635	745282.6975
247	267490.0951	745299.0384
248	267208.8239	745846.0334
249	267226.7467	745854.4900
250	267102.0658	746118.7379
251	267041.8270	746090.6090

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252	267078.7450	746064.9510
253	267072.4819	746009.7621
254	266679.8020	745843.7280
255	266521.8020	745499.5740
256	266429.9626	745133.1513
257	266123.8213	745194.5373
258	265848.6585	745264.5650
259	265791.4087	745292.7984
260	265712.1808	745315.0612
261	265699.4791	746085.6380
262	267281.7832	746715.6099
263	267606.6314	746028.2035
264	267884.9376	745486.9745
265	268364.1631	745715.0751
266	268089.3986	746249.4165
267	268122.3452	746267.7222
268	267809.9587	746929.7923
269	267923.6136	746975.0165
270	268878.5910	747172.4836
271	268950.4229	747190.8174
272	268987.8598	747211.2293
273	269068.8596	747264.0695
274	269103.7663	747279.2010
275	269326.4037	746848.0900
276	269500.3697	746931.3259
277	269268.8856	747379.5572
278	269869.1850	747740.4471
279.	270367.9888	747338.7244
280	270366.2575	748064.0670
281	270371.9083	748098.9314
282	270167.3646	748509.9919
283	269946.9828	748841.7556
284	269921.5230	748819.8137
285	269856.0452	748780.5182
286	269818.9913	748790.2519
287	269773.8932	784816.0181
288	269661.9359	748844.8995
289	269605.8979	748852.8568
290	269518.4402	748907.0380

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291	269482.5321	748932.4289
292	269389.4933	748986.7898
293	268620.2990	749308.1074
294	268545.1987	749660.8976
295	268471.6789	750184.3168
296	267858.6436	750107.8142
297	267827.7709	750346.4710
298	267780.7903	750691.5864
299	268384.3472	750766.8871
300	268341.2897	751069.8654

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301	267769.5187	750994.7636
302	267627.9650	751814.2270
303	267019.0670	751728.8861
304	266979.6779	752081.5734
305	266365.9810	751997.4390
306	266384.9551	751843.1013
307	265775.9141	751759.6051
308	265840.4683	751194.6864
309	266403.7470	751266.6320
310	266720.3560	751115.2350
311	266751.8570	751106.5760
312	266694.8676	751498.0018
313	266804.8679	751491.7646
314	266954.0862	751481.2248
315.	266993.9223	751469.8815
316	267025.7276	751453.7148
317	267050.2759	751435.8636
318	267168.0566	750595.3839
319	266571.5310	750594.5350
320	266570.1417	750604.4258
321	265922.2250	750521.6690
322	265983.1280	750036.3715
323	265386.8847	749888.0379
324	265412.4263	749685.1515
325	265488.4371	749195.6879
326	265315.0782	745105.3226
327	265281.3920	748794.3087
328	265697.4865	748784.8132
329	265602.9627	748210.4300
330	266027.4085	747193.9704
331	266254.3953	747288.5908
332	266332.1508	747319.8397
333	266340.3820	747319.8297
334	266308.2539	747286.3829
335	266289.5949	747231.3441
336	266364.9882	747043.3664
337	267205.7321	747378.4176
338	267393.3336	747887.0788
339	267434.5713	746796.3643

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340	267919.1697	746988.3156
341	267933.4410	746992.3841
342	268932.5883	747203.7360
343	268980.9123	747229.9072
344	267534.4269	752398.3899
345	266,953.3910	752316.9520
346	266923.2904	752586.4715
347	266319.7359	752503.7282
348	266271.3959	752902.7731
349	267436.8375	753068.6696

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350	266253.2658	753139.4397
351	266182.2544	753610.6257
352	265573.9644	753527.2323
353	265634.8651	753054.6612
354	265630.5310	752900.5258
355	265589.3084	753220.3932
356	264985.1830	753142.5651
357	264966.9541	753264.1644
358	264334.2380	753177.4241
359	264333.2127	753185.2777
360	263908.4012	753126.2464
361	263967.6252	752672.6017
362	264001.3569	752652.2160
363	265601.7419	752863.8745
364	260877.8309	751178.9137
365	260804.7665	751711.8044
366	260254.4640	751640.7761
367	260325.5126	751120.4697
368	260374.0517	751079.5363
369	260842.4035	751138.3333
370	263796.3766	747293.3127
371	263633.9953	747847.4183
372	263590.5811	747868.4316
373	262649.5939	747502.3403
374	262923.8260	746955.4050
375	262863.3610	746931.5520
376	262771.1980	746923.6140
377	262706.9930	746898.0950
378	262600.7340	746844.3370
379	262637.0416	746752.0434
380	262323.2589	746601.1375
381	262306.9222	746554.9062
382	262480.9998	746197.5346
383	262564.6054	746167.5237
384	262877.8074	746289.6858
385	263289.1069	746450.1097
386	263025.5270	746991.2240
387	263156.1140	745722.7520
388.	262888.4212	746268.0645

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389	262570.3908	746144.1361
390	262539.2060	746077.6680
391	262785.4935	745575.9561
392	264094.0285	744171.7756
393	264092.6679	744222.2253
394	263625.4156	745134.6010
395	263132.6560	744865.6774
396	263725.7916	743655.2104
397	263919.9693	743761.1831
398	264285.2271	742986.1385

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399	264390.6886	743233.4857
400	264092.5740	743362.3100
401	264093.9870	743365.6260
402	263827.3800	743480.8350
403	263825.7665	743456.9453
404	264006.7260	743106.4878

The objectives of the analysed Land Use Development Plan refer to studying the area and promoting an alternative use of certain land areas outside the built-up area of Cerchezu, County of Constanta, which would lead to the economic development of the county in order to raise the standard of living of the population by attracting significant sustainable investments.
The only development potential with a significant economic impact for the area is determined by the almost permanent presence of winds. In addition to this potential, the area can be exploited for agriculture.
The main scope of the plan is to build a wind farm comprising the following components:

- 48 (46) SIEMENS GAMESA wind turbines, each with a capacity of 6.6 MW, with a total capacity of approximately 316.8 MW (303.6 MW), which will occupy an area of approximately 254.17 ha.
- 4 (3) 33 kV/110 kV transformer stations, which will occupy a total area of approx. 1.70 ha
- access roads to the turbines, covering an area of approx. 36.65 ha permanently occupied (service roads - 10.65 ha and paved roads - 26 ha).

The implementation of the plan will capitalise on the wind potential of the area by using it as an alternative source of electricity generation, as well as on the infrastructure - electricity networks and the availability of the local community and investors.

In addition to the main scope, we also mention other objectives of major importance:

- reducing greenhouse gas and pollutant emissions into the atmosphere associated with the electricity production sector;
- reducing pollutant emissions into the air, water and soil associated with the energy sector;
- fulfilling Romania's commitments under the Paris Agreement and the subsequent policy created to meet the targets set out in the agreement;
- developing electricity generation capacities with low GHG emissions;
- new electricity generation capacities, subject to the constraints of achieving the objectives of energy security, competitiveness and decarbonisation of the energy sector;
- diversification and flexibility of electricity production capacities in line with the national mix;
- sustainable exploitation of all types of primary energy resources in the country:
- promoting the transition to a circular and resource-efficient economy.

The overall scope of the Land Use Development Plan is to:

- OP1 studying the area and promoting an alternative use of certain land areas outside the Cerchezu administrative-territorial division for the construction of a wind farm;

In addition to this scope, the following environmental protection objectives were taken into account in the implementation of the Land Use Development Plan:

- OP2 Reducing greenhouse gas emissions from the energy sector;
- OP3 Promoting the transition to a circular and resource-efficient economy;

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- OP4 Enhancing the natural environment and harmonising it with the proposed location;
- OP5 Developing the wind farm while taking into account the effects on the environment and the protection of human health;
- OP6 Economic and social growth of the locality;
- OP7 Reducing the impact on biodiversity by ensuring measures for the protection and conservation of biodiversity;

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Relevant environmental objectives for the LAND USE DEVELOPMENT PLAN:

Relevant environmental aspects	Relevant environmental objectives for the Land Use Development Plan	Targets
Water	**OM1.** Maintaining and improving the ecological status/ecological potential and chemical status of surface and groundwater bodies	Maintaining/improving by 2027 the environmental objectives for water bodies whose ecological potential/status and chemical status are not good.
Air	**OM2.** Maintaining air quality by reducing emissions generated by activities in the energy sector	Maintaining atmospheric pollutant levels within the limits imposed by Law No. 104/2011 on ambient air quality.
Soil/subsoil	**OM3.** Limiting soil pollution and soil degradation.	Preventing damage and deterioration of soil and subsoil quality. Limiting occupied areas.
Use of natural resources	**OM4.** Reducing the exploitation of exhaustible resources and facilitating the exploitation of renewable resources	Generating approximately 303 MW of capacity from renewable resources
	OM5. Promoting the transition to a circular and resource-efficient economy	Waste recovery
Waste management	**OM6.** Reducing the quantities of waste generated and disposed of in landfills (compliant landfills)	Achieving a level of reuse, recycling and other material recovery operations of at least 70% of the mass of non-hazardous waste from construction and demolition activities
Noise and vibrations	**OM7.** Limiting noise pollution at source in areas with noise-sensitive receptors. Limiting vibration levels	Compliance with the maximum permissible limits for noise and vibrations set out in Order 119/2014 on public health and hygiene standards for the living environment of the population: • 65 dB for industrial premises; • 55 dB outside the home during the day and 45 dB at night; • 50 dB (A) during the day and 40 dB (A) at night in areas adjacent to a protected territory.
Biodiversity	**OM8.** Conservation of natural habitats and species of flora and fauna of Community importance	Maintaining/improving the conservation status of natural habitats and species of flora and fauna of Community importance
	OM9. Maintaining the Natura 2000 network of protected areas.	Avoidance/minimisation of occupied areas
Population and human health	**OM10.** Maintaining the quality of environmental factors within the limits of legal provisions for the protection of the environment and public health	Maintaining the level of atmospheric pollutants within the limits provided in Act no. 104/2011 on air quality Compliance with the maximum permissible limits for noise and vibrations provided for in Order 119/2014 on public health and

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Relevant environmental aspects	Relevant environmental objectives for the Land Use Development Plan	Targets
		hygiene standards for the living environment of the population: • 65 dB for the industrial premises boundary; • 55 dB outside the home during the day and 45 dB at night; • 50 dB (A) during the day and 40 dB (A) at night in areas adjacent to a protected territory
	OM11. Improving the standard of living and social conditions of the population	Economic development of the area
Landscape	**OM12.** Ensuring the protection of the natural landscape and reducing the impact on the natural landscape	Regulating areas and construction methods in relation to their functions in order to ensure the most aesthetic landscape possible
Climate change	**OM13.** Reducing GHG emissions from the energy sector	Share of RES in gross final energy consumption of 86.1% in 2050 and 36.2% in 2030, for the RO Neutral scenario
	OM14. Minimal risks from climate change (adaptation)	Designing energy infrastructure that is resilient to climate change
Cultural heritage	**OM15.** Protection and conservation of cultural heritage elements	Ensuring the protection and conservation of all archaeological sites identified during the construction phase

Proposed situation

Description of the Plan's life cycle

The life cycle of the Plan involves: planning and design, construction, operation and maintenance, and finally decommissioning. The activities involved in each stage of the life cycle of the Plan proposed by the Land Use Development Plan are presented in the table below:

Life cycle stage	Characteristic activities
PLANNING AND DESIGN	Site assessment
	Wind, noise, shading studies, environmental impact studies, technical documentation and their approval by the competent authorities, etc.
	Design and obtaining the permits/approvals/agreements necessary for the execution of the plan
CONSTRUCTION	Construction of access roads (temporary or permanent) and storage areas for equipment/components/materials/surplus material
	Construction of technological platforms and foundations
	Installation of wind turbines

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Life cycle stage	Characteristic activities
	Construction of electrical connections and laying of underground cables between wind generator groups
	Construction of transformer stations
	Setting up the construction site
	Land restoration works at the end of construction
OPERATION and MAINTENANCE	Periodic inspections
	Maintenance and repairs
	Technological upgrades to maximise energy production and extend equipment life
DECOMMISSIONING *Interventions and activities are similar to those in the construction phase*	Site layout and organisation
	Dismantling of wind turbines
	Decommissioning of technological platforms and foundations
	Decommissioning of electrical connections and removal of underground cables
	Decommissioning of transformer stations
	Decommissioning of access roads
	Land restoration works upon completion of construction

Wind farm construction phase

The work areas will be marked out before construction work begins, so that the boundaries within which all construction and installation activities will take place are indicated and the affected areas are minimised.

The area does not have water supply or sewerage networks.

For the implementation of the Land Use Development Plan, **three construction sites** will be set up within the perimeter of the plan, each with an area of 3,000 m^2, whose location is shown in the table below.

Construction site	E (X) [m]	N (Y) [m]
OS1	748717.741	264875.924
	748647.678	264733.057
	748,574.038	264,755.332
	748,644.036	264,898.219
OS2	749,880.520	268,760.540
	749,843.882	268,528.385
	749,793.29	268,535.543
	749,829.928	268,767.698
OS3	747,373.991	264,415.747
	747,357.911	264,375.476
	747,100.574	264,481.099
	747,116.612	264,521.394

The site organisation is temporary, requires the temporary removal of the occupied land from agricultural use and will include:

- facilities for the temporary storage of materials and parking of machinery and equipment (bulldozers, loaders, excavators, compactors, finishers, dump trucks, cranes, dump trucks, concrete mixers, trailers), in the central area of the wind farm, ensuring quick access to work sites (platform and shed/warehouse);

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- facilities for refuelling machinery (mobile tanker);
- facilities for personnel (office facility, workers' changing rooms, first aid office);
- facilities for firefighting (firefighting point);
- materials, installations, devices and control systems necessary for execution in accordance with the provisions of the execution plan and the regulations in force;
- properly marked fencing to prevent unauthorised persons from entering the site.

As part of the site organisation, *the electricity supply* will be provided by connection to the existing networks in the area, based on specialised documentation, and *the water supply* for sanitary needs will be provided from tanks/cisterns brought to the site for this purpose. Water will be used for the work to spray the work fronts in order to reduce dust pollution in weather conditions favourable to the scattering of earth or powdery materials, but these quantities are small and do not require evacuation from the site. Drinking water will be bottled water brought to the site.
For the personnel involved in the performance of works, sanitary facilities – green toilets – will be provided, which will be periodically emptied by a company authorised for this purpose, or a septic tank will be provided to which the sanitary facilities – green toilets – will be connected and which will be periodically emptied.

Access to the site is via the DN38 Constanta – Negru Vodă national road, the DJ391 Mangalia – Negru Vodă – Cobadin – Tuzla county road, municipal roads (DC13, DC16, DC17, DC18, DC19) and existing service roads. Access roads will be built on the sites to connect the turbines to the assembly and maintenance platforms.
County road DJ 391 is a paved road, the municipal roads are partially paved, and all other service roads are dirt roads.
The agricultural service roads included in the Land Use Development Plan will constitute the road access route for:

- transporting wind turbine components, transformer stations, auxiliary components, as well as the materials needed to build access roads, foundations and technological platforms during the construction phase;
- transporting various technical components during the operation and maintenance phase of the wind farm investment

As the access roads do not have a structure suitable for heavy traffic, they need to be upgraded to ensure the necessary turning radius for the trailers used to transport the components of the wind farms.
The following technological operations are proposed for the construction of the roads:

- removal of the vegetation layer (or, where appropriate, excavation to the foundation level in the case of embankments), stabilisation of the support layer and its compaction;
- filling up to the lower level of the crushed stone layer, if necessary;
- stabilised soil applied to areas with excessive moisture;
- laying the sand layer and compaction.

The roads and platforms will be constructed with bituminous-treated stone surfacing laid on a bed of sand. Their structure must ensure resistance to a maximum load of 12t/axle and a pressure of 18.5t/m^{2} ·The width of the roads within the site will be 4.50 m with a minimum curvature radius of 50.00 m in the access area from the service roads. The curvature radii will be ensured by the temporary concession of land areas.
Slopes of at least 3% will be ensured for the drainage of rainwater and radii of curvature of at least 50 m at the access to the sites.
Each plot will have direct access to a developed service road. The development works for the access roads, which are in the public domain of local interest, will be carried out by the beneficiary of the investment on the basis of a contract concluded with the Cerchezu Town Hall and will be carried out with bituminous-treated stone surfacing laid on a bed of sand.
The intersections will be constructed with simple circular connections, with a radius corresponding to the limits of the oversized transporter platform.

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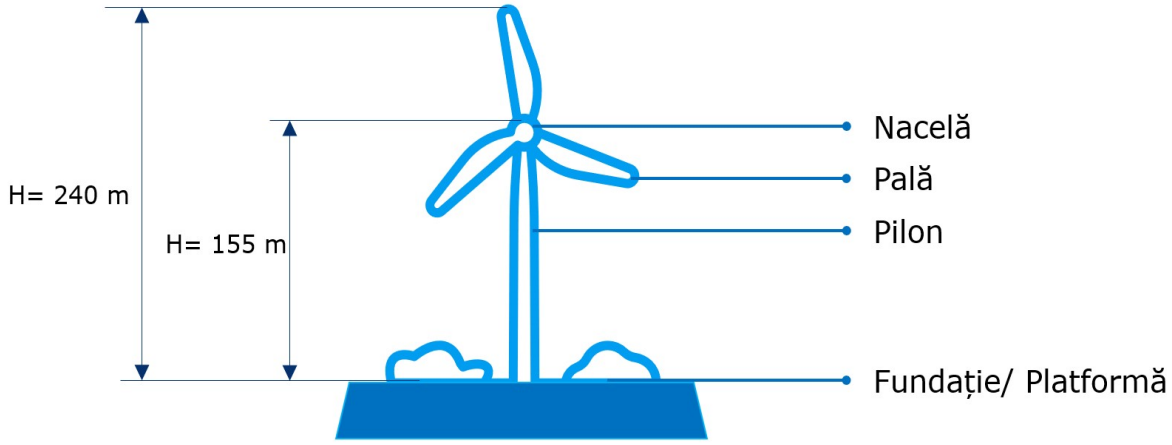
The intersections between service roads and classified roads: national roads, county roads and municipal roads will be constructed in accordance with the permits issued by the Road Manager.
Water drainage will be achieved by evacuating rainwater onto the side slope.

Earthworks consist of levelling the ground, digging, excavating and filling.
The technological platforms required for the installation of the wind farm equipment do not require concreting, only levelling. After the installation of the wind turbines, the land affected by the technological installation platforms will be restored to its original state and returned to agricultural use. For the laying of electrical cables (+fibre optics) connecting the wind turbines, trenches with a depth of between 1.0 and 1.5 m will be dug. After the cables have been laid, they will be filled with compacted earth, thus restoring the land to its original condition. A protection zone of 1.00 - 1.50 m to the left and right of the cable axis will be provided, which is necessary for intervention in case of damage.

The wind turbine tower will be fixed in concrete foundations. The geotechnical analysis carried out on the Land Use Development Plan site has established that the recommended type of foundation is on piles, designed to ensure the strength and rigidity in the group, as required by the turbine manufacturer. After installation, the foundation will be covered with a layer of soil from excavations and topsoil, on which the natural vegetation texture of the area will be restored. Thus, the area of land permanently occupied by a wind turbine will consist of the area occupied by the base of the tower, the maintenance platform and the connecting roads between the power plants and the access roads on the sites.

Installation/equipment assembly works
The wind turbine has the following main components, as shown in the figure and table below:



Nacelle	The nacelle is mounted on the upper section of the tower and has a fibreglass casing. Inside the nacelle is the generator, which is equipped with a rotor and a control system.
Blade	The blades are made of components formed by injecting fibreglass into moulds, with a design based on their own load-bearing surfaces. The rotor has three blades with a diameter of 170 m.
Pylon/Tower	The nacelle support tower is made of metal, conical in shape and will be 155 m high.
Foundation/Platform	The foundation supports the tower, rotor, blades and nacelle with all equipment, but also transmits the specific loads mentioned to the ground without causing deformations that could compromise the safe operation of the structure (without exceeding the load-bearing capacity of the

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	foundation soil). The foundation of the wind generator group is an isolated, heavy concrete footing foundation made of monolithic reinforced concrete. It is proposed to build technological platforms for the installation period of the wind generator groups. The platforms will be located adjacent to the road, in the immediate vicinity of each foundation of the wind generator groups. The technological platforms will be retained and used in the event of possible interventions on the wind turbine groups to level the ground, followed by covering with ballast. The maximum height of the site platform will be 0.95 m.

Electrical connections

In order to feed the energy produced into the grid, the wind turbines are connected to each other via an underground cable system (LES) to the 33 kV/110 kV transformer stations (two in number) located within the studied area. In order to connect the wind farm to the National Energy System (SEN), an overhead/underground electrical connection will be made from the 33kV/110kV transformer stations to the 110 kV overhead line in the area, based on a specialised project that is not covered by this documentation.

The electrical network connecting the turbines to the 33kV - 110kV substations, located on plots A 5/28 and A 177/16, will be buried at a depth of 1.00 - 1.50 m and will be located in the developed/undeveloped service roads in the studied area.

In the trenches for the electrical network, above the cables and separated by a layer of sand, the telecommunications cable will be laid, which transmits all data on the operation of the wind turbines to a process computer and, by radio, to a control unit where the proper functioning of the wind farm is monitored.

The route of the cables for internal connections is planned where possible along existing roads and paths.

A protection zone equal to 1.00 - 1.50 m left and right of the cable axis will be provided, necessary for intervention in case of damage. A protection zone of 20kV = 245.90 m will be ensured, representing $H_{(pole)}$+ $L_{(blade)}$+ 3.0 m + 2.90 m (pole radius at base).

The wind farm can be monitored automatically by the SCADA system or manually by the individual computers integrated into each turbine. The wind speed at which the wind turbines are programmed to stop is 23 - 25 m/s.

The site rehabilitation works will be carried out once the construction works have been completed, when the ecological reconstruction of all the land that has been temporarily occupied by various objectives within the construction site (construction site organisation, temporary technological platforms, etc.) will be carried out.

The main rehabilitation works to be carried out are:

- closing down the site facilities (site organisation, temporary technological platforms, etc.);
- existing structures and installations will be dismantled and removed (loaded and transported off the construction site), and the site will be prepared for rehabilitation.
- land development will be carried out through sanitation, levelling and grass planting works.

Wind farm operation phase

During this stage, the activities to be carried out are:

- electricity production.
- maintenance and servicing works.

Decommissioning phase of the wind farm

The lifespan of a wind turbine is 30-35 years. At the end of this period, there are two possibilities: decommissioning the wind power generators and restoring the site, or replacing the wind generators with new ones.

