

West Sussex Local Nature Recovery Strategy

Statement of Biodiversity Priorities: Priority Species

Species Recovery

Species abundance and diversity serve as crucial indicators of the health of the natural environment. The government has set legally binding targets to:

- halt the decline in species abundance by the end of 2030;
- increase species abundance by the end of 2042 so that it is greater than in 2022 and at least 10% greater than in 2030;
- reduce the risk of species extinction by 2042, when compared to the risk of species extinction in 2022.

LNRS is a new tool for driving the national ambition to increase species abundance and reduce risk of species extinction, by planning for more, bigger, better and better-connected habitat to support species recovery and resilience.

Creation of species longlist

The first step in the process was to create a “species longlist”. The list was selected against nationally set criteria.

- Any native species which have been assessed as Red List *Threatened* and *Near Threatened* against International Union for the Conservation of Nature (IUCN) criteria.
- Any native species which have not been formally assessed against IUCN Red List criteria but where strong evidence is provided to show that they would meet the criteria for Threatened status.
- Any native species considered to be nationally extinct that re-establish themselves or are rediscovered.
- Any native species which the government’s nature advisor, Natural England, suggest as suitable candidates for conservation translocations or any native species already subject to translocation efforts that, on Natural England’s advice, need to be scaled up to maximise success.
- Other species of local significance which have not yet been Red List assessed or lack approved Red Lists but for which there is strong evidence to show (or in the absence of this, authoritative expert opinion) that they would meet criteria for *Threatened* Status.

The International Union for Conservation of Nature (IUCN) Red List is an inventory of the global conservation status and extinction risk of species. Many, but not all, species groups have Red Lists, which assign the following classes to species depending on factors including rate of decline, population size, area of distribution and degree of fragmentation.

- **Extinct:** There is no reasonable doubt that the last individual of the species has died.
- **Extinct in the Wild:** The species only exists in captivity or naturalised populations outside its original range.
- **Critically Endangered:** The species faces an extremely high risk of extinction in the wild.
- **Endangered:** The species faces a very high risk of extinction in the wild.
- **Vulnerable:** The species faces a high risk of extinction in the wild.
- **Near Threatened:** The species is close to qualifying for a threatened category or is likely to qualify in the near future.
- **Least Concern:** The species faces a low risk of extinction in the wild.
- **Data Deficient:** There is inadequate information to assess the species' extinction risk.
- **Not Evaluated:** The species has not yet been evaluated for its extinction risk.

Prioritisation to short list

Meetings were held between January to June 2024 with local organisations, and local representatives from national organisations¹, who have been involved in species prioritisation exercises. This was to understand what has already been done with respect to species recovery across Sussex to avoid duplication of effort and to ensure locally important species were included in the longlist.

The resultant longlist was created by the Sussex Biodiversity Record Centre (SxBRC) by searching for species that fit the nationally set criteria listed above within local records. The date of the most recent record and the number of records was collated for these species and the lists were organised into taxa (species groups) and shared with the County Recorders in July 2024. County Recorders are skilled and dedicated volunteers, each one an expert in their own particular field, with a primary role to verify the accuracy of species records received. This review provided an opportunity to add species to the longlist where they were felt to be of local significance (as above), and to gain expert opinion on and justification for which of the species should be included in the longlist. The resultant longlist included 899 species.

Species Prioritisation (creation of shortlist)

The next stage was to create a “shortlist” containing those individual species that the LNRS will focus on supporting. Some of these species share similar habitat management requirements, and these were grouped into assemblages.

There are County Recorders for the majority of the taxa, and species atlases for Sussex have recently been published for flora, birds, odonata (dragonflies and damselflies), lepidoptera (butterflies and moths) and bees. Feedback from the County Recorders, alongside the best available information on species ecological needs, national distribution, local distribution and abundance from SxBRC and species atlases, was used to assign species to one of the categories A to G in table 1 below.

Table 1. Species guidance: identifying species which LNRS can best support

Category	Description	Benefit from LNRS?	Suitable priority species?
A: Needs more/bigger/better-connected habitat	<ul style="list-style-type: none">Species likely to markedly benefit from general creation, expansion and improved connectivity of good quality habitats in the strategy area and do not need to be singled out for specific LNRS measures.Species with high recovery potential that do not require specific or targeted recovery measures.	Yes	Probably not
B: Needs targeted habitat management	<ul style="list-style-type: none">Species with specific requirements for habitat quality, structure, conditions or processes above and beyond category A.Species may require specific configurations or complexes or connected or nearby habitat(s), either at site level or across large areas/multiple sites. This may include habitat connectivity	Yes	Yes

¹ Organisations involved included Buglife, SxBRC, South Downs National Park Authority, Environment Agency, Natural England, Sussex Wildlife Trust, Chichester Harbour Conservancy, High Weald National Landscape, Forestry Commission, Weald to Waves, Royal Society for the Protection of Birds, Species Recovery Trust, East Sussex County Council and West Sussex County Council.

	<p>measures for species needing support to track climate change.</p> <ul style="list-style-type: none"> • Causes of decline can be addressed with new or improved management practices. 		
C: Needs improvement in environmental quality	<ul style="list-style-type: none"> • Species primarily limited by one or more pressures beyond site level that can be mitigated at LNRS scale or wider scales through collaboration with neighbouring RAs. • E.g. better catchment water quality, improved spatial planning or air pollution sources, mitigation of recreational disturbance. 	Yes	Yes
D: Needs bespoke conservation action/s	<ul style="list-style-type: none"> • Species requiring additional, tailored measures <i>which can be spatially indicated</i> on the local habitat map. • Species may need multiple coordinated actions to bring about recovery, including combinations of local actions and national actions, where LNRS could address the former. • Examples of bespoke, spatially targetable local actions include conservation translocations (such as assisted colonisation for climate change adaptation), control of invasive species, and localised surveys. <p>NB Species requiring bespoke measures <i>which cannot be mapped</i> should be assigned to category E.</p>		
E: Needs better evidence base/on-the-ground action not a priority	<ul style="list-style-type: none"> • Species for which there is insufficient evidence or understanding regarding drivers of decline, required recovery actions, and range/population levels. • Species for which the current priority is other than on-the-ground actions, e.g. research of ex-situ action. 	Unknown	No
F: Needs action outside England	<ul style="list-style-type: none"> • Species with low (or very low) recovery potential due to factors constraining recovery beyond English borders. • Evidence shows that action in England is highly unlikely to improve species' prospects. • This category is likely to apply only to migratory species (e.g. Afro-Palearctic migratory birds affected by hunting). 	No	No

