

Appendix 5 – Tabular summary of information on resources of protected species of plant, fungus and animals in the area of Task and its surroundings

This appendix to the Environmental Management Plan (EMP) for Task **2A.2/2 Construction of "Krosnowice" – a dry flood control reservoir on Duna stream** includes a summary of information on resources of protected species of plants, fungi and animals in the area of Task and its surroundings.

Table 1. Specification of rare and protected species of plants and fungi within the Task area

No.	Name	Protection status	Regional/national Red List assessment	Population resources (specimens or area)	No of stands	Location
Vascular plants						
1.	Cut-leaved Crane's-bill <i>Geranium dissectum</i>	none	LC / none	300-500 sp.	3	fields on terraces of both streams
2.	Wild garlic <i>Allium ursinum</i>	PP	NT / VU	500-1000 sp.	6	oak-hornbeam and riparian forests in the valleys of both streams
3.	Trailing St John's-wort <i>Hypericum humifusum</i>	none	LC / none	5 sp.	1	fields in the upper section of the Duna Górna valley
4.	Oxlip <i>Primula elatior</i>	PP	none / none	200-400 sp.	14	oak-hornbeam and riparian forests in the valleys of both streams
5.	Field cow-wheat <i>Melampyrum arvense</i>	none	VU / none	20-40 sp.	1	next to the road Krosnowice-Starków
6.	Blue field madder <i>Sherardia arvensis</i>	none	NT / none	350-500 sp.	2	fields on terraces of both streams
7.	Spring snowflake <i>Leucojum vernalis</i>	PP	none / VU	80-200 sp.	5	oak-hornbeam and riparian forests in the valleys of both streams
8.	Spurge <i>Euphorbia serrulata</i>	none	NT / none	10-20 sp.	2	swords and roadsides on farmlands
9.	Vetch <i>Vicia dumetorum</i>	none	LC / none	10-20 sp.	1	oak-hornbeam forest in the upper reaches of the Duna Dolna

No.	Name	Protection status	Regional/national Red List assessment	Population resources (specimens or area)	No of stands	Location
10.	Autumn crocus <i>Colchicum autumnale</i>	PP	LC / none	500-1000 sp.	17	meadows on the slopes of the valleys of both streams
Bryophyte						
11.	<i>Fossombronina wondraczekii</i>	PP	none / EN	several thousand sp.	2	at the confluence of streams Duna Górna and Duna Dolna, and the field on the left bank of Duna Górna
12.	Field hornwort <i>Anthoceros agrestis</i>	none	none / EN	several thousand sp.	2	as above
13.	Springy turf-moss <i>Rhytidiadelphus squarrosus</i>	PP	none / none	20 m ²	2	pasture on the right side of the Duna Górna valley
14.	<i>Homalia trichomanoides</i>	PP	none / none	0,3 m ²	1	at the base of a tree in oak-hornbeam forest on the right bank of Duna Dolna
15.	<i>Abietinella abietina</i>	PP	none / none	1 m ²	1	pasture on the right side of the Duna Górna valley
16.	Pointed spear moss <i>Calliergonella cuspidata</i>	PP	none / none	several hundred m ²	1	many in the western part of the Duna Górna valley
17.	Bruch's pincushion <i>Ulota bruchii</i>	PP	none / VU	10-15 cm ²	3	on the trunks and branches of the Bird cherry near the stream Duna Dolna, in the western part of the area
18.	<i>Anomodon attenuatus</i>	PP	none / none	0,2 m ²	1	alder root on the left floodplain terrace of Duna Dolna
Lichen fungi (lichens)						
19.	<i>Ramalina fastigiata</i>	SP	EN/EN	6 fronds on 2 trees	2	on the trunks of two clones by the road Krosnowice-Starków
20.	<i>Pleurosticta acetabulum</i>	PP	EN/EN	1 frond on 1 tree	1	on the trunk of a clone by the road Krosnowice-Starków
<p><u>Protection status</u>: SP – strict protection, PP – partial protection</p> <p><u>Red List assessment</u>: LC –least concern, NT – near threatened, VU – vulnerable, EN – endangered</p>						

Table 2. Specification of rare and protected fish species within the range of impact of the Task

No.	Name	Protection status	Average number [number of specimens/100 m ²]
1.	Stone loach <i>Barbatula barbatula</i>	PP, LC	47,6
2.	European bullhead <i>Cottus gobio</i>	PP, HDII, VU	0,3
3.	Brook lamprey <i>Lampetra planeri</i>	PP, HDII	no data
4.	Alpine bullhead <i>Cottus poecilopus</i>	PP, VU	no data
5.	Eurasian minnow <i>Phoxinus phoxinus</i>	LC	52,9
6.	River trout <i>Salmo trutta fario</i>	R, LC	1,5
7.	European chub <i>Leuciscus cephalus</i>	LC	0,2
8.	Grayling <i>Thymallus thymallus</i>	R, CD, HDV	no data
<p style="text-align: center;"><u>Protection status:</u> PP – partial protection, R – protection period or dimension, HDII – Annex II of the Habitat Directive, HDV – Annex V of the Habitat Directive</p> <p style="text-align: center;"><u>Red List assessment:</u> VU – vulnerable, CD – conservation dependent, LC – least concern</p>			

