



**Appendix IV**  
Desk Study



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## **Appendix IV: Desk Study**

## 1.1 Desk Study Results

Desktop records of protected, rare, or other notable flora and fauna species within the vicinity of the Proposed Scheme are listed below in Table 1.

Plant species which are legally protected under the Flora (Protection) Order, 2022 and / or are listed as Critically Endangered, Endangered or Vulnerable on Ireland Red List No. 10: Vascular Plants (Wyse Jackson *et al.*, 2016) and Ireland Red List No. 8 Bryophytes (Lockhart *et al.*, 2012) are listed.

In relation to amphibian, reptile and mammal species those which are protected under the Wildlife Acts, the Habitats Directive and / or are listed as threatened (Vulnerable to Critically Endangered) on Ireland Red List No. 12: Terrestrial Mammals (Marnell *et al.*, 2019); Ireland Red List No. 5: Amphibians, Reptiles & Freshwater Fish (King *et al.*, 2011).

In the case of bird species, only those species listed in Annex I of the Birds Directive or on the Birds of Conservation Concern in Ireland (BoCCI) Red List are included in the table below.

For invertebrate species, those which are listed as threatened (Vulnerable to Critically Endangered) on Ireland Red List No. 4 – Butterflies (Regan *et al.*, 2010); Ireland Red List No.6: Damselflies & Dragonflies (Nelson *et al.*, 2011); Ireland Red List No. 2 – Non-Marine Molluscs. (Byrne *et al.*, 2009); Ireland Red List No. 1 – Water beetles (Foster *et al.*, 2009); Ireland Red List No. 9: Macro-moths (Allen *et al.*, 2016); Ireland Red List No. 7: Mayflies (Kelly-Quinn *et al.*, 2012); Ireland Red List No. 13: Stoneflies (Feeley *et al.*, 2020); and Regional Red List of Irish Bees (Fitzpatrick *et al.* 2006).

Desktop records of invasive plant species which are scheduled under articles 49 and 50 of the Birds and Habitats Regulations are considered as a potential threat in respect of biodiversity. S.I.477 species within the vicinity of the Proposed Scheme are listed in Table 2.

**Table 1: Records of Protected, Red-listed or Notable Flora Recorded from the Desk Study in the Vicinity of the Study Area**

Common Name / Scientific name	Legal Status	Red List Status	Source
<b>Plants</b>			
Beck Pocket-moss <i>Fissidens rufulus</i>	FPO	Endangered	NBDC online database record
Betony <i>Betonica officinalis</i>	FPO	Near threatened	NBDC online database record
Black Horehound <i>Ballota nigra</i>	n/a	Near threatened	NBDC online database record
Blunt-fruited Pottia <i>Tortula modica</i>	n/a	Vulnerable	NBDC online database record
Bright Silk-moss <i>Plagiothecium laetum</i>	n/a	Vulnerable	NBDC online database record
Bristle-leaf <i>Brachydontium trichodes</i>	FPO	Endangered	NBDC online database record
Capillary Wing-moss <i>Pterigynandrum filiforme</i>	n/a	Regionally Extinct	NBDC online database record
Chalk Screw-moss <i>Tortula vahliana</i>	n/a	Vulnerable	NBDC online database record
Common Extinguisher-moss <i>Encalypta vulgaris</i>	n/a	Near threatened	NBDC online database record
Common Gromwell <i>Lithospermum officinale</i>	n/a	Near threatened	NBDC online database record
Common Sorrel <i>Rumex acetosa</i>	n/a	Near threatened	NBDC online database record
Corn Marigold <i>Glebionis segetum</i>	n/a	Near Threatened	NBDC online database record
Curved Silk-moss <i>Plagiothecium curvifolium</i>	n/a	Vulnerable	NBDC online database record
Darnel <i>Lolium temulentum</i>	n/a	Endangered	NBDC online database record
Dense-flowered Fumitory <i>Fumaria densiflora</i>	n/a	Regionally Extinct	NBDC online database record
Dittander <i>Lepidium latifolium</i>	n/a	Vulnerable	NBDC online database record
Dwarf Mallow <i>Malva neglecta</i>	n/a	Near threatened	NBDC online database record
Fringed Heartwort <i>Ricciocarpos natans</i>	n/a	Near threatened	NBDC online database record