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During the decommissioning period, the organisation of the decommissioning site will involve the same activities and objectives as during the construction period.
The work involved in decommissioning the wind farm includes:

- dismantling the wind turbines and the tower, with the recovery and recycling of metals and reusable materials in general;
- demolition of foundations and use of crushed concrete for various purposes (road platforms, various fillings)
- recovery and recycling of electrical cables; filling/levelling the foundation pit and restoring the vegetation cover.

Replacing wind turbine generators with new ones requires less intervention.

⚙ Utilities

The project does not provide for wastewater treatment or pre-treatment facilities at any stage. During the execution phase, the site organisation will provide green toilets that will be emptied periodically by the business operator providing these facilities.
The following will be provided at the construction site:

- Green toilets for the management of faecal-domestic wastewater;
- The storage of materials, raw materials and waste that may lead to the occurrence of soil and groundwater pollutants s shall be carried out exclusively on impermeable surfaces specially designed for this purpose;
- For the organisation of the construction site, waste bins and 1 fully equipped firefighting station have been provided.

Analysis of alternatives

Four alternatives were studied during the Land Use Development Plan development process:

- **Alternative "zero"** - no implementation of the Land Use Development Plan
- **Alternative I** - initiated in 2011 (consisting of three wind farms) - 117 wind turbines with a total installed capacity of 351 MW
- **Alternative II** - initiated in 2022 - 48 wind turbines, with a total installed capacity of 316.8 MW
- **Alternative III** – initiated in 2023 after obtaining TRANSGAZ SA approval no. 34618/948/10.05.2023, following which 2 power plants, T17 and T23, were abandoned, so the new wind farm will comprise 46 wind turbines, with a total installed capacity of 303.6 MW

Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Impact assessment									
		Alternative ZERO	Execution			Operation			Decommissioning		
			Alternative I	Alternative II	Alternative III	Alternative I	Alternative II	Alternative III	Alternative I	Alternative II	Alternative III
Water	**OM1.** Maintaining and improving the ecological status/ecological potential and	0	-	-	-	0	0	0	-1	-1	-

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Impact assessment									
			Execution			Operation			Decommissioning		
		Alternative ZERO	Alternative I	Alternative II	Alternative III	Alternative I	Alternative II	Alternative III	Alternative I	Alternative II	Alternative III
	chemical status of surface water bodies and groundwater										
Air	**OM2.** Maintaining air quality by reducing emissions from energy sector activities	-	-	-	-	2	2	2	-2	-1	-1
Soil/subsoil	**OM3.** Limiting soil pollution and degradation of soil surfaces.	0	-	-	-	0	0	0	-1	-1	-1
Use of natural resources	**OM4.** Reducing the exploitation of exhaustible resources and facilitating the exploitation of renewable resources	-2	-2	-	-	2	2	2	-1	-1	-1
	OM5. Promoting the transition to a circular and resource-efficient economy	-1	-	-	-	2	2	2	0	0	0
Waste management	**OM6.** Reduction of waste quantities generated and disposed of through landfilling (compliant landfills)	0	-	-	-	0	0	0	-2	-2	-
Noise and vibrations	**OM7.** Limiting noise pollution at source in areas with noise-sensitive receptors. Limiting vibration levels	0	-	-	-	-	0	0	-1	-1	-1
Biodiversity	**OM8.** Conservation of natural habitats and species of flora and fauna of Community importance	0	-	-	-	-	0	0	-1	-1	-

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Impact assessment									
		Alternative ZERO	Execution			Operation			Decommissioning		
			Alternative I	Alternative II	Alternative III	Alternative I	Alternative II	Alternative III	Alternative I	Alternative II	Alternative III
	OM9. Maintenance of the Natura 2000 network of protected areas.	0	0	0	0	0	0	0	0	0	0
Population and human health	**OM10.** Maintaining the quality of environmental factors within the limits of legal provisions for environmental protection and public health	0	-	-	-	-	0	0	-1	-1	-
	OM11. Improving the standard of living and social conditions of the population	-1	1	1	1	2	2	2	1	1	1
Landscape	**OM12.** Ensuring the protection of the natural landscape and reducing the impact on the natural landscape	0	-	-	-	0	0	0	2	1	1
Climate change	**OM13.** Reducing GHG emissions from the energy sector	-2	-1	-	-	2	2	2	-1	-1	-1
	OM14. Minimal risks to climate change (adaptation)	-1	0	0	0	2	2	2	0	0	0
Cultural heritage	**OM15.** Protection and conservation of cultural heritage elements	0	-	-	-	0	0	0	-1	-1	-1
TOTAL		**-8**	**-14**	**-1**	**-12**	**9**	**12**	**12**	**-9**	**-9**	**-9**

From the assessment of the three alternatives in relation to the environmental objectives set for the impact assessment of the Land Use Development Plan implementation, it can be concluded that alternatives II and III have the lowest impact.

Following the analysis of the alternatives, **alternative III** is considered optimal for the following reasons:

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- minimisation of negative effects on the environment by reducing the number of wind turbines;
- more efficient use of air currents through optimal positioning of the turbines in relation to each other, at greater distances, which leads to their operation in the best conditions and increased efficiency of the wind farm.

Climate change

The assessment from a climate change perspective is based on two components: the impact of the plan on climate change (contribution to greenhouse gas (GHG) emissions) and adaptation to climate change.

Climate change is one of the greatest threats to the environment and the social and economic framework. These changes are largely due to greenhouse gas emissions resulting from human activities, represented by: CO_2 , CH_4 , N_2 O, HFCs, PFCs, SF_6 .

The main sources of man-made greenhouse gases are: the burning of fossil fuels for electricity generation, transport, industry and households; changes in agriculture and land use (deforestation), waste disposal and the use of fluorinated industrial gases.

Climate change poses two major challenges: drastically reducing greenhouse gas **emissions** and **adapting**, through sustainable development, to a carbon-neutral economy that ensures both a good quality of life for citizens and effective protection of their lives and property in the face of new vulnerabilities and risks of natural disasters.

With regard to the **GHG emission reduction** component, as an EU Member State (MS), Romania has committed to complying with the key principles of the European Green Deal (EGD): (i) reducing net GHG emissions by at least 55% by 2030 compared to 1990 levels ("Fit for 55") and (ii) achieving the goal of net zero GHG emissions by 2050 ("net zero").

Achieving the Net0@2050 target will pose substantial challenges, requiring acceptance at the political level and by the population. To achieve these ambitious goals, substantial emissions reductions are needed in sectors that are difficult to change, and an additional 96% reduction in emissions is needed even if the "Fit for 55" target is achieved.

At the end of 2023, Government Decision 1215/2023 adopted **Romania's long-term strategy for reducing greenhouse gas emissions - Romania Neutral in 2050 (STL 2050)**. The main target of the strategy is for Romania to be climate neutral by 2050, achieving a 99% reduction in net emissions by 2050 compared to 1990 levels.

In terms of decarbonising the energy sector in 2019, 69% of the GHG emission reduction target for 2050 has already been achieved. By 2035, 98% of the target will have been achieved.

Target for the renewable energy sector (RES) According to the selected RO Neutral scenario, the share of RES in gross final energy consumption will be 86.1% in 2050 and 36.2% in 2030.

The major increase in electricity production from wind and solar sources, as well as from green hydrogen, contributes to the increase in the share of RES in the electricity production sector (RES-E) to approximately 80% in 2050 in the RO Neutral scenario.

The wind capacity targets for 2030-2050 in the RO Neutral scenario include new wind capacity – 550 MW installed each year in 2023-2025, 600 MW each year between 2026 and 2030, 675 MW each year between 2031 and 2040, and 750 MW each year from 2041 to 2050.

With regard to **the adaptation component*, the National Strategy on Adaptation to Climate Change*** for the period 2023-2030 with a view to 2050 (S.N.A.S.C.) aims to improve the adaptive capacity and increase the resilience of socio-economic and natural systems to the impact of climate variability and change in different areas and time intervals. Specifically, for 2030, the strategy aims to

- strengthen Romania's resilience and capacity to adapt to the risks associated with climate change and natural disasters;
- increasing the capacity to respond quickly to unexpected extreme weather events;
- improving education, awareness and human and institutional capacity for mitigation, adaptation and reduction of the impact of climate change, as well as implementing early warning systems;

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- intensifying national efforts to achieve the transition to a "green" economy.

According to the guide on adaptation to climate change approved by Order 1170/2008, for the specific objective *of Energy*, the Action Plan provides for the following adaptation measures relevant to the proposed Land Use Development Plan:

- urgently conducting studies to assess the risk of climate change effects on the energy sector in general and, in particular, on the risk assessment for the hydropower sector, but also taking these risks into account in relation to planned investment projects;
- promoting energy production from renewable sources;
- the development of local public administration strategies for the use of energy sources that comply with European environmental and efficiency standards for the production of electricity and heat in centralised systems.

County of Constanta belongs 80% to the continental climate sector (plain climate zone and a limited hill climate zone) and about 20% to the maritime coastal climate sector (plain climate zone).
The general climate in the continental part of the county is commonly marked by hot summers with low rainfall and mild winters, sometimes with strong blizzards, but also with frequent warm spells that cause the snow cover to be episodic. and in the maritime part, by summers whose heat is mitigated by the cool sea breeze and by mild winters, marked by strong and humid winds from the sea.
The average annual temperatures are higher than the national average -11.2^0 C in Mangalia and 11.2^0 C in Murfatlar - and in the central-northern half of the territory the values do not fall below 10^0 C.
The absolute minimum temperatures recorded in County of Constanta were -250C in Constanța on 10 February 1929, -33.1^0 C in Basarabi (Murfatlar) on 25 January 1954 and - 25.2^0 C in Mangalia on 25 January 1942. The absolute maximum temperatures recorded were $^{+43°C}$in Cernavodă on 31 July 1985, $^{+41°C}$in Basarabi on 20 August 1945, +38.5^0 C in Constanța on 10 August 1927 and +36^0 C in Mangalia on 25 May 1950.
Annual precipitation ranges between 350 mm and 475 mm, placing Constanța among the driest regions in the country. The low values are due to the continentalisation of air masses as they move from west to east and to particular local conditions (low altitudes, the Black Sea basin).
The ratio between rainfall and temperature indicates periods of drought, dryness and wet periods. Droughts are longer in the south of the county. Droughts occur frequently in conditions of maximum barometric pressure, with light winds and high temperatures.
The commune of Cerchezu has a temperate continental climate, with an average annual temperature of approximately 11°C. The absolute maximum temperature recorded was 38.5°C on 25 July 2007, and the absolute minimum temperature was -25°C. The average annual rainfall is 396 mm.
The average duration of frost-free days is approximately 200 days per year, with the first frost usually occurring after 25 October.
Changes in the general circulation of the atmosphere from one season to another are reflected in changes in the frequency of winds from certain directions. The prevailing winds in Cerchezu are usually from the northeast and east during winter and spring, contributing to wet and cold winters and hot and dry summers.

Identification of climate hazards and assessment of the area's sensitivity
The climate parameters relevant to the municipality of Cerchezu are:

Extreme temperatures
Extreme temperatures are exceptionally high or low temperatures in a particular region or place at a particular time. These temperatures significantly exceed the normal or usual temperature limits for that area or period of time.
Temperature increases have intensified since 2000, with the winter of 2006-2007 considered the warmest since instrumental measurements began in Romania. In that year, pronounced deviations in maximum/minimum temperatures from the multi-year average persisted over long periods of time.
In terms of temperature extremes, at national level, the results recorded at weather stations indicated a decrease in the number of frost days in some areas in the south of the country and an increase in heat waves in most areas of the country.

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According to global climate data for the period 1970-2000 available on WorldClim, the average annual maximum temperature in the Land Use Development Plan's area of influence, at the level of the Cerchezu commune, is between 5.82 and 6.39^{0}C.

As regards the evolution of the average annual maximum temperature in the area of influence of the proposed Land Use Development Plan, an increase in temperature of approximately 13^{0}C is expected in 2050, with values ranging between 19.01÷19.36^{0}C being recorded in the area.
According to global climate data for the period 1970-2000 available on WorldClim, the average annual minimum temperature in the area of influence of the Land Use Development Plan, at the level of the Cerchezu commune, ranges between 0.68÷0.33^0 C.

With regard to the evolution of the average annual minimum temperature in the area of influence of the proposed LAND USE DEVELOPMENT PLAN, at the level of the Cerchezu commune, in 2050 a temperature increase of about 9^{0}C is expected, with values ranging between 9.49÷9.84^{0}C being recorded in the area.

Analysing the data presented above, it can be seen that by 2050 there will be an increase in temperature, both in terms of maximum and minimum temperatures, but **exposure to the risk of extreme temperatures is reduced** in the case of wind farms.

Precipitation
Precipitation can take various forms, such as liquid water droplets, snow crystals or ice pellets. Extreme precipitation can have significant effects on water supply and sewerage infrastructure by increasing the turbidity of surface water sources.
According to global climate data for the period 1970-2000 available on WorldClim, the annual amount of precipitation in the area of influence of the Land Use Development Plan, at the level of the Cerchezu commune, varies between 460÷476 mm.

With regard to the evolution of annual precipitation in the area of influence of the proposed Land Use Development Plan, a decrease in precipitation of approximately 10 mm is expected in the Cerchezu commune in 2050, with values ranging between 450 and 475 mm in the area.

Analysing the data presented above, it can be seen that by 2050 there will be a decrease in precipitation, but **exposure to the risk of precipitation is low** in the case of wind farms.

Floods
Floods are events in which the ground is covered with excess water, usually due to heavy rainfall, rapid snowmelt or overflowing watercourses.
Exposure to flood risk, already considerable in most of the country, is expected to increase due to climate change. According to the data available in the flood hazard and risk maps - cycle 2, the impact area of the proposed LAND USE DEVELOPMENT PLAN is not subject to flood risks, the distance to water bodies at risk of flooding being at least 15 km.

The watercourses in the location area (Măgura, Cerchez, Ceair) are not included in the Dobrogea Litoral River Basin Management Plan and do not appear in the flood hazard and risk maps - cycle 2. However, in accordance with Law 575/2001 on the approval of the National Spatial Planning Plan - Section V Natural Risk Areas, the commune of Cerchezu is exposed to the risk of torrential flooding.

In conclusion, it can be assessed that **the area of implementation of the Land Use Development Plan is not exposed to the risk of flooding**.

Drought

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The concept of drought can be defined as "a deficit of precipitation over a long period of time (usually a season or more), leading to a shortage of water".
Several types of drought are classified as follows:

- *meteorological drought*, which refers to an extended period of time when there is no or very little rainfall;
- *agricultural drought* occurs when soil water levels are low and the water deficit damages or destroys agricultural crops;
- *hydrological drought* refers to reduced water supply to rivers, lakes, aquifers and other reservoirs and usually follows meteorological drought;
- *ecological drought* is an episodic deficit in water availability that pushes ecosystems beyond their vulnerability thresholds and triggers reactions in natural and/or human systems, and occurs when widespread ecological damage caused by lack of soil moisture is reached;
- *socio-economic drought* occurs when water supply is reduced or stopped due to a lack of water resources.

According to data available from the European Drought Observatory, the complex drought indicator for the plan's implementation area, *at the Cerchezu commune*, shows predominantly agricultural drought (soil moisture deficit).

Fires

Vegetation fires are fires that spread through areas with vegetation, such as forests, grasslands or bushes. These fires can have multiple causes, including careless human activity, lightning strikes or natural phenomena such as drought.

In recent years, against the backdrop of global warming, there has been a worldwide increase in the duration and extent of weather conditions conducive to forest fires (Davis et al. 2018).
Between 1995 and 2018, the number of forest fires and the area affected by them varied significantly from year to year, with the highest values recorded in 2000, 2007 and 2012. This result can be explained by the fact that these years were considered to be the hottest since the reference year 1951, when the maximum temperature record was recorded in our country (Busuioc et al 2007). Of all the fires that affected Romania's forests between 1995 and 2018, most occurred in March, August and November.
In the area where the Land Use Development Plan is being implemented, which is devoid of forests, it can be estimated that **there is no likelihood of fires.**

Earthquakes

Earthquakes are caused by the release of tension generated by forces related to plate tectonics or by anthropogenic activities such as the creation of reservoirs, deposits, dumps, mining and/or the injection of fluids into underground formations.
Earthquakes can cause cracks, fissures or damage to water supply and sewerage systems.
From a seismic point of view, in accordance with Standard P 100-1/2013 (Seismic Design Code), Part 1 – Design Provisions for Buildings, the location of the investments provided for in the Land Use Development Plan is characterised, for seismic events with an average recurrence interval (of magnitude) IMR = 225 years, as follows:

- ground acceleration for design a_g = 0.10 g/ 0.15 g;
- control period (corner) T_c = 0.7 sec.

Considering the above, the exposure to earthquake risk in the Land Use Development Plan implementation area is very low.

Landslides

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Landslides are caused by gravitational forces, but can be triggered by a variety of processes. Some of the most common triggers include earthquakes and prolonged and/or intense periods of rainfall. Deforestation can also increase the likelihood of landslides.

In the commune of Cerchezu, the risk associated with landslides is very low, and it can be concluded that **exposure to the risk of landslides in the Land Use Development Plan implementation area is very low**.

Cumulative impact

With regard to the relationship with other plans and programmes both in Romania and Bulgaria, according to the information available, the following existing/proposed wind farms are located in the vicinity of the existing/proposed wind farm

- ***Existing:***
  - "WIND FARM 32 WIND TURBINES, TOTAL POWER 80 MW, TRANSFORMER STATION, ELECTRICAL CONNECTION NETWORKS, CONSTRUCTION AND MODERNISATION OF COMMUNICATION AND ACCESS ROADS", located in the municipalities of Chirnogeni and Independența. The distance between the proposed wind farm and the existing one is approximately 1.5 km (the distance between the proposed T24 turbine and the existing T1).
  - Wind farm on Bulgarian territory, located 5.6 km from the proposed project (distance between the proposed T3 turbine and the existing T6 turbine).

- ***Proposed:***

In order to assess the cumulative impact on the environment and protected natural areas for the Land use development plan *"Wind Farm 48 (46) CE, Transformer Stations, Electrical Connection Networks, Construction and Modernisation of Communication and Access Routes",* proposed to be located in Cerchezu, County of Constanta, information was requested from the competent environmental protection authority in Constanța by letter no. 37/10.05.2024 requesting information on the projects and plans/strategies approved/endorsed during the period 2020-2024, as well as those currently awaiting approval in the territory of Cerchezu and the neighbouring localities (Măgura, Căscioarele, Viroaga, Chirnogeni, Negru Vodă, Olteni, Dumbrăveni, Independența, Plopeni), operators carrying out activities in the administrative territory of Cerchezu, projects and plans/strategies approved/endorsed/pending approval located in the protected areas within the area of influence of the respective Land Use Development Plan: ROSAC0071 (ROSCI0071), ROSPA0036, ROSPA0166, ROSPA0094, ROSAC0157(ROSCI0157), data on the location of projects/plans in relation to the boundaries of these protected areas and the areas occupied by them within the protected areas, etc.
The following information regarding the projects was sent by APM Constanta no. 5836/12.06.2024:

- Wind farm 14 CE-92.4 MW, transformer station, connection networks, construction and modernisation of communication and access routes - outside the built-up area of Fântana Mare, Independența commune, County of Constanta.
- Wind farm 17 CE-112.2 MW, transformer station, electrical connection networks, construction and modernisation of communication and access routes - outside the built-up area of Independența commune and Cerchezu commune, County of Constanta,
- Comana - Pecineaga Wind Farm - underground MV electrical cable route and fibre optic network,
- Construction of wind farm including: wind turbines, access roads and assembly/maintenance platforms, electrical transformer station (own), medium and high voltage electrical network, telecommunications network, Independența commune, County of Constanta,

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- Demolition of existing buildings and construction of a 3.212 MW photovoltaic power plant, connection to the SEN, installation of PC and PTAB, construction of internal and access roads, fencing of the site and organisation of the construction site located in Independența,
- Construction of underground fibre optic network for electronic communications services in County of Constanta, Independența commune, Dumbrăveni,
- Construction of an underground fibre optic network for electronic communications services, Negru Vodă,
- Electricity supply for water household, Furnica village, Dumbrăveni commune, County of Constanta. General Urban Plan for the commune of Independența,
- General urban plan for the commune of Independența,
- Establishment of a smart natural gas distribution network in the commune of Independența, County of Constanta,
- Construction of a footbridge in Movila Verde, Bisericii Street, Movila Verde, Independența commune,
- Asphalting of Comana, Tătaru and Pelinu streets, phase I, Comana commune, County of Constanta
- Construction of bridges, footbridges and paving of rainwater drainage channels in Credința, Chirnogeni commune,
- Modernisation and rehabilitation of streets in Chirnogeni commune, County of Constanta.

- RIG SERVICE SA, LAND USE DEVELOPMENT PLAN - WIND FARM 17 CE – CCA. 112.2 MW, TRANSFORMER STATION, ELECTRICAL CONNECTION NETWORKS, CONSTRUCTION AND MODERNISATION OF COMMUNICATION AND ACCESS ROADS, IN INDEPENDENTA COMMUNE, EXTRAVILAN, CONSTANTA COUNTY
- RCS & RDS SA - CONSTRUCTION OF UNDERGROUND FIBRE OPTIC NETWORK FOR ELECTRONIC COMMUNICATIONS SERVICES, IN CONSTANTA COUNTY, INDEPENDENTA COMMUNITY, DUMBRAVENI.
- INDEPENDENTA COMMUNITY - GENERAL URBAN PLAN FOR THE INDEPENDENTA COMMUNITY
- EMERGY STRIBOG SRL - CONSTRUCTION OF WIND FARM INCLUDING: WIND TURBINES, ACCESS ROADS AND ASSEMBLY/MAINTENANCE PLATFORMS, ELECTRICAL TRANSFORMER STATION (OWN), MEDIUM AND HIGH VOLTAGE ELECTRICAL NETWORK, TELECOMMUNICATIONS NETWORK, INDEPENDENTA COMMUNITY, CONSTANTA COUNTY. CONSTANTA COUNTY, INDEPENDENTA COMMUNITY - "ESTABLISHMENT OF A SMART NATURAL GAS DISTRIBUTION NETWORK IN INDEPENDENTA COMMUNITY, CONSTANTA COUNTY"
- INDEPENDENTA ADMINISTRATIVE-TERRITORIAL DIVISION - "ESTABLISHMENT OF A SMART NATURAL GAS DISTRIBUTION NETWORK IN THE COMMUNITY OF INDEPENDENTA, CONSTANTA COUNTY"
- COMMUNITY OF INDEPENDENTA, "CONSTRUCTION OF A BRIDGE IN MOVILA VERDE, BISERRCII STREET, MOVILA VERDE, COMMUNITY OF INDEPENDENTA, CONSTANTA COUNTY"
- RAJA - ELECTRICITY SUPPLY FOR WATER UTILITY, FURNICA VILLAGE, DUMBRAVENI COMMUNITY, CONSTANTA COUNTY
- AGROTECH INVESTMENT SRL - DEMOLITION OF EXISTING BUILDINGS AND CONSTRUCTION OF A 3.212 MW PHOTOVOLTAIC POWER PLANT, CONNECTION TO SEN, INSTALLATION OF PC AND PTAB, CONSTRUCTION OF INTERNAL ROAD AND ACCESS, FENCING OF LAND AND ORGANISATION OF CONSTRUCTION SITE LOCATED IN INDEPENDENTA'
- RCS&RDS SRL - CONSTRUCTION OF UNDERGROUND FIBRE OPTIC NETWORK FOR ELECTRONIC COMMUNICATIONS SERVICES IN NEGRU VODA
- ROMCM S.A. RELOCATION OF THE DN 1000T1 ISACCEA - NEGRU VODA INTERNATIONAL NATURAL GAS TRANSPORT PIPELINE, IN THE ROMCIM QUARRY AREA, PL MEDGIDIA"

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- PECINEAGA ENERGIES SRL. - COMANA WIND FARM - PECINEAGA - UNDERGROUND ELECTRICAL CABLE ROUTE MT AND FIBRE OPTIC NETWORK PECINEAGA ENERGIES SRL
- COMANA COMMUNITY COUNCIL, REPRESENTED BY MAYOR ADAM ION - ASPHALTING OF COMANA, TATARU AND PELINU STREETS, PHASE I, COMANA COMMUNITY, CONSTANTA COUNTY"
- CHIRNOGENI COMMUNITY - CONSTRUCTION OF BRIDGES, FOOTBRIDGES AND RAINWATER DRAINAGE CHANNELS IN THE LOCALITY OF CREDINTA, LOCALITY OF CREDINTA, CHIRNOGENI COMMUNITY.

