DRAFT STATUTORY INSTRUMENTS

2022 No. XXXX

ENVIRONMENTAL PROTECTION, ENGLAND

The Environmental Targets (Biodiversity) (England) Regulations 2022

Made - - - ***

Coming into force ***

The Secretary of State makes these Regulations in exercise of the powers conferred by sections 1, 3, 6(1) and 143(1) of the Environment Act 2021(a) ("the 2021 Act").

In accordance with section 3(4) of the 2021 Act, the Secretary of State is satisfied that meeting the species abundance target referred to in regulation 11 will halt a decline in the abundance of species.

In accordance with section 4(1) and (2) of the 2021 Act, the Secretary of State has sought advice from persons the Secretary of State considers to be independent and to have relevant expertise, and is satisfied that the targets in these Regulations can be met.

In accordance with sections 4(8) and 143(5)(b) of the 2021 Act, a draft of these Regulations has been laid before, and approved by resolution of, each House of Parliament.

PART 1

Introduction

Citation, commencement, extent and application

- **1.**—(1) These Regulations may be cited as the Environmental Targets (Biodiversity) (England) Regulations 2022.
 - (2) These Regulations come into force on the day after the day on which they are made.
- (3) These Regulations extend to England and Wales but apply in relation to England only, including the territorial sea adjacent to England.

Interpretation

2. In these Regulations—

"the 2021 Act" means the Environment Act 2021;

"the 2022 Red List Index for England" means the document entitled "Outcome Indicator Framework for England's 25 Year Environment Plan: D5 Conservation status of our native species, Data Sheet 2022 (NERR124)" published by Natural England in October 2022(a);

"native species" means species which naturally occur or have in the past naturally occurred in England, and include—

- (a) regularly occurring migratory species (both breeding and non-breeding) and natural colonists; and
- (b) species that have been reintroduced in England following past extinction;

"natural colonists" means species that arrived in England of their own accord and have become established, including those that become migratory species;

"species" includes ranks below and above species level, where these are listed—

- (a) for the purposes of Part 2 of these Regulations, in the 2022 Red List Index for England; or
- (b) for the purposes of Part 4 of these Regulations, in Schedule 2.

Biodiversity targets

- **3.**—(1) Regulations 4, 7 and 14 specify targets for the purposes of the Secretary of State's duty in section 1 of the 2021 Act to set a long-term target in respect of biodiversity.
- (2) Regulation 11 specifies a target for the purposes of the Secretary of State's duty in section 3 of the 2021 Act to set a target in respect of a matter relating to the abundance of species.

PART 2

Long-term biodiversity target: species' extinction risk

Species' extinction risk target

4. The long-term biodiversity target for species' extinction risk is to reduce the risk of species' extinction by 2042, when compared to the risk of species' extinction in 2022.

Measurement of species' extinction risk target

- **5.**—(1) The target in regulation 4 is met by 31st December 2042 if the extinction risk value for 2042 calculated in accordance with paragraph (2) has a greater value than the baseline value, with the extinction risk value for 2042 and the baseline value being expressed as values in a range from 1 to 0 where—
 - (a) a value of 1 would indicate that all baseline species were of Least Concern; and
 - (b) a value of 0 would indicate that all baseline species were Regionally Extinct.
- (2) The Secretary of State must ensure that an extinction risk value for 2042 is calculated in 2042 using the same methodology that was used to calculate the baseline value(**b**), to indicate the aggregate risk of extinction for all baseline species at the time of its calculation.
- (a) The 2022 Red List Index for England may be found at http://publications.naturalengland.org.uk/publication/6315201438941184 . A printed copy of the 2022 Red List Index for England may be obtained from Natural England, County Hall, Spetchley Road, Worcester WR5 2NP.
- (b) An explanation of how the 2022 Red List Index for England is calculated can be found in the document named "Outcome Indicator Framework for England's 25 Year Environment Plan: D5 Conservation status of our native species Technical background document for D5 Conservation status of our native species" published in October 2022, which can be found

(3) In this regulation—

"baseline species" means a species listed in the 2022 Red List Index for England;

"the baseline value" means the value of 0.9070, being the value set out in the 2022 Red List Index for England to indicate the aggregate risk of extinction for all baseline species.

- (4) In this regulation—
 - (a) a species is considered to be of Least Concern when it is classified as such for the purposes of calculating the 2022 Red List Index for England;
 - (b) a species is Regionally Extinct when it is classified as such for the purposes of calculating the 2022 Red List Index for England.

Reporting date for the species' extinction risk target

6. For the purposes of section 6(1) of the 2021 Act (environmental targets: reporting duties), the reporting date for the target in regulation 4 is 1st July 2043.

PART 3

Long-term biodiversity target: wildlife-rich habitat restoration or creation

Wildlife-rich habitat restoration or creation target

7. The long-term biodiversity target for the restoration or creation of wildlife-rich habitat is that on or after the day these Regulations come into force, in excess of 500,000 hectares of a range of wildlife-rich habitats are to be restored or created by 31st December 2042.

Measurement of the habitat restoration or creation target

- **8.**—(1) In order to measure the area of wildlife-rich habitat which is restored or created, the Secretary of State must obtain information about action that has been or is being undertaken in order to restore or create the wildlife-rich habitat on or after the day on which these Regulations come into force, including information about—
 - (a) the location of the action;
 - (b) the size of the area intended to become wildlife-rich habitat;
 - (c) the type of wildlife-rich habitat that is being restored or created.
 - (2) The Secretary of State must keep a record of the information obtained under paragraph (1).
- (3) For the purposes of this Part, habitat is restored or will be restored when appropriate action has been or is being taken to improve the condition of relict or degraded habitat which might reasonably be expected to lead to an expansion of the wildlife-rich habitat there, but excluding such action taken—
 - (a) on protected sites; or
 - (b) for the purpose of replacing habitat that has been lost on or after the day these Regulations come into force.
- (4) For the purposes of this Part, habitat is created or will be created when appropriate action has been or is being taken to establish wildlife-rich habitat on land, or water, excluding such action taken—
 - (a) on protected sites; or
 - (b) for the purpose of replacing habitat that has been lost on or after the day these Regulations come into force.

online at http://publications.naturalengland.org.uk/publication/6315201438941184 . A printed copy of this document may be obtained from Natural England, County Hall, Spetchley Road, Worcester WR5 2NP.

- (5) In paragraphs (3) and (4) "appropriate action" includes action—
 - (a) to develop one or more specific wildlife-rich habitat types; or
 - (b) to allow a dynamic mosaic of wildlife-rich habitats to develop through the restoration of natural processes and ecosystems.

Reporting date for the wildlife-rich habitat restoration or creation target

9. For the purposes of section 6(1) of the 2021 Act, the reporting date for the target in regulation 7 is 1st December 2043.

Interpretation of Part 3

10. In this Part—

"baseline" means the baseline from which the breadth of the territorial sea is measured;

"European site" has the meaning given in regulation 8 of the Conservation of Habitats and Species Regulations 2017(a) (European sites and European marine sites);

"marine conservation zone" means an area designated as a marine conservation zone under section 116(1) of the Marine and Coastal Access Act 2009(**b**) (marine conservation zones);

"nautical mile" means an international nautical mile of 1,852 metres;

- a "protected site" means a site which is-
- (a) a European site;
- (b) a site of special scientific interest; or
- (c) a marine conservation zone,

on or before the day these Regulations come into force, to the extent that the site is situated wholly or partly in England or in its waters;

"site of special scientific interest" means an area notified under section 28(1) of the Wildlife and Countryside Act 1981(c) (sites of special scientific interest);

"territorial sea" means such of the territorial sea of the United Kingdom that is adjacent to England;

"water" and "waters", in relation to England only, means all waters, including, in the case of the sea, the area of the sea and the seabed below that area of the sea which is on the landward side of a line every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline;

"wildlife-rich habitat" means a habitat that is one of the following types of habitat and which is of sufficient quality that it is, or will be, capable of supporting flora and fauna which are typically found in the habitat in question—

- (a) a habitat type of principal importance for the conservation of biodiversity listed by the Secretary of State under section 41 of the Natural Environment and Rural Communities Act 2006(**d**) (biodiversity lists and action (England));
- (b) another habitat type listed in Schedule 1.