Common Name / Scientific name	Legal Status	Red List Status	Source
Glass-wort Feather-moss <i>Scleropodium tourettii</i>	FPO	Endangered	NBDC online database record
Good-King-Henry <i>Chenopodium bonus-henricus</i>	n/a	Vulnerable	NBDC online database record
Great Burnet <i>Sanguisorba officinalis</i>	FPO	Vulnerable	NBDC online database record
Greater Knapweed <i>Centaurea scabiosa</i>	n/a	Near threatened	NBDC online database record
Hairy Violet <i>Viola hirta</i>	FPO	Vulnerable	NBDC online database record NPWS rare species data request return 2021
Hedgehog Grimmia <i>Grimmia crinita</i>	n/a	Regionally Extinct	NBDC online database record
Irish Whitebeam <i>Sorbus hibernica</i>	n/a	Vulnerable	NBDC online database record
Lance-leaved Pottia <i>Tortula lanceola</i>	n/a	Critically endangered	NBDC online database record
Lead-moss <i>Ditrichum plumbicola</i>	FPO	Endangered	NBDC online database record
Many-seasoned thread-moss <i>Bryum intermedium</i>	FPO	Endangered	NBDC online database record
Meadow Barley <i>Hordeum secalinum</i>	FPO	Vulnerable	NBDC online database record
Meadow Crane's-bill <i>Geranium pratense</i>	n/a	Vulnerable	NBDC online database record, NPWS Consultation 2021,
Opposite-leaved Pondweed <i>Groenlandia densa</i>	FPO	Near threatened	NBDC online database record, NPWS rare species data request return 2021,
Oval-leaved Pottia <i>Pterygoneurum ovatum</i>	n/a	Regionally extinct	NBDC online database record,
Pale Flax <i>Linum bienne</i>	n/a	Near threatened	NBDC online database record
Prostrate Broom <i>Cytisus scoparius</i> subsp. <i>maritimus</i>	n/a	Vulnerable	NBDC online database record
Purple Spurge <i>Euphorbia peplis</i>	n/a	Regionally extinct	NBDC online database record
Rigid Aloe-moss <i>Aloina rigida</i>	n/a	Regionally extinct	NBDC online database record
Rounded Pygmy-moss <i>Acaulon muticum</i>	n/a	Regionally Extinct	NBDC online database record
Round-leaved Crane's-bill <i>Geranium rotundifolium</i>	n/a	Least concern	NBDC online database record
Sausage Beard-moss <i>Didymodon tomaculosus</i>	n/a	Vulnerable	NBDC online database record
Shady Beard-moss <i>Didymodon umbrosus</i>	n/a	Vulnerable	NBDC online database record
Slender Pocket-moss <i>Fissidens exilis</i>	n/a	Vulnerable	NBDC online database record
Small Cudweed <i>Filago minima</i>	FPO	Near threatened	NBDC online database record
Smooth Brome <i>Bromus racemosus</i>	n/a	Near threatened	NBDC online database record
Spiral Chalk-moss <i>Pterygoneurum lamellatum</i>	n/a	Regionally extinct	NBDC online database record
Starke's Pottia <i>Microbryum starckeanum</i>	n/a	Regionally extinct	NBDC online database record
Tall Aloe-moss <i>Aloina ambigua</i>	n/a	Endangered	NBDC online database record
Tiny Feather-moss <i>Amblystegium confervoides</i>	n/a	Near threatened	NBDC online database record
Tubular Water-dropwort <i>Oenanthe fistulosa</i>	n/a	Near threatened	NBDC online database record
Tufted Feather-moss <i>Scleropodium cespitans</i>	n/a	Near threatened	NBDC online database record
Twisting Thread-moss <i>Bryum torquescens</i>	n/a	Vulnerable	NBDC online database record
Upright Brome <i>Bromopsis erecta</i>	n/a	Near threatened	NBDC online database record
Water-violet <i>Hottonia palustris</i>	n/a	Critically endangered	NBDC online database record
<i>Weissia longifolia</i> var. <i>angustifolia</i>	n/a	Vulnerable	NBDC online database record
Wild Asparagus <i>Asparagus prostratus</i>	FPO	Endangered	NBDC online database record
Wilson's Pottia <i>Tortula wilsonii</i>	n/a	Regionally Extinct	NBDC online database record
Wood bitter-vetch <i>Vicia orobus</i>	FPO	Vulnerable	NBDC online database record
<b>Mammals</b>			