G: Vagrants/occasional visitors	<ul style="list-style-type: none"> Species currently outside their normal breeding or wintering range or normal migration route, without an extant populations in the strategy area, and which are not suitable for conservation translocation. 	No	No
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Sussex is a well recorded county, as demonstrated by there being over 12 million species records in the database held by SxBRC. As such, for the majority of species groups, the balance of probability is that if there have been no records for the past 20 years, the species is unlikely to be present in most cases. Species for which the most recent records were from 2004 or earlier were therefore excluded from the shortlist (effectively assigned category E on the grounds of needing a better evidence base). However, this date cut-off was not applied to lichens (as there has not been a dedicated County Recorder for the group for some years, and it may therefore have been under-recorded) or to fungi (as the fruiting bodies can lie dormant for several years).

Species which are present but which do not require targeted action over and above that proposed for habitats or are widespread were assigned to category A on the grounds that they would likely benefit from general habitat improvements. In other words, they are supported by other LNRS measures.

If species were considered to meet the criteria for categories B to D above, they were provisionally shortlisted, with this categorisation further refined through consideration of additional criteria provided in the guidance, listed in Table 2. These included whether species were considered iconic of the strategy area, where East Sussex is a stronghold, or whether their recovery locally would contribute to recovery at a national level.

Some species, often urban, which did not meet the national criteria of being 'near threatened' or above were included where there was strong support for them from the public surveys, e.g. glow worm; these species meet the additional criteria set out in the Species Guidance which recognises that some species can be a great hook for wider public and stakeholder engagement with the LNRS, and that Responsible Authorities may wish to consider the depth of public interest in species and the opportunities this presents for encouraging broad local participation in the LNRS process. It is important to note that most national criteria focus on rarity and species in semi-natural habitats, whereas urban habitats have a differing range of iconic, indicator, classic and often much-loved species. Urban areas are also where this is most development and thus loss of wildlife.

Some species assigned to categories B to D in Table 1 above would benefit from similar management measures, and were therefore grouped together into assemblages, with measures developed for them.

Table 2. Species guidance: additional criteria

Para 4.3	<ul style="list-style-type: none"> Local significance Not RL but expert opinion would meet 'threatened' Candidates for conservation translocation Iconic/local champion spp Flagship/indicator for wider ecosystem improvement
Para 2.2	<ul style="list-style-type: none"> Public interest/local participation
Para 6.2	<ul style="list-style-type: none"> Assemblages
Para 6.3	<ul style="list-style-type: none"> Urgency

	<ul style="list-style-type: none"> • Deliverability- how feasible is it to delivery • Contributions to national species recovery - is sp of national/international significance? <i>Should</i> prioritise spp/assemblages which are only found in strategy area (<i>interpretation - stronghold</i>) • Cross-boundary considerations- any opportunities to join up recovery plans across boundaries? • Maximising benefits - would recovery bring about other benefits? Keystone spp/assemblages. • Pre-existing initiatives.
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Justification for categorisation, along with measures for shortlisted species and assemblages was again shared with County Recorders and local species experts to ensure it was robust. The lists and measures were also reviewed by the Working Group, Supporting Authorities, the Technical Review Panel, and other individuals/organisations with species expertise.

Priority Species

The LNRS Priority Species list contains the individual species and assemblages (groups of species that share similar management requirements) that the LNRS will focus on supporting. Of the 899 species on the longlist, 163 were shortlisted, demonstrating the richness of biodiversity in the LNRS area. Of these, 115 were grouped into 19 assemblages, leaving 48 species which required their own bespoke measures. All priority species are listed in Table 3. Habitat measures are considered likely to support an additional 338 species for which the LNRS area is known to be important.

Table 3. Priority species for the West Sussex LNRS area.

Species Group	Common Name	Scientific Name	Assemblage
Mammals (excluding bats)	Beaver	<i>Castor fiber</i>	
	European otter	<i>Lutra lutra</i>	Streams and rivers
	European water vole	<i>Arvicola amphibius</i>	
	Harbour seal	<i>Phoca vitulina</i>	
	Hazel dormouse	<i>Muscardinus avellanarius</i>	
	Pine marten	<i>Martes martes</i>	
	West European hedgehog	<i>Erinaceus europaeus</i>	
Bats	Bechstein's bat	<i>Myotis bechsteinii</i>	Woodland bats
	Greater horseshoe bat	<i>Rhinolophus ferrumequinum</i>	
	Grey long-eared bat	<i>Plecotus austriacus</i>	
	Mouse-eared bat	<i>Myotis myotis</i>	
	Western barbastelle	<i>Barbastella barbastellus</i>	Woodland bats
Birds	Corn bunting	<i>Emberiza calandra</i>	Farmland birds
	Cuckoo	<i>Cuculus canorus</i>	Farmland birds
	Dark-bellied brent goose	<i>Branta bernicla bernicla</i>	
	Dartford warbler	<i>Curruca undata</i>	Heathland birds
	Eurasian honey-buzzard	<i>Pernis apivorus</i>	Woodland birds
	Grey partridge	<i>Perdix perdix</i>	Farmland birds
	Hawfinch	<i>Coccothraustes coccothraustes</i>	Woodland birds
	House martin	<i>Delichon urbicum</i>	Urban birds
	Lapwing	<i>Vanellus vanellus</i>	Breeding waders – wet grassland and heathland
	Lesser spotted woodpecker	<i>Dryobates minor comminutus</i>	Woodland birds
	Linnet	<i>Linaria cannabina</i>	Farmland birds
	Little tern	<i>Sternula albifrons</i>	Shore birds – breeding and migrating/winter
	Marsh harrier	<i>Circus aeruginosus</i>	
	Marsh tit	<i>Poecile palustris</i>	Woodland birds
	Mediterranean gull	<i>Ichthaetus melanocephalus</i>	Shore birds – breeding and migrating/winter
	Nightingale	<i>Luscinia megarhynchos</i>	Woodland birds
	Nightjar	<i>Caprimulgus europaeus</i>	Heathland birds