⁽a) S.I. 2017/1012, as amended by S.I. 2019/579.

⁽b) 2009 c. 23. There are amendments of section 116, but none is relevant.

⁽c) 1981 c. 69. Section 28(1) was amended by section 105(1) of, and paragraph 79 of Schedule 11 to, the Natural Environment and Rural Communities Act 2006 (c. 16) and by section 148 of, and paragraph 2(1) and (2) of Schedule 13 to, the Marine and Coastal Access Act 2009 (c. 23).

⁽d) 2006 c.16. Section 41 is amended by section 102(8) of the 2021 Act. The list published by the Secretary of State in accordance with section 41 can be found in the document entitled "List of habitats and species of principal importance in England" published on 8th September 2022 and updated on 29th November 2022. This document can be found online at https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england. A printed copy of this document may be obtained from the Department for the Environment, Food and Rural Affairs, Seacole Building, 2 Marsham Street, London SW1P 4DF.

PART 4

Targets relating to the abundance of species

CHAPTER 1

2030 Species abundance target

2030 species abundance target

- 11.—(1) The 2030 species abundance target is that the overall relative species abundance index on the specified date indicates that the decline in the abundance of species has been halted.
- (2) The specified date for the 2030 species abundance target described in paragraph (1) is 31st December 2030.

Measurement of 2030 species abundance target

- 12.—(1) The 2030 species abundance target is to be measured by calculating the difference between the overall relative species abundance index for the years 2029 and 2030 in order to establish whether the overall relative species abundance index for the year 2030 is the same as, or higher than, the overall relative species abundance index for the year 2029.
- (2) The overall relative species abundance index for a year is derived from the calculation of the geometric mean of the relative species abundance indices for every species listed in Schedule 2 for that year, which is smoothed to reduce the impact of between-year fluctuations in data collected over time.
- (3) The same methodology must be used to determine the overall relative species abundance index for each year.
 - (4) In this regulation—
 - "baseline index" means the index value of 100 for any species in the first year that it is included in that relative species abundance index;
 - "geometric mean" means a mathematical process where a series of numbers are multiplied together and then the "n"th root of the product is calculated, where "n" is equal to the length of the series;
 - "relative species abundance index" for a species means an index which—
 - (a) is an annual measure;
 - (b) provides a standardised measure of abundance of that species across England; and
 - (c) is expressed as a value relative to 100, where—
 - (i) 100 is the baseline index for each species in the first year that it is measured in that relative species abundance index; and
 - (ii) 0 means no sightings of that species were recorded in a year(a).
- (5) Where a species listed in Schedule 2 appears in more than one dataset that meets the criteria referred to in sub-paragraphs (a) and (b) of the definition of "relative species abundance index" in paragraph (4), the relative species abundance index for that species is calculated—
 - (a) in the case of a species listed in Schedule 2 that is a plant, from the average value of species abundance for that species derived from all the species abundance datasets in which it appears;
 - (b) in the case of a species listed in Schedule 2 that is an animal, from the species abundance dataset that the Secretary of State considers best provides—

⁽a) If the value of the relative species abundance index is 50, this means that the abundance of that species has decreased by 50% compared to the first year of measurement. If the value of the relative species abundance index is 200, this means that the abundance of that species has doubled compared to the first year of measurement.

- (i) an annual measure; and
- (ii) a standardised measure of abundance of that species with the widest coverage across England.
- (6) For the purposes of paragraph (4), an index is only to be used if it is calculated using the same methodology each year.

Reporting date for the 2030 species abundance target

13. For the purposes of section 6(1) of the 2021 Act, the reporting date for the target in regulation 11 is 15th April 2032.

CHAPTER 2

Species abundance: long-term target

Long-term biodiversity target to reverse the decline of species abundance

- **14.** The long-term biodiversity target to reverse the decline of species abundance is that the overall relative species abundance index by 31st December 2042 is—
 - (a) higher than the overall relative species abundance index for 31st December 2022; and
 - (b) at least 10% higher than the overall relative species abundance index for 31st December 2030 (the specified date for the 2030 species abundance target).

Measurement of the long-term biodiversity target to reverse the decline of species abundance

- **15.**—(1) The long-term biodiversity target to reverse the decline of species abundance is to be measured by calculating the overall relative species abundance index for the following dates—
 - (a) 31st December 2022;
 - (b) 31st December 2030; and
 - (c) 31st December 2042.
- (2) Regulation 12(2) to (6) applies in relation to the measurement of the long-term biodiversity target to reverse the decline of species abundance as it applies to the measurement of the 2030 species abundance target described in regulation 11.

Reporting date for the long-term biodiversity target to reverse the decline of species abundance

16. For the purposes of section 6(1) of the 2021 Act, the reporting date for the target in regulation 14 is 15th April 2044.

Name
Parliamentary Under Secretary of State
Department for Environment, Food and Rural Affairs

Date

SCHEDULE 1

Regulation 10

Types of wildlife-rich habitat

Broad habitat	Wildlife-rich habitat other than a habitat type
	of principal importance for the conservation of
	biodiversity listed by the Secretary of State
	under section 41 of the Natural Environment
	and Rural Communities Act 2006

Acid grassland Lowland acid grassland
Acid grassland Upland acid grassland

Boundary and linear features Line of trees (ecologically valuable – such that

the line includes at least one tree per 30m length of ancient or veteran quality)

Boundary and linear features Line of trees (ecologically valuable – such that

the line includes at least one tree per 30m length of ancient or veteran quality) – with

bank or ditch

Boundary and linear features Native hedgerow with trees

Boundary and linear features Native hedgerow – associated with bank or

ditch

Boundary and linear features Native hedgerow with trees – associated with

bank or ditch

Boundary and linear features Native species-rich hedgerow

Boundary and linear features Native species-rich hedgerow – associated with

bank or ditch

Boundary and linear features Native species-rich hedgerow with trees

Broadleaved, mixed and yew woodland
Mixed scrub

Broadleaved, mixed and yew woodland Mixed woodland: mainly native broadleaved

(with a minimum requirement of 70% native

broadleaved species)

Broadleaved, mixed and yew woodland Native woodland: broadleaved Fen, marsh and swamp Floodplain wetland mosaic

Inland rock
Littoral rock

Littoral sediment Coastal saltmarsh and saline reedbeds

Littoral sediment
Littoral mixed sediments
Littoral muddy sand

Littoral sediment Littoral sand
Neutral grassland Neutral grassland
Rivers and streams Rivers and streams

Standing open waters Ponds

Sublittoral rock
Sublittoral rock
Sublittoral rock
Sublittoral rock
Sublittoral rock
Sublittoral rock

Sublittoral sediment Native oyster (Ostrea edulis) beds

Sublittoral sediment
Sublittoral sediment
Sublittoral sediment
Sublittoral sediment
Subtidal mixed sediments