Common Name / Scientific name	Legal Status	Red List Status	Source
Brown Long eared Bat <i>Plecotus auritus</i>	HD IV, WA	Least concern	NBDC online database record
Daubenton's Bat <i>Myotis daubentonii</i>	HD IV, WA	Least concern	NBDC online database record
Eurasian Badger <i>Meles meles</i>	WA	Least concern	NBDC online database record
Eurasian Pygmy Shrew <i>Sorex minutus</i>	WA	Least concern	NBDC online database record
Eurasian Red Squirrel <i>Sciurus vulgaris</i>	WA	Least concern	NBDC online database record
European Otter <i>Lutra lutra</i>	HD II, HD IV, WA	Least concern	NBDC online database record
Irish Hare <i>Lepus timidus</i> subsp. <i>hibernicus</i>	WA	Least concern	NBDC online database record
Lesser Noctule <i>Nyctalus leisleri</i>	HD IV, WA	Least concern	NBDC online database record
Nathusius's Pipistrelle <i>Pipistrellus nathusii</i>	HD IV, WA	Least concern	NBDC online database record
Natterer's Bat <i>Myotis nattereri</i>	HD IV, WA	Least concern	NBDC online database record
Pine Marten <i>Martes martes</i>	HD V, WA	Least concern	NBDC online database record
Pipistrelle <i>Pipistrellus pipistrellus sensu lato</i>	HD IV, WA	Least concern	NBDC online database record
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	HD IV, WA	Least concern	NBDC online database record
Whiskered Bat <i>Myotis mystacinus</i>	HD IV, WA	Least concern	NBDC online database record
Wolf <i>Canis lupus</i>	n/a	Regionally extinct	NBDC online database record
Bottle-nosed Dolphin <i>Tursiops truncatus</i>	HD II, HD IV, WA	n/a	NBDC online database record
Common Dolphin <i>Delphinus delphis</i>	HD IV, WA	n/a	NBDC online database record
Common Porpoise <i>Phocoena phocoena</i>	HD II, HD V, WA	Least concern*	NBDC online database record
Common Seal <i>Phoca vitulina</i>	HD II, HD V, WA	Least concern	NBDC online database record
Grey Seal <i>Halichoerus grypus</i>	HD II, HD V, WA	Least concern	NBDC online database record
Northern Bottlenose Whale <i>Hyperoodon ampullatus</i>	HD IV, WA	n/a	NBDC online database record
Risso's Dolphin <i>Grampus griseus</i>	HD IV, WA	n/a	NBDC online database record
Sperm Whale <i>Physeter macrocephalus</i>	HD IV, WA	Not evaluated	NBDC online database record
Striped Dolphin <i>Stenella coeruleoalba</i>	HD IV, WA	n/a	NBDC online database record
House Mouse <i>Mus musculus</i>	WA	Least concern	NBDC online database record
<b>Birds</b>			
Arctic Tern <i>Sterna paradisaea</i>	SCI, BD I, WA	Amber	NBDC online database record
Balearic Shearwater <i>Puffinus mauretanicus</i>	BD I, WA	Red	NBDC online database record
Barn Owl <i>Tyto alba</i>	WA	Red	NBDC online database record
Barn Swallow <i>Hirundo rustica</i>	WA	Amber	NBDC online database record
Barnacle Goose <i>Branta leucopsis</i>	SCI, BD I, WA	Amber	NBDC online database record
Bar-tailed Godwit <i>Limosa lapponica</i>	SCI, BD I, WA	Red	NBDC online database record
Black Guillemot <i>Cephus grylle</i>	WA	Amber	NBDC online database record
Black-headed Gull <i>Chroicocephalus ridibundus</i>	SCI, WA	Amber	NBDC online database record
Black-legged Kittiwake <i>Rissa tridactyla</i>	SCI, WA	Red	NBDC online database record
Black-necked Grebe <i>Podiceps nigricollis</i>	WA	Red	NBDC online database record
Black-tailed Godwit <i>Limosa limosa</i>	SCI, WA	Red	NBDC online database record
Black-throated Diver <i>Gavia arctica</i>	BD I, WA	Amber	NBDC online database record
Chaffinch <i>Fringilla coelebs</i>	WA	Green	NBDC online database record
Common Coot <i>Fulica atra</i>	SCI, WA	Amber	NBDC online database record