Species Group	Common Name	Scientific Name	Assemblage
	Redshank	<i>Tringa tetanus</i>	Breeding waders – wet grassland and heathland
	Ringed plover	<i>Charadrius hiaticula</i>	Shore birds – breeding and migrating/winter
	Sandwich tern	<i>Thalasseus sandvicensis</i>	Shore birds – breeding and migrating/winter
	Skylark	<i>Alauda arvensis</i>	Farmland birds
	Spotted flycatcher	<i>Muscicapa striata</i>	Woodland birds
	Starling	<i>Sturnus vulgaris</i>	Urban birds
	Stone-curlew	<i>Burhinus oediconemus</i>	Farmland birds
	Swift	<i>Apus apus</i>	Urban birds
	Tree pipit	<i>Anthus trivialis</i>	Heathland birds
	Turtle dove	<i>Streptopelia turtur</i>	Farmland birds
	White-tailed eagle	<i>Haliaeetus albicilla</i>	
	Yellowhammer	<i>Emberiza citrinella</i>	Farmland birds
Amphibians & reptiles	Common toad	<i>Bufo bufo</i>	Ponds for amphibians
	Great crested newt	<i>Triturus cristatus</i>	Ponds for amphibians
	Sand lizard	<i>Lacerta agilis</i>	Dry heaths with sand and gravel exposures
	Smooth snake	<i>Coronella austriaca</i>	Dry heaths with sand and gravel exposures
Fish	Brook lamprey	<i>Lampetra planeri</i>	Streams and rivers
	Brown/Sea trout	<i>Salmo trutta</i>	Streams and rivers
	Bullhead	<i>Cottus gobio</i>	Streams and rivers
	European eel	<i>Anguilla anguilla</i>	Streams and rivers
	River lamprey	<i>Lampetra fluviatilis</i>	Streams and rivers
	Sea lamprey	<i>Petromyzon marinus</i>	Streams and rivers
Crustaceans	White-clawed crayfish	<i>Austropotamobius pallipes</i>	
Spiders	A spider	<i>Araniella alpica</i>	
	A spider	<i>Araniella displicata</i>	
	A spider	<i>Centromerus albidus</i>	
	A spider	<i>Euophrys petrensis</i>	Dry heaths with sand and gravel exposures
	A spider	<i>Hygrolycosa rubrofasciata</i>	
	A spider	<i>Lathys heterophthalma</i>	Dry heaths with sand and gravel exposures
	A spider	<i>Micaria silesiaca</i>	Dry heaths with sand and gravel exposures
	A spider	<i>Pardosa paludicola</i>	

Species Group	Common Name	Scientific Name	Assemblage
	A spider	<i>Philodromus emarginatus</i>	
	A spider	<i>Xysticus luctuosus</i>	
	Gentle groove-head spider	<i>Tapinocyba mitis</i>	Dry heaths with sand and gravel exposures
Ants, bees & wasps	A wasp	<i>Diodontus insidiosus</i>	Dry heaths with sand and gravel exposures
	A wasp	<i>Ectemnius borealis</i>	
	Brown-banded carder bee	<i>Bombus humilis</i>	Chalk grassland
	Heath potter wasp	<i>Eumenes coarctatus</i>	
	Moss carder bee	<i>Bombus muscorum</i>	Chalk grassland
	Red-shanked carder bee	<i>Bombus ruderarius</i>	Chalk grassland
	Sea aster bee	<i>Colletes halophilus</i>	Coastal grazing marsh and upper saltmarsh
	Small Bear-clawed nomad bee	<i>Nomada baccata</i>	
	Southern bronze furrow bee	<i>Halictus confusus</i>	Dry heaths with sand and gravel exposures
Beetles	Cosnard's net-winged beetle	<i>Erotides cosnardi</i>	
	Glow-worm	<i>Lampyris noctiluca</i>	
	Stag beetle	<i>Lucanus cervus</i>	
	Variable chafer	<i>Gnorimus variabilis</i>	
	Wood (heath) tiger beetle	<i>Cicindela sylvatica</i>	Dry heaths with sand and gravel exposures
Butterflies & moths	Adonis blue	<i>Polyommatus bellargus</i>	Chalk grassland
	Chalk hill blue	<i>Polyommatus coridon</i>	Chalk grassland
	Duke of Burgundy	<i>Hamearis Lucina</i>	Chalk grassland
	Large gold case-bearer	<i>Coleophora vibicella</i>	
	Silver spotted skipper	<i>Hesperia comma</i>	Chalk grassland
	Small blue	<i>Cupido minimus</i>	Chalk grassland
Crickets & grasshoppers	Field cricket	<i>Gryllus campestris</i>	
Dragonflies & damselflies	Common club-tail	<i>Gomphus vulgatissimus</i>	Streams and rivers
	Emerald damselfly	<i>Lestes sponsa</i>	
Flies	A true fly	<i>Nephrotoma sullingtonensis</i>	
True bugs	A planthopper	<i>Tettigometra impressopunctata</i>	Chalk grassland
	A true bug	<i>Chlamydatus (Eurymerocoris) evanescens</i>	Shingle and sand dune
	Pondweed leafhopper	<i>Erotettix cyane</i>	