Sublittoral sediment Subtidal mud Sublittoral sediment Subtidal sand

Sublittoral sediment Subtidal seagrass beds

Species for the targets relating to the abundance of species

Scientific name	Common name(a)
Birds	
Acanthis cabaret	Lesser redpoll
Accipiter gentilis	Northern goshawk
Accipiter nisus	Sparrowhawk
Acrocephalus palustris	Marsh warbler
Acrocephalus schoenobaenus	Sedge warbler
Acrocephalus scirpaceus	Reed warbler
Actitis hypoleucos	Common sandpiper
Aegithalos caudatus	Long-tailed tit
Alauda arvensis	Skylark
Alcedo atthis	Kingfisher
Anas acuta	Pintail
Anas crecca	Teal
Anas platyrhynchos	Mallard
Anser albifrons	European white-fronted goose
Anser anser	Greylag goose
Anser brachyrhynchus	Pink-footed goose
Anthus pratensis	Meadow pipit
Anthus trivialis	Tree pipit
Apus apus	Swift
Ardea cinerea	Grey heron
Arenaria interpres	Turnstone
Aythya ferina	Common pochard
Aythya fuligula	Tufted duck
Aythya marila	Scaup
Botaurus stellaris	Eurasian bittern
Branta bernicla	Brent goose
Bucephala clangula	Common goldeneye
Burhinus oedicnemus	Stone-curlew
Buteo buteo	Buzzard
Calidris alba	Sanderling
Calidris alpina	Dunlin
Calidris canutus	Knot
Calidris maritima	Purple sandpiper
Calidris pugnax	Ruff
Caprimulgus europaeus	Nightjar
Carduelis carduelis	Goldfinch
Certhia familiaris	Treecreeper
Cettia cetti	Cetti's warbler
Charadrius hiaticula	Ringed plover
Chloris chloris	Greenfinch
Chroicocephalus ridibundus	Black-headed gull
Cinclus cinclus	Dipper
Circus aeruginosus	Marsh harrier

⁽a) The common name or names given in the second column of this Schedule are included by way of guidance only.

Circus pygargus Montagu's harrier

Coloeus monedulaJackdawColumba oenasStock doveColumba palumbusWoodpigeonCorvus coraxRavenCorvus coroneCarrion crowCorvus frugilegusRook

Coturnix coturnixCommon quailCrex crexCorncrakeCuculus canorusCuckooCurruca communisWhitethroatCurruca undataDartford warbler

Cyanistes caeruleus Blue tit

Cygnus columbianusBewick's swanCygnus cygnusWhooper swanCygnus olorMute swanDelichon urbicumHouse martin

Dendrocopos majorGreat spotted woodpeckerDryobates minorLesser spotted woodpecker

Egretta garzettaLittle egretEmberiza calandraCorn buntingEmberiza cirlusCirl buntingEmberiza citrinellaYellowhammerEmberiza schoeniclusReed bunting

Erithacus rubecula Robin Falco columbarius Merlin Falco peregrinus Peregrine Falco subbuteo Hobby Falco tinnunculus Kestrel Chaffinch Fringilla coelebs Fulica atra Common coot Fulmarus glacialis Northern fulmar

Gallinago gallinagoSnipeGallinula chloropusMoorhenGarrulus glandariusJay

Grus grusCommon craneHaematopus ostralegusOystercatcherHirundo rusticaSwallow

Ichthyaetus melanocephalus Mediterranean gull

Lagopus lagopus Red grouse

Lanius collurioRed-backed shrikeLarus argentatusHerring gullLimosa lapponicaBar-tailed godwitLimosa limosaBlack-tailed godwit

Linaria cannabina Linnet
Linaria flavirostris Twite

Locustella luscinioidesSavi's warblerLullula arboreaWoodlarkLuscinia megarhynchosNightingaleLyrurus tetrixBlack grouseMareca penelopeWigeonMareca streperaGadwallMergus merganserGoosander

Mergus serrator Red-breasted merganser

Milvus milvus Red kite

Morus bassanusNorthern gannetMotacilla albaPied wagtailMotacilla cinereaGrey wagtailMotacilla flavaYellow wagtailMuscicapa striataSpotted flycatcher

Curlew Numenius arquata Oenanthe oenanthe Wheatear Oriolus oriolus Golden oriole Pandion haliaetus Osprey Panurus biarmicus Bearded tit Parus major Great tit House sparrow Passer domesticus Passer montanus Tree sparrow Perdix perdix Grey partridge Periparus ater Coal tit

Pernis apivorus Honey-buzzard Phalacrocorax aristotelis European shag Phalacrocorax carbo Great cormorant Phoenicurus ochruros Black redstart Phoenicurus phoenicurus Redstart Chiffchaff Phylloscopus collybita Wood warbler Phylloscopus sibilatrix Phylloscopus trochilus Willow warbler

Pica pica Magpie

Picus viridisGreen woodpeckerPlatalea leucorodiaEurasian spoonbillPluvialis apricariaGolden ploverPluvialis squatarolaGrey plover

Podiceps cristatusGreat crested grebePodiceps nigricollisBlack-necked grebe

Poecile montanus Willow tit Poecile palustris Marsh tit Porzana porzana Spotted crake Dunnock Prunella modularis Bullfinch Pyrrhula pyrrhula Recurvirostra avosetta Avocet Firecrest Regulus ignicapilla Regulus regulus Goldcrest Riparia riparia Sand martin

Rissa tridactyla Black-legged kittiwake

Saxicola rubetra Whinchat Saxicola rubicola Stonechat Nuthatch Sitta europaea Eider Somateria mollissima Spatula clypeata Shoveler Spatula querquedula Garganey Spinus spinus Siskin Sterna dougallii Roseate tern Sterna hirundo Common tern Sterna paradisaea Arctic tern Sternula albifrons Little tern

Streptopelia decaocto Collared dove Turtle dove Streptopelia turtur Strix aluco Tawny owl Starling Sturnus vulgaris Blackcap Sylvia atricapilla Garden warbler Sylvia borin Sylvia curruca Lesser whitethroat Tachybaptus ruficollis Little grebe Tadorna tadorna Shelduck Thalasseus sandvicensis Sandwich tern Redshank Tringa totanus Troglodytes troglodytes Wren Turdus merula Blackbird Song thrush Turdus philomelos Turdus torquatus Ring ouzel Turdus viscivorus Mistle thrush Uria aalge Guillemot Vanellus vanellus Lapwing

Bumblebees

Bombus pascuorum Common carder bee Red-tailed bumblebee Bombus lapidarius Bombus pratorum Early bumblebee Bombus hypnorum Tree bumblebee Bombus hortorum Garden bumblebee

Bombus lucorum / terrestris White-tailed / buff-tailed bumblebee

Bombus vestalis Southern cuckoo bumblebee Bombus sylvestris Forest cuckoo bumblebee Bombus campestris Field cuckoo bumblebee Bombus rupestris Red-tailed cuckoo bumblebee Bombus humilis Brown-banded carder bee

Fish

Abramis brama Common bream

Alburnus alburnus Bleak

Lesser sandeel Ammodytes tobianus

Anguilla anguilla Ee1

Sand smelt Atherina presbyter Barbatula barbatula Stone loach Barbus barbus Barbel Blicca bjoerkna Silver bream Carassius carassius Crucian carp

Chelon labrosus Thick lipped grey mullet

Clupea harengus Herring Cobitis taenia Spined loach Bullhead Cottus gobio Dicentrarchus labrax Sea bass

Esox lucius Pike

Gasterosteus aculeatus Three spined stickleback

Gudgeon Gobio gobio Gymnocephalus cernuus Ruffe Leuciscus leuciscus Dace

Golden grey mullet Liza aurata Liza ramada Thin lipped grey mullet

Osmerus eperlanus Smelt Perca fluviatilisPerchPhoxinus phoxinusMinnowPlatichthys flesusFlounderPleuronectes platessaPlaice

Pomatoschistus micropsCommon gobyPomatoschistus minutusSand goby

Pungitius pungitius Ten spined stickleback

Rutilus rutilus Roach

Salmo salarAtlantic salmonSalmo truttaBrown trout

Scardinius erythrophthalmusRuddSprattus sprattusSpratSqualius cephalusChub

Syngnathus acus Greater pipefish
Thymallus thymallus Grayling

Tinca tinca Tench

Freshwater invertebrates

Acroloxus lacustris Lake limpet

Adicella reducta

Aeshna spp. Hawkers
Agabus spp. Agabus (beetle)

Agapetus spp.