Common Name / Scientific name	Legal Status	Red List Status	Source
Common Eider <i>Somateria mollissima</i>	SCI, WA	Red	NBDC online database record
Common Goldeneye <i>Bucephala clangula</i>	SCI, BD II(II), WA	Red	NBDC online database record
Common Greenshank <i>Tringa nebularia</i>	SCI, WA	Green	NBDC online database record
Common Guillemot <i>Uria aalge</i>	SCI, WA	Amber	NBDC online database record
Common Kestrel <i>Falco tinnunculus</i>	WA	Red	NBDC online database record
Common Kingfisher <i>Alcedo atthis</i>	SCI, BD I, WA	Amber	NBDC online database record
Common Linnet <i>Carduelis cannabina</i>	WA	Amber	NBDC online database record
Common Pochard <i>Aythya ferina</i>	SCI, WA	Red	NBDC online database record
Common Quail <i>Coturnix coturnix</i>	WA	Red	NBDC online database record
Common Redshank <i>Tringa totanus</i>	SCI, WA	Red	NBDC online database record
Common Redstart <i>Phoenicurus phoenicurus</i>	WA	Red	NBDC online database record
Common Sandpiper <i>Actitis hypoleucos</i>	WA	Amber	NBDC online database record
Common Scoter <i>Melanitta nigra</i>	SCI, BD II(II) BD III(III), WA	Red	NBDC online database record
Common Shelduck <i>Tadorna tadorna</i>	SCI, WA	Amber	NBDC online database record
Common Snipe <i>Gallinago gallinago</i>	BD II(I) BD III(III), WA	Red	NBDC online database record
Common Starling <i>Sturnus vulgaris</i>	WA	Amber	NBDC online database record
Common Swift <i>Apus apus</i>	WA	Red	NBDC online database record
Common Tern <i>Sterna hirundo</i>	SCI, BD I, WA	Amber	NBDC online database record
Corn Crake <i>Crex crex</i>	SCI, BD I, WA	Red	NBDC online database record
Curlew Sandpiper <i>Calidris ferruginea</i>	WA	Red	NBDC online database record
Dunlin <i>Calidris alpina</i>	SCI, BD I, WA	Red	NBDC online database record
Eurasian Curlew <i>Numenius arquata</i>	SCI, BD II(II), WA	Red	NBDC online database record
Eurasian Oystercatcher <i>Haematopus ostralegus</i>	SCI, WA	Red	NBDC online database record
Eurasian Teal <i>Anas crecca</i>	SCI, BD II(I) BD III(II), WA	Amber	NBDC online database record
Eurasian Tree Sparrow <i>Passer montanus</i>	WA	Amber	NBDC online database record
Eurasian Wigeon <i>Anas penelope</i>	SCI, BD II(I) BD III(II), WA	Amber	NBDC online database record
Eurasian Woodcock <i>Scolopax rusticola</i>	BD II(I) BD III(III), WA	Red	NBDC online database record
European Golden Plover <i>Pluvialis apricaria</i>	SCI, BD I BD II(II), WA	Red	NBDC online database record
European Greenfinch <i>Chloris chloris</i>	WA	Amber	NBDC online database record
European Nightjar <i>Caprimulgus europaeus</i>	BD I, WA	Red	NBDC online database record
European Shag <i>Phalacrocorax aristotelis</i>	SCI, WA	Amber	NBDC online database record
European Storm-petrel <i>Hydrobates pelagicus</i>	SCI, BD I, WA	Amber	NBDC online database record
European Turtle Dove <i>Streptopelia turtur</i>	WA	Red	NBDC online database record
Gadwall <i>Anas strepera</i>	SCI, WA	Amber	NBDC online database record
Goldcrest <i>Regulus regulus</i>	WA	Amber	NBDC online database record
Great Cormorant <i>Phalacrocorax carbo</i>	SCI, WA	Amber	NBDC online database record
Great Crested Grebe <i>Podiceps cristatus</i>	SCI, WA	Amber	NBDC online database record
Great Northern Diver <i>Gavia immer</i>	SCI, BD I, WA	Amber	NBDC online database record
Great Spotted Woodpecker <i>Dendrocopos major</i>	BD I, WA	Green	NBDC online database record