Species Group	Common Name	Scientific Name	Assemblage
	Scarlet shieldbug	<i>Eurydema (Rubrodorsalium) dominulus</i>	Open deciduous woodland
Molluscs	A mollusc	<i>Euglesa pseudosphaerium</i>	Grazing marsh molluscs
	Cheese snail	<i>Helicodonta obvoluta</i>	
	Common oyster	<i>Ostrea edulis</i>	
	Defolin's lagoon snail	<i>Caecum armoricum</i>	
	Depressed river mussel	<i>Pseudanodonta complanata</i>	Streams and rivers
	Heath snail	<i>Helicella itala</i>	Chalk grassland
	Lagoon spire snail	<i>Semisalsa stagnorum</i>	
	Looping snail	<i>Truncatella subcylindrica</i>	
	Ramshorn snail	<i>Anisus (Disculifer) vorticulus</i>	Grazing marsh molluscs
	Swollen spire snail	<i>Mercuria tachoensis</i>	
Moss animals	Crystal moss-animal	<i>Lophopus crystallinus</i>	
Higher Plants	Annual knawel	<i>Scleranthus annuus</i>	Rare arable plants
	Basil thyme	<i>Clinopodium acinos</i>	Chalk grassland
	Bird's-nest orchid	<i>Neottia nidus-avis</i>	Open deciduous woodland
	Burnt orchid	<i>Neotinea ustulate</i>	Chalk grassland
	Chalk milkwort	<i>Polygala calcarean</i>	Chalk grassland
	Childing pink	<i>Petrorhagia nanteuilii</i>	Shingle and sand dune
	Corn buttercup	<i>Ranunculus arvensis</i>	Rare arable plants
	Cut-grass	<i>Leersia oryzoides</i>	
	Field fleawort	<i>Tephroseris integrifolia</i>	Chalk grassland
	Field gromwell	<i>Lithospermum arvense</i>	Rare arable plants
	Frog orchid	<i>Coeloglossum viride</i>	Chalk grassland
	Frosted orache	<i>Atriplex laciniata</i>	Shingle and sand dune
	Grass-poly	<i>Lythrum hyssopifolia</i>	
	Hairy rock-cress	<i>Arabis hirsute</i>	Chalk grassland
	Lesser Marshwort	<i>Apium inundatum</i>	
	Little-robin	<i>Geranium purpureum</i>	Shingle and sand dune
	Man orchid	<i>Orchis anthropophora</i>	Chalk grassland
	Marsh Clubmoss	<i>Lycopodiella inundata</i>	
	Musk orchid	<i>Herminium monorchis</i>	Chalk grassland

Species Group	Common Name	Scientific Name	Assemblage
	Narrow-leaved helleborine	<i>Cephalanthera longifolia</i>	Open deciduous woodland
	Parsley water-dropwort	<i>Oenanthe lachenalia</i>	Coastal grazing marsh and upper saltmarsh
	Petty whin	<i>Genista anglica</i>	
	Round-headed rampion	<i>Phyteuma orbiculare</i>	Chalk grassland
	Saltmarsh goosefoot	<i>Chenopodium chenopodioides</i>	Coastal grazing marsh and upper saltmarsh
	Saltwort	<i>Salsola kali</i>	Shingle and sand dune
	Sea barley	<i>Hordeum marinum</i>	Coastal grazing marsh and upper saltmarsh
	Sea clover	<i>Trifolium squamosum</i>	Coastal grazing marsh and upper saltmarsh
	Sea knotgrass	<i>Polygonum maritimum</i>	Shingle and sand dune
	Sea rocket	<i>Cakile maritima</i>	Shingle and sand dune
	Sea-kale	<i>Crambe maritima</i>	Shingle and sand dune
	Shepherd's-needle	<i>Scandix pecten-veneris</i>	Rare arable plants
	Slender hare's-ear	<i>Bupleurum tenuissimum</i>	Coastal grazing marsh and upper saltmarsh
	Spreading hedge-parsley	<i>Torilis arvensis</i>	Rare arable plants
	Upright chickweed	<i>Moenchia erecta</i>	
	White helleborine	<i>Cephalanthera damasonium</i>	Open deciduous woodland
Mosses	Curly beardless-moss	<i>Weissia condensa</i>	Chalk grassland
	Rusty fork-moss	<i>Dicranum spurium</i>	
	Sterile beardless-moss	<i>Weissia sterilis</i>	Chalk grassland
Stoneworts	Great tassel stonewort	<i>Tolypella prolifera</i>	
Lichens	A lichen	<i>Cladonia rei</i>	
	A lichen	<i>Lecanora quercicola</i>	Open parkland mature and veteran tree lichens
	A lichen	<i>Lecanora sublivescens</i>	Open parkland mature and veteran tree lichens
	A lichen	<i>Pertusaria pustulata</i>	Open parkland mature and veteran tree lichens
Fungi	Beautiful bonnet	<i>Mycena renati</i>	Deciduous woodland and wood pasture fungi
	Bilious bolete	<i>Boletus legaliae</i>	Deciduous woodland and wood pasture fungi
	Citrine waxcap	<i>Hygrocybe citrinovirens</i>	Waxcap grassland fungi
	Coral tooth	<i>Hericium coralloides</i>	Deciduous woodland and wood pasture fungi
	Crimson waxcap	<i>Hygrocybe punicea</i>	Waxcap grassland fungi
	Dingy waxcap	<i>Neohygrocybe ingrata</i>	Waxcap grassland fungi
	Dusky bolete	<i>Porphyrellus porphyrosporus</i>	Deciduous woodland and wood pasture fungi