Agraylea multipunctata Salt and pepper microcaddis

Alboglossiphonia heteroclita White leech

Ameletus inopinatusUpland summer mayflyAmphinemura spp.Spring stonefliesAmpullaceana balthicaWandering snail

Anabolia nervosa Anacaena globulus Anacaena limbata

Ancylus fluviatilis River limpet

Anisus leucostoma White-lipped ramshorn
Anisus vortex Whirlpool ramshorn

Antocha vitripennis

Aphelocheirus aestivalis

Asellus aquaticus Pond slater / Water louse
Atherix ibis Yellow-legged water-snipefly

Athripsodes spp.

Austropotamobius pallipes White-clawed crayfish

Baetis buceratus Scarce olive Baetis muticus Iron blue

Baetis rhodaniLarge dark oliveBaetis scambus groupSmall dark oliveBaetis vernusMedium oliveBathyomphalus contortusTwisted ramshorn

Beraea maurus

Beraea pullata

Beraeodes minutus

Beris spp. Green soldier flies

Bithynia leachii

Bithynia tentaculata Faucet snail

Brachycentrus subnubilus

Brachyptera risi

Brychius elevatus Caenis horaria

Caenis luctuosa group Angler's curse

Caenis pusilla Caenis rivulorum Caenis robusta

Callicorixa praeustaWater boatmanCalopteryx spp.Damselflies

Capnia spp. Small winter stoneflies

Centroptilum luteolum Small spurwing

Ceraclea spp. Long-horned caddisflies

Chaetopteryx villosa Cheumatopsyche lepida Chloroperla tripunctata

Cloeon dipterum Pond olive

Coenagrion spp.Eurasian bluets damselfliesCordulegaster boltoniiGolden-ringed dragonflyCrenobia alpinaAlpine flatworm

Crunoecia irrorata Cyrnus flavidus Cyrnus trimaculatus

Dendrocoelum lacteum Aquatic flatworm

Dicranota spp.
Dinocras cephalotes
Diplectrona felix
Dixa nebulosa
Dixa puberula
Drusus annulatus
Dryops spp.

Dugesia polychroa group

Dytiscus spp.

Ecclisopteryx dalecarlica

Ecdyonurus spp.
Electrogena spp.
Elmis aenea
Elodes spp.
Eloeophila spp.

Enallagma cyathigerum Common blue damselfly

Ephemera spp. Erpobdella spp.

Erythromma najas Red-eyed damselfly

Esolus parallelepipedus

Galba truncatula Dwarf pond snail

Gammarus pulex group Common freshwater shrimp

Gammarus zaddachi

Gerris spp.

Glossiphonia complanata Glossiphonia verrucata

Glossosoma spp.

Glyphotaelius pellucidus

Goera pilosa Graptodytes pictus

Gyraulus albus White ramshorn

13

Gyraulus crista
Nautilus ramshorn
Gyraulus laevis
Smooth ramshorn
Gyrinus substriatus

Gyrinus urinator
Habrophlebia fusca
Ditch dun

Halesus spp.
Haliplus confinis
Haliplus lineatocollis
Haliplus ruficollis group
Helobdella stagnalis
Helophorus brevipalpis
Hermiclepsis marginata

Heptagenia spp.
Hesperocorixa sahlbergi Lesser waterboatman

Hippeutis complanatus Flat ramshorn
Hydraena gracilis

Hydraena riparia
Hydrobius fuscipes
Hydroporus palustris
Hydropsyche angustipennis
Hydropsyche contubernalis
Hydropsyche instabilis
Hydropsyche pellucidula
Hydropsyche siltalai

Hydroptila spp.

Hyphydrus ovatus

Ibisia marginata

Black-legged water-snipefly

Ilybius spp.

Ilyocoris cimicoidesSaucer bugIschnura elegansBlue-tailed damselflyIsoperla grammaticaCommon yellow sally

Isoperia grammatica Common yell
Ithytrichia spp.
Laccobius spp.
Laccophilus hyalinus
Lepidostoma basale
Lepidostoma hirtum

Limnephilus extricatus Limnephilus flavicornis

Limnephilus lunatus Cinnamon sedge Limnephilus marmoratus Limnephilus rhombicus

Limnius volckmari

Lymnaea stagnalis Great pond snail Lype spp.

Melampophylax mucoreus

Micronecta spp.
Micropterna lateralis
Micropterna sequax
Molanna angustata
Mystacides spp.

Nebrioporus depressus group

Leptophlebia spp. Leuctra spp. Nemoura spp. Nemurella pictetii

Nepa cinerea Water scorpion

Neureclipsis bimaculata

Nigrobaetis spp.

Noterus clavicornis Larger noterus

Notonecta glauca Common backswimmer

Notonecta maculata Notonecta viridis Ochthebius spp.

Odontocerum albicorne

Oecetis spp.

Orectochilus villosus Oreodytes sanmarkii Oulimnius spp.

Oxycera spp.
Oxyethira spp.

Paraleptophlebia spp.

Pedicia spp. Perla bipunctata

Perlodes mortoni Orange-striped stonefly

Phagocata vitta

Philopotamus montanus Yellow spotted sedge

Phryganea bipunctata

Physa fontinalis Common bladder snail

Pilaria spp.

Piscicola geometra Common fish leech

Pisidium spp.

Planorbarius corneus Great ramshorn

Planorbis spp.

Platambus maculatus

Platycnemis pennipes White-legged damselfly

Plea minutissima Plectrocnemia spp. Polycelis spp. Polycentropus spp.

Potamanthus luteus Yellow mayfly

Potamophylax cingulatus Potamophylax latipennis Potamophylax rotundipennis

Proasellus meridianus One-spotted waterlouse

Procloeon pennulatum Prosimulium spp. Protonemura spp. Psychomyia pusilla Ptychoptera spp.

Pyrrhosoma nymphulaLarge red damselflyRadix auriculariaEar pond snail

Rhithrogena spp.

Rhyacophila dorsalis Sandfly

Rhyacophila fasciata Rhyacophila munda Rhyacophila obliterata Riolus spp.

Sericostoma personatum

Serratella ignita Blue-winged olive

Sialis fuliginosa

Sialis lutaria Common alderfly

Sigara dorsalis Sigara falleni Sigara fossarum Silo nigricornis Silo pallipes

Simulium (Wilhemia) spp.
Simulium angustitarse group
Simulium argyreatum group
Simulium aureum group
Simulium costatum

Simulium cryophilum-vernum group

Simulium erythrocephalum

Simulium noelleri

Simulium ornatum group

Simulium reptans

Simulium tuberosum complex Twinn's black fly

Siphlonurus spp.

Siphonoperla torrentium Small yellow sally

Sisyra spp. Sphaerium spp. Stagnicola spp.

Stictotarsus duodecimpustulatus

Taeniopteryx nebulosaFebruary redTheodoxus fluviatilisRiver neriteTheromyzon tessulatumDuck leech

Tinodes unicolor Tinodes waeneri Tipula spp.

Triaenodes bicolor Trocheta spp.

Valvata cristataFlat valve snailValvata piscinalisEuropean valve snail

Velia spp.

Viviparus viviparus Common river snail

Wormaldia spp.

