

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

This appendix to the Environmental Management Plan (EMP) for the Task **2A.1/2 Construction of “Roztoki Bystrzyckie” – a dry flood control reservoir on Goworówka 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. Summary of protected species of plants and fungi including the risk status and location within the Task

| No.                    | Name   | Protection status  | Hazard status in the area /Poland | Population resources  | Number of stands | Location  |
|------------------------|--|--------------------|-----------------------------------|-----------------------|------------------|---|
| <b>Vascular plants</b> |  |                    |                                   |                       |                  |   |
| 1.                     | European white hellebore<br><i>Veratrum lobelianum</i> | partial protection | LC/-                              | 1 specimen            | 1                | plot no. 241, area of Roztoki   |
| 2.                     | Wild garlic<br><i>Allium ursinum</i>                   | partial protection | -/-                               | at least few thousand | 15               | common, riparian forests in river valleys                                 |
| 3.                     | Bird’s-nest orchid<br><i>Neottia nidus-avis</i>        | partial protection | VU/-                              | 16 specimens          | 1                | oak-hornbeam forest south from the Estuary of Nowinka                     |
| 4.                     | European silver fir<br><i>Abies alba</i>               | none               | NT/-                              | about 20 specimens    | 4                | oak-hornbeam forest south from the Estuary of Nowinka                     |
| 5.                     | Intermediate corydalis<br><i>Corydalis intermedia</i>  | none               | LC/ none                          | 100-200               | 3                | Forests on slopes of valleys of Goworowka, Cieszycza, and Nowinka         |
| 6.                     | Siberian iris<br><i>Iris sibirica</i>                  | strict protection  | VU/ none                          | 5 shoots              | 1                | meadow, anthropogenic origin  |
| 7.                     | Martagon lily<br><i>Lilium martagon</i>                | strict protection  | LC/ none                          | Few hundred specimens | 3                | oak-hornbeam forest in the eastern part and riparian forests at Goworowka |
| 8.                     | Eggleaf twayblade<br><i>Listera ovata</i>              | partial protection | none / none                       | 22 specimens          | 1                | meadow at Goworowka   |
| 9.                     | European columbine<br><i>Aquilegia vulgaris</i>        | partial protection | VU/ none                          | 9 tufts               | 1                | meadow, anthropogenic origin  |

| No.  | Name  | Protection status  | Hazard status in the area /Poland | Population resources      | Number of stands | Location   |
|--|---|--------------------|-----------------------------------|---------------------------|------------------|--|
| 10.  | Oxlip<br><i>Primula elatior</i>                           | partial protection | none / none                       | at least few thousand     | 44               | common at meadows and in riparian forests            |
| 11.  | Slender bedstraw<br><i>Galium pumilum</i>                 | none               | LC/ none                          | Few tens                  | 1                | at the Estuary of Goworowka                          |
| 12.  | Spring snowflake<br><i>Leucojum vernalis</i>              | partial protection | NT/VU                             | at least several thousand | 18               | common in riparian forests                           |
| 13.  | February daphne<br><i>Daphne mezereum</i>                 | partial protection | none / none                       | about 30 specimens        | 10               | in riparian forests at Bielica and Goworowka         |
| 14.  | Autumn crocus<br><i>Colchicum autumnale</i>               | partial protection | LC/ none                          | few thousand              | 31               | common in riparian forests and scrubs                |
| <b>Bryophyte</b>   |   |                    |                                   |                           |                  |  |
| 15.  | Bruch's pincushion<br><i>Ulota bruchii</i>                | partial protection | no data / VU                      | 5 cm <sup>2</sup>         | 4                | Trees at river-beds and at the road Roztoki – Gajnik |
| 16.  | Crisped pincushion<br><i>Ulota crispa</i>                 | partial protection | no data / VU                      | 1 cm <sup>2</sup>         | 1                | a tree at Nowinka                                    |
| <b>Lichen fungi (lichens)</b>  |   |                    |                                   |                           |                  |  |
| 17.  | Oakmoss<br><i>Evernia prunastri</i>                       | none               | EN/NT                             | several thalli            | 1                | a tree at the road Roztoki – Gajnik                  |
| 18.  | Pleurosticta acetabulum<br><i>Pleurosticta acetabulum</i> | partial protection | EN/EN                             | several thalli            | 2                | trees at the road in Roztoki                         |
| <p><u>Key for the hazard status:</u> LC – least concern, NT – near threatened, VU – vulnerable, EN – endangered</p> <p>The summary does not include widespread species, which have lost the protection status due to adjusting the list of species under protection, although they are present in the EIA Report (2014).</p> |   |                    |                                   |                           |                  |  |