Table 3. Specification of protected species of amphibians and reptiles within the Task area

No.	Name	Protection status	Estimated number of specimens	Occurrence within the Task area
1.	Common frog <i>Rana temporaria</i>	PP, LC	300-600 sp.	commonly on feeding grounds; lack of breeding sites
2.	Slow worm <i>Anguis fragilis</i>	PP	80-100 sp.	scattered: baulks, field roads, scrub
3.	Grass snake <i>Natrix natrix</i>	PP, LC	10 sp.	near Duna Dolna stream
<p style="text-align: center;"><u>Protection status:</u> PP – partial protection</p> <p style="text-align: center;"><u>Red List assessment:</u> LC – least concern</p>				

Table 4. Specification of protected species of birds within the Task area

No.	Name	Protection status	Number or density on 10 ha	Status in the area
1.	Black stork <i>Ciconia nigra</i>	SP, BDI	1 p.	a, f
2.	White stork <i>Ciconia ciconia</i>	SP, BDI	1 p.	a, f
3.	Common buzzard <i>Buteo buteo</i>	SP	1 p.	b, f
4.	Eurasian sparrowhawk <i>Accipiter nisus</i>	SP	1 p.	b, f
5.	Northern goshawk <i>Accipiter gentilis</i>	SP	1 p.	a, f
6.	Common kestrel <i>Falco tinnunculus</i>	SP	1 p.	b, f
7.	Common quail <i>Coturnix coturnix</i>	SP	1 sp.	b, f
8.	Corn crake <i>Crex crex</i>	SP, BDI	1 sp.	b?, f
9.	European turtle dove <i>Streptopelia turtur</i>	SP	1-2 p.	b, f
10.	Eurasian collared dove <i>Streptopelia decaocto</i>	SP	no data	b, f
11.	Common cuckoo <i>Cuculus canorus</i>	SP	no data	b, f
12.	Long-eared owl <i>Asio otus</i>	SP	no data	a, f
13.	Common swift <i>Apus apus</i>	SP	10-20 p.	b, f
14.	Common kingfisher <i>Alcedo atthis</i>	SP, BDI	1 p.	b, f
15.	Grey-headed woodpecker <i>Picus canus</i>	SP, BDI	1 p.	b, f
16.	Great spotted woodpecker <i>Dendrocopos major</i>	SP	no data	b, f
17.	Eurasian wryneck <i>Jynx torquilla</i>	SP	2 p.	b, f
18.	Eurasian skylark <i>Alauda arvensis</i>	SP	no data	b, f
19.	Barn swallow <i>Hirundo rustica</i>	SP	no data	b, f
20.	Common house martin <i>Delichon urbica</i>	SP	no data	b, f
21.	Meadow pipit <i>Anthus pratensis</i>	SP	no data	b, f
22.	Tree Pipit <i>Anthus trivialis</i>	SP	2 p./10 ha	b, f
23.	White wagtail <i>Motacilla alba</i>	SP	no data	b, f
24.	Grey wagtail <i>Motacilla cinerea</i>	SP	1 p.	a, f
25.	Western yellow wagtail <i>Motacilla flava</i>	SP	1,5 p./10 ha	b, f
26.	White-throated dipper <i>Cinclus cinclus</i>	SP	non breeding	a, f
27.	Dunnock <i>Prunella modularis</i>	SP	several p.	b, f
28.	European robin <i>Erithacus rubecula</i>	SP	2,5 p./10 ha	b, f
29.	Black redstart <i>Phoenicurus ochruros</i>	SP	no data	b, f
30.	Whinchat <i>Saxicola rubetra</i>	SP	1,8 p./10 ha	b, f
31.	Song thrush <i>Turdus philomelos</i>	SP	no data	b, f
32.	Fieldfare <i>Turdus pilaris</i>	SP	10-20 p.	b, f
33.	Common blackbird <i>Turdus merula</i>	SP	2,5 p./10 ha	b, f