Lepidoptera (Butterfly)

Aglais io Peacock

Aglais urticae Small tortoiseshell
Anthocharis cardamines Orange-tip

Anthocharis cardamines Orange-tip

Apatura iris Purple emperor

Aphantopus hyperantus Ringlet

Argynnis adippeHigh brown fritillaryArgynnis paphiaSilver-washed fritillary

Aricia agestis Brown argus

Aricia artaxerxesNorthern brown argusBoloria euphrosynePearl-bordered fritillaryBoloria seleneSmall pearl-bordered fritillary

Callophrys rubi Green hairstreak

Celastrina argiolus Holly blue Small heath Coenonympha pamphilus Colias croceus Clouded yellow Small blue Cupido minimus Scotch argus Erebia aethiops Erynnis tages Dingy skipper Euphydryas aurinia Marsh fritillary Purple hairstreak Favonius quercus

Hamearis lucinaDuke of burgundyHesperia commaSilver-spotted skipper

Brimstone

Hipparchia semeleGraylingLasiommata megeraWall

Gonepteryx rhamni

Wood white Leptidea sinapis Limenitis camilla White admiral Lycaena phlaeas Small copper Maculinea arion Large blue Maniola jurtina Meadow brown Melanargia galathea Marbled white Melitaea athalia Heath fritillary Melitaea cinxia Glanville fritillary Ochlodes sylvanus Large skipper Swallowtail Papilio machaon Speckled wood Pararge aegeria Pieris brassicae Large white

Pieris napi Green-veined white

Pieris rapae Small white

Plebejus argus Silver-studded blue

Polygonia c-albumCommaPolyommatus bellargusAdonis bluePolyommatus coridonChalk hill bluePolyommatus icarusCommon bluePyrgus malvaeGrizzled skipperPyronia tithonusGatekeeperSatyrium pruniBlack hairstreak

Satyrium w-album White-letter hairstreak Speyeria aglaja Dark green fritillary Thecla betulae Brown hairstreak Lulworth skipper Thymelicus acteon Thymelicus lineola Essex skipper Small skipper Thymelicus sylvestris Vanessa atalanta Red admiral Painted lady Vanessa cardui

Lepidoptera (Moths)

Abraxas grossulariata

Abraxas sylvata

Abrostola tripartita

Abrostola triplasia

The magpie

Clouded magpie

The spectacle

Dark spectacle

Acasis viretata Yellow-barred brindle

Achlya flavicornisYellow hornedAcronicta psiGrey daggerAcronicta rumicisKnot grassAcronicta tridensDark dagger

Aethalura punctulata Grey birch Scarce umber Agriopis aurantiaria Agriopis leucophaearia Spring usher Agriopis marginaria Dotted border Agrochola helvola Flounced chestnut Agrochola litura Brown-spot pinion Agrochola lota Red-line quaker Agrochola macilenta Yellow-line quaker

Agrochola circellaris The brick Agrochola lychnidis Beaded chestnut Heart & club Agrotis clavis Agrotis exclamationis Heart & dart Agrotis ipsilon Dark sword-grass Agrotis puta Shuttle-shaped dart Agrotis segetum Turnip moth Agrotis vestigialis Archer's dart Alcis jubata Dotted carpet

Alcis repandata Mottled beauty
Allophyes oxyacanthae Green-brindled crescent

Alsophila aesculariaMarch mothAmphipoea lucensLarge earAmphipoea oculeaEar moth

Amphipyra berbera Svensson's copper underwing

Amphipyra pyramideaCopper underwingAmphipyra tragopoginisMouse mothAnaplectoides prasinaGreen archesAnarta trifoliiNutmeg

Anorthoa munda Twin-spotted quaker

Anticlea derivataThe streamerAntitype chiGrey chiApamea ancepsLarge nutmeg

Apamea crenata Clouded-bordered brindle

Apamea epomidionClouded brindleApamea lithoxylaeaLight archesApamea monoglyphaDark archesApamea remissaDusky brocadeApamea scolopacinaSlender brindleApamea sordensRustic shoulder-knotApamea unanimisSmall clouded brindle

Apeira syringariaLilac beautyAplocera efformataLesser treble-barAplocera plagiataTreble-bar

Small brindled beauty Apocheima hispidaria Aporophyla lutulenta Deep-brown dart Black rustic Aporophyla nigra Dingy shears Apterogenum ypsillon Garden tiger Arctia caja Aspitates gilvaria Straw belle Yellow belle Aspitates ochrearia Asteroscopus sphinx The sprawler

Asteroscopus sphinx
Asthena albulata
Small white wave
Atethmia centrago
Centre-barred sallow

Athetis pallustris Marsh moth

Autographa bracteaGold spangleAutographa gammaSilver YAutographa jotaPlain golden YAutographa pulchrinaBeautiful golden YAxylia putrisThe flame

Axylia putris

Biston betularia

Peppered moth

Biston strataria

Oak beauty

Brachylomia viminalisMinor shoulder-knotBryophila domesticaMarbled beautyBupalus piniariaBordered whiteCabera exanthemataCommon waveCabera pusariaCommon white wave

Calliteara pudibundaPale tussockCampaea margaritariaLight emeraldCamptogramma bilineataYellow shell

Caradrina clavipalpis Pale mottled willow moth

Caradrina morpheus Mottled rustic Catarhoe rubidata Ruddy carpet Catocala nupta Red underwing Celaena haworthii Haworth's minor Cerapteryx graminis Antler moth Cerastis rubricosa Red chestnut Broom moth Ceramica pisi Charanyca trigrammica Treble lines

Chesias legatella The streak Broom-tip Chesias rufata Chiasmia clathrata Latticed heath Chloroclysta miata Autumn green carpet Chloroclysta siterata Red-green carpet Chloroclystis v-ata The V-pug Barred yellow Cidaria fulvata Cilix glaucata Chinese character

Cirrhia gilvagoDusky-lemon sallowCirrhia icteritiaSallowCleorodes lichenariaBrussels laceClostera curtulaChocolate-tipCoenobia rufaSmall rufous

Coenotephria salicata Striped twin-spot carpet

Coleophora vibicella

Nut-tree tussock Colocasia coryli Colostygia multistrigaria Mottled grey Green carpet Colostygia pectinataria Feathered thorn Colotois pennaria Comibaena bajularia Blotched emerald Conistra ligula Dark chestnut Conistra rubiginea Dotted chestnut Conistra vaccinii The chestnut

Cosmia affinisLesser-spotted pinionCosmia pyralinaLunar-spotted pinion

Cosmia trapezinaThe dun-barCosmorhoe ocellataPurple barCraniophora ligustriThe coronetCrocallis elinguariaScalloped oak

Cucullia umbratica The shark

Cybosia mesomella Four-dotted footman

Cyclophora albipunctataBirch mochaCyclophora lineariaClay triple-linesCyclophora punctariaMaiden's blushCymatophorina dilutaOak lutestringDeilephila elpenorElephant hawk-moth

Deileptenia ribeata Satin beauty

Deltote pygarga Marbled white spot Denticucullus pygmina Small wainscot Diachrysia chrysitis Burnished brass Diacrisia sannio Clouded buff Diaphora mendica Muslin moth Diarsia brunnea Purple clay Diarsia dahlii Barred chestnut Diarsia mendica Ingrailed clay Diarsia rubi Small square-spot Diloba caeruleocephala Figure of eight Drepana falcataria Pebble hook-tip Drymonia dodonaea Marbled brown

Drymonia aodonaea Maroled brown
Drymonia ruficornis Lunar marbled brown
Dryobotodes eremita Brindled green
Dypterygia scabriuscula Bird's wing

Dysstroma citrataDark marbled carpetDysstroma truncataCommon marbled carpet

Earophila badiata Shoulder-stripe Ecliptopera silaceata Small phoenix Ectropis crepuscularia The engrailed Scarce footman Eilema complana Eilema depressa Buff footman Dingy footman Eilema griseola Eilema lurideola Common footman Eilema sororcula Orange footman Electrophaes corylata Broken-barred carpet Ennomos alniaria Canary-shouldered thorn

Ennomos autumnariaLarge thornEnnomos erosariaSeptember thornEnnomos fuscantariaDusky thornEnnomos quercinariaAugust thorn

Grey mountain carpet Entephria caesiata Epione repandaria Bordered beauty Epirrhoe alternata Common carpet Epirrhoe galiata Galium carpet Epirrhoe rivata Wood carpet Autumnal moth Epirrita autumnata Epirrita christyi Pale November moth Epirrita dilutata November moth Epirrita filigrammaria Small autumnal moth