Characteristics of other existing plans/projects that may have a cumulative impact with the evaluated plan/project on the natural protected area of community interest (ANPIC)

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No. ctr.	Plan/project name	Location relative to ANPIC (distance)	Effects generated									Impacts				
			Change in air quality	Increased noise and vibration levels	Increased light intensity	Increased concentration of pollutants in soil/pollution	Land occupation	Changes in vegetation	Introduction/spread of invasive species	Fauna mortality	The emergence of behavioural barriers for wildlife	PH	AH	FH	PAS	REP
ROSCI0071/ROSAC0071 Dumbrăveni - Urluia Valley - Lake Vederoasa																
1	Chirnogeni wind farm (existing)	5.1	-	-	-	-	-	-	-	X	X	-	X	X	X	X
2	Karnobat wind farm (existing)	16.89 km	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ROSCI0157/ROSAC157 Hagieni Forest - Cotul Văii																
1	Chirnogeni Wind Farm (existing)	13.57 km	-	-	-	-	-	-	-	X	X	-	X	X	X	X
2	Karnobat wind farm (existing)	13.62 km	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ROSPA0036 Dumbrăveni																
1	Chirnogeni wind farm (existing)	10.66 km	-	-	-	-	-	-	-	X	X	-	X	X	X	X
2	Karnobat wind farm (existing)	23.05 km	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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No. ctr.	Plan/project name	Location relative to ANPIC (distance)	Effects generated									Impacts				
			Change in air quality	Increased noise and vibration levels	Increased light intensity	Increased concentration of pollutants in soil/pollution	Land occupation	Changes in vegetation	Introduction/spread of invasive species	Fauna mortality	The emergence of behavioural barriers for wildlife	PH	AH	FH	PAS	REP
ROSPA0166 Plopeni-Chirnogeni																
1	Chirnogeni wind farm (existing)	3.18 km	-	-	-	-	-	-	-	X	X	-	X	X	X	X
2	Karnobat wind farm (existing)	18.91 km	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ROSPA0094 Hagieni Forest-Cotul Văii																
1	Chirnogeni wind farm (existing)	17.05 km	-	-	-	-	-	-	-	X	X	-	X	X	X	X
2	Karnobat wind farm (existing)	20 km	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BG0000569 Kardam																

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No. ctr.	Plan/project name	Location relative to ANPIC (distance)	Effects generated									Impacts				
			Change in air quality	Increased noise and vibration levels	Increased light intensity	Increased concentration of pollutants in soil/pollution	Land occupation	Changes in vegetation	Introduction/spread of invasive species	Fauna mortality	The emergence of behavioural barriers for wildlife	PH	AH	FH	PAS	REP
1	Chirnogeni wind farm (existing)	9.65 km	-	-	-	-	-	-	-	X	X	-	X	X	X	X
2	Karnobat wind farm (existing)	0.54 km	-	-	-	-	-	-	-	X	X	-	X	X	X	X
1BG0000570 Izvorovo - Kraishte																
1	Chirnogeni wind farm (existing)	12.70	-	-	-	-	-	-	-	X	X	-	X	X	X	X
2	Karnobat wind farm (existing)	12.79 km	-	-	-	-	-	-	-	X	X	-	X	X	X	X

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Measures proposed to prevent, reduce and compensate as fully as possible for any adverse environmental effects of implementing the Land Use Development Plan

Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Proposed measures	Responsible
Water	**OM1.** Maintaining and improving the ecological status/ecological potential and chemical status/ e of surface water bodies and groundwater	**Construction stage:** - Domestic sewage will be disposed of in mobile green toilets, which will be emptied and transported to the nearest treatment plant. - The works will be carried out by ensuring drainage slopes for rainwater. - Drinking water supply during the construction period will be provided from external sources: bottled water. - Construction materials will not be stored near watercourses in order to prevent damage to water bodies (ecological status/ecological potential and chemical status for surface water bodies, and quantitative status and chemical status for groundwater bodies). - Waste will be collected selectively and handed over to specialised companies to prevent any leaks. - All work will be monitored to prevent any contamination of the area due to accidental spills of fuel or lubricants from the equipment/machinery used in the work. In the event of accidental pollution, absorbent/neutralising substances will be used immediately, and any faults in the vehicles and/or machinery will be repaired in specialised service units. - The works for crossing the watercourses (Cerchez and Măgura rivers) shall be carried out using horizontal drilling technology at a depth of 1 m between the upper generator of the protective pipe and the watercourse bed.	The contractor responsible for the construction of the wind farm is

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Proposed measures	Responsible
Air	**OM2.** Maintaining air quality by reducing emissions generated by activities in the energy sector	**Construction stage:** - Use of water spraying techniques on the work area to reduce dust, if the dust resulting from the works related to the plan is visible. - With regard to emissions from transport vehicles, these must comply with the technical conditions set out in the technical inspections carried out periodically throughout the entire period of use of all motor vehicles registered in the country. - Use of machinery/vehicles equipped with high-performance engines (EURO 4 or EURO 5) and driving at low speed (maximum 30 km/h), especially on dirt or gravel roads (in very dry periods, it is recommended to spray them with water). - Dump trucks must be equipped with tarpaulins during transport. - The topsoil from the project sites where foundation works are carried out shall be stored and reused to restore the land to its original condition after completion of the works. - Technological processes that produce a lot of dust shall be reduced during periods of strong wind, or more intensive moistening of the surfaces under the action of working machinery or access roads, especially unpaved ones, shall be ensured. - Paint will be applied to construction elements using minimal quantities of paint, primer and thinners and applying it with special devices that ensure minimal VOC emissions into the atmosphere.	The contractor responsible for the construction of the wind farm
Soil /subsoil	**OM3.** Limiting soil pollution and soil surface degradation.	**Construction stage:** - delimitation of work areas before the start of construction works, so that the boundaries within which construction and assembly activities will take place are indicated, as well as minimisation of the affected areas. - Ensure controlled storage of construction materials and waste generated during the construction and decommissioning phases in specially designated areas on site. - Avoid storing materials on the ground that, when exposed to precipitation, may cause infiltration into the soil and groundwater (impermeable storage areas).	The contractor responsible for the construction of the wind farm

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Proposed measures	Responsible
		- Deposits of fertile soil and earth resulting from excavations carried out for building foundations shall be placed in the immediate vicinity of the work areas from which they originate, without affecting adjacent land. - Waste generated during construction activities shall be managed in accordance with the relevant legal provisions (selective collection, reuse and final storage). - Fuel for transport vehicles will be supplied at authorised distribution stations. - Maintenance, repair and washing of the machinery and vehicles used will be carried out by authorised companies. - Vegetation will be restored through ecological reconstruction in the area of the foundation platforms and technological platforms by covering them with a layer of topsoil and restoring the vegetation specific to the habitats in the area. - Access roads will be built on the site in order to improve the roadways and restore the infrastructure, so that the equipment involved in construction can access the site and maintenance personnel can easily access it throughout the entire period of operation.	
Use of natural resources	**OM4.** Reducing the exploitation of exhaustible resources and facilitating the exploitation of renewable resources	- Use of energy-efficient construction equipment to reduce fossil fuel consumption. - During the operational phase, the wind farm promotes the use of renewable resources, having a positive impact. In addition, by building the wind farm, an amount of electricity corresponding to the capacity of the farm will replace the same amount produced from non-renewable sources (fossil fuels), thus reducing their exploitation.	The contractor responsible for the construction of the wind farm
	OM5. Promoting the transition to a circular and resource-efficient economy	- Use of more reliable products that can be reused, upgraded and repaired reduces the amount of waste. - The wind turbines and transformer stations that will equip the wind farm will comply with the principles of the circular economy, reducing the impact on resource consumption.	The contractor responsible for the construction of the wind farm
Waste management	**OM6.** Reducing the amount of waste generated and disposed of in	- Implementation of a waste management plan that includes recycling and safe disposal of construction materials. - Minimising waste generation through efficient use of resources and reuse of materials.	Contractor responsible for

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Proposed measures	Responsible
	landfills (compliant landfills).		the construction of the wind farm
Noise and vibrations	**OM7.** Limiting noise pollution at source in areas with noise-sensitive receptors. Limiting vibration levels	**Construction phase:** - Carrying out the works in stages in terms of time and space, according to the work schedule, so that the noise level is below the maximum permissible limits. - Planning of material transport activities so that vehicle movements are limited to the minimum necessary to carry out the works in order to reduce the discomfort caused to the local population. - Use of appropriate noise mitigation systems at source (engines, machinery, etc.); - Installation of mobile panels in the immediate vicinity of noise-generating activities in order to protect inhabited areas - Setting and enforcing speed limits for vehicles in towns and on service roads; - Carrying out activities during the day (between 7:00 and 23:00), respecting the rest period of local residents, or modifying traffic routes accordingly. - Monitoring noise emissions to verify compliance with the limits imposed by the applicable legislation depending on the situation. - As regards vibrations, these are generally low-frequency sounds and cannot adversely affect human health or the environment.	The contractor responsible for the construction of the wind farm The wind farm operator
Biodiversity	**OM8.** Conservation of natural habitats and species of flora and fauna of Community importance **OM9.** Maintenance of the Natura 2000 network of protected areas.	The biodiversity protection measures proposed in the appropriate assessment study are as follows: **a. General measures** - Regular training for all personnel involved in construction/decommissioning works on general environmental issues, protected habitats and species, and measures to avoid and reduce impacts. Particular attention will be paid to issues related to the prohibition of collecting plants and animals or deliberately injuring/killing protected species. - Implementation of low-contrast lighting systems with exclusive dispersion on the ground (exclusion of incandescent bodies that generate heat). - Compliance with the proposed work schedule and the period proposed in this plan.	The contractor responsible for the construction of the wind farm

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Proposed measures	Responsible
		- Compliance with the perimeter of the proposed construction site to be located in the immediate vicinity of the work area. - Carrying out activities within the perimeter on the strictly necessary areas. - Construction materials shall only be stored in the areas specified in the plan within the site organisation and work areas, without affecting the surrounding areas. - Avoid any spillage of liquid fuels, oils, paints, etc. on the ground. In the event of accidental pollution, it shall be eliminated by applying absorbent materials and removed from the site by contracting companies specialised in the management of such hazardous waste. - Ensure proper waste management with regular disposal without using intermediate and non-compliant storage facilities. It is forbidden to dispose of waste in the immediate vicinity of the construction site and beyond. - Access to work sites will be via existing access routes so as not to affect additional land areas. - Use of machinery and equipment for carrying out the works that produce a minimum level of noise and vibration, are efficient, low-polluting and quiet, so that wildlife species are not affected. - Topsoil or fertile soil resulting from excavations will be stored appropriately and then reused. Restoration of the vegetation layer in temporarily occupied areas. **b. Specific measures*** - Construction and installation works must be planned so as to take place outside the breeding and rearing periods of species of Community interest, regardless of the presence or absence of nests on site. The planning of activities must take into account the biological calendar of the species concerned in order to prevent any negative impact on them. - Turbines must be marked at night with flashing lights, with long intervals between two consecutive flashes. These turbines are more easily recognisable by birds when flashing lights are used instead of continuous lights.	The wind farm operator

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Proposed measures	Responsible
		- Regular mowing of vegetation around turbines in order to maintain a low abundance of insect species that are a food source for both bat and bird species. - Installation of a conditional activation lighting system (Aircraft Detection Lighting System – ADLS) on turbines T47, T46, T35, T36, T34 to reduce the risk of mortality of species sensitive to artificial light (birds and bats). The measure will be applied from the first year of operation of the project. - To reduce the risk of mortality, the following measures are proposed: limiting the entry into production of turbines (T47, T46, T35, T36, T34) at a wind speed of 6.5 m/s, during the sensitive period (migration), starting half an hour before sunset until sunrise, and bat protection systems that emit ultrasonic deterrent signals to remove bats from the rotor's wake. The measure will be applied from the first year of operation of the wind farm. - The installation of collision risk prevention systems will be implemented from the first year of operation of the wind farm. An automatic shutdown/speed reduction control system for turbines (e.g. DTBird, IdentiFlight, Robin Radar Max, STRIX BirdTrack). The system will target bird species for which a significant potential impact has been identified and will be implemented from the first year of operation. - Installation of a video system for bird detection on turbines T8, T18, T29, T32 and T37. High-resolution camera systems will be installed. The signal emission system must be installed from the first year of operation of the wind farm. The camera system detects birds from a distance of up to 600 m and emits repellent sounds. If the bird continues to approach the turbine, after 300 metres the blades begin to slow down to a speed of 3 rpm, which eliminates the risk of collision. - Installation of radar systems and day and night video cameras (on turbines T8, T18, T29, T32 and T37) to detect and prevent the risk of collision of bats with the structures of the wind farm. The diversion signal system must be installed during the first year of operation of the wind farm. **Cross-border context**	

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Proposed measures	Responsible
		According to letter no. 99.00.268-40/17.09.2025 from the Ministry of Environment and Water of the Republic of Bulgaria, the following mandatory conditions were communicated for inclusion in the normative act: 1. "The wind farm with 48 (46) wind turbines, transformer stations, electrical connection networks, construction and modernisation of communication and access roads" – will be implemented in compliance with all measures provided for in the Environmental Report submitted, with a view to preventing, reducing and eliminating negative effects on the environment, the living environment and the health of the population as a result of the project's implementation; 2. Given that the wind farm is located in the immediate vicinity of the border with the Republic of Bulgaria, an assessment of the impact of physical factors in a cross-border context, in particular light effects, will be carried out during the design phase. The assessment will be sent to the Republic of Bulgaria; 3. The paint used for wind turbines (tower and rotor) must be of the "absorbent" type, so as not to create conditions for the reflection of incident light; 4. After implementation of the investment proposal, controlled monitoring of noise levels, non-ionising radiation and light effects at the border with the affected Bulgarian localities shall be ensured. The results of the monitoring shall be communicated to the Republic of Bulgaria.	
Population and human health	**OM10.** Maintaining the quality of environmental factors within the limits of legal provisions for the protection of the environment and public health	- Use of state-of-the-art equipment and technologies that generate low noise levels. - During construction, in order to prevent dust emissions, especially during periods of strong wind, more intensive moistening of surfaces affected by work machinery or access roads, especially unpaved ones, will be pursued. - Implementation of environmentally friendly construction practices that reduce the impact on the soil, such as proper waste management and the use of sustainable construction materials.	The contractor responsible for the construction of the wind farm

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Proposed measures	Responsible
	OM11. Improving the living standards and social conditions of the population	- Hiring local manpower for the construction, maintenance and operation of the wind farm. - Developing the local infrastructure (roads) necessary for the construction of the wind farm, which will remain for the benefit of the community. - Offering financial compensation or direct benefits to landowners affected by the construction and operation of the wind farm.	The contractor responsible for the execution of the wind farm . The wind farm operator
Landscape	**OM12.** Ensuring the protection of the natural landscape and reducing the impact on the natural landscape	- Use of colours that reduce the contrast between the turbine structures and the landscape. - Use of matt paints for finishing to reduce the reflection of sunlight. - Restoration of affected land areas – maintenance of vegetation areas and access roads on site. - Design and construction of substations in correlation with the site area.	The contractor responsible for the construction of the wind farm
Climate change	**OM13.** Reducing GHG emissions from the energy sector	- The construction of the wind farm itself is an effective measure for reducing greenhouse gas (GHG) emissions by replacing fossil fuel sources with clean and sustainable renewable energy.	The contractor responsible for the construction of the wind farm
	OM14. Minimal risks to climate change (adaptation)	- Use of turbines designed to withstand high winds and storms. - Use of turbines made of materials and components that can withstand large temperature variations and extreme weather conditions. - Designing foundations to withstand erosion and soil changes - Integration of advanced weather forecasts to anticipate and manage the impact of extreme weather conditions in order to establish the appropriate operating regime for the conditions.	Wind farm operator
Cultural heritage	**OM15.** Protection and conservation of cultural heritage elements	- Monitoring construction activities to ensure that they do not adversely affect cultural heritage sites.	Contractor responsible for the construction of the wind farm

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Description of measures envisaged to monitor the significant effects of the implementation of the LAND USE DEVELOPMENT PLAN

In accordance with the provisions of Government Decision No. 1076/2004, monitoring the implementation of the plan, based on the programme proposed by the holder, aims to identify from the outset its significant effects on the environment, as well as any unforeseen adverse effects, in order to be able to take appropriate remedial action. The implementation and performance of the environmental impact monitoring programme is the responsibility of the Land Use Development Plan holder.

As shown by the assessment of potential environmental effects, the provisions of the Land Use Development Plan will not generate significant negative effects on the environment (see Chapter 7). At the same time, the implementation of the Land Use Development Plan may bring about economic or social changes in the municipality of Cerchezu.

The monitoring of the effects of the plan's implementation will be carried out in accordance with the provisions of Article 27 of Government Decision 1076/2004, with reference to significant environmental effects, i.e. all types of effects, whether positive, adverse, foreseen or unforeseen. Not only direct effects, but also indirect, synergistic and cumulative effects must be monitored. Monitoring other effects (not assessed as significant) may be justified and useful if the overall effects of the Land Use Development Plan implementation are to be quantified.

The monitoring of environmental factors over time should be carried out in collaboration with the authorities involved in The Land Use Development Plan approval process. The monitoring of the plan holder will refer only to those activities that can be quantified in terms of values, quantities and time of completion, and will include the construction period and the operating period.

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Proposals for monitoring the effects of the Land Use Development Plan implementation

Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Indicators	Responsible
Water	**OM1.** Maintaining and improving the ecological status/ecological potential and chemical status of surface and groundwater bodies	Periodic visual assessment of surface water quality in the vicinity of the site (Măgura and Cerchez watercourses). Visual inspection to identify potential leaks of oil or other chemicals from equipment and recording of inspections.	The contractor responsible for the construction of the wind farm. The wind farm operator.
Air	**OM2.** Maintaining air quality by reducing emissions generated by activities in the energy sector	The level of air pollutant emissions (CO, NO2, SO2, PM10, PM2.5, VOC) resulting from the construction period is associated with the machinery/equipment involved in the works, but is low. During the operation of the wind farm, there are no pollutant emissions except for the machines involved in maintenance and intervention activities, but the associated emissions are insignificant and cannot affect the air environment factor.	The contractor responsible for the construction of the wind farm.
Soil/subsoil	**OM3.** Limiting soil pollution and soil surface degradation.	Monitoring the management of waste and hazardous materials to prevent soil contamination.	The contractor responsible for the construction of the wind farm.
Use of natural resources	**OM4.** Reducing the exploitation of exhaustible resources and facilitating the exploitation of renewable resources	Monitoring the consumption of exhaustible resources during the implementation phase of the Land Use Development Plan Monitoring of electricity production from renewable sources.	The contractor responsible for the construction of the wind farm.
	OM5. Promoting the transition to a circular and resource-efficient economy	Monitoring the use of renewable materials within the plan.	The contractor responsible for the construction of the wind farm.