No.	Name	Protection status	Number or density on 10 ha	Status in the area
34.	Common grasshopper warbler <i>Locustella naevia</i>	SP	1 m.	b, f
35.	Marsh warbler <i>Acrocephalus palustris</i>	SP	10-20 p.	b, f
36.	Icterine warbler <i>Hippolais icterina</i>	SP	no data	b, f
37.	Garden warbler <i>Sylvia borin</i>	SP	1 p./10 ha	b, f
38.	Eurasian blackcap <i>Sylvia atricapilla</i>	SP	2,3 p./10 ha	b, f
39.	Lesser whitethroat <i>Sylvia curruca</i>	SP	0,5 p./10 ha	b, f
40.	Common whitethroat <i>Sylvia communis</i>	SP	2,3 p./10 ha	b, f
41.	Willow warbler <i>Phylloscopus trochilus</i>	SP	no data	b, f
42.	Common chiffchaff <i>Phylloscopus collybita</i>	SP	no data	b, f
43.	Wood warbler <i>Phylloscopus sibilatrix</i>	SP	no data	b, f
44.	Goldcrest <i>Regulus regulus</i>	SP	1 p./10 ha	b, f
45.	Great tit <i>Parus major</i>	SP	no data	b, f
46.	Spotted flycatcher <i>Muscicapa striata</i>	SP	no data	b, f
47.	Eurasian blue tit <i>Cyanistes careuleus</i>	SP	no data	b, f
48.	Willow tit <i>Poecilla montana</i>	SP	no data	b, f
49.	Marsh tit <i>Poecilla palustris</i>	SP	several p.	b, f
50.	Long-tailed tit <i>Aegithalos caudatus</i>	SP	no data	b, f
51.	Eurasian nuthatch <i>Sitta europaea</i>	SP	no data	b, f
52.	Eurasian treecreeper <i>Certhia familiaris</i>	SP	several p.	b, f
53.	Red-backed shrike <i>Lanius collurio</i>	SP, BDI	14-15 p.	b, f
54.	Eurasian jay <i>Garrulus glandarius</i>	SP	no data	b, f
55.	Common raven <i>Corvus corax</i>	PP	1 p.	b, f
56.	Common starling <i>Sturnus vulgaris</i>	SP	no data	b, f
57.	Orioles <i>Oriolus oriolus</i>	SP	no data	b, f
58.	Common chaffinch <i>Fringilla coelebs</i>	SP	no data	a, f
59.	European serin <i>Serinus serinus</i>	SP	no data	b, f
60.	Common Linnet <i>Carduelis cannabina</i>	SP	4 p.	b, f
61.	European goldfinch <i>Carduelis carduelis</i>	SP	no data	b, f
62.	European greenfinch <i>Carduelis chloris</i>	SP	no data	b, f
63.	Eurasian siskin <i>Carduelis spinus</i>	SP	no data	b, f
64.	Hawfinch <i>Coccothraustes coccothraustes</i>	SP	no data	b, f
65.	House sparrow <i>Passer domesticus</i>	SP	no data	b, f
66.	Eurasian tree sparrow <i>Passer montanus</i>	SP	no data	b, f
67.	Yellowhammer <i>Emberiza citrinella</i>	SP	3 p./10 ha	b, f

No.	Name	Protection status	Number or density on 10 ha	Status in the area
<p><u>Protection status:</u> SP – strict protection, PP – partial protection, BDI – Annex I of the Bird Directive, <u>Number or density:</u> p. – breeding pairs, m. – males, no data – common species, not counted <u>Status of species in the area:</u> b – breeding species, a – species rarely appearing in the area, f – species feeding in the area</p>				

Table 5. Specification of protected species of land mammals within the Task area

No.	Name	Protection status	Number	Occurrence
1.	Common shrew <i>Sorex araneus</i>	PP	no data	potential possible (based on the presence of habitats, observations and data from the literature)
2.	Eurasian pygmy shrew <i>Sorex minutus</i>	PP	no data	as above
3.	Eurasian water shrew <i>Neomys fodiens</i>	PP	no data	as above
4.	European hedgehog <i>Erinaceus europaeus</i>	PP	no data	as above
5.	Stoat <i>Mustela erminea</i>	PP	no data	as above
6.	Least weasel <i>Mustela nivalis</i>	PP	no data	as above
7.	European water vole <i>Arvicola amphibius</i>	PP	no data	as above
8.	Wood mouse <i>Apodemus sylvaticus</i>	PP	no data	as above
9.	Eurasian harvest mouse <i>Micromys minutus</i>	PP	no data	as above
10.	European mole <i>Talpa europaea</i>	PP	no data	in agricultural lands on the banks of both streams
<u>Protection status:</u> PP – partial protection				

Table 6. Specification of protected bat species within the Task area

No.	Name	Protection status	Occurrence
1.	Common noctule <i>Nyctalus noctula</i>	SP, HDIV, LC,	within the whole area of Task
2.	Common pipistrelle <i>Pipistrellus pipistrellus</i>	SP, HDIV, LC,	within the whole area of Task
3.	Nathusius's pipistrelle <i>Pipistrellus nathusii</i>	SP, HDIV, LC,	within the whole area of Task
4.	Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	SP, HDIV, LC,	within the whole area of Task
5.	Serotine bat <i>Eptesicus serotinus</i>	SP, HDIV, LC,	in the area of front dam reservoir
6.	Parti-coloured bat <i>Vespertillo murinus</i>	SP, HDIV, LC,	within the whole area of Task
7.	Daubenton's bat <i>Myotis daubentonii</i>	SP, HDIV, LC,	within the whole area of Task
8.	Long-eared bat <i>Plecotus sp.</i>	SP, HDIV, LC,	along the valley of Duna Dolna
9.	Pipistrelle <i>Pipistrellus sp.</i>	SP, HDIV, LC,	within the whole area of Task
10.	Mouse-eared bat <i>Myotis sp.</i>	SP, HDIV, LC,	within the whole area of Task
<p><u>Protection status</u>: SP – strict protection, HDIV – Annex IV of the Habitat Directive <u>Red List assessment</u>: LC –least concern</p>			