Erannis defoliaria Mottled umber
Eremobia ochroleuca Dusky sallow
Euchoeca nebulata Dingy shell
Eugnorisma glareosa Autumnal rustic
Eulithis mellinata The spinach

Eulithis populata Northern spinach The phoenix Eulithis prunata Eulithis testata The chevron Cloaked carpet Euphyia biangulata Euphyia unangulata Sharp-angled carpet Eupithecia abbreviata Brindled pug Eupithecia absinthiata Wormwood pug Eupithecia assimilata Currant pug

Eupithecia centaureata Lime-speck pug Eupithecia dodoneata Oak-tree pug Eupithecia exiguata Mottled pug Eupithecia haworthiata Haworth's pug Eupithecia icterata Tawny speckled pug Eupithecia indigata Ochreous pug Eupithecia innotata Angle-barred pug Eupithecia intricata Freyer's pug Eupithecia inturbata Maple pug

Eupithecia linariata Toadflax pug
Eupithecia nanata Narrow-winged pug

Larch pug

Eupithecia lariciata

Eupithecia phoeniceata Cypress pug Eupithecia pulchellata Foxglove pug Eupithecia pusillata Juniper pug Eupithecia satyrata Satyr pug Eupithecia simpliciata Plain pug Eupithecia subfuscata Grey pug Eupithecia succenturiata Bordered pug Eupithecia tantillaria Dwarf pug Eupithecia tenuiata Slender pug Eupithecia tripunctaria White-spotted pug

Eupithecia venosataNetted pugEupithecia virgaureataGolden-rod pugEupithecia vulgataCommon pugEuplexia luciparaSmall angle shades

Euproctis chrysorrhoeaBrown-tailEuproctis similisYellow-tailEupsilia transversaThe satellite

Eustroma reticulata Netted carpet moth

The drinker Euthrix potatoria Garden dart Euxoa nigricans Euxoa tritici White-line dart Falcaria lacertinaria Scalloped hook-tip Sallow kitten Furcula furcula Gandaritis pyraliata Barred straw Gastropacha quercifolia The lappet Geometra papilionaria Large emerald Gortyna flavago Frosted orange Graphiphora augur Double dart Merveille du jour Griposia aprilina

Gymnoscelis rufifasciataDouble-striped pugHabrosyne pyritoidesBuff archesHada plebejaThe shearsHadena bicrurisThe lychnis

Hadena confusaMarbled coronetHadena perplexaTawny shearsHecatera bicolorataBroad-barred white

Crescent Helotropha leucostigma Hemistola chrysoprasaria Small emerald Common emerald Hemithea aestivaria Hepialus humuli Ghost moth Herminia grisealis Small fan-foot Herminia tarsipennalis The fan-foot Hoplodrina ambigua Vine's rustic Hoplodrina blanda The rustic Hoplodrina octogenaria Uncertain Horisme tersata The fern

Horisme vitalbata Small waved umber

Hydraecia micacea Rosy rustic

Hydraecia osseolaMarsh mallow mothHydrelia flammeolariaSmall yellow wave

Hydria cervinalis Scarce tissue Hydria undulata Scallop shell Hydriomena furcata July highflyer Hydriomena impluviata May highflyer Hylaea fasciaria Barred red Beautiful snout Hypena crassalis Hypena proboscidalis The snout Hypomecis punctinalis Pale oak beauty Hypomecis roboraria Great oak beauty Idaea aversata Riband wave

Idaea biselata Small fanfooted wave Single-dotted wave Idaea dimidiata Idaea emarginata Small scallop Dwarf cream wave Idaea fuscovenosa Idaea ochrata Bright wave moth Idaea rusticata Least carpet Idaea seriata Small dusty wave Idaea straminata Plain wave

Idaea subsericeataSatin waveIdaea trigeminataTreble brown spot

Ipimorpha subtusaThe oliveJodis lacteariaLittle emeraldKorscheltellus fusconebulosaMap-winged swiftKorscheltellus lupulinaCommon swift

Lacanobia oleracea Bright-line brown-eye

Lacanobia suasa Dog's tooth

Lacanobia thalassina Pale-shouldered brocade

Lampropteryx otregiataDevon carpetLampropteryx suffumataWater carpetLaothoe populiPoplar hawk-mothLarentia clavariaThe mallowLasiocampa quercusOak eggar

Laspeyria flexulaBeautiful hook-tipLateroligia ophiogrammaDouble lobed

Leucania comma Shoulder-striped wainscot

Ligdia adustata Scorched carpet

Litoligia literosa Rosy minor

Blair's shoulder-knot Lithophane leautieri Lithophane ornitopus Grey shoulder-knot Pale pinion Lithophane socia The seraphim Lobophora halterata Lomaspilis marginata Clouded border Lomographa bimaculata White-pinion spotted Clouded silver Lomographa temerata Luperina testacea Flounced rustic Lycia hirtaria Brindled beauty Belted beauty Lycia zonaria

Lycia zonariaBelted beautyLycophotia porphyreaTrue lover's knotLygephila pastinumThe blackneckLymantria monachaBlack archesMacaria alternataSharp-angled peacock

Macaria liturataTawny-barred angleMacaria notataPeacock mothMacaria wauariaThe V-mothMacrothylacia rubiFox mothMalacosoma neustriaThe lackeyMamestra brassicaeCabbage mothMelanchra persicariaeDot moth

Melanthia procellataPretty chalk carpetMenophra abruptariaWaved umber

Mesapamea secalis / didyma

Mesoleuca albicillataBeautiful carpetMesoligia furunculaCloaked minorMesotype didymataTwin-spot carpetMiltochrista miniataRosy footmanMniotype adustaDark brocadeMythimna albipunctaWhite-pointMythimna ferragoThe clay

Mythimna conigeraBrown-line bright-eyeMythimna impuraSmoky wainscotMythimna pallensCommon wainscot

Naenia typica The gothic

Noctua comes Lesser yellow underwing

Noctua fimbriata Broad-bordered yellow underwing

Noctua interjecta Least yellow underwing

Noctua janthe Lesser broad-bordered yellow underwing

Noctua pronubaLarge yellow underwingNola confusalisLeast black archesNola cucullatellaShort-cloaked moth

Nomophila noctuella Rush veneer Notodonta dromedarius Iron prominent Pebble prominent Notodonta ziczac Nudaria mundana Muslin footman Nycteola revayana Oak nycteoline Ochropacha duplaris Common lutestring Ochropleura plecta Flame shoulder Odontopera bidentata Scalloped hazel Odontosia carmelita Scarce prominent Oligia fasciuncula Middle-barred minor Oligia latruncula Tawny marbled minor

Oligia strigilisMarbled minorOligia versicolorRufous minorOmphaloscelis lunosaLunar underwingOperophtera brumataWinter moth

Northern winter moth Operophtera fagata Opisthograptis luteolata Brimstone moth Orgyia antiqua The vapourer Orthonama vittata Oblique carpet Orthosia cerasi Common quaker Small quaker Orthosia cruda Orthosia gothica Hebrew character Orthosia gracilis Powdered quaker Orthosia incerta Clouded drab Orthosia populeti Lead-coloured drab Ourapteryx sambucaria Swallow-tailed moth

Pachycnemia hippocastanariaHorse chestnutPanolis flammeaPine beautyParascotia fuliginariaWaved black

Parectropis similaria Brindled white-spot

Pasiphila rectangulata Green pug Pelurga comitata Dark spinach Pine carpet Pennithera firmata Peribatodes rhomboidaria Willow beauty Peridea anceps Great prominent Perizoma affinitata The rivulet Perizoma albulata Grass rivulet Perizoma alchemillata Small rivulet Barred rivulet Perizoma bifaciata Perizoma flavofasciata Sandy carpet Brown silver-line Petrophora chlorosata