Table 2. Location of stands for protected species of butterflies large blue type *Phengaris sp.* within the Task

| Stand no. | Coordinates            | Area in ha | Dusky large blue   | Scarce large blue  |
|-----------|------------------------|------------|--------------------|--------------------|
| 1.        | N50 11.546, E16 40.526 | 0.31       | about 40 specimens | -                  |
| 2.        | N50 11.496, E16 40.712 | 0.40       | about 10 specimens | -                  |
| 3.        | N50 11.450, E16 40.900 | 1.36       | about 20 specimens | about 20 specimens |
| 4.        | N50 11.349, E16 41.162 | 0.25       | 7 specimens        | 1 specimens        |
| 5.        | N50 11.377, E16 40.995 | 0.54       | 5 specimens        | 2 specimens        |
| 6.        | N50 11.231, E16 40.891 | 0.37       | 3 specimens        | 1 specimens        |
| 7.        | N50 11.316, E16 40.619 | 1.03       | 7 specimens        | 2 specimens        |
| 8.        | N50 11.370, E16 40.561 | 0.06       | 2 specimens        | 2 specimens        |
| 9.        | N50 11.470, E16 40.493 | 0.79       | 12 specimens       | 2 specimens        |
| 10.       | N50 11.200, E16 41.567 | 0.14       | 5 specimens        | -                  |

Table 3. Summary of species of fish and lampreys under forms of protection identified in reaches of streams in the Task impact range

| No. | Species                                  | Protection status | Occurrence within the Task                                 |                           |
|-----|--|-------------------|--|---------------------------|
|     |  |                   | Reservoir:<br>Bielica, Cieszycza,<br>Goworówka,<br>Nowinka | District road:<br>Nowinka |
| 1.  | <i>Barbatula barbatula</i> Stone loach   | OC                | numerous   | numerous                  |
| 2.  | <i>Lampetra planeri</i> Brook lamprey    | OC, DsII, NT      | numerous   | potential                 |
| 3.  | <i>Salmo trutta m. fario</i> Brown trout | R                 | dominating   | dominating                |

Protection status: OC – partial protection of species, R – protection period / range, DsII – Appendix II to the Habitats Directive, Protection status in the Polish Red Book of Animals: NT – near threatened