Species Group	Common Name	Scientific Name	Assemblage
	Excentric pinkgill	<i>Entoloma excentricum</i>	Waxcap grassland fungi
	Felted pinkgill	<i>Entoloma griseocyaneum</i>	Waxcap grassland fungi
	Gilded bolete	<i>Aureoboletus gentilis</i>	Deciduous woodland and wood pasture fungi
	Glistening waxcap	<i>Gloioxanthomyces vitellinus</i>	Waxcap grassland fungi
	Lilac pinkgill	<i>Entoloma porphyrophaeum</i>	Waxcap grassland fungi
	Mealy pinkgill	<i>Entoloma prunuloides</i>	Waxcap grassland fungi
	Pink waxcap	<i>Porpolomopsis calyptriformis</i>	Waxcap grassland fungi
	Splendid waxcap	<i>Hygrocybe splendidissima</i>	Waxcap grassland fungi
	Tawny bolete	<i>Aureoboletus moravicus</i>	Deciduous woodland and wood pasture fungi
	Toasted waxcap	<i>Cuphophyllus colemannianus</i>	Waxcap grassland fungi

Priority Species Measures

Abbreviations

The abbreviations used at the start of the information section summarise any conservation status, and are as follows:

Legal Protection – under international and/or national conventions/legislation.

[International Union for Conservation of Nature \(IUCN\) Red List](#) (Great Britain):

- EX Extinct
- EW Extinct in the Wild
- CR Critically Endangered
- EN Endangered
- VU Vulnerable
- NT Near Threatened
- LC Least Concern

R – Rare (pre 1994 Red List).

NR – Nationally Rare, occurring in 15 or fewer hectads in Great Britain (GB) or England (England).

NR (marine) – Nationally Rare marine species, occurring in eight or fewer hectads in Great Britain.

NS – Nationally scarce, recorded in 16-100 hectads (10km squares) but not included in one of the Red List Categories.

BoCC Red, Amber or Green – [Birds of Conservation Concern](#).

S41 – [Species listed under Section 41 of the Natural Environment and Rural Communities Act](#).

Sussex Rare – species assessed as being particularly rare in Sussex by local species experts.

Some measures, although critical, cannot be addressed directly by the Local Nature Recovery Strategy as they related to supporting mechanisms, processes and functions. These ‘enabling measures’ are shown in italics.

Individual Species Measures

Species	Information	Measures
Beaver <i>Castor fiber</i>	EN. Critically endangered in England. Used to be widespread in Britain but hunted to extinction. Important components of river and wetland ecosystems. Candidate for local conservation introductions.	Improve the condition of riparian habitats in the strategy area to support the future establishment of a beaver population and their natural spread.
European water vole <i>Arvicola amphibius</i>	Legal protection, S41, EN, Sussex Rare. Found throughout Britain. Long term decline, disappearing from 94% of former sites. Populations in Sussex critically low; estimated that over 90% lost in last 30 years. Chichester Coastal Plain plus re-introduced population on River Arun	<ol style="list-style-type: none"> 1. Eradication of non-native American mink; 2. Improve habitat networks and connectivity around key populations; 3. Create suitable habitat on edges of floodplains to provide refuge habitat during floods; 4. Bank side management- increase the occurrence of bank side trees/hedges/reeds/scrub patches along linear watercourse to provide seasonal food and refuge habitat, plus sensitive, graded cuts on bankside vegetation to encourage female dispersal; 5. Pollution control; 6. Create non-linear wetlands (vertical habitats such as reedbeds, fens etc); 7. <i>Increase survey effort in non-linear sites which are particularly important in winter.</i> Helping-water-voles-on-your-land.pdf
Harbour seal <i>Phoca vitulina</i>	Legal protection, S41. Population in the Solent often visit Chichester Harbour. The only known rookery in the Eastern English Channel.	<ol style="list-style-type: none"> 1. Protect known colony by reducing disturbance through e.g. wardening, raising awareness etc. 2. Support ongoing conservation work within Chichester Harbour.
Hazel dormouse <i>Muscardinus avellanarius</i>	Legal protection, VU, S41. Occurs mainly in southern England, especially Devon, Sussex and Kent.	<ol style="list-style-type: none"> 1. Create structural diversity and increase light levels in woodland, e.g. through active coppicing, creating glades and opening up rides.

Species	Information	Measures
	West Sussex is a stronghold for the species.	2. Cut hedgerows (where connected to woodland sites/other suitable habitat) on three-year cycle, alternating sides. managing-woodlands-for-dormice-final.pdf
Pine marten <i>Martes martes</i>	Legal protection, S41. Once widespread across the UK, hunting and woodland clearance meant the species restricted to Scottish Highlands and pockets of Wales and northern England by the 20th century. Population is spreading across Scotland but remains very rare in England and Wales. SWT working in partnership with KWT and Wildwood Trust to assess the feasibility of restoring them to the south-east.	Create, improve and connect woodland habitats to support future establishment of a pine marten population and its natural spread.
West European Hedgehog <i>Erinaceus europaeus</i>	S41, VU. Widespread but has undergone significant decline. Scored highly in public consultations- champion species for urban habitats and gardens.	1. Improve connectivity between gardens by creating access points at the bottom of fences, or planting hedgerows as boundaries. 2. Create wildlife friendly gardens, e.g. by planting shrubs and hedges, encouraging insets with wildflowers and scrub habitat, creating compost, log and leaf piles. 3. Install hedgehog houses. 4. <i>Research rural hedgehog populations.</i> 5. <i>Develop planning guidance for East Sussex to encourage access fences or penetrable boundaries within new development.</i> Helping Hedgehogs Top 10 Tips for a hedgehog-friendly garden Help a hedgehog The Wildlife Trusts Hedgehogs In Your Garden RSPCA- RSPCA- rspca.org.uk Britain's National Hedgehog Conservation Strategy- Hedgehog Street