Phalera bucephala Buff-tip

Pheosia gnomaLesser swallow prominentPheosia tremulaSwallow prominentPhigalia pilosariaPale brindled beauty

Philereme transversataDark umberPhilereme vetulataBrown scallopPhlogophora meticulosaAngle shadesPhotedes fluxaMere wainscotPhotedes minimaSmall dotted buff

Phragmatobia fuliginosaRuby tigerPhymatopus hectaGold swiftPlagodis dolabrariaScorched wingPlagodis pulverariaBarred umber

Plemyria rubiginata Blue-bordered carpet

Plusia festucae Gold spot

Plutella xylostellaDiamond-back mothPoecilocampa populiDecember mothPolia nebulosaGrey archesPolychrysia monetaGolden plusiaPolymixis flavicinctaLarge ranunculusPolymixis licheneaFeathered ranunculus

Polyploca ridens Frosted green

Pseudoips prasinanaGreen silver-linesPseudoterpna pruinataGrass emeraldPterapherapteryx sexalataSmall seraphimPterostoma palpinaPale prominentPtilodon capucinaCoxcomb prominentPyropteron chrysidiformisFiery clearwingPhizedra lutosaLarge wainscot

Rhizedra lutosa
Rhodometra sacraria
Rivula sericealis
Rusina ferruginea
Saturnia pavonia
Saturnia pavonia
Emperor moth

Schrankia costaestrigalis Pinion-streaked snout

Scoliopteryx libatrixThe heraldScopula floslactataCream waveScopula imitariaSmall blood-veinScopula immutataLesser cream waveScopula marginepunctataMullein waveScotopteryx chenopodiataShaded broad-barScotopteryx luridataJuly belle

Scotopteryx nucronata July belie
Lead belle

Scythris siccella

Selenia dentariaEarly thornSelenia lunulariaLunar thornSelenia tetralunariaPurple thornSideridis rivularisCampion

Siona lineata Black-veined moth

Spaelotis ravidaStout dartSpilosoma lubricipedaWhite ermineSpilosoma luteaBuff ermineStauropus fagiLobster mothStilbia anomalaThe anomalousSubacronicta megacephalaPoplar grey

Figure of eighty Tethea ocularis Sussex emerald Thalera fimbrialis Thalpophila matura Straw underwing Thera Britannica Spruce carpet Thera juniperata Juniper carpet Thera obeliscata Grey pine carpet Theria primaria Early moth Tholera cespitis Hedge rustic Tholera decimalis Feathered gothic Thumatha senex Round-winged muslin

Thyatira batisPeach blossomTiliacea auragoBarred sallowTiliacea citragoOrange sallowTimandra comaeBlood-veinTrichiura crataegiPale eggar

Trichopteryx carpinataEarly tooth-stripedTriodia sylvinaOrange swiftTriphosa dubitataThe tissueTyria jacobaeaeThe cinnabarUdea ferrugalisRusty dot pearlVenusia cambricaWelsh wave

Watsonalla binariaOak hook-tipWatsonalla cultrariaBarred hook-tipXanthia togataPink-barred sallow

Xanthorhoe decolorariaRed carpetXanthorhoe designataFlame carpet

Xanthorhoe ferrugata Dark-barred twin-spot carpet

Xanthorhoe fluctuataGarden carpetXanthorhoe montanataSilver-ground carpetXanthorhoe quadrifasiataLarge twin-spot carpetXanthorhoe spadiceariaRed twin-spot carpet

Xestia agathinaHeath rusticXestia bajaDotted clayXestia castaneaNeglected rustic

Xestia c-nigrum Setaceous Hebrew character

Xestia ditrapeziumTriple-spotted clayXestia sexstrigataSix-striped rusticXestia triangulumDouble square-spotXestia xanthographaSquare-spot rustic

Xylocampa areola Early grey

Mammals

Arvicola amphibiusWater voleCapreolus capreolusRoe deerDama damaFallow deerEptesicus serotinusSerotine batLepus europaeusBrown hareMuscardinus avellanariusDormouse

Muscardinus avellanariusDormouseMyotis daubentoniiDaubenton's bat

Myotis mystacinus/Myotis brandtiiWhiskered bat/Brandt's batMyotis nattereriNatterer's batNyctalus noctulaNoctule bat

Nyctalus noctulaNoctule batOryctolagus cuniculusRabbitPipistrellus pipistrellusCommon pipistrelle bat

Pipistrellus pygmaeusSoprano pipistrelle batPlecotus auritusBrown long-eared batRhinolophus ferrumequinumGreater horseshoe batRhinolophus hipposiderosLesser horseshoe bat

Vulpes vulpes Red fox

Vascular Plants

Achillea millefoliumYarrowAethusa cynapiumFool's parsleyAgrimonia eupatoriaAgrimonyAjuga reptansBugleAlisma plantago-aquaticaWater-plantain

Allium ursinum Ramsons
Alnus glutinosa Alder
Alopecurus geniculatus Marsh foxtail

Alopecurus geniculatus Marsh foxtail
Ammophila arenaria Marram
Anagallis arvensis Scarlet pimpernel

Anthemis cotulaStinking chamomileAnthoxanthum odoratumSweet vernal-grassAnthyllis vulnerariaKidney vetchApium nodiflorumFool's-water-cress

Arctium minus/nemorosum

Armeria maritima Thrift

Lords-and-ladies Arum maculatum Asplenium trichomanes Maidenhair spleenwort

Aster tripolium Sea aster Atriplex portulacoides Sea-purslane

Atriplex spp.

Bellis perennis Daisy

Berula erecta Lesser-water-parsnip

Beta vulgaris Beet

Blackstonia perfoliata Yellow-wort Blechnum spicant Hard-fern Briza media Quaking-grass Bromopsis erecta Upright brome Heather Calluna vulgaris

Caltha palustris Marsh-marigold Calystegia sepium Hedge bindweed Campanula glomerata Clustered bellflower

Campanula rotundifolia Harebell

Campanula trachelium Nettle-leaved bellflower Shepherd's-purse Capsella bursa-pastoris Cardamine pratensis Cuckooflower Carduus nutans Musk thistle Star sedge Carex echinata Carex nigra Common sedge Carex otrubae False fox-sedge Pendulous sedge Carex pendula Carex remota Remote sedge

Carex sylvatica Wood-sedge Field mouse-ear Cerastium arvense Cerastium fontanum Common mouse-ear Cerastium glomeratum Sticky mouse-ear Ceratocapnos claviculata Climbing corydalis Rough chervil Chaerophyllum temulum Chenopodium album Fat-hen

Chrysosplenium oppositifolium Opposite-leaved golden-saxifrage

Enchanter's-nightshade Circaea lutetiana

Dwarf thistle Cirsium acaule Cirsium palustre Marsh thistle Clematis vitalba Traveller's-joy Cochlearia Scurveygrass Conopodium majus **Pignut** Dogwood Cornus sanguinea Hazel Corylus avellana

Crataegus monogyna Hawthorn Cruciata laevipes Crosswort

Crested dog's-tail Cynosurus cristatus Dactylorhiza fuchsii Common spotted-orchid

Daucus carota Carrots

Deschampsia cespitosa Tufted hair-grass Deschampsia flexuosa Wavy hair-grass Digitalis purpurea Foxglove Dioscorea communis Black bryony Dipsacus fullonum Wild teasel

Drosera rotundifolia Round-leaved sundew

Sea couch Elytrigia atherica Empetrum nigrum Crowberry Great willowherb Epilobium hirsutum Water horsetail Equisetum fluviatile Bell heather Erica cinerea Erica tetralix Cross-leaved heath Eriophorum angustifolium Common cottongrass