Common Name / Scientific name	Legal Status	Red List Status	Source
Greater Scaup <i>Aythya marila</i>	SCI, BD II(II) BD III(III), WA	Red	NBDC online database record
Grey Heron <i>Ardea cinerea</i>	SCI, WA	Green	NBDC online database record
Grey Partridge <i>Perdix perdix</i>	WA	Red	NBDC online database record
Grey Plover <i>Pluvialis squatarola</i>	SCI, WA	Red	NBDC online database record
Grey Wagtail <i>Motacilla cinerea</i>	WA	Red	NBDC online database record
Greylag Goose <i>Anser anser</i>	SCI, WA	Amber	NBDC online database record
Hen Harrier <i>Circus cyaneus</i>	SCI, BD I, WA	Amber	NBDC online database record
Herring Gull <i>Larus argentatus</i>	SCI, WA	Amber	NBDC online database record
House Martin <i>Delichon urbicum</i>	WA	Amber	NBDC online database record
House Sparrow <i>Passer domesticus</i>	WA	Amber	NBDC online database record
Lesser Black-backed Gull <i>Larus fuscus</i>	SCI, WA	Amber	NBDC online database record
Light-bellied Brent Goose <i>Branta bernicla</i> subsp. <i>hrota</i>	SCI, WA	Amber	NBDC online database record
Little Grebe <i>Tachybaptus ruficollis</i>	SCI, WA	Green	NBDC online database record
Little Gull <i>Hydrocoloeus minutus</i>	BD I, WA	Amber	NBDC online database record
Little Tern <i>Sternula albifrons</i>	SCI BD I, WA	Amber	NBDC online database record
Long-tailed Duck <i>Clangula hyemalis</i>	BD II(II), WA	Red	NBDC online database record
Mallard <i>Anas platyrhynchos</i>	SCI, BD II(I) BD III(I), WA	Amber	NBDC online database record
Manx Shearwater <i>Puffinus puffinus</i>	SCI, WA	Amber	NBDC online database record
Meadow Pipit <i>Anthus pratensis</i>	WA	Red	NBDC online database record
Mediterranean Gull <i>Larus melanocephalus</i>	BD I, WA	Amber	NBDC online database record
Merlin <i>Falco columbarius</i>	SCI, BD I, WA	Amber	NBDC online database record
Mute Swan <i>Cygnus olor</i>	WA	Amber	NBDC online database record
Northern Gannet <i>Morus bassanus</i>	SCI, WA	Amber	NBDC online database record
Northern Goshawk <i>Accipiter gentilis</i>	WA	Amber	NBDC online database record
Northern Lapwing <i>Vanellus vanellus</i>	SCI, BD II(II), WA	Red	NBDC online database record
Northern Shoveler <i>Anas clypeata</i>	SCI, BD II(I) BD III(III), WA	Red	NBDC online database record
Northern Wheatear <i>Oenanthe oenanthe</i>	WA	Amber	NBDC online database record
Razorbill <i>Alca torda</i>	SCI, WA	Red	NBDC online database record
Red Grouse <i>Lagopus lagopus</i>	BD II(I) BD III(I), WA	Red	NBDC online database record
Red Kite <i>Milvus milvus</i>	BD I, WA	Red	NBDC online database record
Red Knot <i>Calidris canutus</i>	SCI, WA	Red	NBDC online database record
Red-backed Shrike <i>Lanius collurio</i>	BD I, WA	n/a	NBDC online database record
Red-breasted Merganser <i>Mergus serrator</i>	SCI, BD II(II), WA	Amber	NBDC online database record
Red-legged Partridge <i>Alectoris rufa</i>	WA	n/a	NBDC online database record
Red-necked Phalarope <i>Phalaropus lobatus</i>	BD I, WA	Red	NBDC online database record
Red-throated Diver <i>Gavia stellata</i>	SCI, BD I, WA	Amber	NBDC online database record
Ring Ouzel <i>Turdus torquatus</i>	WA	Red	NBDC online database record
Ringed Plover <i>Charadrius hiaticula</i>	SCI, WA	Amber	NBDC online database record
Roseate Tern <i>Sterna dougallii</i>	SCI, BD I, WA	Amber	NBDC online database record
Sand Martin <i>Riparia riparia</i>	WA	Amber	NBDC online database record



Common Name / Scientific name	Legal Status	Red List Status	Source
Sandwich Tern <i>Sterna (Thalasseus) sandvicensis</i>	SCI, BD I, WA	Amber	NBDC online database record
Short-eared Owl <i>Asio flammeus</i>	BD I, WA	Amber	NBDC online database record
Sky Lark <i>Alauda arvensis</i>	WA	Amber	NBDC online database record
Smew <i>Mergellus albellus</i>	BD I, WA	Amber	NBDC online database record
Spotted Crake <i>Porzana porzana</i>	BD I, WA	Amber	NBDC online database record
Spotted Flycatcher <i>Muscicapa striata</i>	WA	Amber	NBDC online database record
Tufted Duck <i>Aythya fuligula</i>	SCI, BD II(I) BD III(II), WA	Amber	NBDC online database record
Twite <i>Carduelis flavirostris</i>	WA	Red	NBDC online database record
Whiskered Tern <i>Chlidonias hybrida</i>	WA	n/a	NBDC online database record
Whooper Swan <i>Cygnus cygnus</i>	SCI, BD I, WA	Amber	NBDC online database record
Wood Warbler <i>Phylloscopus sibilatrix</i>	WA	Red	NBDC online database record
Yellowhammer <i>Emberiza citrinella</i>	WA	Red	NBDC online database record
<b>Reptiles</b>			
Common Lizard <i>Zootoca vivipara</i>	WA	Least concern	NBDC online database record,
Leatherback Turtle <i>Dermochelys coriacea</i>	HD IV, WA	Least concern	NBDC online database record
Loggerhead Turtle <i>Caretta caretta</i>	HD II HD IV, WA	n/a	NBDC online database record
<b>Amphibians</b>			
Common Frog <i>Rana temporaria</i>	HD V	Least concern	NBDC online database record
Smooth Newt <i>Lissotriton vulgaris</i>	WA	Least concern	NBDC online database record
<b>Fish</b>			
European Eel <i>Anguilla anguilla</i>	OSPAR, Fisheries Acts	Critically endangered	NBDC online database record
<b>Invertebrates</b>			
Ash-black Slug <i>Limax cinereoniger</i>	n/a	Vulnerable	NBDC online database record
Blind Snail <i>Ceciloides acicula</i>	n/a	Vulnerable	NBDC online database record
Brown Snail <i>Zenobiella subrufescens</i>	n/a	Vulnerable	NBDC online database record
Common Shelled Slug <i>Testacella haliotideia</i>	n/a	Vulnerable	NBDC online database record
Ear Pond Snail <i>Radix auricularia</i>	n/a	Vulnerable	NBDC online database record
English Chrysalis Snail <i>Leiostyla anglica</i>	n/a	Vulnerable	NBDC online database record
False Orb Pea Mussel <i>Pisidium pseudosphaerium</i>	n/a	Endangered	NBDC online database record
Glutinous Snail <i>Myxas glutinosa</i>	n/a	Endangered	NBDC online database record
Heath Snail <i>Helicella itala</i>	n/a	Vulnerable	NBDC online database record
Lake Orb Mussel <i>Musculium lacustre</i>	n/a	Near threatened	NBDC online database record
Lesser Bulin <i>Merdigera obscura</i>	n/a	Endangered	NBDC online database record
Marsh Whorl Snail <i>Vertigo antivertigo</i>	n/a	Vulnerable	NBDC online database record
Mauge's Shelled Slug <i>Testacella maugei</i>	n/a	Near threatened	NBDC online database record
Moss bladder snail <i>Aplexa hypnorum</i>	n/a	Near threatened	NBDC online database record
Iridescent Pea Mussel <i>Pisidium pulchellum</i>	n/a	Endangered	NBDC online database record
Plaited Door Snail <i>Cochlodina laminata</i>	n/a	Vulnerable	NBDC online database record
Plated Snail <i>Spermodea lamellata</i>	n/a	Endangered	NBDC online database record
Point Snail <i>Acicula fusca</i>	n/a	Vulnerable	NBDC online database record