Species	Information	Measures
Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>	<p>Legal protection, S41.</p> <p>Has shown a marked decline- estimated that has declined by over 90% in last 100 years. Rare in Britain and now confined largely to SW England and south Wales.</p> <p>Key species: Important hibernation and maternity colony showing range expansion into West Sussex with land management key to conservation and further population increase and expansion. Benefits of Greater Horseshoe land management likely to also benefit Serotine.</p> <p>Woodland for foraging, caves, tunnels etc for roosting.</p>	<ol style="list-style-type: none"> 1. Protect known roost sites. 2. Appropriate management of surrounding environment to provide adequate food resource. 3. Ensure succession and continuity of roost sites through encouraging new roost sites in close proximity to existing, with long-term monitoring to inform conservation.
Grey Long-eared Bat	<p>Legal protection, EN.</p> <p>Southern European species, with distribution extending to southern England. In England, restricted to a few colonies in Sussex, Hampshire, Isle of Wight, Dorset, Devon and Somerset. Key species.</p> <p>Grassland meadows and woodland edge for foraging, roosts in buildings.</p>	<ol style="list-style-type: none"> 1. Monitor and protect (e.g. through raising awareness with landowners) known roost sites, retain as many potential roost sites as practically possible, and ensure a succession or continuity of potential roost sites for the future. 2. Create a good network of habitats for roosting, feeding and commuting, avoiding isolating any areas currently used for feeding and ensure good connectivity between sites. 3. <i>Reduce pesticide use within foraging areas to improve insect diversity.</i>
Mouse-eared Bat <i>Myotis myotis</i>	<p>Legal protection, CR.</p> <p>Rarest bat in Britain, but not resident with no maternity sites found for many years. Only two individuals of this species in the UK, both in West Sussex. Thought to be crossing the Channel to hibernate. Possible that there are undiscovered summer roosts in southern England.</p> <p>Key species: Hibernation roost protection key.</p> <p>Habitats: tunnels (hibernation roost); woodland edge, pasture/grassland, agricultural land (foraging).</p>	<ol style="list-style-type: none"> 1. Protect hibernation roost. 2. Create, enhance and manage supporting foraging habitat for the species including woodland edges, pasture/grassland and agricultural land, especially in proximity to known hibernation roost and historic maternity roost site.

Species	Information	Measures
Dark-bellied Brent Goose <i>Branta bernicla bernicla</i>	S41, BoCC Red. Very common winter visitor and passage migrant. Chichester Harbour holds about 80% of birds wintering in Sussex. Stronghold for the species and considered iconic.	<ol style="list-style-type: none"> 1. Work with farmers to provide suitable crop or set aside pasture in winter months for geese to feed on. 2. Create and manage diverse coastal grasslands and marshes with ditches and scrapes of lagoons. 3. Ideally leave ungrazed over winter. 4. <i>Reduce recreational disturbance through education.</i>
Marsh Harrier <i>Circus aeruginosus</i>	Legal protection, BoCC Amber. Scarce passage migrant and winter visitor; very scarce breeder since 2004. Marshes and reedbeds.	<ol style="list-style-type: none"> 1. Maintain/enhance water quality in wetland in rivers around known sites. 2. Manage reedbeds.
White-tailed Eagle <i>Haliaeetus albicilla</i>	Legal protection, BoCC Amber. Rare vagrant. Reintroduction project on the Isle of Wight. Considered iconic. Coastal & wetland.	<i>Survey/monitoring to assess success of reintroduction programme and to inform future management.</i>
White-clawed Crayfish <i>Austropotamobius pallipes</i>	Legal protection, S41, EN, Sussex Rare. Only freshwater crayfish in Britain. Under threat and declining throughout European range. In lowland England, tends to be confined to clean, base-rich watercourses.	<ol style="list-style-type: none"> 1. Survey to know current distribution. 2. Investigate and correct sources of poor water quality or water resource issues and enhancement of habitat, e.g. <ol style="list-style-type: none"> a. Reduce risk of pollution through reduction in chemical use and creation of buffer zones. b. Maintain water levels and ensure stable flow regime with pools and glides. c. Maintain/create variety of refuges within channel, e.g. cobbles and boulders, submerged tree roots, soft banks. d. Maintain stands of submerged vegetation and ensure habitat not dominated by algae such as blanket weed. e. Maintain areas of undercut, vertical bank, with overhanging vegetation. 3. <i>Follow CHECK-CLEAN-DRY principles if entering watercourses to limit transfer of crayfish plague.</i>

Species	Information	Measures
		<p>4. Inform landowners, developers and other stakeholders of presence.</p> <p>Ark sites for crayfish. Buglife.</p> <p>Check Clean Dry » NNSS</p>
<p>A spider</p> <p><i>Araniella alpica</i></p>	<p>EN, NR.</p> <p>Widespread but uncommon. Especially yew and beech woodland. Potentially an old population at Heyshott Down which would be important in a national context for this species. Records from the 19th century and 2012.</p>	<p>Localised survey of historic site to assess presence and inform future management.</p>
<p>A spider</p> <p><i>Araniella displicata</i></p>	<p>NT, NR, Sussex Rare.</p> <p>Confined to SE England, restricted to a few sites.</p> <p>Found in pine woodlands, associated with heather.</p>	<p>Retain pines on/near heathland.</p>
<p>A spider</p> <p><i>Centromerus albidus</i></p>	<p>NR.</p> <p>Most records from Surrey and Hampshire. Only GB record in over 50 years is from Amberley Chalk Pits in 2021, so West Sussex is mission critical for it.</p>	<p>Localised survey of historic site to assess presence and inform future management.</p>
<p>A spider</p> <p><i>Hygrolycosa rubrofasciata</i></p>	<p>EN, NR.</p> <p>Most records from Suffolk, Norfolk & Cambridgeshire. Only one record, with slight question mark, now 13 years old. Unknown if significant population. This is a species in real trouble nationally, so some priority is needed in reassessing possible sites.</p>	<p>Localised survey of historic site to assess presence and inform future management.</p>
<p>A spider</p> <p><i>Pardosa paludicola</i></p>	<p>EN, NR.</p> <p>Few records nationally. The population at Ebernoe Common and Butcherlands is the largest known nationally- the spider is particularly abundant on the arable reversion at Butcherlands (all recent records held by SxBRC) and has more recently been recorded from</p>	<p>Ensure maintenance of high water tables in known sites.</p>