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Indicators	Responsible
Waste management	**OM6.** Reducing the quantities of waste generated and disposed of in landfills (compliant landfills).	Monitoring the quantities of waste generated during construction and operation. Implementation and periodic evaluation of a waste management plan.	The contractor responsible for the construction of the wind farm.
Noise and vibrations	**OM7.** Limiting noise pollution at source in areas with noise-sensitive receptors. Limiting vibration levels	Monitoring noise and vibration levels in the vicinity of residential areas and other sensitive receptors.	The wind farm operator
Biodiversity	**OM8.** Conservation of natural habitats and species of flora and fauna of Community importance	Assessment of the impact on natural habitats and local species. Implementation of biodiversity conservation and monitoring measures.	Wind farm operator
	OM9. Maintenance of the Natura 2000 network of protected areas.	Monitoring the impact of the plan on Natura 2000 protected areas	Wind farm operator
Population and human health	**OM10.** Maintaining the quality of environmental factors within the limits of legal provisions for environmental protection and public health	Monitoring the quality of air, water and soil in accordance with legal standards.	Wind farm operator
	OM11. Improving the standard of living and social conditions of the population	Assessing community satisfaction with the plan and social benefits.	Wind farm operator
Landscape	**OM12.** Ensuring the protection of the natural landscape and reducing the impact on the natural landscape	Implementation of measures for the landscape integration of wind structures.	Wind farm operator
Climate change	**OM13.** Reducing GHG emissions from the energy sector	Monitoring electricity production and assessing GHG emissions avoided due to the operation of the wind farm.	Wind farm operator

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Relevant environmental aspects	Environmental objectives relevant to the Land Use Development Plan	Indicators	Responsible
	OM14. Minimal climate change risks (adaptation)	Use of wind turbines designed to withstand extreme weather conditions such as strong winds, storms and extreme temperatures. These may include more resistant materials and self-regulating speed technologies.	Beneficiary/Contractor responsible for the execution of the wind farm.
Cultural heritage	**OM15.** Protection and conservation of cultural heritage elements	Monitoring the impact of construction and activities on cultural heritage sites. Implementation of measures to protect and conserve cultural heritage.	Wind farm operator

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Identification and quantification of impacts

	Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
ROSCI0071/ROSAC0071 Dumbrăveni - Urluia Valley - Vederoasa Lake											
Construction	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus*	Habitat area of the species	0 ha of protected area Areas temporarily occupied by the project outside the boundaries of protected areas where the presence of the species has been reported: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis of field inventory results
	Construction of access roads	Temporary/permanent occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Habitat area of the species		
	Earthworks (land levelling, digging, excavation, filling)	Increased noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Population size	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be seen locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise contour will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a) The impact will be experienced outside the protected area of the wind farm, within the limits/vicinity of the work front Results of noise level modelling study	Noise level estimates
	Foundation construction works	Collision of wildlife with vehicle traffic on access	REP	No indirect	No secondary	No cumulative impacts identified	Short-term direct impact		Population size	1/individual (accidental) (outside the protected area, within the wind farm)	Risk analysis of species mortality

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
		roads/machinery in the work area		impacts identified	impacts identified						
	Installation/equipment works	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Areas temporarily occupied by the project outside the boundaries of protected areas where the presence of the species has been reported: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis of the results of field inventories
	Construction of the electrical network for discharging the energy produced by the wind power plant to the transformer station and the telecommunications network (fibre optics), transformer stations	Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts were identified	No secondary impacts have been identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area 30-40 m² in the work area, land outside the protected area (agricultural land).	Spatial analysis of field inventory results
	Land rehabilitation works upon completion of construction	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	– 0 ha within the protected area – Maximum 500 m from the work area boundary. – The distance over which the effects are felt is between 5 m (in the case of rhizomes/root fragments) and 200-500 m (in the case of seeds), the habitat is located 200-700 m from the area where the excavation works are carried out. Taking into account the precautionary principle, it was considered that this could generate a potential impact	Spatial analysis of field inventory results
Operation	Carrying out energy production activities	Increase in noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Spermophilus citellus*	Population size (distribution pattern)	Possible disruption of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not capable of affecting sensitive receptors in the area The 30 dB noise isoline will project at distances of up to 1.5 km around the work area	Noise level estimates

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
									(see section 1.1.7, fig. 1-10a) The impact will project outside the protected area of the wind farm, in the vicinity of the wind turbines Noise level modelling study results	
	Night-time lighting	PAS/PH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Not identified	No potentially affected species identified	Not applicable	Not applicable	Not applicable
	Waste generation	AH/PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	None identified	None identified	Not applicable	Not applicable	Not applicable
Maintenance and repair works	Collision of wildlife with vehicle traffic on access roads/machinery in the repair front area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus*	Population size	1/individual (accidental) (outside the protected area, within the wind farm)	Risk analysis of species mortality
	Collision with turbine blades	REP	No indirect impacts identified	No secondary impacts identified	– Cumulative impact with: – Chirnogeni wind farm (existing) – 14 CE-92.4 MW wind farm, transformer station – transformer station, connection networks, construction and – modernisation of communication and access routes - outside the built-up area – Fântana Mare, Independența commune, County of Constanta – Wind farm 17 CE-112.2 MW, transformer station – Wind farm 17 CE-112.2 MW, transformer station – transformer station, electrical	Direct long-term impact	*Miniopterus schreibersii* *Rhinolophus mehelyi*	Population size	*Miniopterus schreibersii* - maximum one individual every 5 years	Precautionary principle And data from the specialist literature Eurobats Report 2023

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
					connection networks, construction and – modernisation of communication and access routes - outside built-up areas – Independența commune and Cerchezu commune County of Constanta – (proposed) Comana - Pecineaga Wind Farm, Tătaru – and outside the built-up area of Comana (proposed – Karnobat Wind Farm (existing) –					
	Sudden pressure change within the range of the turbine blades, but also below this (approx. 5 m) - barotrauma	REP	No indirect impacts identified	No secondary impacts identified	Cumulative impact with: Chirnogeni wind farm (existing) 14 CE-92.4 MW wind farm, transformer station transformer station, connection networks, construction and modernisation of communication and access routes - outside the built-up area Fântana Mare, Independența commune, County of Constanta Wind farm 17 CE-112.2 MW, transformer station, electrical connection networks, construction and Wind farm 17 CE-112.2 MW, transformer station	Direct long-term impact	*Miniopterus schreibersii*	Population size	*Schreiber's bat* - maximum one individual every five years	Precautionary principle And data from the specialist literature Eurobats Report 2023

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	Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
						transformer station, electrical connection networks, construction and modernisation of communication and access routes - outside built-up areas Independența commune and Cerchezu commune County of Constanta (proposed) Comana - Pecineaga Wind Farm, Tătaru and outside the built-up area of Comana (proposed Karnobat Wind Farm (existing					
		Introduction of invasive species	AH	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Decommissioning	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus*	Habitat area of the species	0 ha within the protected area Areas occupied outside the protected area where the species was reported following monitoring: 0.9 ha temporarily occupied, area of the construction site	Spatial analysis and data received from the beneficiary
		Temporary occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus*	Habitat area of the species		
		Increase in noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus*	Population size (distribution pattern)	Possible disturbance of the activity of a maximum of 2 to 3 individuals	Noise level modelling study results

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
									The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will project at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a) The impact will project outside the protected area of the wind farm, in the vicinity of the wind turbines	
Decommissioning/demolition works Land restoration/rehabilitation works at the end of the plan's lifetime	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus*	Population size	1/individual (accidental) outside the protected area, within the wind farm)	Risk analysis of species mortality
	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Areas temporarily occupied by the project outside the boundaries of protected areas where the presence of the species has been reported: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm The impact will project outside the protected area, within the boundaries/vicinity of the wind farm work front	Spatial analysis of the results of field inventories
	Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts were identified	No secondary impacts were identified	No cumulative impacts identified	Direct short-term impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area 30-40 square metres in the working area, agricultural land outside the protected area	Spatial analysis of field inventory results
	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Maximum 500 m from the work area boundary. The distance over which the effects are felt is between 5 m (in the case of rhizomes/root fragments) and 200-500	Spatial analysis of field inventory results

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	Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
										m (in the case of seeds), the habitat is located 200-700 m from the area where the excavation works are carried out. Taking into account the precautionary principle, it was considered that this could generate a potential impact	
ROSCI0157/ROSAC157 Hagieni Forest - Cotul Văii											
Construction	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mustela eversmanii*	Habitat area of the species	0 ha within the protected area Areas occupied outside the protected area where presence was reported following monitoring: 0.9 ha temporarily occupied, area of the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis and data received from the beneficiary
	Construction of access roads	Temporary/permanent occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Habitat area of the species		
	Earthworks (land levelling, digging, excavation, filling)	Increased noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Habitat area of the species		
	Foundation construction works	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Population size	1/individual (accidental) (outside the protected area boundary, within the wind farm boundary)	Risk analysis of species mortality
	Installation/equipment works	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Areas temporarily occupied by the project outside the boundaries of protected areas where the presence of the species has been reported: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm The impact will project outside the protected area, within the boundaries/vicinity of the wind farm.	Spatial analysis of the results of field inventories

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	Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
Operation	Construction of the electrical network for discharging the energy produced by the wind power plant to the transformer station and the telecommunications network (fibre optic), transformer stations	Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts were identified	No secondary impacts have been identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area 30-40 square metres in the working area, land outside the protected area (agricultural land).	Spatial analysis of field inventory results
	Land rehabilitation works upon completion of construction	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Maximum 500 m from the work area boundary. The distance over which the effects are felt is between 5 m (in the case of rhizomes/root fragments) and 200-500 m (in the case of seeds), the habitat is located 200-700 m from the area where the excavation works are carried out. Taking into account the precautionary principle, it was considered that this could generate a potential impact	Spatial analysis of field inventory results
	Carrying out energy production activities	Increased noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Spermophilus citellus, Mustela eversmanii*	Population size	Possible disruption of the activity of a maximum of 2 to 3 individuals The effects will project locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will project at distances of up to 1.5 km around the work area. (see section 1.1.7, fig. 1-10a) The impact will project outside the protected area of the wind farm, in the vicinity of the wind turbines	Noise level modelling study results
		Night-time lighting	PAS/PH	No indirect impacts were identified	No secondary impacts were identified	No cumulative impacts identified	Long-term direct impact	No potentially affected species identified	Not applicable	Not applicable	Not applicable
		Waste generation	AH/PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	None identified	None identified	Not applicable	Not applicable	Not applicable
		Collision with turbine blades	REP	No indirect impacts identified	No secondary impacts identified	Cumulative impact with: Chirnogeni wind farm (existing)	Direct long-term impact	*Miniopterus schreibersii, Rhinolophus ferrumequinum*	Population size	*Rhinolophus ferrumequinum* *Miniopterus* schreibersii *approx. 1-2 individuals/year (accidental)*	Data from specialist literature

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
					14 CE-92.4 MW wind farm, transformer station transformer station, connection networks, construction and modernisation of communication and access routes - outside the built-up area Fântana Mare, Independența commune, County of Constanta Wind farm 17 CE-112.2 MW, transformer station, electrical connection networks, construction and Wind farm 17 CE-112.2 MW, transformer station transformer station, electrical connection networks, construction and modernisation of communication and access routes - outside built-up areas Independența commune and Cerchezu commune County of Constanta (proposed) Comana - Pecineaga Wind Farm, Tătaru and outside the built-up area of Comana (proposed Karnobat Wind Farm (existing					Eurobats Report 2023
	Sudden change in pressure within the range of the turbine blades, but also below this (approx. 5 m) - barotrauma	REP	No indirect impacts identified	No secondary impacts identified	Cumulative impact with: Chirnogeni wind farm (existing)	Direct long-term impact	*Miniopterus schreibersii, Rhinolophus ferrumequinum*	Population size	*Rhinolophus ferrumequinum Miniopterus schreibersii* - maximum one individual every 5 years	Data from the specialist literature

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
					Wind farm 14 CE-92.4 MW, transformer station , electrical connection networks, construction and modernisation of communication and access routes - outside the built-up area Fântana Mare, Independența commune, County of Constanta (proposed) Wind farm 17 CE-112.2 MW, transformer station transformer station, electrical connection networks, construction and modernisation of communication and access routes - outside built-up areas Independența commune and Cerchezu commune County of Constanta (proposed) Comana - Pecineaga Wind Farm, Tătaru and outside the built-up area of Comana (proposed Karnobat Wind Farm (existing					Eurobats Report 2023
Maintenance and repair works	Collision of wildlife with vehicle traffic on access roads/machinery in the repair front area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mustela eversmanii*	Population size	1/individual (accidental)	Risk analysis of species mortality
	Introduction of invasive species	AH	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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	Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
Decommissioning	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mustela eversmanii*	Habitat area of the species	0 ha within the protected area Areas occupied outside the protected area where presence was reported following monitoring: 0.9 ha temporarily occupied, area of the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis and data received from the beneficiary
		Temporary occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mustela eversmanii*			
		Increased noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mustela eversmanii*	Population size (distribution pattern)	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will project at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a)	Noise level modelling study results
	Decommissioning/ demolition works Land restoration/rehabilitation works at the end of the plan's life cycle	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mustela eversmanii*	Population size	The impact will be experienced outside the protected area of the wind farm, in the vicinity of the wind turbines 1/individual (accidental) (outside the protected area boundary, within the wind farm boundary)	Mortality risk analysis of species mortality
		Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Areas temporarily occupied by the project outside the boundaries of protected areas where the presence of the species has been reported: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis of the results of field inventories

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
										The impact will be experienced outside the protected area, within the boundaries/vicinity of the wind farm work front	
		Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts were identified	No secondary impacts were identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area 30-40 m² in the work area, agricultural land outside the protected area	Spatial analysis of field inventory results
		Introduction of invasive species	AH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Maximum 500 m from the work area boundary. The distance over which the effects are felt is between 5 m (in the case of rhizomes/root fragments) and 200-500 m (in the case of seeds), the habitat is located 200-700 m from the area where the excavation works are carried out. Taking into account the precautionary principle, it was considered that this could generate a potential impact	Spatial analysis of field inventory results
ROSPA0166 Plopeni - Chirnogeni											
Construction	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Anthus campestris* *Buteo rufinus* *Circus cyaneus* *Falco columbarius* *Falco vespertinus* *Lanius minor*	Population size trend Population size	0 individuals The impact will be experienced outside the protected area, in the work front area, resulting in the temporary removal of specimens that use these areas for feeding/resting, with the species moving to neighbouring areas with similar conditions. The effect will be insignificant and temporary, as the work will be carried out in stages.	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed. GIS analysis
	Construction of access roads	Temporary/permanent occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Population size trend Population size	The impact will be experienced outside the protected area, in the work front area, resulting in the temporary removal of specimens that use these areas for feeding/resting, with the species moving to neighbouring areas with similar conditions. The effect will be insignificant and temporary, as the work will be carried out in stages.	Analysis of inventories and field monitoring based on the behaviour of observed species. GIS analysis

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
	Earthworks (land levelling, digging, excavation, filling)	Increased noise levels	PAS	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Population size trend Population size	Possible disruption of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will project at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a) The impact manifests itself outside the boundaries of the protected area	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed. GIS analysis Noise level modelling
	Foundation construction works	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Installation of facilities/equipment	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Construction of the electrical network for discharging the energy produced by the to the transformer station and the telecommunications network (fibre optics), transformer stations	Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts have been identified	No secondary impacts have been identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Land rehabilitation works upon completion of construction	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Operation	Carrying out energy production activities	Increased noise levels	PAS	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Anthus campestris* *Buteo rufinus* *Circus cyaneus* *Falco columbarius* *Falco vespertinus* *Lanius minor*	Population size trend	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will project at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a) The impact will be experienced outside the protected area, within the wind farm, in the vicinity of the wind turbines	Noise level modelling study

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
	Night-time lighting	PAS/PH	No indirect impacts have been identified	No secondary impacts were identified	No cumulative impacts have been identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Waste generation	AH/PAS	ndirect impacts have not been identified	nd secondary impacts have not been identified	No cumulative impacts have been identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Collision with turbine blades	REP	No indirect impacts identified	No secondary impacts identified	Cumulative impact with: Chirnogeni wind farm (existing) 14 CE-92.4 MW wind farm, transformer station transformer station, connection networks, construction and modernisation of communication and access routes - outside the built-up area Fântana Mare, Independența commune, County of Constanta Wind farm 17 CE-112.2 MW, transformer station Wind farm 17 CE-112.2 MW, transformer station transformer station, electrical connection networks, construction and modernisation of communication and access routes - outside built-up areas Independența commune and	Direct long-term impact	*Anthus campestris* *Buteo rufinus* *Circus cyaneus* *Falco columbarius* *Falco vespertinus* *Lanius minor*	Population size	*Anthus campestris* - insignificant *Buteo rufinus* - 0.193 individuals/year (1 individual approx. every 5 years), *Circus cyaneus* - 0.012 individuals/year (1 individual approx. every 83 years) *Falco columbarius* - insignificant *Falco vespertinus* - insignificant *Lanius minor* – insignificant, it is a small species, the effects on these species are considered to be rarely significant at the population level due to (in most cases) the relatively large population size	Scottish National Heritage guides: "Wind farms and Birds: Calculating a theoretical collision risk assuming no avoiding action"

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
					Cerchezu commune County of Constanta (proposed) Comana - Pecineaga Wind Farm, Tătaru and outside the built-up area of Comana (proposed Karnobat Wind Farm (existing					
	Sudden change in pressure within the range of the turbine blades, but also below this (approx. 5 m) - barotrauma	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Maintenance and repair works	Collision of wildlife with vehicle traffic on access roads/machinery in the repair front area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Introduction of invasive species	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Decommissioning	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Anthus campestris* *Buteo rufinus* *Circus cyaneus* *Falco columbarius* *Falco vespertinus* *Lanius minor*	Population size trend	Not really. The impact will be experienced outside the protected area, in the work front area, causing the temporary removal of wildlife that uses these areas for feeding or resting. These species will move to neighbouring areas with similar habitat conditions. The effect will be temporary and insignificant, concentrated on specific work periods. The works will be carried out in stages, and monitoring and impact prevention measures will be implemented to ensure the protection of fauna in these areas. The works will also comply with the prohibition periods on interventions during sensitive periods for vulnerable species. 0 ha of the protected area	Analysis of inventories and monitoring carried out in the field ed on the behaviour of the species observed GIS analysis.

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
									Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	
	Temporary occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Anthus campestris* *Buteo rufinus* *Circus cyaneus* *Falco columbarius* *Falco vespertinus* *Lanius minor*	Population size trend	Insignificant. The impact will be experienced outside the protected area in the work front zone, resulting in the temporary removal of specimens that use these areas for feeding/resting, with the species moving to neighbouring areas with similar conditions. The effect will be insignificant and temporary, as the work will be carried out in stages. 0 ha of the protected area Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed GIS analysis.
	Increase in noise levels	PAS	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Anthus campestris* *Buteo rufinus* *Circus cyaneus* *Falco columbarius* *Falco vespertinus* *Lanius minor*	Population size trend	Insignificant, given the results of estimates regarding the possible noise level recorded in the work area, within the wind farm's boundaries, during the construction period, similar to the decommissioning period (see section 1.1.7, fig. 1-10a) The impact will be experienced outside the protected area, within the wind farm, in the vicinity of the wind turbines	Noise level modelling results

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
	Decommissioning/ demolition works Land restoration/rehabilitation works at the end of the plan's lifetime	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Anthus campestris* *Buteo rufinus* *Circus cyaneus* *Falco columbarius* *Falco vespertinus* *Lanius minor*	Population size trend	Insignificant. The impact will be experienced outside the protected area in the work front zone, resulting in the temporary removal of specimens that use these areas for feeding/resting, with the species moving to neighbouring areas with similar conditions. The effect will be insignificant and temporary, as the work will be carried out in stages. Maximum 1 individual of the species *Anthus campestris* at this stage	Analysis of field inventories and monitoring based on the behaviour of the species observed GIS analysis.
		Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
		Accidental spills of petroleum products from machinery – penetration of pollutants into the soil	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
		Introduction of invasive species	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
BG0000569 Kardam											
Construction	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus,* *Mesocricetus newtoni,* *Mustela eversmanii,* *Vormela peregusna* *Lynx lynx (only if presence is confirmed)*	Habitat area of the species	0 ha within the protected area Areas occupied outside the protected area where presence has been reported following monitoring: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis and data provided by the Bulgarian Ministry of the Environment at the request of the beneficiary
	Construction of access roads	Temporary/permanent occupation of land areas	FH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Habitat area of the species		

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
Earthworks (land levelling, digging, excavation, filling)	Increased noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Population size (type of distribution)	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise contour will project at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a) The impact will be experienced outside the protected area of the wind farm, in the vicinity of the wind turbines	Noise level estimates
Foundation construction works	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Population size	1 individual (accidental) (outside the protected area boundary, within the wind farm boundary)	Data from the literature Precautionary principle Mortality risk analysis of species mortality
Installation/equipment assembly works	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Construction of the electrical network for discharging the energy produced by the to the transformer station and the telecommunications network (fibre optics), transformer stations	Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts have been identified	No secondary impacts have been identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Land restoration works upon completion of construction	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	During the construction phase of the project, a potential risk of damage was identified due to the introduction of invasive plant species (*Ailanthus altissima, Ambrosia artemisiifolia, Xanthium orientale, Conyza canadensis* may be present in the vicinity of roads) into the habitat, mainly by wind dispersal during the construction phase (during excavation works through the excavated soil and through transport	Spatial analysis of field inventory results

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
										activities - on construction machinery or vehicles) Given that the project does not involve any work on the site itself, but only in its vicinity, the spread of invasive species is only possible at the edge of the habitat. According to the results of specialist studies (Management of invasive species in Romania, beneficiary: Ministry of the Environment), the abundance of invasive species in the project area is very low (1-3 species), and the hotspots for the distribution of invasive species are insignificant. 0 ha of the protected area Maximum 500 m from the work front boundary. The distance over which the effects are felt is between 5 m (in the case of rhizomes/root fragments) and 200-500 m (in the case of seeds), the habitat is located 200-700 m from the area where the excavation works are carried out. Taking into account the precautionary principle, it was considered that this could generate a potential impact	
Operation	Carrying out energy production activities	Increased noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna*	Population size	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will project at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a) The impact will be experienced outside the protected area of the wind farm, in the vicinity of the wind turbines	Noise modelling
		Night-time lighting	PAS/PH	No indirect impacts have been identified	No secondary impacts have been identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
	Waste generation	AH/PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Maintenance and servicing work	Collision of wildlife with vehicle traffic on access roads/machinery in the repair front area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna*	Population size	1 individual (accidental) (outside the protected area, within the wind farm)	Specialised literature data Analysis of the risk of species mortality
	Collision with turbine blades	REP	No indirect impacts identified	No secondary impacts identified	Cumulative impact with: Chirnogeni wind farm (existing) 14 CE-92.4 MW wind farm, transformer station transformer station, connection networks, construction and modernisation of communication and access routes - outside the built-up area Fântana Mare, Independența commune, County of Constanta Wind farm 17 CE-112.2 MW, transformer station, electrical connection networks, construction and Wind farm 17 CE-112.2 MW, transformer station transformer station, electrical connection networks, construction and modernisation of communication and	Direct long-term impact	*Rhinolophus mehelyi* *Rhinolophus hipposideros* *Rhinolophus ferrumequinum* *Rhinolophus euryale* *Rhinolophus blasii* *Miniopterus schreibersii* *Myotis myotis* *Myotis emarginatus* *Myotis capaccinii* *Myotis blythii* *Bechstein's bat* *Barbastella barbastellus*	Population size	*Rhinolophus mehelyi* - maximum one individual every 10 years *Rhinolophus hipposideros* - maximum one individual per 10-year period *Rhinolophus ferrumequinum* - maximum two individuals in a 10-year period *Rhinolophus euryale* - maximum one individual per 10-year period *Rhinolophus blasii* - maximum one individual per 10-year period *Miniopterus schreibersii* - maximum two individuals per 10-year period *Myotis myotis* - maximum two individuals per 10-year period *Myotis emarginatus* - maximum one individual every 10 years *Myotis capaccinii* - maximum one individual per 10-year period *Myotis blythii* - maximum two individuals per 10-year period *Myotis bechsteinii* - maximum one individual per 10-year period *Barbastella barbastellus* - maximum two individuals per 10-year period	data from the specialist literature

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
					access routes - outside built-up areas Independența commune and Cerchezu commune County of Constanta (proposed) Comana - Pecineaga Wind Farm, Tătaru and outside the built-up area of Comana (proposed Karnobat Wind Farm (existing					
	Sudden change in pressure within the range of the turbine blades, but also below this (approx. 5 m) - barotrauma	REP	No indirect impacts were identified	No secondary impacts identified	Cumulative impact with: Chirnogeni wind farm (existing) 14 CE-92.4 MW wind farm, transformer station transformer station, connection networks, construction and modernisation of communication and access routes - outside the built-up area Fântana Mare, Independența commune, County of Constanta Wind farm 17 CE-112.2 MW, transformer station Wind farm 17 CE-112.2 MW, transformer station transformer station, electrical connection networks, construction and modernisation of communication and		*Rhinolophus mehelyi* *Rhinolophus hipposideros* *Rhinolophus ferrumequinum* *Rhinolophus euryale* *Rhinolophus blasii* *Miniopterus schreibersii* *Myotis myotis* *Myotis emarginatus* *Myotis capaccinii* *Myotis blythii* *Bechstein's bat* *Barbastella barbastellus*	Population size	*Rhinolophus mehelyi* - maximum one individual every 10 years *Rhinolophus hipposideros* - maximum one individual per 10-year period *Rhinolophus ferrumequinum* - maximum two individuals in a 10-year period *Rhinolophus euryale* - maximum one individual per 10-year period *Rhinolophus blasii* - maximum one individual per 10-year period *Miniopterus schreibersii* - maximum two individuals per 10-year period *Myotis myotis* - maximum two individuals per 10-year period *Myotis emarginatus* - maximum one individual every 10 years *Myotis capaccinii* - maximum one individual per 10-year period *Myotis blythii* - maximum two individuals per 10-year period *Myotis bechsteinii* - maximum one individual per 10-year period *Barbastella barbastellus* - maximum two individuals per 10-year period	data from the specialist literature