Common Name / Scientific name	Legal Status	Red List Status	Source
Smooth Grass Snail <i>Vallonia pulchella</i>	n/a	Vulnerable	NBDC online database record
Smooth Ramshorn <i>Gyraulus laevis</i>	n/a	Endangered	NBDC online database record
Swan Mussel <i>Anodonta cygnea</i>	n/a	Vulnerable	NBDC online database record
Tree Snail <i>Balea perversa</i>	n/a	Vulnerable	NBDC online database record
<b>Insects</b>			
August thorn <i>Ennomos quercinaria</i>	n/a	Regionally extinct	NBDC online database record
Barbut's Cuckoo Bee <i>Bombus barbutellus</i>	n/a	Endangered	NBDC online database record
Bare-saddled colletes bee <i>Colletes similis</i>	n/a	Near threatened	NBDC online database record
Bordered Pug <i>Eupithecia succenturiata</i>	n/a	Vulnerable	NBDC online database record
Bronze Furrow Bee <i>Halictus tumulorum</i>	n/a	Near threatened	NBDC online database record
Buffish Mining Bee <i>Andrena nigroaenea</i>	n/a	Vulnerable	NBDC online database record
Dark Green Fritillary <i>Argynnis aglaja</i>	n/a	Vulnerable	NBDC online database record
Dog's Tooth <i>Lacanobia suasa</i>	n/a	Near threatened	NBDC online database record
Double colon moss beetle <i>Ochthebius bicolon</i>	n/a	Vulnerable	NBDC online database record
Dull-vented sharp-tail bee <i>Coelioxys elongata</i>	n/a	Endangered	NBDC online database record
Feathered Gothic moth <i>Tholera decimalis</i>	n/a	Critically Endangered	NBDC online database record
Field Cuckoo Bee <i>Bombus campestris</i>	n/a	Vulnerable	NBDC online database record
Figure of Eight <i>Diloba caeruleocephala</i>	n/a	Near threatened	NBDC online database record
Forester <i>Adscita statices</i>	n/a	Endangered	NBDC online database record
Furry-bellied blood bee <i>Sphecodes hyalinatus</i>	n/a	Vulnerable	NBDC online database record
Furry-clasped furrow bee <i>Lasioglossum lativentre</i>	n/a	Critically Endangered	NBDC online database record
Garden Dart <i>Euxoa nigricans</i>	n/a	Near threatened	NBDC online database record
Gatekeeper <i>Pyronia tithonus</i>	n/a	Near threatened	NBDC online database record
Gipsy cuckoo bee <i>Bombus bohemicus</i>	n/a	Near threatened	NBDC online database record
Gooden's Nomad Bee <i>Nomada goodeniana</i>	n/a	Endangered	NBDC online database record
Grayling <i>Hipparchia semele</i>	n/a	Near threatened	NBDC online database record
Great Yellow Bumble Bee <i>Bombus distinguendus</i>	n/a	Endangered	NBDC online database record
Grey mountain carpet <i>Entephria caesiata</i>	n/a	Near threatened	NBDC online database record
Grey-banded mining bee <i>Andrena denticulata</i>	n/a	Vulnerable	NBDC online database record
Groove-faced mining bee <i>Andrena angustior</i>	n/a	Vulnerable	NBDC online database record
Halfpenny reed beetle <i>Donacia semicuprea</i>	n/a	Regionally extinct	NBDC online database record
Heart & Club <i>Agrotis clavis</i>	n/a	Near threatened	NBDC online database record
Hill Cuckoo Bee <i>Bombus Psithyrus rupestris</i>	n/a	Endangered	NBDC online database record
Large red tailed bumble bee <i>Bombus lapidarius</i>	n/a	Near threatened	NBDC online database record
Leaf Miner Beetle <i>Bagous alismatis</i>	n/a	Critically Endangered	NBDC online database record
<i>Limnebius nitidus</i>	n/a	Endangered	NBDC online database record
Maiden's blush <i>Cyclophora punctaria</i>	n/a	Endangered	NBDC online database record
Mallow <i>Larentia clavaria</i>	n/a	Critically Endangered	NBDC online database record
Mallow moth <i>Larentia clavaria</i>	n/a	Critically Endangered	NBDC online database record
March brown mayfly <i>Rhithrogena germanica</i>	n/a	Vulnerable	NBDC online database record