Species	Information	Measures
	another rewilding site at Biddenfield (NE pers comm, record not held by SxBRC). Preferred habitat (peat/fens) restricted in West Sussex.	
A Spider <i>Philodromus emarginatus</i>	VU, NR. Known from only six locations since 1992. Very local and appears to have undergone major long-term decline.	Maintain old semi-natural pine on heathland.
A spider <i>Xysticus luctuosus</i>	EN, NR. Widespread but scattered. Occurs among local low plants and bushes in woods therefore understorey important. The Graffam Common 2017 record for this is really important- one of only two nationally this Century.	<i>Localised survey of historic site to assess presence and inform future management.</i>
A wasp <i>Ectemnius borealis</i>	Sussex Rare. Most restricted range of all British species in genus, known only from western West Sussex and east Hampshire, north to Surrey border.	<ol style="list-style-type: none"> 1. Ensure woodland management retains dead wood. 2. Coppice woodland to encourage rich ground flora including umbellifers.
Heath potter wasp <i>Eumenes coarctatus</i>	Sussex Rare. S Devon to East Sussex and N to Bucks. Very localised.	Manage heathland to maintain sources of water and patches of exposed wet clay for construction of nest pots.
Small bear-clawed nomad bee <i>Nomada baccata</i>	Mainly restricted to central southern England (Dorset, Hampshire, Surrey and West Sussex). No records since 2008. Recorded at Ambersham Common, Iping Common, Weavers Down.	<i>Survey to establish presence, abundance and distribution and to inform management.</i>
Cosnard's net-winged beetle <i>Erotides cosnardi</i>	S41, EN, NR, Sussex Rare. Saproxyllic mainly on dead or dying Beech, freshly cut stumps may be of benefit. Subject of conservation project by Species Recovery Trust.	<ol style="list-style-type: none"> 1. Management should ensure that dead beech wood is not cleared. 2. Maintain longevity of existing old beech trees (dead and alive). 3. Allow natural regeneration/plant beech. 4. Consider veteranising younger trees. 5. <i>Increase survey and monitoring.</i>

Species	Information	Measures
		CNWB-species-information-guide.FINAL .pdf The Species The Species Recovery Trust Cosnard's Net-winged Beetle
Glow-worm <i>Lampyris noctiluca</i>	LC. Iconic species. Well distributed and relatively common in West Sussex, although concern that it is declining and it has been lost from some sites. Found in low growing vegetation, often at the base of hedgerows, in grasslands and woodland edges. Hides away in crevices under stones or bark during the day.	<ol style="list-style-type: none"> 1. Maintain dark corridors at and adjoining known sites. 2. Avoid strimming vegetation at the base of hedgerows during mating season (June to July).
Stag beetle <i>Lucanus cervus</i>	Legal protection, NS, S41, Sussex Rare. Large and iconic species that is widely distributed in West Sussex, but the majority of records come from urban centres located on southern edge of The South Downs. Larvae take three to four years to fully develop.	Ensure undisturbed deadwood is available for larvae in suburban parks and gardens as well as in woodlands in wider countryside. Woodland Wildlife Toolkit > Stag beetle. Stag beetle facts- People's Trust for Endangered Species
Variable chafer <i>Gnorimus variabilis</i>	S41, EN, NR. Restricted to just two locations in UK, Windsor Great Park and Parham Park in West Sussex. Larvae feed in the interface between red-rotten wood and heart wood of ancient Oak and Beech.	Management must allow for dead and decaying ancient trees to remain in-situ and for trees to be allowed to reach extreme age by avoidance of soil compaction or allowing younger trees to shade-out older ones.
Large gold case-bearer <i>Coleophora vibicella</i>	S41, Sussex Rare. Only extant Sussex population severely impacted by the failure of a sluice gate at Great Deep causing saltwater inundation and destruction of habitat. Thorney Island.	<ol style="list-style-type: none"> 1. Encourage the growth of dyer's greenweed <i>Genista tinctoria</i> on and adjacent to known site through appropriate management, aiming to create a sward height of 5-10cm interspersed with tussocky areas by November. 2. Stocking density should be low (maximum 0.75 livestock units per ha or less April and May, 1 livestock unit per ha June to October and no grazing November to February inclusive).