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
						access routes - outside built-up areas Independența commune and Cerchezu commune County of Constanta (proposed) Comana - Pecineaga Wind Farm, within the built-up area of Tătaru and outside the built-up area of Comana (proposed Karnobat Wind Farm (existing					
		Introduction of invasive species	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Decommissioning	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Lynx lynx (only if presence is confirmed)*	Habitat area of the species	0 ha within the protected area Areas occupied outside the protected area where presence has been reported following monitoring: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis and data received from the beneficiary Spatial analysis and data provided by the Bulgarian Ministry of the Environment at the request of the beneficiary
		Temporary occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Lynx lynx (only if presence is confirmed)*	Population size	0 ha fragmented habitats within the protected area Areas occupied outside the protected area where presence was reported following monitoring: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation	Spatial analysis and data received from the beneficiary Spatial analysis and data provided by the Bulgarian Ministry of the Environment at the request of the beneficiary

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
									309.24 ha permanently occupied by the construction elements of the wind farm	
	Increase in noise levels	PAS	No indirect impacts were identified	No secondary impacts were identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Lynx lynx (only if presence is confirmed)*	Population size (distribution pattern)	Possible disruption of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a)	Spatial analysis and data received from the beneficiary Spatial analysis and data provided by the Bulgarian Ministry of the Environment at the request of the beneficiary Noise level estimates
Decommissioning/ demolition works Land restoration/rehabilitation works at the end of the plan's lifetime	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Lynx lynx (only if presence is confirmed)*	Population size	1/individual (accidental) (outside the protected area, within the wind farm)	Precautionary principle and data from the literature Risk analysis of species mortality
	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm The impact will be felt outside the protected area at the edge of the wind farm, within/near the work front	Spatial analysis of the results of field inventories

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		Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts were identified	No secondary impacts were identified	No cumulative impacts identified	Direct short-term impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area 30-40 m² in the work area, agricultural land outside the protected area	Spatial analysis of field inventory results
		Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Maximum 500 m from the work area boundary. The distance over which the effects are felt is between 5 m (in the case of rhizomes/root fragments) and 200-500 m (in the case of seeds), the habitat is located 200-700 m from the area where the excavation works are carried out. Taking into account the precautionary principle, it was considered that this could generate a potential impact	Spatial analysis of field inventory results
BG0000570 Izvorovo - Kraishte											
Construction	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Canis lupus (ly only if presence is confirmed) Lynx lynx (only if presence is confirmed)*	Habitat area of the species	0 ha within the protected area Areas occupied outside the protected area where presence has been reported following monitoring: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis and data received from the beneficiary Spatial analysis and data submitted by the Bulgarian Ministry of the Environment to at the request of the beneficiary
	Construction of access roads	Temporary/permanent occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Habitat area of the species		
	Earthworks (land levelling, digging, excavation, filling)	Increased noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Habitat area of the species		
	Foundation construction works	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Population size	1/individual (accidental) (outside the protected area, within the wind farm)	Precautionary principle and data from the literature Risk analysis of species mortality
	Installation/equipment works	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Areas temporarily occupied by the project outside the boundaries of protected areas where the presence of the species has been reported:	Spatial analysis of the results of field inventories

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
										0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	
	Construction of the electrical network for discharging the energy produced by the wind power plant to the transformer station and the telecommunications network (fibre optics), transformer stations	Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts were identified	No secondary impacts have been identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area 30-40 m² in the work area, land outside the protected area (agricultural land).	Spatial analysis of field inventory results
	Land rehabilitation works upon completion of construction	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Maximum 500 m from the work area boundary. The distance over which the effects are felt is between 5 m (in the case of rhizomes/root fragments) and 200-500 m (in the case of seeds), the habitat is located 200-700 m from the area where the excavation works are carried out. Taking into account the precautionary principle, it was considered that this could generate a potential impact	Spatial analysis of field inventory results
Operation	Carrying out energy production activities	Increased noise levels	PAS	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Canis lupus (only if the presence of s confirmed) Lynx lynx (only if presence is confirmed)*	Population size (distribution pattern)	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a) The impact will be experienced outside the protected area of the wind farm, in the vicinity of the wind turbines	Spatial analysis and data received from the beneficiary Spatial analysis and data provided by the Bulgarian Ministry of the Environment at the request of the beneficiary Wind farm noise level modelling
		Night-time lighting	PAS/PH	No indirect impacts	No secondary	No cumulative impacts identified	Long-term direct impact	No potentially affected species identified	Not applicable	Not applicable	Not applicable

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
			were identified	impacts identified						
	Waste generation	AH/PAS	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	None identified	None identified	Not applicable	Not applicable	Not applicable
	Collision with turbine blades	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Rhinolophus mehelyi* *Rhinolophus hipposideros* *Rhinolophus ferrumequinum* *Rhinolophus euryale* *Rhinolophus blasii* *Miniopterus schreibersii* *Myotis myotis* *Myotis emarginatus* *Myotis capaccinii* *Myotis blythii* *Bechstein's bat* *Barbastella barbastellus*	Population size	*Rhinolophus mehelyi* - maximum one individual every 10 years *Rhinolophus hipposideros* - maximum one individual per 10-year period *Rhinolophus ferrumequinum* - maximum two individuals in a 10-year period *Rhinolophus euryale* - maximum one individual per 10-year period *Rhinolophus blasii* - maximum one individual per 10-year period *Miniopterus schreibersii* - maximum two individuals per 10-year period *Myotis myotis* - maximum two individuals per 10-year period *Myotis emarginatus* - maximum one individual every 10 years *Myotis capaccinii* - maximum one individual per 10-year period *Myotis blythii* - maximum two individuals per 10-year period *Myotis bechsteinii* - maximum one individual per 10-year period *Barbastella barbastellus* - maximum two individuals per 10-year period	Precautionary principle and data from the specialist literature Eurobats Report 2023
	Sudden change in pressure within the range of the turbine blades, but also below this (approx. 5 m) - barotrauma	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Rhinolophus mehelyi* *Rhinolophus hipposideros* *Rhinolophus ferrumequinum* *Rhinolophus euryale* *Rhinolophus blasii* *Miniopterus schreibersii* *Myotis myotis*	Population size	*Rhinolophus mehelyi* - maximum one individual per 10-year interval *Rhinolophus hipposideros* - maximum one individual per 10-year period *Rhinolophus ferrumequinum* - maximum two individuals in a 10-year period *Rhinolophus euryale* - maximum one individual per 10-year period *Rhinolophus blasii* - maximum one individual per 10-year period *Miniopterus schreibersii* - maximum two individuals per 10-year period	Precautionary principle and data from the specialist literature Eurobats Report 2023

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	Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
								emarginatus *Myotis capaccinii* *Myotis blythii* *Bechstein's bat* *Barbastella barbastellus*		*Myotis myotis* - maximum two individuals per 10-year period *Myotis emarginatus* - maximum one individual per 10-year interval *Myotis capaccinii* - maximum one individual per 10-year period *Myotis blythii* - maximum two individuals per 10-year period *Myotis bechsteinii* - maximum one individual per 10-year period *Barbastella barbastellus* - maximum two individuals at 10-year intervals	
	Maintenance and servicing works	Collision of wildlife with vehicle traffic on access roads/machinery in the repair front area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus,* *Mesocricetus newtoni,* *Mustela eversmanii,* *Vormela peregusna* *Canis lupus (only if presence is confirmed)* *Lynx lynx (only if presence is confirmed)*	Population size	1/individual (accidental) (outside the protected area, within the wind farm)	Precautionary principle and data from the literature Risk analysis of species mortality
		Introduction of invasive species	AH	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Decommissioning	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus,* *Mesocricetus newtoni,* *Mustela eversmanii,* *Vormela peregusna* *Canis lupus (only if presence is confirmed)* *Lynx lynx (only if presence is confirmed)*	Habitat area of the species	0 ha within the protected area Areas occupied outside the protected area where presence has been reported following monitoring: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Spatial analysis and data provided by the Bulgarian Ministry of Environment at the request of the project beneficiary GIS analysis of land data

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
	Temporary occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Canis lupus (only if presence is confirmed) Lynx lynx (only if presence is confirmed)*	Population size	0 ha fragmented habitats in the protected area Areas occupied outside the protected area where presence has been reported following monitoring: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha permanently occupied by the construction elements of the wind farm	Spatial analysis and data provided by the Bulgarian Ministry of Environment at the request of the project beneficiary GIS analysis of land data
	Increase in noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Canis lupus (only if presence is confirmed) Lynx lynx (only if presence is confirmed)*	Population size	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a)	Spatial analysis and data provided by the Bulgarian Ministry of the Environment at the request of the project beneficiary GIS analysis of terrain data Noise level modelling
Decommissioning/demolition works Land restoration/rehabilitation works at the end of the plan's lifetime	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Spermophilus citellus, Mesocricetus newtoni, Mustela eversmanii, Vormela peregusna Canis lupus (only if presence is confirmed) Lynx lynx (only if presence is confirmed)*	Population size	1/individual (accidental)	Risk analysis of species mortality
	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect	No secondary	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the	Habitat area of the species	0 ha within the protected area	Spatial analysis of the results of field inventories

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short-term and long - term impacts	Species/ habitat	Parameter/ affected target	Quantification impact	Quantification method
			impacts identified	impacts identified			protected natural area		Areas temporarily occupied by the project outside the boundaries of protected areas where the presence of the species has been reported: 0.9 ha temporarily occupied by the construction site + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm The impact will be experienced outside the protected area, within the boundaries/vicinity of the wind farm work front	
	Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts were identified	No secondary impacts were identified	No cumulative impacts were identified	Direct short-term impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area 30-40 m² in the work area, agricultural land outside the protected area	Spatial analysis of field inventory results
	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	Agricultural land outside the protected natural area	Habitat area of the species	0 ha within the protected area Maximum 500 m from the work area boundary. The distance over which the effects are felt is between 5 m (in the case of rhizomes/root fragments) and 200-500 m (in the case of seeds), the habitat is located 200-700 m from the area where the excavation works are carried out. Taking into account the precautionary principle, it was considered that this could generate a potential impact	Spatial analysis of field inventory results

Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species	Parameter /affected target	Quantification impact	Quantification method
ROSPA0036 Dumbrăveni										

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species					Parameter /affected target	Quantification impact	Quantification method
Construction	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Accipiter brevipes, Anthus campestris, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Falco peregrinus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Melanocorypha calandra, Milvus migrans, Pernis apivorus*	**Species with regular migration/ Species associated with extensively used agricultural land** *Alauda arvensis, Carduelis cannabina, Carduelis carduelis, Coturnix coturnix, Emberiza melanocephala, Falco tinnunculus, Fringilla montifringilla, Galerida cristata, Lanius excubitor, Lanius senator, Merops apiaster, Miliaria calandra, Motacilla alba, Motacilla flava, Oenanthe isabellina, Oenanthe oenanthe, Saxicola torquata, Streptopelia turtur, Sturnus roseus (alternative name Pastor roseus), Turdus iliacus, Upupa epops*	**Species associated with forest habitats** *Carduelis chloris, Carduelis spinus, Coccothraustes coccothraustes, Falco subbuteo, Ficedula hypoleuca, Fringilla coelebs, Jynx torquilla, Muscicapa striata, Oriolus oriolus, Phylloscopus collybita, Phylloscopus sibilatrix, Phylloscopus trochilus, Pyrrhula pyrrhula, Regulus ignicapillus, Regulus regulus, Serinus serinus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Turdus merula, Turdus philomelos,*	**Species associated with reedbed habitats** *Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Locustella fluviatilis, Locustella luscinioides, Riparia riparia*	**Species associated with rocky habitats and urban areas** *Monticola saxatilis, Hirundo daurica, Hirundo rustica*	Population size trend	0 ha of the protected area Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed GIS analysis.
	Construction of access roads	Temporary/ permanent occupation of land areas	FH	No indirect impacts were identified.	No secondary impacts have been identified.	cumulative impacts have not been identified	Direct short-term impact						Population size trend	0 ha of the protected area Areas occupied outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed GIS analysis.
	Earthworks (land levelling, digging, excavation, filling)	Increased noise levels	PAS	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact						Population size trend	Possible disruption of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not	Analysis of inventories and monitoring carried out in the field based on the

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species	Parameter /affected target	Quantification impact	Quantification method
							Turdus pilaris, Turdus viscivorus		likely to affect sensitive receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a)	behaviour of the species observed GIS analysis.
Foundation construction works	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Installation of facilities/equipment	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts have been identified	No secondary impacts have been identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Construction of the electrical network for discharging the energy produced by the to the transformer station and the telecommunications network (fibre optics), transformer stations	Accidental spills of petroleum products from machinery - penetration of pollutants into the soil	AH	No indirect impacts have been identified	No secondary impacts have been identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Land rehabilitation works upon completion of construction	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species					Parameter /affected target	Quantification impact	Quantification method
Operation	Carrying out energy production activities	Increased noise levels	PAS	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Accipiter brevipes, Anthus campestris, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Falco peregrinus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Melanocorypha calandra, Milvus migrans, Pernis apivorus*	**Regularly migrating species/Species associated with extensively used agricultural land** *Alauda arvensis, Carduelis cannabina, Carduelis carduelis, Coturnix coturnix, Emberiza melanocephala, Falco tinnunculus , Fringilla montifringilla, Galerida cristata, Lanius excubitor, Lanius senator, Merops apiaster, Miliaria calandra, Motacilla alba, Motacilla flava, Oenanthe isabellina, Oenanthe oenanthe, Saxicola torquata, Streptopelia turtur, Sturnus roseus (alternative name Pastor roseus), Turdus iliacus, Upupa epops*	**Species associated with forest habitats** *Carduelis chloris, Carduelis spinus, Coccothraustes coccothraustes, Falco subbuteo, Ficedula hypoleuca, Fringilla coelebs, Jynx torquilla, Muscicapa striata, Oriolus oriolus, Phylloscopus collybita, Phylloscopus sibilatrix, Phylloscopus trochilus, Pyrrhula pyrrhula, Regulus ignicapillus, Regulus regulus, Serinus serinus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Turdus merula, Turdus philomelos,*	**Species associated with reedbed habitats** *Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Locustella fluviatilis, Locustella luscinioides , Riparia riparia*	**Species associated with rocky habitats and urban areas** *Monticola saxatilis, Hirundo daurica, Hirundo rustica*	Population size trend	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a)	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed GIS analysis.

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species					Parameter /affected target	Quantification impact	Quantification method
									Turdus pilaris, Turdus viscivorus					
	Night-time lighting	PAS/PH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
	Waste generation	AH/PAS	No indirect impac s were identified	No secondary impacts have been identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
	Collision with turbine blades	REP	No indirect impacts identified	No secondary impacts identified	Cumulative impact with: Chirnogeni wind farm (existing) 14 CE-92.4 MW wind farm, transformer station transformer station, connection networks, construction and modernisation of communication and access routes - outside the built-up area Fântana Mare, Independența commune, County of Constanta	Long-term direct impact	*Accipiter brevipes, Anthus campestris, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Falco peregrinus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Melanocorypha calandra, Milvus migrans, Pernis apivorus*	**Species with regular migration/Species associated with extensively used agricultural land** *Alauda arvensis, Carduelis cannabina, Carduelis carduelis, Coturnix coturnix, Emberiza melanocephala, Falco tinnunculus, Fringilla montifringilla, Galerida cristata, Lanius excubitor, Lanius senator, Merops apiaster, Miliaria calandra,*	**Species associated with forest habitats** *Carduelis chloris, Carduelis spinus, Coccothraustes coccothraustes, Falco subbuteo, Ficedula hypoleuca, Fringilla coelebs, Jynx torquilla, Muscicapa striata, Oriolus oriolus, Phylloscopus collybita, Phylloscopus sibilatrix, Phylloscopus trochilus, Pyrrhula pyrrhula,*	**Species associated with reedbed habitats** *Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Locustella fluviatilis, Locustella luscinioides, Riparia riparia*	**Species associated with rocky habitats and urban areas** *Monticola saxatilis, Hirundo daurica, Hirundo rustica*	Population size	*Alauda arvensis* - 0.083 individuals/year (1 individual approx. every 12 years) *Buteo rufinus* - 0.193 individuals/year (1 individual approx. every 5 years) *Circus cyaneus* - 0.012 individuals/year (1 individual approx. every 83 years) *Coracias garrulus* - 0.009 individuals/year (1 individual approx. every 111 years) *Falco* tinnunculus - 0.964 individuals/year (1 individual approx. every 1 year) *Falco subbuteo* - 0.154 individuals/year (1 individual approx. every 7 years) *Galerida cristata* - 0.006 individuals/year (1 individual in approx. 167 years) *Hirundo* rustica - 0.019 individuals/year (1 individual in approx. 53 years)	Scottish National Heritage guide: "Wind farms and Birds: Calculating a theoretical collision risk assuming no avoiding action"

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species				Parameter /affected target	Quantification impact	Quantification method
					Wind farm 17 CE-112.2 MW, transformer station Wind farm 17 CE-112.2 MW, transformer station transformer station, electrical connection networks, construction and modernisation of communication and access routes - extravilan Independența commune and Cerchezu commune County of Constanta (proposed) Comana - Pecineaga Wind Farm, Tătaru and outside the built-up area of Comana (proposed Karnobat Wind Farm (existing		*Motacilla alba, Motacilla flava, Oenanthe isabellina, Oenanthe oenanthe, Saxicola torquata, Streptopeli a turtur, Sturnus roseus (alternative name Pastor roseus), Turdus iliacus, Upupa epops*	*Regulus ignicapillus, Regulus regulus, Serinus serinus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Turdus merula, Turdus philomelos, Turdus pilaris, Turdus viscivorus*				*Melanocorypha calandra* - 0.005 individuals/year (1 individual in approx. 200 years) *Merops apiaster* - 0.019 individuals/year (1 individual in approx. 53 years) *Miliaria calandra* - 0.014 individuals/year (1 individual in approx. 71 years) *Motacilla alba* - 0.006 individuals/year (1 individual in approx. 167 years) *Motacilla flava* - 0.003 individuals/year (1 individual approx. every 333 years) *Pernis apivorus* - 0.028 individuals/year (1 individual in approx. 36 years) *Streptopelia turtur* - 0.004 individuals/year (1 individual in approx. 250 years) *Upupa epops* - 0.005 individuals/year (1 individual in approx. 20 years)	
	Sudden change in pressure within the	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable				Not applicable	Not applicable	Not applicable

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species					Parameter /affected target	Quantification impact	Quantification method
		range of the turbine blades, but also below this (approx. 5 m) - barotrauma													
	Maintenance and repair works	Collision of wildlife with vehicle traffic on access roads/machinery in the repair front area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
		Introduction of invasive species	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
Decommissioning	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Accipiter brevipes, Anthus campestris, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Falco peregrinus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Melanocorypha calandra,*	**Regularly migrating species/Species associated with extensively used agricultural land** *Alauda arvensis, Carduelis cannabina, Carduelis carduelis, Coturnix coturnix, Emberiza melanocephala, Falco tinnunculus, Fringilla montifringilla, Galerida cristata, Lanius excubitor,*	**Species associated with forest habitats** *Carduelis chloris, Carduelis spinus, Coccothraustes coccothraustes, Falco subbuteo, Ficedula hypoleuca, Fringilla coelebs, Jynx torquilla, Muscicapa striata, Oriolus oriolus, Phylloscopus collybita,*	**Species associated with reedbed habitats** *Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Locustella fluviatilis, Locustella luscinioides, Riparia riparia*	**Species associated with rocky habitats and urban areas** *Monticola saxatilis, Hirundo daurica, Hirundo rustica*	Population size trend	0 ha of the protected area Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction elements of the wind farm	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed GIS analysis.
		Temporary occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact						Population size trend	0 ha of the protected area Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site	Analysis of field inventories and monitoring based on the behaviour of the species observed

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species					Parameter /affected target	Quantification impact	Quantification method
							Milvus migrans, Pernis apivorus	*Lanius senator, Merops apiaster, Miliaria calandra, Motacilla alba, Motacilla flava, Oenanthe isabellina, Oenanthe oenanthe, Saxicola torquata, Streptopelia turtur, Sturnus roseus (alternative name Pastor roseus), Turdus iliacus, Upupa epops*	*Phylloscopus sibilatrix, Phylloscopus trochilus, Pyrrhula pyrrhula, Regulus ignicapillus, Regulus regulus, Serinus serinus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Turdus merula, Turdus philomelos, Turdus pilaris, Turdus viscivorus*				organisation area + area temporarily occupied by trenches for cable installation	GIS analysis.
	Increase in noise levels	PAS	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact						Population size trend	Possible disruption of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a)	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observ nt GIS analysis.
Decommissioning/demolition works Land restoration/rehabilitation works at the end of the plan's lifetime	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact						Population size trend	The population trend will be stable, with 0% change The impact will be experienced in the work areas, resulting in the temporary removal of specimens that use these areas for feeding/resting, with the species moving to neighbouring areas with similar conditions. The effect will be insignificant and temporary, as the work will be carried out in stages	Analysis of field inventories and monitoring based on the behaviour of the species observed GIS analysis.
	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
	Accidental spills of petroleum products	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species	Parameter /affected target	Quantification impact	Quantification method
		from machinery – penetration of pollutants into the soil									
		Introduction of invasive species	AH	No indirect impacts were identified	No secondary impacts were identified	No cumulative impacts were identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Identification and quantification of impacts

Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species	Parameter/affected target	Quantification impact	Quantification method
ROSPA0094 Hagieni Forest											
Construction	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Accipiter brevipes, Alcedo atthis, Anthus campestris, Aquila heliaca, Aquila pomarina, Burhinus oedicnemus, Buteo rufinus, Caprimulgus europaeus, Calandrella brachydactyla, Ciconia ciconia, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Falco cherrug, Falco columbarius, Falco peregrinus, Falco vespertinus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Larus melanocephalus, Larus minutus, Lullula arborea, Melanocorypha calandra, Milvus migrans, Nycticorax nycticorax, Oenanthe pleschanka, Pelecanus crispus, Pernis apivorus, Philomachus pugnax, Porzana porzana/Calidris pugnax, Recurvirostra avosetta, Tadorna ferruginea* **Species with regular migration Species associated with open/agricultural land agricultural** *Alauda arvensis, Buteo lagopus, Emberiza melanocephala, Lanius senator, Merops apiaster, Miliaria calandra, Motacilla alba, Oenanthe oenanthe, Streptopelia turtur, Upupa epops, Falco tinnunculus* **Species with regular migration Species associated with riparian and coastal habitats** *Gallinago gallinago, Hirundo rustica* **Species with regular migration Species associated with urban habitats** *Hirundo rustica* **Regularly migrating species Species associated with reedbed habitats** *Motacilla flava* **Regularly migrating species Species associated with open aquatic habitats** *Anser albifrons, Anser anser, Cygnus olor, Larus cachinnans* **Regularly migrating species Species associated with forest habitats** *Sylvia atricapilla*	Population size trend	0 ha of protected area	Analysis of inventories and monitoring
										Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied	carried out in the field based on the behaviour of the species observed GIS analysis.