Common Name / Scientific name	Legal Status	Red List Status	Source
Marsh Fritillary <i>Euphydryas aurinia</i>	HD II	Vulnerable	NBDC online database record
<i>Megachile (Megachile) centuncularis</i>	n/a	Near threatened	NBDC online database record
<i>Megachile (Delomegachile) willughbiella</i>	n/a	Near threatened	NBDC online database record
Moss beetle <i>Ochthebius bicolon</i>	n/a	Vulnerable	NBDC online database record
Moss carder-bee <i>Bombus muscorum</i>	n/a	Near threatened	NBDC online database record
Mouse Moth <i>Amphipyra tragopoginis</i>	n/a	Near threatened	NBDC online database record
Narrow-bordered Five-spot Burnet <i>Zygaena loniceræ</i>	n/a	Vulnerable	NBDC online database record
Neat Mining Bee <i>Lasioglossum nitidiusculum</i>	n/a	Vulnerable	NBDC online database record
<i>Nomada obtusifrons</i>	n/a	Endangered	NBDC online database record
<i>Nomada panzeri</i>	n/a	Near threatened	NBDC online database record
<i>Nomada striata</i>	n/a	Endangered	NBDC online database record
Northern Colletes bee <i>Colletes floralis</i>	n/a	Vulnerable	NBDC online database record
Northern Drab <i>Orthosia opima</i>	n/a	Vulnerable	NBDC online database record
Painted mining bee <i>Andrena fucata</i>	n/a	Near threatened	NBDC online database record
Pale evening dun <i>Procloeon bifidum</i>	n/a	Vulnerable	NBDC online database record
Pale evening mayfly <i>Procloeon bifidum</i>	n/a	Vulnerable	NBDC online database record
Portland Moth <i>Actebia praecox</i>	n/a	Critically Endangered	NBDC online database record
<i>Protonemura praecox</i>	n/a	Critically Endangered	NBDC online database record
Red-tailed Carder bee <i>Bombus ruderarius</i>	n/a	Vulnerable	NBDC online database record
<i>Rhithrogena germanica</i>	n/a	Vulnerable	NBDC online database record
Rockhopper Beetle <i>Hydrocyphon deflexicollis</i>	n/a	Endangered	NBDC online database record
Sandpit Mining Bee <i>Andrena barbilabris</i>	n/a	Near threatened	NBDC online database record
Sandy Carpet <i>Perizoma flavofasciata</i>	n/a	Near threatened	NBDC online database record
Scarce Blue-tailed Damselfly <i>Ischnura pumilio</i>	n/a	Vulnerable	NBDC online database record
Sculptured moss beetle <i>Enicocerus exsculptus</i>	n/a	Endangered	NBDC online database record
Shiny-margined mini-mining bee <i>Andrena semilaevis</i>	n/a	Vulnerable	NBDC online database record
Short-horned yellow-face bee <i>Hylaeus brevicornis</i>	n/a	Endangered	NBDC online database record
Shrill Carder Bee <i>Bombus sylvarum</i>	n/a	Endangered	NBDC online database record
Small argent & sable <i>Epirrhoe tristata</i>	n/a	Vulnerable	NBDC online database record
Small Autumnal Moth <i>Epirrita filigrammaria</i>	n/a	Vulnerable	NBDC online database record
Small Blue <i>Cupido minimus</i>	n/a	Endangered	NBDC online database record
Small Flecked Mining Bee <i>Andrena coitana</i>	n/a	Vulnerable	NBDC online database record
Small Heath <i>Coenonympha pamphilus</i>	n/a	Near threatened	NBDC online database record
Small Purple-barred <i>Phytometra viridaria</i>	n/a	Near threatened	NBDC online database record
Small Sallow Mining Bee <i>Andrena praecox</i>	n/a	Vulnerable	NBDC online database record
Spattered diver <i>Agabus conspersus</i>	n/a	Endangered	NBDC online database record
Sprawler <i>Asteroscopus sphinx</i>	n/a	Near threatened	NBDC online database record
Suspected <i>Parastichtis suspecta</i>	n/a	Regionally extinct	NBDC online database record
Tawny mining bee <i>Andrena fulva</i>	n/a	Regionally extinct	NBDC online database record
Tissue <i>Triphosa dubitata</i>	n/a	Near threatened	NBDC online database record