Table 4. Summary of protected species of amphibians and reptiles within the Task

| No.   | Species                                   | Protection status | Occurrence within the Task  |               |
|---|---|-------------------|---|---------------|
|   |   |                   | Reservoir   | District road |
| 1.  | <i>Triturus vulgaris</i> Smooth newt      | OC                | Probable<br>(favourable habitats were observed, no specimens of the species were identified)  |               |
| 2.  | <i>Triturus alpestris</i> Alpine newt     | OC                | Probable<br>(favourable habitats for the occurrence of this species, no specimens were identified)  |               |
| 3.  | <i>Bufo bufo</i> Common toad              | OC                | Certain<br>(species observed within the area once, at the boundary of construction sites for the reservoir and for the road. Lives in trees at the existing road connecting Roztoki and Gajnik.)  | Probable      |
| 4.  | <i>Rana temporaria</i> Common frog        | OC                | Certain<br>(species observed in small reservoirs within forested areas in the western part of the investment. Occurrence of common frog's larvae and adults was identified)   | Probable      |
| 5.  | <i>Anguis fragilis</i> Slow worm          | OC                | Probable<br>(as in case of viviparous lizard identified in the area of the Task based upon book data, specimens have not been observed in the area covered by individual elements of the Task. A habitat favourable for the occurrence of the species in the Task area was identified.) |               |
| 6.  | <i>Zootoca vivipara</i> Viviparous lizard | OC                | Probable<br>(not identified in the area covered by the works – habitats favourable for the occurrence were observed. The occurrence of species was moreover confirmed by book data collected on the environmental impact assessment stage in the environmental decision phase.)         |               |
| 7.  | <i>Vipera berus</i> Common European adder | OC                | Probable<br>(specimens not observed on the discussed site, however identified habitats indicate the possibility of occurrence in case of the species.)  |               |
| <u>Protection status</u> : OC – partial protection of species |   |                   |   |               |

Table 5. Summary of protected species of birds identified within the Task

| No.        | Scientific name                      | English name              | Protection status | Quantity within the Task |
|------------|--------------------------------------|---------------------------|-------------------|--------------------------|
| 1.         | <i>Accipiter gentilis</i>            | Northern goshawk          | os                | 1 p                      |
| 2.         | <i>Acrocephalus palustris</i>        | Marsh warbler             | os                | ≥ 3 p                    |
| 3.         | <i>Alauda arvensis</i>               | Eurasian skylark          | os                | ≥ 5 p                    |
| 4.         | <i>Anas platyrhynchos</i>            | Mallard                   | g, Dp2            | ≥ 1 p                    |
| 5.         | <i>Anthus pratensis</i>              | Meadow pipit              | os, p             | 1 p                      |
| 6.         | <i>Anthus trivialis</i>              | Tree pipit                | os                | ≥ 2 p                    |
| 7.         | <i>Apus apus</i>                     | Common swift              | os                | z                        |
| 8.         | <i>Ardea cinerea</i>                 | Grey heron                | oc, Dp2           | z                        |
| 9.         | <i>Buteo buteo</i>                   | Common buzzard            | os                | 1 p                      |
| 10.        | <i>Carduelis carduelis</i>           | European goldfinch        | os                | ≥ 2 p                    |
| 11.        | <i>Carduelis chloris</i>             | European greenfinch       | os                | ≥ 2 p                    |
| 12.        | <i>Carduelis spinus</i>              | Eurasian siskin           | os                | ≥ 1 p                    |
| 13.        | <i>Certhia familiaris</i>            | Eurasian treecreeper      | os                | ≥ 1 p                    |
| 14.        | <i>Cinclus cinclus</i>               | White-throated dipper     | os, p             | 1 p                      |
| 15.        | <i>Coccothraustes coccothraustes</i> | Hawfinch                  | os                | ≥ 2 p                    |
| 16.        | <i>Columba palumbus</i>              | Common wood pigeon        | g                 | ≥ 2 p                    |
| 17.        | <i>Corvus corax</i>                  | Common raven              | os                | 1 p                      |
| 18.        | <i>Coturnix coturnix</i>             | Common quail              | os, Dp2, z        | 1                        |
| <b>19.</b> | <b><i>Crex crex</i></b>              | <b>Corn crane</b>         | <b>os, Dp1, z</b> | <b>2 p</b>               |
| 20.        | <i>Cuculus canorus</i>               | Common cuckoo             | os                | ≥ 1 p                    |
| 21.        | <i>Cyanistes caeruleus</i>           | Eurasian blue tit         | os                | ≥ 1 p                    |
| 22.        | <i>Dendrocopos major</i>             | Great spotted woodpecker  | os                | ≥ 2 p                    |
| 23.        | <i>Dendrocopos minor</i>             | Lesser spotted woodpecker | os                | 1 p                      |
| 24.        | <b><i>Dryocopus martius</i></b>      | <b>Black woodpecker</b>   | <b>os, Dp1</b>    | <b>1 p</b>               |
| 25.        | <i>Emberiza citrinella</i>           | Yellowhammer              | os                | ≥ 3 p                    |
| 26.        | <i>Erithacus rubecula</i>            | European robin            | os                | ≥ 5 p                    |
| 27.        | <i>Falco tinnunculus</i>             | Common kestrel            | os, r             | 1 p                      |
| 28.        | <i>Ficedula hypoleuca</i>            | European pied flycatcher  | os                | ≥ 1 p                    |
| 29.        | <i>Fringilla coelebs</i>             | Common chaffinch          | os                | ≥ 3 p                    |
| 30.        | <i>Garrulus glandarius</i>           | Eurasian jay              | os                | ≥ 1 p                    |
| 31.        | <i>Hippolais icterina</i>            | Icterine warbler          | os                | ≥ 2 p                    |
| 32.        | <i>Hirundo rustica</i>               | Barn swallow              | os                | z                        |
| 33.        | <i>Jynx torquilla</i>                | Eurasian wryneck          | os                | ≥ 1 p                    |