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species							Parameter/affected target	Quantification impact	Quantification method
								Anser albifrons, Galerida cristata, Coturnix coturnix			**associated with mixed terrestrial habitats for forest and**					by the construction elements of the wind farm	
Construction of access roads	Temporary/permanent occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact									Population size trend	0 ha of the protected area Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation	Analysis of field inventories and monitoring based on the behaviour of the species observed GIS analysis.
Earthworks (land levelling, digging, excavation, filling)	Increased noise levels	PAS	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact									Population size trend	Possible disruption of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed GIS analysis.

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species	Parameter/affected target	Quantification impact	Quantification method
							penland *Accipiter nisus, Falco subbuteo, Buteo buteo*		receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a)	
Foundation construction works	Collision of wildlife with vehicle traffic on access roads/ma	REP	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species					Parameter/affected target	Quantification impact	Quantification method
		chinery in the work area													
	Installation of facilities/equipment	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
	Construction of the electrical network for discharging the energy produced by the to the transformer station and the telecommunications network (fibre optics), transformer stations	Accidental spills of petroleum products from machiner y - penetration of pollutants into the soil	AH	No indirect impacts have been identified	No secondary impacts have been identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
	Land rehabilitation works upon completion of construction	Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
Operation	Carrying out energy production activities	Increased noise levels	PAS	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Long-term direct impact	*Accipiter brevipes, Anthus campestris, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Falco peregrinus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Melanocorypha calandra,*	**Species with regular migration/Species associated with extensively used agricultural land** *Alauda arvensis,*	**Species associated with forest habitats** *Carduelis chloris, Carduelis spinus, Coccothraustes coccothraustes, Falco subbuteo,*	**Species associated with reedbed habitats** *Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus,*	**Species associated with rocky habitats and urban areas** *Monticola saxatilis, Hirundo daurica, Hirundo rustica*	Population size trend	Possible disturbance of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not capable of affecting sensitive	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species					Parameter/affected target	Quantification impact	Quantification method
								Milvus migrans, Pernis apivorus	*Carduelis cannabina, Carduelis carduelis, Coturnix coturnix, Emberiza melanocephala, Falco tinnunculus, Fringilla montifringilla, Galerida cristata, Lanius excubitor, Lanius senator, Merops apiaster, Miliaria calandra, Motacilla alba, Motacilla flava, Oenanthe isabellina, Oenanthe oenanthe, Saxicola torquata, Streptopelia turtur, Sturnus roseus (alternative name Pastor roseus), Turdus iliacus, Upupa epops*	*Ficedula hypoleuca, Fringilla coelebs, Jynx torquilla, Muscicapa striata, Oriolus oriolus, Phylloscopus collybita, Phylloscopus sibilatrix, Phylloscopus trochilus, Pyrrhula pyrrhula, Regulus ignicapillus, Regulus regulus, Serinus serinus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Turdus merula, Turdus philomelos, Turdus pilaris, Turdus viscivorus*	*Locustella fluviatilis, Locustella luscinioides, Riparia riparia*			receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a	
		Night-time lighting	PAS/PH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable

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	Waste generation	AH/PAS	No indirect impacts have been identified	No secondary impacts have been identified	No cumulative impacts have been identified	Not applicable	Not applicable					Not applicable	Not applicable	Not applicable
	Collision with turbine blades	REP	No indirect impacts identified	No secondary impacts identified	Cumulative impact with: Chirnogeni wind farm (existing) 14 CE-92.4 MW wind farm, transformer station transformer station, connection networks, construction and modernisation of communication and access routes - outside the built-up area Fântana Mare, Independența commune, County of Constanta Wind farm 17 CE-112.2 MW, transformer station, electrical connection networks,	Long-term direct impact	*Accipiter brevipes, Anthus campestris, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Falco peregrinus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Melanocorypha calandra, Milvus migrans, Pernis apivorus*	**Species with regular migration/Species associated with extensively used agricultural land** *Alauda arvensis, Carduelis cannabina, Carduelis carduelis, Coturnix coturnix, Emberiza melanocephala, Falco tinnunculus, Fringilla montifringilla, Galerida cristata, Lanius excubitor, Lanius senator, Merops apiaster, Miliaria calandra, Motacilla alba, Motacilla flava, Oenanthe isabellina, Oenanthe*	**Species associated with forest habitats** *Carduelis chloris, Carduelis spinus, Coccothraustes coccothraustes, Falco subbuteo, Ficedula hypoleuca, Fringilla coelebs, Jynx torquilla, Muscicapa striata, Oriolus oriolus, Phylloscopus collybita, Phylloscopus sibilatrix, Phylloscopus trochilus, Pyrrhula pyrrhula, Regulus ignicapillus, Regulus regulus, Serinus serinus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Turdus merula, Turdus philomelos, Turdus pilaris,*	**Species associated with reedbed habitats** *Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Locustella luscinioides, Riparia riparia*	**Species associated with rocky habitats and urban areas** *Monticola saxatilis, Hirundo daurica, Hirundo rustica*	Population size	*Alauda arvensis* - 0.083 individuals/year (1 individual approx. every 12 years) *Aquila pomarina* - 0.197 individuals/year (1 individual approx. every 5 years) *Buteo buteo* - 1.285 individuals/year (1 individual approx. every 1 year) *Buteo rufinus* - 0.193 individuals/year (1 individual approx. every 5 years) *Circaetus gallicus* - 0.261 individuals/year (2 individuals in approx. 5 years) *Circus aeruginosus* - 0.181 individuals/year (1 individual approx. every 6 years) *Circus cyaneus* - 0.012	Scottish National Heritage guide: "Wind farms and Birds: Calculating a theoretical collision risk assuming no avoiding action"

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species					Parameter/affected target	Quantification impact	Quantification method
					construction and Wind farm 17 CE-112.2 MW, transformer station transformer station, electrical connection networks, construction and modernisation of communication and access routes - outside built-up areas Independența commune and Cerchezu commune County of Constanta (proposed) Comana - Pecineaga Wind Farm, Tătaru and outside the built-up area of Comana (proposed Karnobat Wind Farm (existing			*oenanthe, Saxicola torquata, Streptopelia turtur, Sturnus roseus (alternative name Pastor roseus), Turdus iliacus, Upupa epops*	*Turdus viscivorus*				individuals/year (1 individual in approx. 83 years) *Coracias garrulus* - 0.009 individuals/year (1 individual approx. every 111 years) *Falco subbuteo* - 0.077 individuals/year (1 individual approx. every 12 years) *Falco tinnunculus* - 0.964 individuals/year (1 individual approx. every 1 year) *Galerida cristata* - 0.006 individuals/year (1 individual in approx. 167 years) *Hirundo rustica* - 0.019 individuals/year (1 individual approx. every 53 years) *Melanocorypha calandra* - 0.005 individuals/year (1 individual in approx. 200 years) *Merops apiaster* - 0.019 individuals/year (1 individual in approx. 53	

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species	Parameter/affected target	Quantification impact	Quantification method
									years) *Miliaria calandra* - 0.014 individuals/year (1 individual in approx. 71 years) *Motacilla alba* - 0.006 individuals/year (1 individual approx. every 167,) *Motacilla flava* - 0.003 individuals/year (1 individual approx. every 333 years) *Pernis* apivorus - 0.028 individuals/year (1 individual approx. every 36 years) *Streptopelia turtur* - 0.004 individuals/year (1 individual in approx. 250 years) *Upupa epops* - 0.005 individuals/year (1 individual in approx. 20 years)		
	Sudden change in pressure within the range of the turbine blades, but also	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species				Parameter/affected target	Quantification impact	Quantification method
		below this (approx. 5 m) - barotrauma												
	Maintenance and repair works	Collision of wildlife with vehicle traffic on access roads/machinery in the repair front area	REP	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable				Not applicable	Not applicable	Not applicable
		Introduction of invasive species	AH	No indirect impacts identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable				Not applicable	Not applicable	Not applicable
Decommissioning	Organisation and operation of the construction site (including site traffic)	Removal of topsoil and vegetation	AH/PH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact	*Accipiter brevipes, Anthus campestris, Aquila pomarina, Bubo bubo, Buteo rufinus, Caprimulgus europaeus, Circus cyaneus, Circus macrourus, Circus pygargus, Coracias garrulus, Falco peregrinus, Hieraaetus pennatus, Lanius collurio, Lanius minor, Melanocorypha calandra, Milvus migrans, Pernis apivorus*	**Species with regular migration/Species associated with extensively used agricultural land** *Alauda arvensis, Carduelis cannabina, Carduelis carduelis, Coturnix coturnix, Emberiza melanocephala, Falco tinnunculus, Fringilla montifringilla,*	**Species associated with forest habitats** *Carduelis chloris, Carduelis spinus, Coccothraustes coccothraustes, Falco subbuteo, Ficedula hypoleuca, Fringilla coelebs, Jynx torquilla, Muscicapa striata, Oriolus oriolus, Phylloscopus collybita, Phylloscopus sibilatrix,*	**Species associated with reedbed habitats** *Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Locustella fluviatilis, Locustella luscinioides, Riparia riparia*	**Species associated with rocky habitats and urban areas** *Monticola saxatilis, Hirundo daurica, Hirundo rustica*	Population size trend	0 ha of the protected area Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation 309.24 ha of areas permanently occupied by the construction	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed GIS analysis.

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species				Parameter/affected target	Quantification impact	Quantification method
								Galerida cristata, Lanius excubitor, Lanius senator, Merops apiaster, Miliaria calandra, Motacilla alba, Motacilla flava, Oenanthe isabellina, Oenanthe oenanthe, Saxicola torquata, Streptopelia turtur, Sturnus roseus (alternative name Pastor roseus), Turdus iliacus, Upupa epops	*Phylloscopus trochilus, Pyrrhula pyrrhula, Regulus ignicapillus, Regulus regulus, Serinus serinus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Turdus merula, Turdus philomelos, Turdus pilaris, Turdus viscivorus*				elements of the wind farm	
	Temporary occupation of land areas	FH	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact					Population size trend	0 ha of the protected area Areas outside the protected area that could constitute feeding habitats: 0.9 ha temporarily occupied, site organisation area + area temporarily occupied by trenches for cable installation	Analysis of field inventories and monitoring based on the behaviour of the species observed GIS analysis.
	Increase in noise levels	PAS	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact					Population size trend	Possible disruption of the activity of a maximum of 2 to 3 individuals The effects will be experienced locally, at distances that are not likely to affect sensitive receptors in the area The 30 dB noise isoline will be felt at distances of up to 1.5 km around the work area (see section 1.1.7, fig. 1-10a)	Analysis of inventories and monitoring carried out in the field based on the behaviour of the species observed GIS analysis.

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Intervention	Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species	Parameter/affected target	Quantification impact	Quantification method
Decommissioning/ demolition works Land restoration/rehabilitation works at the end of the plan's lifetime	Collision of wildlife with vehicle traffic on access roads/machinery in the work area	REP	No indirect impacts were identified	No secondary impacts identified	No cumulative impacts identified	Short-term direct impact		Population size trend	The population trend will be stable, with 0% change The impact will be experienced in the work areas, resulting in the temporary removal of specimens that use these areas for feeding/resting, with the species moving to neighbouring areas with similar conditions. The effect will be insignificant and temporary, as the work will be carried out in stages	Analysis of field inventories and monitoring based on the behaviour of the species observed GIS analysis.
	Emissions of pollutants into the atmosphere (operation of vehicles and machinery)	AH	No indirect impacts have been identified	No secondary impacts identified	No cumulative impacts identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Accidental spills of petroleum products from machinery –	AH	No indirect impacts were identified	No secondary impacts were identified	No cumulative impacts were identified	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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Intervention		Effects	Direct impacts	Indirect impacts	Secondary impacts	Cumulative impacts	Short- and long-term impacts	Species	Parameter/affected target	Quantification impact	Quantification method
		penetration of pollutants into the soil									
		Introduction of invasive species ( )	AH	No indirect impacts have been identified	No secondary impacts have been identified	N o cumulative impacts have been identified.	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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Areas of influence of the PP

The direct area of influence of the Plan is represented by the footprint of the " Wind Farm 48 (46) wind power plants approx. 316.8MW (303.6MW), transformer stations, electrical connection networks, construction and modernisation of communication and access routes to the areas affected by the project, at all stages of the project (execution, operation, decommissioning). The distances to which the effects of the project are projected were calculated based on the results of the noise study (ISO9613-2 Poland noise calculation model, maximum operating capacity), the collision study and data from the specialist literature. The following table shows the areas of direct influence according to the effects generated by the project, correlated with section 2.3 of the Appropriate Assessment Study.

Effects generated by the project	Potential impact	Influence area limit	Justification
Construction/decommissioning phase			
Permanent occupation of land areas and removal of topsoil/vegetation	AH	Within the site boundary	For interventions involving permanent occupation permanent occupation of land
Temporary removal of topsoil	PH	Within the site limits	Alteration of habitats on temporarily occupied areas (site organisation, trenches for laying underground cables)
Dispersion/penetration of invasive species	AH	0 m - 500 m depending on species (according to Lososová, Z., et al., 2023 and Pascal Vittoz and Robin Eng ler, 2007).	Distance of species penetration by air
Impact on the physical and chemical parameters of habitats	AH	Within the site	In the work area, on access roads
Increased noise levels	PAS	60 m from the work front boundary	In the work area, on access roads, according to noise estimates
Increase in light pollution	PAS	Up to a maximum of 500 m from the site organisation	Distance to which light sources from the site organisation can act as attractants/repellents for wildlife
Emissions of pollutants into the atmosphere	AH	150-200 m	In the work area, on access roads, see the results of pollutant dispersion in the air (section 1.1.7)
Potential traps for species	REP	Within the site boundaries	Turbine foundations, underground cable trenches, transformer station foundations
Collision of wildlife with construction machinery and vehicles	REP	Within the site limits	In the work areas, on access roads
Operational phase			
Increased noise levels	PAS	500 m	Distance at which noise is perceived during operation according to noise estimates, corresponding to the 42 dB isoline

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Effects generated by the project	Potential impact	Influence area limit	Justification
Air pollutant emissions	AH	150-200 m	In the work area where repairs/damage interventions are carried out, on access roads
Avoiding bird turbines by birds during operation	PAS	Up to 500 m from each turbine	The greatest distance of alteration identified was taken into account, considering the species identified in the project area
Collision of fauna with turbines (birds and bats)	REP	Blade rotation zone (a radius of 85 m) for each turbine	Collision caused by blade rotation, regardless of distance travelled
Barrier effect	FH	Up to 500 m from each turbine	The greatest distance of alteration identified was taken into account, considering the species identified in the project area

An ArcGIS spatial analysis was used to delimit the area of direct influence, using the "buffer" function, based on the distances presented in the previous table. The minimum size of the area of influence is 500 m around access roads and cable routes and 900 m around turbines. In areas where several components of the project may accumulate, the width of the buffer zone may exceed 900 m.

The indirect area of influence of the Plan is represented by existing activities that may be affected by the project, such as car traffic on the existing road transport infrastructure.
The transport of wind farm components will be carried out on the shortest route from the Port of Constanţa to the interior of the site. The additional traffic generated by the project is not likely to significantly influence the area of influence of these roads. Therefore, no additional impacts generated by the indirect area of influence have been identified.

The plan area does not intersect any Natura 2000 sites, but it is adjacent to five Natura 2000 sites in Romania that have the potential to be affected by its construction and operation: ROSCI0071/ROSAC0071 Dumbrăveni - Urluia Valley - Vederoasa Lake, ROSCI0157/ROSAC157 Hagieni Forest - Cotul Văii, ROSPA0036 Dumbrăveni, ROSPA0166 Plopeni-Chirnogeni, ROSPA0094 Hagieni Forest and two Natura 2000 sites in Bulgaria: BG0000569 Kardam, BG0000570 Izvorovo – Kraishte.

The most significant potential impact associated with the plan is the reduction in wildlife populations, which may occur during the construction and operation phases as a result of the works, collisions with site traffic and, in particular, collisions with wind turbines (especially in the case of bird and bat species). The reduction in population numbers is likely to have a significant impact on wildlife populations and affect the population size parameters of the specific conservation objectives set for species.

The measures proposed in this study to avoid and reduce the impact address all identified forms of impact that may affect the parameters of the conservation objectives set for habitats and species of Community interest in potentially affected Natura 2000 sites.
The analyses in the appropriate assessment study were carried out on the basis of the conservation objectives issued by ANANP and approved by MMAP through:

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- ROSCI0071/ROSAC0071 Dumbrăveni - Urluia Valley - Vederoasa Lake - Decision No. 414 of 03.08.2022 - Order of the Minister of Environment, Water and Forests No. 1557/2016 approving the Management Plan for the protected natural areas ROSCI0071 Dumbrăveni - Urluia Valley - Vederoasa Lake, ROSPA0036 Dumbrăveni, ROSPA0001 Aliman - Adamclisi, ROSPA0007 Vederoasa Lake, 2.361 Pădurea Dumbrăveni, 2.350 Pereții calcaroși de la Petroșani - Deleni Commune, 2,351 Aliman Fossil Site and IV.30 Lake Vederoasa
- ROSCI0157/ROSAC157 Hagieni Forest - Decision No. 197 of 26 June 2020 and No. 426 of 24 September 2020 Order No. 1480/2016 approving the Management Plan and Regulations for the protected natural areas ROSCI0157 Hagieni-Cotul Văii Forest, ROSPA0094 Hagieni Forest and 2.360 Hagieni Forest
- ROSPA0036 Dumbrăveni: Decision No. 414 of 3 August 2022 - Order of the Minister of Environment, Water and Forests No. 1557/2016 approving the Management Plan for the protected natural areas ROSCI0071 Dumbrăveni - Urluia Valley - Vederoasa Lake, ROSPA0036 Dumbrăveni, ROSPA0001 Aliman - Adamclisi, ROSPA0007 Balta Vederoasa, 2,361 Dumbrăveni Forest, 2,350 Limestone walls at Petroșani - Deleni Commune, 2,351 Aliman Fossil Site and IV.30 Vederoasa Lake
- ROSPA0166 Plopeni-Chirnogeni - Note no. 8914/BT/ 28.03.2022
- ROSPA0094 Hagieni Forest: Decision no. 197 of 26.06.2020 and 426 of 24.09.2020 - Order no. 1480/2016 approving the Management Plan and Regulations for the protected natural areas ROSCI0157 Hagieni Forest-Cotul Văii, ROSPA0094 Hagieni Forest and 2.360 Hagieni Forest

In a cross-border context

- Order No. RD - 1021/17 December 2020 (promulgated by SG 17/2021) promulgated by the Ministry of Environment and Water for the area BG0000569 Kardam
- Council of Ministers Decision No. 122/02.03.2007 (promulgated by SG 21/2007) for the BG0000570 Izvorovo – Kraishte area.

For the two protected natural areas in Bulgaria, namely BG0000569 Kardam and BG0000570 Izvorovo – Kraishte, the data used in this Study are those provided by the Bulgarian Ministry of Environment and Forestry, following correspondence. (see letter no. 99-00-243-1 dated 30 May 2024 and letter no. 99-00-243-3 dated 13 June 2024).