Common Name / Scientific name	Legal Status	Red List Status	Source
Trimmer's Mining Bee <i>Andrena trimmerana</i>	n/a	Critically Endangered	NBDC online database record
Triple-spotted Clay <i>Xestia ditrapezium</i>	n/a	Regionally extinct	NBDC online database record
Upland Summer Mayfly <i>Ameletus inopinatus</i>	n/a	Near threatened	NBDC online database record
V-moth <i>Macaria wauaria</i>	n/a	Regionally extinct	NBDC online database record
Water plantain sloth weevil <i>Bagous alismatis</i>	n/a	Critically Endangered	NBDC online database record
Wood White <i>Leptidea sp.</i>	n/a	Near threatened	NBDC online database record
Yellow Shell <i>Camptogramma bilineata</i>	n/a	Near threatened	NBDC online database record

HDII / IV / V = Habitats Directive Annexes II / IV / V; FPO = Flora (Protection) Order, 2022; WA = Wildlife Acts.

HD II / IV / V = Habitats Directive Annexes II / IV / V; BD I / II / III = Birds Directive Annex I / II / III; OSPAR = Convention for the protection of the marine environment of the North-east Atlantic 1992, Third schedule of S.I. 477 = Third Schedule of S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011, Species of Union concern = Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species.

**Table 2: Non-native IAPS species listed under S.I 477 of the Birds and Habitats Regulations 2011**

Common Name / Scientific name	Legal Status	Source
American Skunk-Cabbage <i>Lysichiton americanus</i>	Third schedule of S.I. 477 / Species of Union concern	NBDC online database record
Brazilian Giant-Rhubarb <i>Gunnera Manicata</i>	Third schedule of S.I. 477	NBDC online database record
Canadian Waterweed <i>Elodea canadensis</i>	Delisted as Third Schedule per SI355 of 2015	NBDC online database record
Curly Waterweed <i>Lagarosiphon major</i>	Third schedule of S.I. 477 / Species of Union concern	NBDC online database record
Fallopia japonica x sachalinensis = F. x bohemica	Third schedule of S.I. 477	NBDC online database record
Fringed Water-lily ( <i>Nymphoides peltata</i> )	Third schedule of S.I. 477	NBDC online database record
Giant Hogweed <i>Heracleum mantegazzianum</i>	Third schedule of S.I. 477 / Species of Union concern	NBDC online database record
Giant Knotweed <i>Reynoutria sachalinensis</i>	Third schedule of S.I. 477	NBDC online database record
Giant-rhubarb <i>Gunnera tinctoria</i>	Third schedule of S.I. 477 / Species of Union concern	NBDC online database record
Himalayan Knotweed ( <i>Persicaria wallichii</i> )	Third schedule of S.I. 477	NBDC online database record
Indian Balsam <i>Impatiens glandulifera</i>	Third schedule of S.I. 477 / Species of Union concern	NBDC online database record
Japanese Knotweed <i>Reynoutria japonica</i>	Third schedule of S.I. 477	NBDC online database record
New Zealand Pigmyweed <i>Crassula helmsii</i>	Third schedule of S.I. 477	NBDC online database record
Nuttall's Waterweed <i>Elodea nuttallii</i>	Third schedule of S.I. 477 / Species of Union concern	NBDC online database record,
Parrot's-feather <i>Myriophyllum aquaticum</i>	Third schedule of S.I. 477 / Species of Union concern	NBDC online database record
Rhododendron <i>Rhododendron ponticum</i>	Third schedule of S.I. 477	NBDC online database record
Sea-Buckthorn <i>Hippophae rhamnoides</i>	Third schedule of S.I. 477	NBDC online database record
Spanish Bluebell <i>Hyacinthoides hispanica</i>	Third schedule of S.I. 477	NBDC online database record
Three-cornered Garlic <i>Allium triquetrum</i>	Third schedule of S.I. 477	NBDC online database record

S.I. 477 = Third Schedule of S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011, Species of Union concern = Regulation (EU) No 1143 / 2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species, and Commission Implementing Regulation (EU) 2017/1263 updating the list of invasive alien species of Union concern established by Implementing Regulation (EU) 2016/1141 pursuant to Regulation (EU) No 1143/2014 of the European Parliament and of the Council.

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