| No.   | Scientific name                | English name               | Protection status | Quantity within the Task |
|---|--------------------------------|----------------------------|-------------------|--------------------------|
| 34.   | <i>Lanius collurio</i>         | Red-backed shrike          | os, Dp1, p        | 7 p                      |
| 35.   | <i>Locustella naevia</i>       | Common grasshopper warbler | os, p             | 2 p                      |
| 36.   | <i>Motacilla alba</i>          | White wagtail              | os                | ≥ 2 p                    |
| 37.   | <i>Motacilla cinerea</i>       | Grey wagtail               | os, p             | 3 p                      |
| 38.   | <i>Muscicapa striata</i>       | Spotted flycatcher         | os                | ≥ 1 p                    |
| 39.   | <i>Oriolus oriolus</i>         | Eurasian golden oriole     | os                | ≥ 2 p                    |
| 40.   | <i>Parus major</i>             | Great tit                  | os                | +                        |
| 41.   | <i>Passer montanus</i>         | Eurasian tree sparrow      | os                | ≥ 1 p                    |
| 42.   | <i>Pariparus ater</i>          | Coal tit                   | os                | ≥ 3 p                    |
| 43.   | <i>Pernis apivorus</i>         | Honey buzzard              | os, Dp1, p        | 1 p                      |
| 44.   | <i>Phylloscopus collybita</i>  | Common chiffchaff          | os                | ≥ 5 p                    |
| 45.   | <i>Phylloscopus sibilatrix</i> | Wood warbler               | os                | ≥ 3 p                    |
| 46.   | <i>Phylloscopus trochilus</i>  | Willow warbler             | os                | ≥ 3 p                    |
| 47.   | <i>Picus canus</i>             | Grey-headed woodpecker     | os, Dp1           | 1 p                      |
| 48.   | <i>Prunella modularis</i>      | Dunnock                    | os                | ≥ 2 p                    |
| 49.   | <i>Regulus ignicapillus</i>    | Common firecrest           | os                | ≥ 8 p                    |
| 50.   | <i>Regulus regulus</i>         | Goldcrest                  | os                | ≥ 3 p                    |
| 51.   | <i>Saxicola rubetra</i>        | Whinchat                   | os                | ≥ 1 p                    |
| 52.   | <i>Sitta europaea</i>          | Eurasian nuthatch          | os                | ≥ 2 p                    |
| 53.   | <i>Streptopelia turtur</i>     | European turtle dove       | os, p             | 1 p                      |
| 54.   | <i>Sturnus vulgaris</i>        | Common starling            | os                | ≥ 5 p                    |
| 55.   | <i>Sylvia atricapilla</i>      | Eurasian blackcap          | os                | ≥ 5 p                    |
| 56.   | <i>Sylvia borin</i>            | Garden warbler             | os                | ≥ 1 p                    |
| 57.   | <i>Sylvia communis</i>         | Common whitethroat         | os                | +                        |
| 58.   | <i>Troglodytes troglodytes</i> | Eurasian wren              | os                | ≥ 1 p                    |
| 59.   | <i>Turdus merula</i>           | Common blackbird           | os                | ≥ 3 p                    |
| 60.   | <i>Turdus philomelos</i>       | Song thrush                | os                | +                        |
| 61.   | <i>Turdus pilaris</i>          | Fieldfare                  | os                | ≥ 3 p                    |
| 62.   | <i>Turdus viscivorus</i>       | Mistle thrush              | os, p             | 2 p                      |
| <p><u>Protection status:</u> os – strict protection, g – game animals with protection period specified, Dp1 – species from Appendix I to the Birds Directive, Dp2 – species from Appendix II to the Birds Directive, C – requires active protection, p – potentially threatened species in the regional scale, z – threatened species in the regional scale; r – rare species in the regional scale;</p> <p><u>Quantity:</u> 1 p, 3 p, 5 p, etc. – number of identified breeding pairs / areas, + – species occurring in large numbers, z – species appears occasionally from other breeding places</p> |                                |                            |                   |                          |