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Measures proposed to prevent, reduce and compensate as fully as possible any adverse environmental effects of the implementation of the LAND USE DEVELOPMENT PLAN

Relevant environmental aspects	Environmental objectives relevant to the LAND USE DEVELOPMENT PLAN	Proposed measures	Responsible
Water	**OM16.** Maintaining and improving the ecological status/ecological potential and chemical status of surface and groundwater bodies	**Implementation stage:** - Domestic sewage will be disposed of in mobile green toilets, which will be emptied and transported to the nearest treatment plant. - Carrying out the works by ensuring drainage slopes for rainwater. - Drinking water supply during the construction period will be provided from external sources: bottled water. - Construction materials will not be stored near watercourses in order to prevent damage to water bodies (ecological status/ecological potential and chemical status for surface water bodies, and quantitative status and chemical status for groundwater bodies). - Waste will be collected selectively and handed over to specialised companies to prevent any leakage. - All work shall be monitored in order to prevent any contamination of the area due to accidental spillage of fuels or lubricants from the equipment/machinery used in the work. In the event of accidental pollution, absorbent/neutralising substances will be used immediately, and any faults in the vehicles and/or machinery will be repaired in specialised service units. - The works for crossing the watercourses (Cerchez and Măgura rivers) shall be carried out using horizontal drilling technology at a depth of 1 m between the upper generator of the protective pipe and the watercourse bed.	The contractor responsible for the construction of the wind farm
Air	**OM17.** Maintaining air quality by reducing emissions generated by activities in the energy sector	**Construction stage:** - Use of water spraying techniques on the work front to reduce dust, if the dust resulting from the works related to the plan is visible. - With regard to emissions from transport vehicles, these must comply with the technical conditions set out in the technical inspections carried out periodically throughout the entire period of use of all motor vehicles registered in the country. - Use of machinery/vehicles equipped with high-performance engines (euro 4 or euro 5) and driving at low speed (maximum 30 km/h), especially on dirt or gravel roads (in very dry periods, it is recommended to spray them with water). - Dump trucks must be equipped with tarpaulins during transport. - The topsoil from the project sites where foundation works are carried out shall be stored and reused to restore the land to its original condition after completion of the works. - Technological processes that produce a lot of dust shall be reduced during periods of strong wind, or more intensive moistening of the surfaces under the action of working machinery or access roads, especially unpaved ones, shall be ensured. - Paint will be applied to construction elements using minimal quantities of paint, primer and thinners and applying it with special devices that ensure minimal voc emissions into the atmosphere.	The contractor responsible for the construction of the wind farm
Soil/subsoil	**OM18.** Limiting soil pollution and soil surface degradation.	-	The contractor responsible for the construction of the wind farm
Use of natural resources	**OM19.** Reducing the exploitation of non-renewable resources and	- Use of energy-efficient construction equipment to reduce fossil fuel consumption. - During the operational phase, the wind farm promotes the use of renewable resources, having a positive impact. In addition, by building the wind farm, an amount of electricity corresponding to the capacity of the	The contractor responsible for the construction of the wind farm

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Relevant environmental aspects	Environmental objectives relevant to the LAND USE DEVELOPMENT PLAN	Proposed measures	Responsible
	facilitating the exploitation of renewable resources	farm will replace the same amount produced from non-renewable sources (fossil fuels), thus reducing their exploitation.	
	OM20. Promoting the transition to a circular and resource-efficient economy	- The use of more reliable products that can be reused, upgraded and repaired reduces the amount of waste. - The wind turbines and transformer stations that will equip the wind farm will comply with the principles of the circular economy, reducing the impact on resource consumption.	The contractor responsible for the construction of the wind farm
Waste management	**OM21.** Reducing the amount of waste generated and disposed of in landfills (compliant landfills).	- Implementation of a waste management plan that includes recycling and safe disposal of construction materials. - Minimising waste generation through efficient use of resources and reuse of materials.	Contractor responsible for the construction of the wind farm
Noise and vibrations	**OM22.** Limiting noise pollution at source in areas with noise-sensitive receptors. Limiting vibration levels	**Execution phase:** - carrying out the works in stages in terms of time and space, according to the work schedule, so that the noise level is below the maximum permissible limits. - Planning of material transport activities so that vehicle movements are limited to the minimum necessary to carry out the works in order to reduce the discomfort caused to the local population. - Use of appropriate noise mitigation systems at source (engines, machinery, etc.). - Installing mobile panels in the immediate vicinity of noise-generating activities to protect inhabited areas. - Establishment and enforcement of speed limits for vehicles in localities and on service roads. - Carrying out activities during the day (between 7:00 and 23:00), respecting the rest period of local residents, or modifying traffic routes accordingly. - monitoring noise emissions to verify compliance with the limits imposed by the applicable legislation depending on the situation. - As regards vibrations, these are generally low-frequency sounds and cannot adversely affect human health or the environment.	The contractor responsible for the construction of the wind farm The wind farm operator
Biodiversity	**OM23.** Conservation of natural habitats and species of flora and fa e of Community importance	The biodiversity protection measures proposed in the appropriate assessment study are as follows: **c. General measures** - Regular training for all personnel involved in construction/decommissioning work on general environmental issues, protected habitats and species, and measures to avoid and reduce impacts. Particular attention will be paid to issues related to the prohibition of collecting plants and animals or deliberately injuring/killing protected species. - Implementation of low-contrast lighting systems with exclusive dispersion on the ground (exclusion of incandescent bodies that generate heat). - Compliance with the proposed work schedule and the period proposed in this plan. - Compliance with the perimeter of the proposed construction site to be located in the immediate vicinity of the work area. - Carrying out activities within the perimeter on the strictly necessary areas. - Construction materials shall only be stored in the areas specified in the plan within the site organisation and work areas, without affecting the surrounding areas. - Avoid any spillage of liquid fuels, oils, paints, etc. on the ground. In the event of accidental pollution, it shall be eliminated by applying absorbent materials and removed from the site by contracting companies specialised in the management of these types of hazardous waste.	The contractor responsible for the construction of the wind farm
	OM24. Maintenance of the Natura 2000 network of protected areas.		The wind farm operator

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Relevant environmental aspects	Environmental objectives relevant to the LAND USE DEVELOPMENT PLAN	Proposed measures	Responsible
		- Ensure proper waste management with regular disposal without using intermediate and non-compliant storage facilities. It is forbidden to dispose of waste in the immediate vicinity of the construction site and beyond. - Access to the work sites will be via existing access routes so as not to affect additional land areas. - use of machinery and equipment to carry out the works that produce a minimum level of noise and vibration, are efficient, low-polluting and quiet, so that wildlife species are not affected. - Topsoil or fertile soil resulting from excavations will be stored appropriately and then reused. Restoration of the vegetation layer in temporarily occupied areas. **d. Specific measures*** - Construction and installation works must be planned so as to take place outside the breeding and rearing periods of species of Community interest, regardless of the presence or absence of nests on site. The planning of activities must take into account the biological calendar of the species concerned in order to prevent any negative impact on them. - Turbines must be marked at night with flashing lights, with long intervals between two consecutive flashes. These turbines are more easily recognisable by birds when flashing lights are used instead of continuous lights. - Regular mowing of vegetation around turbines in order to maintain a low abundance of insect species that are a food source for both bat and bird species. - Installation of a conditional activation lighting system (Aircraft Detection Lighting System – ADLS) on turbines T47, T46, T35, T36, T34 to reduce the risk of mortality of species sensitive to artificial light (birds and bats). The measure will be applied from the first year of operation of the project. - To reduce the risk of mortality, the following measures are proposed: limiting the entry into production of turbines (T47, T46, T35, T36, T34) at wind speeds of 6.5 m/s, during the sensitive period (migration), starting half an hour before sunset until sunrise, and bat protection systems that emit ultrasonic deterrent signals to remove bats from the rotor's wake. The measure will be applied from the first year of operation of the wind farm. - The installation of collision risk prevention systems will be implemented from the first year of operation of the wind farm. An automatic shutdown/speed reduction control system for turbines (e.g. DTBird, IdentiFlight, Robin Radar Max, STRIX BirdTrack). The system will target bird species for which a significant potential impact has been identified and will be implemented from the first year of operation. - Installation of a video system for bird detection on turbines T8, T18, T29, T32 and T37. High-resolution camera systems will be installed. The signal emission system must be installed from the first year of operation of the wind farm. The camera system detects birds from a distance of up to 600 m and emits repellent sounds. If the bird continues to approach the turbine, after 300 metres the blades begin to slow down to a speed of 3 rpm, which eliminates the risk of collision. - Installation of radar systems and day and night video cameras (on turbines T8, T18, T29, T32 and T37) to detect and prevent the risk of collision of bats with the structures of the wind farm. The diversion signal system must be installed during the first year of operation of the wind farm. Cross-border context According to letter no. 99.00.268-40/17.09.2025 from the Ministry of Environment and Water of the Republic of Bulgaria, the following mandatory conditions were communicated for inclusion in the normative act: 1. "The wind farm 48 (46) wind turbines, transformer stations, electrical connection networks, construction and modernisation of communication and access roads" – will be implemented in compliance with all	

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Relevant environmental aspects	Environmental objectives relevant to the LAND USE DEVELOPMENT PLAN	Proposed measures	Responsible
		measures provided for in the Environmental Report submitted, in order to prevent, reduce and eliminate negative effects on the environment, the living environment and the health of the population as a result of the project's implementation; 2. Given that the wind farm is located in the immediate vicinity of the border with the Republic of Bulgaria, an assessment of the impact of physical factors in a cross-border context, in particular light effects, will be carried out during the design phase. The assessment will be sent to the Republic of Bulgaria; 3. The paint used for wind turbines (tower and rotor) must be of the "absorbent" type, so as not to create conditions for the reflection of incident light; 4. After the implementation of the investment proposal, controlled monitoring of noise levels, non-ionising radiation and light effects at the border with the affected Bulgarian localities shall be ensured. The results of the monitoring shall be communicated to the Republic of Bulgaria.	
Population and human health	**OM25.** Maintaining the quality of environmental factors within the limits of legal provisions for the protection of the environment and public health	- Use of state-of-the-art equipment and technologies that generate low noise levels. - During construction, in order to prevent dust emissions, especially during periods of strong wind, more intensive moistening of the surfaces under the action of working machinery or access roads, especially unpaved ones, will be pursued. - Implementation of environmentally friendly construction practices that reduce the impact on the soil, such as proper waste management and the use of sustainable building materials.	The contractor responsible for the construction of the wind farm
	OM26. Improving the living standards and social conditions of the population	- Hiring local labour for the construction, maintenance and operation of the wind farm. - Developing the local infrastructure (roads) necessary for the construction of the wind farm, which will remain for the benefit of the community. - Offering financial compensation or direct benefits to landowners affected by the construction and operation of the wind farm.	The contractor responsible for the construction of the wind farm. The wind farm operator
Landscape	**OM27.** Ensuring the protection of the natural landscape and reducing the impact on the natural landscape	- Use of colours that reduce the contrast between the turbine structures and the landscape. - Use of matt paints for finishing to reduce the reflection of sunlight. - Restoration of affected land areas – maintenance of vegetation areas and access roads on site. - Design and construction of substations in correlation with the site area.	The contractor responsible for the construction of the wind farm
Climate change	**OM28.** Reducing GHG emissions from the energy sector	- The construction of the wind farm itself is an effective measure to reduce greenhouse gas (GHG) emissions by replacing fossil fuel sources with clean and sustainable renewable energy.	The contractor responsible for the construction of the wind farm
	OM29. Minimal risks to climate change (adaptation)	- Use of turbines designed to withstand high winds and storms. - Use of turbines made of materials and components that can withstand large temperature variations and extreme weather conditions. - Designing foundations to withstand erosion and soil changes - Integration of advanced weather forecasts to anticipate and manage the impact of extreme weather conditions in order to establish the appropriate operating regime for the conditions.	Wind farm operator
Cultural heritage	**OM30.** Protection and conservation of cultural heritage elements	- Monitoring construction activities to ensure that they do not adversely affect cultural heritage sites.	The entrepreneur responsible for the execution of the wind farm

The holder is responsible for applying and monitoring the implementation of biodiversity protection measures.
The holder shall comply with the conditions imposed in Notice No. 62/17.10.2025, issued by the authority responsible for the administration of protected natural areas (ANMAP).

The biodiversity protection measures proposed in the appropriate assessment study are presented in the table below:

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Proposed measures for biodiversity protection

	Measure- Description	Type measure (P/E/R)	Species/ Habitat affected	Parameter to which addressed the	Impact to which it addressed the measure	Implementation of of the measure	Location of implementation of the measure
GENERAL MEASURES							
M1	Conducting regular training for all personnel involved in construction/decommissioning works on general environmental issues, habitats and protected species, and measures to avoid and reduce impacts. Particular attention shall be paid to issues related to the prohibition of collecting plants and animals or deliberately injuring/killing protected species.	E	All components Natura 2000 components of the protected natural areas ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species Habitat area	All forms of impact	Construction/Decommissioning	Plan implementation area
M2	Implementation of low-contrast lighting systems without UV spectrum and with exclusive dispersion on the ground (exclusion of incandescent bodies that generate heat)	P	All bird species* potentially affected and chiroptera** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	PAS, REP	Construction/Operation/ Decommissioning	Plan implementation area
M3	Compliance with the proposed work schedule and the period proposed in this plan.	P	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	PAS	Construction/Decommissioning	Plan implementation area
M4	Compliance with the perimeter of the proposed construction site to be located in the immediate vicinity of the work area.	P	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157,	Population trends for each species Habitat area	PAS	Construction/Decommissioning	Plan implementation area

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Measure- Description		Type measure (P/E/R)	Species/ Habitat affected	Parameter to which addressed the	Impact to which it addressed the measure	Implementation of of the measure	Location of implementation of the measure
			ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570				
M5	Carrying out activities within the perimeter on the strictly necessary areas.	P	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH, PAS	Construction/Decommissioning	Plan implementation area
M6	Construction materials shall be stored only in the areas specified in the plan within the site organisation and work areas, without affecting the surrounding areas.	P,E	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH, PAS	Construction/Decommissioning	Plan implementation area
M7	Avoid any spillage of liquid fuels, oils, paints, etc. on the ground. In the event of accidental pollution, this will be eliminated by applying absorbent materials and removed from the site by contracting companies specialised in the management of this type of hazardous waste.	P,E	All species of birds* potentially affected and chiroptera** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH, PAS	Construction/Operation/Decommissioning	Plan implementation area

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Measure- Description		Type measure (P/E/R)	Species/ Habitat affected	Parameter to which addressed the	Impact to which it addressed the measure	Implementation of of the measure	Location of implementation of the measure
M8	Ensuring proper waste management with regular disposal without using intermediate and non-compliant landfills. It is prohibited to dispose of waste in the immediate vicinity of the construction site and beyond.	P,E	All species of birds* potentially affected and chiroptera** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH, PAS	Construction/Operation/Decommissioning	Plan implementation area
M9	Access to the work sites will be via existing access routes so as not to affect additional land areas.	P,E	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH, PAS	Construction/Operation/Decommissioning	Plan implementation area
M10	Use of machinery and equipment to carry out the works that produce a minimum level of noise and vibration, are efficient, low-polluting and quiet, so that wildlife species are not affected.	P,E	All bird species* potentially affected and chiroptera** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	PAS	Construction/Operation/Decommissioning	Plan implementation area
M11	Topsoil or fertile soil resulting from excavations will be stored appropriately and protected, then reused. Restoration of the vegetation layer in temporarily occupied areas.	P,E	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036,	Population trends for each species Habitat area	AH,PAS	Construction/Decommissioning	Plan implementation area

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	Measure-Description	Type measure (P/E/R)	Species/ Habitat affected	Parameter to which addressed the	Impact to which it addressed the measure	Implementation of of the measure	Location of implementation of the measure
			ROSPA0094, BG0000569, BG0000570				
SPECIFIC MEASURES							
M12	Construction and installation works must be planned so as to take place outside the breeding and rearing seasons of species of Community interest, regardless of the presence or absence of nests on the site. The planning of activities must take into account the biological calendar of the species concerned, so as to prevent any negative impact on them.	P,E	All components Natura 2000 components of protected natural areas ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	Construction?Decommissioning	Plan implementation area
M13	Turbines must be marked at night with flashing lights, with long intervals between two consecutive flashes. These turbines are easier for birds to recognise when flashing lights are used instead of continuous lights.	P,E,R	All bird species* potentially affected and bats** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	Operation	Wind farm area
M14	Regular mowing of vegetation around turbines to maintain low abundance of insect species that are a food source for both bat and bird species.	P,E	All potentially affected bird species* potentially affected and bats** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	Operation	Areas around turbines

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Measure- Description		Type measure (P/E/R)	Species/ Habitat affected	Parameter to which addressed the	Impact to which it addressed the measure	Implementation of of the measure	Location of implementation of the measure
M15	Installation of a conditional activation lighting system (Aircraft Detection Lighting System – ADLS) for turbines T47, T46, T35, T36, T34 to reduce the risk of mortality of species sensitive to artificial light (birds and bats). The measure will be applied from the first year of project operation.	P, E, R	All bird species* potentially affected and chiroptera** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	Operation	Turbine area T47, T46, T35, T36, T34
M16	To reduce the risk of mortality, the following measures are proposed: limiting the entry into production of turbines (T47, T46, T35, T36, T34) at wind speeds of 6.5 m/s, during the sensitive period (migration), starting half an hour before sunset until sunrise, and bat protection systems that emit ultrasonic deterrent signals to remove bats from the rotor's wake. The measure will be applied from the first year of operation of the wind farm.	R	All bird species* potentially affected and chiroptera** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	Operation	Turbine area T47, T46, T35, T36, T34
M17	Collision risk prevention systems will be installed from the first year of operation of the wind farm. An automatic control system for shutting down/reducing the operating speed of turbines (e.g. DTBird, IdentiFlight, Robin Radar Max, STRIX BirdTrack). The system will target bird species for which a significant potential impact has been identified and will be applied from the first year of operation.	R	All bird species* potentially affected from ROSPA0166, ROSPA0036, ROSPA0094	Population size Population trends for each species	REP	Operation	Turbine area T8, T18, T29. T32 and T37
M18	Installation of a video system for bird detection on turbines T8, T18, T29, T32 and T37. High-resolution camera systems will be installed. The diversion signal emission system must be installed during the first year of operation of the wind farm. The camera system detects birds from a distance of up to 600 m and emits warning sounds. If the bird continues to approach the turbine, after 300 metres the blades begin to slow down to a speed of 3 rpm, which eliminates the risk of collision.	E,R	All bird species* potentially affected from ROSPA0166, ROSPA0036, ROSPA0094	Population size Population trends for each species	REP	Operation	Turbine area T8, T18, T29. T32 and T37
M19	Installation of radar systems and day and night video cameras (on turbines T8, T18, T29, T32 and T37) to detect and prevent the risk of collision of bats with wind farm structures. The diversion signal system must be installed during the first year of operation of the wind farm.	E,R	All bat species* potentially affected from ROSCI0071, ROSCI0157,	Population size Population trends for each species	REP	Operation	Turbine area T8, T18, T29. T32 and T37

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Measure-Description		Type measure (P/E/R)	Species/ Habitat affected	Parameter to which addressed the	Impact to which it addressed the measure	Implementation of of the measure	Location of implementation of the measure
			BG0000569, BG0000570				

**Aquila pomarina, Falco peregrinus, Hieraaetus pennatus, Lanius minor, Milvus migrans, Accipiter brevipes, Accipiter nisus, Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Alauda arvensis, Alcedo atthis, Anser albifrons, Anser anser, Anthus campestris, Aquila heliaca, Aquila pomarina, Bubo bubo, Burhinus oedicnemus, Buteo buteo, Buteo lagopus, Buteo rufinus, Calandrella brachydactyla, Caprimulgus europaeus, Carduelis cannabina, Carduelis carduelis, Carduelis chloris, Carduelis spinus, Ciconia ciconia, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coccothraustes coccothraustes, Coracias garrulus, Coturnix coturnix, Cygnus olor, Emberiza melanocephala, Falco cherrug, Falco columbarius, Falco peregrinus, Falco subbuteo, Falco tinnunculus, Falco vespertinus, Ficedula hypoleuca, Fringilla coelebs, Fringilla montifringilla, Galerida cristata, Gallinago gallinago, Hieraaetus pennatus, Hirundo daurica, Hirundo rustica, Jynx torquilla, Lanius collurio, Lanius excubitor, Lanius minor, Lanius senator, Larus cachinnans, Larus melanocephalus, Larus minutus, Locustella fluviatilis, Locustella luscinioides, Lullula arborea, Melanocorypha calandra, Merops apiaster, Miliaria calandra, Milvus migrans, Monticola saxatilis, Motacilla alba, Motacilla flava, Muscicapa striata, Nycticorax nycticorax, Oenanthe isabellina, Oenanthe oenanthe, Oenanthe pleschanka, Oriolus oriolus, Pelecanus crispus, Pernis apivorus, Philomachus pugnax, Phylloscopus collybita, Phylloscopus sibilatrix, Phylloscopus trochilus, Porzana porzana/Calidris pugnax, Pyrrhula pyrrhula, Recurvirostra avosetta, Regulus ignicapillus, Regulus regulus, Riparia riparia, Saxicola torquata, Serinus serinus, Streptopelia turtur, Sturnus roseus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Tadorna ferruginea, Turdus iliacus, Turdus merula, Turdus philomelos, Turdus pilaris, Turdus viscivorus, Upupa epops*

*** Miniopterus schreibersii, Rhinolophus mehelyi, Rhinolophus ferrumequinum, Myotis capaccinii, Nyctalus noctula, Pipistrellus pipistrellus*

**** Spermophilus citellus, Mustela eversmanii*

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Calendar for the implementation and monitoring of impact reduction measures

	Measure	Species/ Habitat affected	Parameter subject to the measure	Impact assessed by the measure	Timeline for implementing the measures												Responsible	Budget
					1	2	3	4	5	6	7	8	9	10	11	12		
General measures																		
M1	Conduct regular training for all personnel involved in construction/decommissioning works on general environmental issues, habitats and protected species, and measures to avoid and reduce impacts. Particular attention shall be paid to issues related to the prohibition of collecting plants and animals or deliberately injuring/killing protected species.	All bird species* potentially affected and bats** in ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species Habitat area	All forms of impact	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M2	Implementation of low-contrast lighting systems with exclusive dispersion on the ground (exclusion of incandescent bodies that generate heat)	All potentially affected bird species* potentially affected and bats** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	PAS, REP	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M3	Compliance with the proposed work schedule and the period proposed in this plan.	All bird species* potentially affected and bats** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M4	Compliance with the perimeter of the proposed construction site to be located in the immediate vicinity of the work area.	All potentially affected bird species* potentially affected and bats** and mammals* from	Population trends for each species Habitat area	PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs

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Measure		Species/ Habitat affected	Parameter subject to the measure	Impact assessed by the measure	Timeline for implementing the measures												Responsible	Budget
					1	2	3	4	5	6	7	8	9	10	11	12		
		ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570																
M5	Carrying out activities within the perimeter on the strictly necessary areas.	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH,PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M	Construction materials shall be stored only in the areas designated in the site and work area organisation plan, without affecting the surrounding areas.	All species of birds* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH, PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M7	Prevention of any spillage of liquid fuels, oils, paints, etc. on the ground. In the event of accidental pollution, this will be eliminated by applying absorbent materials and removed from the site by contracting companies specialised in the management of these types of hazardous waste.	All species of birds* potentially affected and chiroptera** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094,	Population trends for each species Habitat area	AH,PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs

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Measure		Species/ Habitat affected	Parameter subject to the measure	Impact assessed by the measure	Timeline for implementing the measures												Responsible	Budget
					1	2	3	4	5	6	7	8	9	10	11	12		
		BG0000569, BG0000570																
M8	Ensuring proper waste management with regular disposal without using intermediate and non-compliant storage facilities. It is prohibited to dispose of waste in the immediate vicinity of the construction site and beyond.	All species of birds* potentially affected and chiroptera** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH,PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M9	Access to the work sites will be via existing access routes so as not to affect additional land areas.	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH,PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M10	Use of machinery and equipment to carry out the work that produces a minimum level of noise and vibration, is efficient, low-polluting and quiet, so that wildlife species are not affected.	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs

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Measure		Species/ Habitat affected	Parameter subject to the measure	Impact assessed by the measure	Timeline for implementing the measures												Responsible	Budget
					1	2	3	4	5	6	7	8	9	10	11	12		
M11	Topsoil or fertile soil resulting from excavations will be properly stored and protected, then reused. Restoration of the topsoil in temporarily occupied areas.	All bird species* potentially affected and bats** and mammals*** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population trends for each species Habitat area	AH, PAS	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
Specific measures																		
M12	Construction and installation work must be planned so as to take place outside the breeding and rearing seasons of species of Community interest, regardless of the presence or absence of nests on site. The planning of activities must take into account the biological calendar of the species concerned in order to prevent any negative impact on them.	All components Natura 2000 components of the protected natural areas ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M13	Turbines must be marked at night with flashing lights, with long intervals between two consecutive flashes. These turbines are easier for birds to recognise when flashing lights are used instead of continuous lights.	All bird species* potentially affected and bats** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	X	X	X	X	X	X	X	X	X	X	X	X	Builder	No additional costs
M14	Regular mowing of vegetation around turbines in order to maintain a low abundance of insect species that are a food source for both bat species and birds.	All potentially affected bird species* potentially affected and bats** in ROSCI0071, ROSCI0157, ROSPA0166,	Population size Population trends for each species	REP				X	X	X	X	X	X	X			Builder	10,000 euros/year