Eriophorum vaginatum Hare's-tail cottongrass Euonymus europaeus Spindle Euphorbia amygdaloides Wood spurge Euphorbia exigua Dwarf spurge Euphorbia helioscopia Sun spurge Filipendula ulmaria Meadowsweet

Filipendula vulgaris Dropwort Fumaria **Fumitories** Galium mollugo Hedge bedstraw Galium odoratum Woodruff Galium palustre Marsh-bedstraw Galium saxatile Heath bedstraw Galium verum Lady's bedstraw Geranium robertianum Herb-robert Wood avens

Glaucium flavum Yellow horned-poppy

Glechoma hederacea Ground-ivy Hedera helix Common ivy Helictotrichon pratense Meadow oat-grass

Heracleum sphondylium Hogweed Horseshoe vetch Hippocrepis comosa Mare's-tail Hippuris vulgaris Yorkshire-fog Holcus lanatus Hordeum secalinum Meadow barley

Huperzia selago

Geum urbanum

Hyacinthoides non-scripta Bluebell Hydrocharis morsus-ranae Frogbit

Hydrocotyle vulgaris Marsh pennywort

Hypericum tetrapterum Square-stalked St John's-wort

Hypochaeris radicata Cat's-ear Holly Ilex aquifolium Yellow iris *Iris pseudacorus* Saltmarsh rush Juncus gerardii Heath rush Juncus squarrosus

Sharp-leaved fluellen Kickxia elatine Kickxia spuria Round-leaved fluellen

Field scabious Knautia arvensis Henbit dead-nettle Lamium amplexicaule Lathyrus pratensis Meadow vetchling Lemna trisulca Ivy-leaved duckweed

Leucanthemum vulgare Oxeye daisy

Limonium spp.

Linum catharticum Fairy flax Lonicera periclymenum Honeysuckle

Lotus corniculatus Common bird's-foot-trefoil Lotus pedunculatus Greater bird's-foot-trefoil

Luzula multifloraHeath wood-rushLycopus europaeusGypsywort

Lysimachia nemorum Yellow pimpernel Yellow loosestrife Lysimachia vulgaris Lythrum salicaria Purple-loosestrife Scented mayweed Matricaria chamomilla Black medick Medicago lupulina Melica uniflora Wood melick Mentha aquatica Water mint Mercurialis perennis Dog's mercury Milium effusum Wood millet

Moehringia trinervia

Moehringia trinervia

Molinia caerulea

Purple moor-grass

Mycelis muralis Wall lettuce
Nardus stricta Mat-grass

Narthecium ossifragumBog asphodelNuphar luteaYellow water-lilyNymphaea albaWhite water-lilyOriganum vulgareWild marjoramOrnithopus perpusillusBird's-footOsmunda regalisRoyal fern

Osmunda regalisRoyal fernPastinaca sativaParsnip speciesPersicaria amphibiaAmphibious bistortPersicaria lapathifoliaPale persicaria

Petasites hybridusButterburPhalaris arundinaceaReed canary-grassPhyllitis scolopendriumHart's-tonguePicris echioidesBristly oxtonguePilosella officinarumMouse-ear-hawkweed

Plantago coronopusBuck's-horn plantainPlantago lanceolataRibwort plantainPlantago maritimaSea plantainPlantago mediaHoary plantain

Polygala serpyllifolia/vulgaris

Potamogeton polygonifoliusBog pondweedPotentilla anserinaSilverweedPotentilla erectaTormentil

Potentilla sterilisBarren strawberryPoterium sanguisorbaSalad burnetPrimula verisCowslipPrunus spinosaBlackthorn

Puccinellia maritimaCommon saltmarsh-grassRanunculus acrisMeadow buttercupRanunculus bulbosusBulbous buttercupRanunculus repensCreeping buttercupRanunculus sceleratusCelery-leaved buttercup

Ranunculus spp.Water-crowfootsRhamnus catharticaBuckthornRhinanthus minorYellow-rattleRorippa nasturtium-aquaticumWater-cress

Rubus chamaemorus

Rumex acetosa Common sorrel

Rumex acetosellaSheep's sorrelRumex hydrolapathumWater dockSagittaria sagittifoliaArrowheadSanguisorba officinalisGreat burnetSanicula europaeaSanicle

Scabiosa columbariaSmall scabiousSchoenoplectus lacustrisCommon club-rushSherardia arvensisField madderSilene dioicaRed campionSilene flos-cuculiRagged-robinSilene latifoliaWhite campionSolanum dulcamaraBittersweet

Sonchus arvensisPerennial sow-thistleSonchus oleraceusSmooth sow-thistleSparganium erectumBranched bur-reedSpirodela polyrhizaGreater duckweed

Stachys officinalis Betony

Stachys palustrisMarsh woundwortStellaria gramineaLesser stitchwortStellaria holosteaGreater stitchwortSuaeda maritmaAnnual sea-bliteSuccisa pratensisDevil's-bit scabiousSymphytum officinaleCommon comfreyTeucrium scorodoniaWood sage

Thymus polytrichus/pulegioides

Torilis japonica Upright hedge-parsley

Trifolium campestreHop trefoilTrifolium dubiumLesser trefoilTrifolium pratenseRed cloverTrifolium repensWhite clover

Triglochin maritimum

Tripleurospermum inodorum Scentless mayweed

Typha latifolia Bulrush

Ulex gallii/minor

Vaccinium myrtillus Bilberry Vaccinium vitis-idaea Cowberry Wall speedwell Veronica arvensis Veronica beccabunga Brooklime Veronica montana Wood speedwell Veronica officinalis Heath speedwell Vicia cracca Tufted vetch Vicia hirsuta Hairy tare Field pansy Viola arvensis Viola palustris Marsh violet

Viola reichenbachiana/riviniana

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations set long-term targets in respect of three matters within the priority area of biodiversity under section 1 of the Environment Act 2021 (c. 30). These Regulations also set a target in relation to the abundance of species in accordance with section 3 of the Environment Act

2021. The Regulations specify the standard to be achieved in respect of each target and the date by which it must be achieved.

Part 2 makes provision in respect of a long-term biodiversity target to reduce the risk of species' extinction by 2042, when compared to the risk of species' extinction in 2022 (regulation 4). Regulation 5 makes provision in relation to how that target is to be measured. Regulation 6 provides that the reporting date for the species' extinction risk target is 1st July 2043.

Part 3 makes provision in respect of a long-term biodiversity target to ensure that in excess of 500,000 hectares of a range of wildlife-rich habitats are to be restored or created by 31st December 2042 (regulation 7). Regulation 8 makes provision in relation to how that target is to be measured. Regulation 9 provides that the reporting date for that target is 1st December 2043. Regulation 10 defines terms used in Part 3 including "wildlife-rich habitat". Schedule 1 makes further provision in relation to the definition of "wildlife-rich habitat".

Part 4 makes provision in respect of the 2030 species abundance target to ensure that by 31st December 2030 (the specified date) the decline in the abundance of species has been halted (regulation 11). Regulation 12 makes provision in relation to how the 2030 species abundance target is to be measured. Schedule 2 provides a list of species for which data are included in the relative species abundance indices. Regulation 13 provides that the reporting date for that target is 15th April 2032.

Part 4 also makes provision in respect of a long-term biodiversity target to reverse the decline of species abundance to ensure that the overall species abundance is higher by 31st December 2042 than for 31st December 2022, and at least 10% higher than for 31st December 2030 (regulation 14). Regulation 15 makes provision in relation to how the long-term biodiversity target to reverse the decline of species abundance is to be measured. Regulation 16 provides that the reporting date for that target is 15th April 2044.

A full impact assessment of the effect that this instrument will have on the costs of business, the voluntary sector and the public sector is available from the Department for the Environment, Food and Rural Affairs, Seacole Building, 2 Marsham Street, London SW1P 4DF, and is published with an Explanatory Memorandum alongside these Regulations on www.legislation.gov.uk.

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