Table 6. Summary of protected species of mammals within the Task

| No.  | Scientific name                  | English name         | Protection status          | Occurrence within the Task  |
|--|----------------------------------|----------------------|----------------------------|---|
| 1.   | <i>Sciurus vulgaris</i>          | Red squirrel         | oc                         | forests in the middle and in the western parts of the task                                    |
| 2.   | <i>Lutra lutra</i>               | Eurasian otter       | oc, DsII                   | breeding location at the Goworowka Stream, feeding sites along all water-courses              |
| 3.   | <i>Mustela nivalis</i>           | Least weasel         | oc                         | probable occurrence   |
| 4.   | <i>Sorex araneus</i>             | Common shrew         | oc                         | oak-hornbeam forests in the western part of the task  |
| 5.   | <i>Sorex minutus</i>             | Eurasian pygmy shrew | oc                         | probable occurrence   |
| 6.   | <i>Neomys fodiens</i>            | Eurasian water shrew | oc                         | probable occurrence   |
| 7.   | <i>Erinaceus</i> sp.             | European hedgehog    | oc                         | shrubs in the centre of the task  |
| 8.   | <i>Myotis nattereri</i>          | Natterer's bat       | os, DsIV, Bo, Be, LC       | migration along trees at the rivers and at the road, habitats in the eastern part of the task |
| 9.   | <i>Myotis mystacinus</i>         | Whiskered bat        | os, DsIV, Bo, Be, LC       | habitats in the eastern part of the task  |
| 10.  | <i>Eptesicus serotinus</i>       | Serotine bat         | os, DsIV, Bo, Be, LC       | identified in the area of Roztoki   |
| 11.  | <i>Pipistrellus pipistrellus</i> | Common pipistrelle   | os, DsIV, Bo, Be, LC       | habitat in the southern part of the task  |
| 12.  | <i>Nyctalus noctula</i>          | Common noctule       | os, DsIV, Bo, Be, LC       | large in number within the entire area  |
| 13.  | <i>Barbastella barbastellus</i>  | Barbastelle          | os, DsII, DsIV, Bo, Be, NT | migration along trees at the rivers and at the road   |
| <p><u>Protection status:</u> oc – partial protection, os – strict protection, DsII – species from Appendix II of the Habitats Directive, DsIV – species from Appendix II of the Habitats Directive, Bo – species from Appendix II of the Bonn Convention, Be – species from Appendix II of the Berne Convention, LC – species of the least concern according to the IUCN, NT – species near threatened according to the IUCN</p> |                                  |                      |                            |   |