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Measure		Species/ Habitat affected	Parameter subject to the measure	Impact assessed by the measure	Timeline for implementing the measures												Responsible	Budget
					1	2	3	4	5	6	7	8	9	10	11	12		
		ROSPA0036, ROSPA0094, BG0000569, BG0000570																
M15	Installation of a conditional activation lighting system (Aircraft Detection Lighting System – ADLS) for turbines T47, T46, T35, T36, T34 to reduce the risk of mortality of species sensitive to artificial light (birds and bats). The measure will be applied from the first year of project operation.	All bird species* potentially affected and chiroptera** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	X	X	X	X	X	X	X	X	X	X	X	X	Certified and experienced builders/experts in biodiversity monitoring	Approximately 100,000 euros
M16	To reduce the risk of mortality, the following measures are proposed: limiting the entry into production of turbines (T47, T46, T35, T36, T34) at wind speeds of 6.5 m/s during the sensitive period (migration), starting half an hour before sunset until sunrise, and bat protection systems that emit ultrasonic deterrent signals to remove bats from the rotor wash area. The measure will be applied from the first year of operation of the wind farm.	All bird species* potentially affected and chiroptera** from ROSCI0071, ROSCI0157, ROSPA0166, ROSPA0036, ROSPA0094, BG0000569, BG0000570	Population size Population trends for each species	REP	X	X	X	X	X	X	X	X	X	X	X	X	Farm owner/Certified and experienced experts in biodiversity monitoring	No additional costs
M17	Collision risk prevention systems will be installed from the first year of wind farm operation. An automatic control system for shutting down/reducing the operating speed of turbines (e.g. DTBird, IdentiFlight, Robin Radar Max, STRIX BirdTrack). The system will target bird species for which a significant potential impact has been identified and will be applied from the first year of operation.	All bird species* potentially affected and from ROSPA0166, ROSPA0036, ROSPA0094	Population size Population trends for each species	REP			X	X	X				X	X	X		Farm owner / Certified and experienced experts in biodiversity monitoring	Approximately 150,000 euros
M18	Installation of a video system for bird detection on turbines T8, T18, T29, T32 and T37. High-resolution camera systems will be installed. The signal emission system must be installed during the first year of operation of the wind farm. The camera system detects birds from a distance of up to 600 m and emits warning sounds. If the bird continues to approach the turbine, after 300 metres the blades begin to slow down to a speed of 3 rpm, which eliminates the risk of collision.	All bird species* potentially affected from ROSPA0166, ROSPA0036, ROSPA0094	Population size Population trends for each species	REP	X	X	X	X	X	X	X	X	X	X	X	X	Farm owner / Certified and experienced experts in biodiversity monitoring	Approximately 200,000 euros

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Measure		Species/ Habitat affected	Parameter subject to the measure	Impact assessed by the measure	Timeline for implementing the measures												Responsible	Budget
					1	2	3	4	5	6	7	8	9	10	11	12		
M19	Installation of radar systems and day and night video cameras (on turbines T8, T18, T29, T32 and T37) to detect and prevent the risk of collision of bats with wind farm structures. The diversion signal system must be installed during the first year of operation of the wind farm.	All species of bats* potentially affected from ROSCI0071, ROSCI0157, BG0000569, BG0000570	Population size Population trends for each species	REP				X	X	X	X	X	X	X			Farm owner / Certified and experienced experts in biodiversity monitoring	Approximately 200,000 euros

**Aquila pomarina, Falco peregrinus, Hieraaetus pennatus, Lanius minor, Milvus migrans, Accipiter brevipes, Accipiter nisus, Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Alauda arvensis, Alcedo atthis, Anser albifrons, Anser anser, Anthus campestris, Aquila heliaca, Aquila pomarina, Bubo bubo, Burhinus oedicnemus, Buteo buteo, Buteo lagopus, Buteo rufinus, Calandrella brachydactyla, Caprimulgus europaeus, Carduelis cannabina, Carduelis carduelis, Carduelis chloris, Carduelis spinus, Ciconia ciconia, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coccothraustes coccothraustes, Coracias garrulus, Coturnix coturnix, Cygnus olor, Emberiza melanocephala, Falco cherrug, Falco columbarius, Falco peregrinus, Falco subbuteo, Falco tinnunculus, Falco vespertinus, Ficedula hypoleuca, Fringilla coelebs, Fringilla montifringilla, Galerida cristata, Gallinago gallinago, Hieraaetus pennatus, Hirundo daurica, Hirundo rustica, Jynx torquilla, Lanius collurio, Lanius excubitor, Lanius minor, Lanius senator, Larus cachinnans, Larus melanocephalus, Larus minutus, Locustella fluviatilis, Locustella luscinioides, Lullula arborea, Melanocorypha calandra, Merops apiaster, Miliaria calandra, Milvus migrans, Monticola saxatilis, Motacilla alba, Motacilla flava, Muscicapa striata, Nycticorax nycticorax, Oenanthe isabellina, Oenanthe oenanthe, Oenanthe pleschanka, Oriolus oriolus, Pelecanus crispus, Pernis apivorus, Philomachus pugnax, Phylloscopus collybita, Phylloscopus sibilatrix, Phylloscopus trochilus, Porzana porzana/Calidris pugnax, Pyrrhula pyrrhula, Recurvirostra avosetta, Regulus ignicapillus, Regulus regulus, Riparia riparia, Saxicola torquata, Serinus serinus, Streptopelia turtur, Sturnus roseus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Tadorna ferruginea, Turdus iliacus, Turdus merula, Turdus philomelos, Turdus pilaris, Turdus viscivorus, Upupa epops*

*** Miniopterus schreibersii, Rhinolophus mehelyi, Rhinolophus ferrumequinum, Myotis capaccinii, Nyctalus noctula, Pipistrellus pipistrellus*

**** Spermophilus citellus, Mustela eversmanii*

The beneficiary shall monitor dead specimens of birds and strictly protected species listed in Annexes 4A and 4B to Government Emergency Ordinance No. 57/2007 on the regime of protected natural areas, the conservation of natural habitats, wild flora and fauna, as subsequently amended and supplemented, both during the execution and operation periods, in compliance with the provisions of Government Decision No. 323/2010.

The monitoring of bird species of Community interest shall be carried out in accordance with the provisions of Order No. 1.358/2021 on the approval of the Standard Guide for the Monitoring of Bird Species of Community Interest in Romania, within the project "Completing the level of knowledge of biodiversity by implementing the system for monitoring the conservation status of bird species of Community interest in Romania and reporting under Article 12 of the Birds Directive 2009/147/EC", financed through the Large Infrastructure Operational Programme 2014-2020.

The programme for monitoring the measures

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ANPIC affected (COD, name)	/ Conservation objective/ Species/ habitat affected/ parameter	Form of impact	Measure of reduction	Implementation period of of the measure	Location of the measure	Indicators for monitoring	Units of Measurement	Monitoring frequency	Location monitoring	Duration of of monitoring	Degree of effectiveness of measure	Budget	Responsible Monitoring
ROSCI0071/ROSAC0071 Dumbrăveni - Urluia Valley - Lake Vederoasa	Terrestrial mammals***	AH/PH/FH/REP/PAS	M1, M4, M5, M6, M8, M10,	Construction and operation	Proposed location of the wind farm	Distribution of species Activity level	Spatial and temporal pattern Intensity of use of the future wind farm site	Monthly	The location of the of the future wind farm	Construction/operation period (at least 3 years)	High	No additional costs required	Certified and experienced builders/experts in biodiversity monitoring
	Chiroptera**	PAS/REP	M1, M12, M14, M16, M19	Operation		Species distribution Activity index - BAI	Spatial and temporal pattern Intensity of use of the future wind farm site Number of individuals	Monthly	Location of the future wind farm	Entire period of wind farm operation	Assumed high (effectiveness to be confirmed following monthly monitoring)	Approximately €210,000/operating period of the wind farm	Operator/Certified and experienced experts in biodiversity monitoring
ROSCI0157/ROSAC157 Hagieni Forest - Cotul Văii	Terrestrial mammals***	AH/PH/FH/REP/PAS	M1, M4, M5, M6, M8, M10	Construction and operation		Species distribution Activity level	Spatial and temporal pattern Intensity of use of the future wind farm site	Monthly	Location of the future wind farm	Construction/operation period (at least 3 years)	High	The amount will be determined following field monitoring over a period of at least 3 years in the case of measure M18; no additional construction costs are required for the other measures.	Certified and experienced builders/experts in biodiversity monitoring
	Chiroptera**	PAS/REP	M1, M12, M14, M16, M19	Operation		Species distribution Activity index - BAI	Spatial and temporal pattern Intensity of the use of future wind farm site	Monthly	Location of the future wind farm	Entire period of wind farm operation	Assumed high (effectiveness to be confirmed following monthly monitoring)	Approximately €210,000/operating period of the wind farm	Operator/Certified and experienced experts in biodiversity monitoring

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							Number of individuals						
ROSPA0166 Plopeni - Chirnogeni	Avifauna*	AH/PH/FH/REP/ PAS	M1, M12, M14, M15, M16, M17, M18, M19	Construction and operation		Species distribution Species abundance Population size	Spatial and temporal pattern Intensity of use of the future wind farm site Number of individuals	Monthly	Location of the future wind farm	Entire period of wind farm operation	Assumed high (effectiveness to be confirmed following monthly monitoring)	Approximately 560,000 euros/operating period of the wind farm	Operator/Certified and experienced experts in biodiversity monitoring
ROSPA0036 Dumbrăveni	Avifauna*	AH/PH/FH/REP/ PAS	M1, M12, M14, M15, M16, M17, M18	Construction and operation		Distribution of species Species abundance Population size	Spatial and temporal pattern Intensity of use of the future wind farm site Number of individuals	Monthly	Location of the future wind farm	Entire period of wind farm operation	Assumed high (effectiveness to be confirmed following monthly monitoring)	Approximately 560,000 euros/operating period of the wind farm	Operator/Certified and experienced experts in biodiversity monitoring
ROSPA0094 Hagieni Forest	Avifauna*	AH/PH/FH/REP/ PAS	M1, M12, M14, M15, M16, M17, M18	Construction and operation		Species distribution Species abundance Population size	Spatial and temporal pattern Intensity of use of the future wind farm site Number of individuals	Monthly	Location of the future wind farm	Entire period of wind farm operation	Assumed high (effectiveness to be confirmed following monthly monitoring)	Approximately 560,000 euros/operating period of the wind farm	Operator/Certified and experienced experts in biodiversity monitoring
BG0000569 Kardam	Terrestrial mammals ***	AH/PH/FH/REP/ PAS	M1, M4, M5, M6, M8, M10	Construction		Species distribution Activity level	Spatial and temporal pattern Intensity of use of the future wind farm site	Monthly	Location of the future wind farm	Construction/operation period (at least 3 years)	High	The amount will be determined following field monitoring over a period of at least 3 years in the case	Certified and experienced builders/experts in biodiversity monitoring

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ANPIC affected (COD, name)	/ Conservation objective/ Species/ habitat affected/ parameter	Form of impact	Measure of reduction	Implementation period of of the measure	Location of the measure	Indicators for monitoring	Units of Measurement	Monitoring frequency	Location monitoring	Duration of of monitoring	Degree of effectiveness of measure	Budget	Responsible Monitoring
												of measure M18; no additional construction is required for the other measures	
	Chiroptera**	PAS/REP	M1, M12, M14, M16, M19	Operation		Species distribution Activity index - BAI	Spatial and temporal pattern Intensity of use of the future wind farm site Number of individuals	Monthly	Location of the future wind farm	Entire period of wind farm operation	Assumed high (effectiveness to be confirmed following monthly monitoring)	Approximately €210,000/operating period of the wind farm	Operator/Certified and experienced experts in biodiversity monitoring
BG0000570 Izvorovo - Kraishte	Terrestrial mammals***	AH/PH/FH/REP/ PAS	M1, M4, M5, M6, M8, M10	Construction and operation		Species distribution Activity level	Spatial and temporal pattern Intensity of use of the future wind farm site	Monthly	Location of the future wind farm	Construction/operation period (at least 3 years)	High	The amount will be determined following field monitoring over a period of at least 3 years in the case of measure M18, with no additional construction required for the other measures.	Certified and experienced builders/experts in biodiversity monitoring and assessmen
	Chiroptera**	PAS/REP	M1, M12, M14, M16, M19	Operation		Species distribution Activity index - BAI	Spatial and temporal pattern Intensity of use of the future wind farm site Number of individuals	Monthly	Location of the future wind farm	Entire period of wind farm operation	Presumed high (effectiveness to be confirmed following monthly monitoring)	Approximately €210,000/operating period of the wind farm	Operator/Certified and experienced experts in biodiversity monitoring

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**Aquila pomarina, Falco peregrinus, Hieraaetus pennatus, Lanius minor, Milvus migrans, Accipiter brevipes, Accipiter nisus, Acrocephalus arundinaceus, Acrocephalus palustris, Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Alauda arvensis, Alcedo atthis, Anser albifrons, Anser anser, Anthus campestris, Aquila heliaca, Aquila pomarina, Bubo bubo, Burhinus oedicnemus, Buteo buteo, Buteo lagopus, Buteo rufinus, Calandrella brachydactyla, Caprimulgus europaeus, Carduelis cannabina, Carduelis carduelis, Carduelis chloris, Carduelis spinus, Ciconia ciconia, Circaetus gallicus, Circus aeruginosus, Circus cyaneus, Circus macrourus, Circus pygargus, Coccothraustes coccothraustes, Coracias garrulus, Coturnix coturnix, Cygnus olor, Emberiza melanocephala, Falco cherrug, Falco columbarius, Falco peregrinus, Falco subbuteo, Falco tinnunculus, Falco vespertinus, Ficedula hypoleuca, Fringilla coelebs, Fringilla montifringilla, Galerida cristata, Gallinago gallinago, Hieraaetus pennatus, Hirundo daurica, Hirundo rustica, Jynx torquilla, Lanius collurio, Lanius excubitor, Lanius minor, Lanius senator, Larus cachinnans, Larus melanocephalus, Larus minutus, Locustella fluviatilis, Locustella luscinioides, Lullula arborea, Melanocorypha calandra, Merops apiaster, Miliaria calandra, Milvus migrans, Monticola saxatilis, Motacilla alba, Motacilla flava, Muscicapa striata, Nycticorax nycticorax, Oenanthe isabellina, Oenanthe oenanthe, Oenanthe pleschanka, Oriolus oriolus, Pelecanus crispus, Pernis apivorus, Philomachus pugnax, Phylloscopus collybita, Phylloscopus sibilatrix, Phylloscopus trochilus, Porzana porzana/Calidris pugnax, Pyrrhula pyrrhula, Recurvirostra avosetta, Regulus ignicapillus, Regulus regulus, Riparia riparia, Saxicola torquata, Serinus serinus, Streptopelia turtur, Sturnus roseus, Sturnus vulgaris, Sylvia atricapilla, Sylvia curruca, Tadorna ferruginea, Turdus iliacus, Turdus merula, Turdus philomelos, Turdus pilaris, Turdus viscivorus, Upupa epops*

*** Miniopterus schreibersii, Rhinolophus mehelyi, Rhinolophus ferrumequinum, Myotis capaccinii, Nyctalus noctula, Pipistrellus pipistrellus*

**** Spermophilus citellus, Mustela eversmanii*

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Conditions established by the Bulgarian State in letter No. 99-00-268-40 of 17.09.2025, in the cross-border procedure:

1. **"Wind farm 48CE(46), transformer stations, electrical connection networks, construction and modernisation of communication and access routes" – will be implemented in compliance with all measures provided for in the submitted Environmental Report, with a view to preventing, reducing and eliminating adverse effects on the environment, the living environment and the health of the population as a result of the project's implementation;**
2. **Given that the wind farm is located in the immediate vicinity of the border with the Republic of Bulgaria, an assessment of the impact of physical factors in a cross-border context, in particular light effects, will be carried out during the design phase. The assessment will be sent to the Republic of Bulgaria;**
3. **The paint used for wind turbines (tower and rotor) must be of the "absorbent" type, so as not to create conditions for reflections of incident light;**
4. **After the implementation of the investment proposal, controlled monitoring of noise levels, non-ionising radiation and light effects at the border with the affected Bulgarian localities will be ensured. The results of the monitoring will be sent to the Republic of Bulgaria.**

The environmental permit was issued taking into account:

- notification no. 6182 of 21.07.2023;
- The urban planning documentation prepared by the general designer – arhico consulting srl;
- The environmental report prepared by ramboll south east europe srl – certified expert – main level
- Certificate of confirmation series RGX no. 333/06.11.2025, issued by the Romanian Environmental Association 1998, Commission for the licensing of natural and legal persons who prepare environmental studies;
- urban planning certificate no. 129/28.11.2022 extended and the Opportunity Notice, local regulations related to the LAND USE DEVELOPMENT PLAN, issued by the Constanta County Council;
- site plan, plan showing the existing situation and plan with urban planning proposals;
- announcements regarding the submission of the application for obtaining the environmental permit and the start of the plan classification stage in accordance with Government Decision no. 1076/2004 appeared in the newspaper "Cuget liber" on 21.07.2023 and 24.07.2023;
- notification in a cross-border context in accordance with Law 22/2001, in Romanian, English and Bulgarian, registered with APM Constanta under no. 3383/14.03.2024; correspondence with MMAP – APM letter no. 562/20.03.2024 regarding the need to initiate the cross-border procedure, MMAP reply letter no. DGEIPSC10694/03.04.2024; MMAP letter no. DGEIPSC31942/02.09.2024 requesting additional information from the Bulgarian State; DJM Constanta letter no. 141/08.05.2025, forwarding the requested additional information; MM email forwarding the Bulgarian State's letter, with a request for additional information; DJM letter no. 598/08.07.2025 forwarding the responses to the Bulgarian State; MM email dated 06.08.2025; letter no. 838/06.08.2025; MM letter DGEICPSC/34034/12.08.2025; DJM letter no. 941/13.08.2025; MM email dated 06.10.2025 forwarding the letter regarding the completion of the cross-border procedure by the Bulgarian State; MMAP letter no. 44182/30.09.20205 registered with DJM Constanta under no. 5856/06.10.2025 regarding the completion of the cross-border procedure by the Bulgarian State;
- Health and comfort impact assessment study no. 111/06.03.2024, prepared by SC Vest Medical Impact SRL Timisoara;
- notification – specialist assistance in public health no. IMA 13375R/25.03.2024, issued by the Constanta County Public Health Directorate;

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- public announcement regarding the decision on the classification stage appeared in the newspaper "Cuget liber" on 29.04.2025;
- public announcements regarding the organisation of the public debate on the environmental report appeared in the newspaper "Ziua de Constanta" on 12.05.2025 and 15.05.2025 and a corrective announcement on 27.06.2025;
- Conditional approval no. 62 of 17 October 2025 issued by the National Agency for Environment and Protected Areas, as the competent authority responsible for the administration of the protected natural areas ROSAC0071 Dumbrăveni – Urluia Valley – Vederoasa Lake, ROSPA0166 Plopeni-Chirnogeni, ROSPA0036 Dumbraveni, based on ANMAP Decision no. 148/08.10.2025;
- the provisions of the Management Plan and Regulations for the protected natural areas ROSCI0071 Dumbrăveni - Urluia Valley - Lake Vederoasa, ROSPA0036 Dumbrăveni, ROSPA0001 Aliman - Adamclisi, ROSPA0007 Balta Vederoasa, 2.361 Dumbrăveni Forest, 2.350 Limestone walls at Petroșani - Deleni Commune, 2,351 Aliman Fossil Site and IV.30 Lake Vederoasa, approved by Order of the Minister of Environment, Water and Forests No. 1557/2016.
- the provisions of the Management Plan and Regulations for the protected natural areas RSOCI0157 Hagieni-Cotul Văii Forest, ROSPA0094 Hagieni Forest and 2.360 Hagieni Forest, approved by Order of the Minister of Environment, Water and Forests No. 1480/2016.
- The provisions of the Management Plan and Regulations for the protected natural areas ROSCI0157 Hagieni-Cotul Văii Forest, ROSPA0094 Hagieni Forest and 2.360 Hagieni Forest ROSCI0157/ROSAC157 Hagieni Forest approved by Order No. 1480/2016 on the approval of the Management Plan
- ROSPA0166 Plopeni-Chirnogeni - Note No. 8914/BT/ 28.03.2022
- Provisions of the Management Plan and Regulations for protected natural areas ROSCI0157 Hagieni-Cotul Văii Forest, ROSPA0094 Hagieni Forest and 2,360 Hagieni Forest ROSPA0094 Hagieni Forest approved by Order No. 1480/2016 regarding the approval of the Management Plan
- the public announcement regarding the final decision to issue the environmental permit, in the newspaper "Cuget Liber", on 15.10.2025;
- GA opinion no. 10/26.02.2024;
- the opinions that were requested through the C.U. and through the meetings of the three working groups organised, as well as in the CSC meetings organised by the Constanta environmental authority, physically or electronically;
- declaration in accordance with the provisions of Art. 33, para. (1), point (b) of GD 1076/2004, with amendments and additions.

This opinion is valid from the date of issue, throughout the entire period of validity of the plan, unless changes are made to it.

All provisions of the regulatory acts issued by other authorities shall be complied with, as well as the recommendations in the Adequacy Assessment Study, the Health Study and the Environmental Report.

All recommendations in the Environmental Report shall be included in the Urban Planning Regulations for the P.U.Z.

According to the provisions of Government Decision No. 1076/2004, Article 33, you have the following obligations:

(1) The holder of the plan or programme is obliged to inform the authorities consulted during the procedure and the public and to make the following available to them:
a) the adopted plan or programme;
c) the measures decided upon regarding the monitoring of environmental effects.

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(2) The holder of the plan or programme shall announce in the media and on its own website the location and schedule for consulting the documents referred to in paragraph (1).

Failure to comply with the conditions of this notice shall be punished in accordance with the legal provisions in force.

The holder of the plan is obliged to request the environmental authority's environmental approval for the works provided for in the P.U.Z., in accordance with the provisions of Law No. 292/2018, as amended and supplemented.

Manager,
/illegible/
/illegible signature, round seal/

Name	Position	Date	Signature
Approved : Lavinia Monica ZECA	Chief of Regulatory Department	20.11.2025	/illegible signature/
Drafted : Simona SIMA Mihaela Gabriela STOIANOF	Counsellor	20.11.2025	/illegible signature/

Subsemnata, XENOFONT MAGDA, interpret şi traducător autorizat pentru limba străină Engleză, în temeiul autorizaţiei nr. 4151/2000, eliberată de Ministrul Justiţiei din România, certific exactitatea traducerii efectuate din limba română în limba engleză, că textul prezentat a fost tradus complet, fără omisiuni, şi că, prin traducere, înscrisului nu i-a fost denaturat conţinutul şi sensul.

I, the undersigned XENOFONT MAGDA, authorized interpreter and translator for English language, according to Authorization no. 4151/2000, delivered by the Ministry of Justice of Romania, hereby certify the exactness of the translation from Romanian language into English language, that the text presented to me was entirely translated, without omissions, and that, by means of translation, the document did not incur any modification in terms of content and sense.

Interpret şi traducător autorizat
Authorized interpreter and translator,

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