Species	Information	Measures
		Butterfly Conservation Factsheet. Dyer's Greenweed: A key plant for moths and other insects.
Field cricket <i>Gryllus campestris</i>	Legal protection, S41, VU, NR, Sussex Rare. Long considered the most endangered cricket species in the BI, occurring only in southern England. Declining. By the 1990s, reduced to single surviving colony in West Sussex. Translocated to Pulborough Brooks in 2018. Recorded at Pulborough Brooks, Arundel Park SSSI, Coates Castle SSSI.	<ol style="list-style-type: none"> 1. Restoration of suitable heathland habitat including scrub removal and creation of bare ground. 2. Increase connectivity between known and potential sites. 3. <i>Establish and annual monitoring and advice scheme to tailor habitat management.</i> Back from the Brink Project. Field Cricket: Increasing habitat and starting new populations.
Emerald damselfly <i>Lestes sponsa</i>	LC. Declining nationally. The status of this species in West Sussex is uncertain but perhaps declining and it should be placed on the 'concern list'. Needs shallow standing water (bog pools, ponds and ditches).	<ol style="list-style-type: none"> 1. <i>Annual counts from selected sites.</i> 2. Create shallow ponds with vegetation that retain water late in season.
A true fly <i>Nephrotoma sullingtonensis</i>	EN, Sussex Rare. Sussex iconic. Sullington Warren SSSI is the only known site. Dependant on hot, dry, sandy heathland slopes.	<ol style="list-style-type: none"> 1. Maintain heathland rides through site. 2. <i>Survey and monitor.</i> 3. Seek to expand existing habitat into neighbouring areas.
Pondweed leafhopper <i>Erotettix cyane</i>	S41, Sussex Rare. Only found at six ponds in SE England at only three sites: two in Sussex, one in Surrey. Exclusively found in ponds on only food plant, broad-leaved pondweed <i>Potamogeton natans</i> .	<ol style="list-style-type: none"> 1. Maintain and monitor known pond sites. 2. Ensure surrounding land management maintains high water quality. Pondweed Leafhopper- Species Directory- Freshwater Habitats Trust UKBAP species
Cheese snail <i>Helicodonta obvoluta</i>	VU, NR, Sussex Rare. All but one of the known English populations found in SDNP west of River Arun, of which >60% within West Sussex. Old semi-natural deciduous hanger woodlands.	Maintain traditional woodland practices.

Species	Information	Measures
	Presence often linked to other scarce and/or local inverts and plants.	
Common oyster <i>Ostrea edulis</i>	S41. In the UK and Ireland, populations have declined by 95% and oyster reefs are among the most threatened marine habitats in Europe. In Chichester Harbour, sex ratio heavily skewed towards male, suggesting they are under significant environmental stressors.	<ol style="list-style-type: none"> 1. <i>Survey and monitor, following strict biosecurity measures.</i> 2. Follow recommendations from Solent Wild Oysters Restoration Project to inform fishery restoration and ongoing management within Chichester Harbour. <p>Native Oyster Network – Facilitating the restoration of Native Oysters across the UK and Ireland</p> <p>Solent Wild Oysters Restoration Project Blue Marine Foundation</p>
Defolin's lagoon snail <i>Caecum armoricum</i>	Legal protection, NR (marine). Pagham Harbour supports one of the few populations of this protected species in England. The species is now restricted to a small lagoon on the north entrance to the harbour but subject to loss (may have gone) due to coastal erosion.	<ol style="list-style-type: none"> 1. <i>Survey to establish continued presence.</i> 2. Create new lagoons in location of existing/historic records.
Lagoon spire snail <i>Semisalsa stagnorum</i>	CR, NR, S41. The only known UK population is found in West Sussex living in a single very weakly brackish lagoon on Thorney Island (so not a salt marsh or estuarine species) surrounded by Phragmites. Long-term habitat management may be essential to retain the single, vulnerable population. This species is assessed as CR in the 2014 RDB so there is a special responsibility to conserve this species.	<ol style="list-style-type: none"> 1. Identify potential risks to site and reduce or eliminate them. 2. Prevent major salinity changes. 3. Maintain open water through management of reedbed encroachment. 4. Manage adjacent land to ensure no eutrophication. 5. <i>Survey and monitor population.</i> <p>Willing & Rowson, 2020. Discovery of the first record live population in the UK of the lagoon spire snail...with notes on its habitat and conservation.</p>
Looping snail <i>Truncatella subcylindrica</i>	NT, NR, Sussex Rare. The population at Pagham Harbour is large and together with those on the Dorset Fleet form the UK strongholds. In West Sussex it is also present scattered around Chichester Harbour (not fully surveyed).	<ol style="list-style-type: none"> 1. Maintain suitable habitat at high water mark. 2. <i>Raise awareness of species with beach managers.</i> 3. Exclude the movement of beach management works and storage of materials/equipment in known sites. 4. <i>Monitor populations.</i>

Species	Information	Measures
	Found in shingle amongst rotting vegetation and fine sediment at a depth of c. 15cm, at high water mark and more rarely in muddy habitats under stones at the high water mark. Often associated with <i>Suaeda maritima</i> , <i>Suaeda vera</i> and <i>Aptriplex (Halimione) portulacoides</i> . A species dependent upon relatively undisturbed, upper shore shingle/gravel and so at risk from beach/upper shore management operations.	
Swollen spire snail <i>Mercuria tachoensis</i>	S41, VU, NR. West Sussex supports one of the most extensive and robust populations in the UK.	1. Maintain tidal cycle in occupied part of river. 2. Limit saline intrusion.
Crystal moss-animal <i>Lophopus crystallinus</i>	S41. Since 2024, colonies only recorded at three sites, one of which is in West Sussex. Recently recorded at Burton Mill Pond.	1. Maintain suitable conditions at known site, including: a. Maintain presence of woody debris and emergent vegetation; b. Maintain flow of water; c. Maintain mesotrophic to hypereutrophic conditions. 2. Create stream-fed ponds within current or historical distribution in predominantly low intensity catchments.
Cut-grass <i>Leersia oryzoides</i>	Legal protection, S41, EN, NR, Sussex Rare. Apart from a small colony in Surrey and re-introduced populations in Surrey and Hampshire, all extant sites in BI are in West Sussex. Found in margins of ditches, ponds and rivers, open wet grassland, marsh and damp mud.	1. Maintain existing habitat inside and peripheral to protected sites. 2. Restore hydrology on protected sites. 3. Water pollution reduction and mitigation. 4. Management to reduce dense vegetation.
Grass-poly <i>Lythrum hyssopifolia</i>	Legal protection, S41, EN, NR, Sussex Rare. Currently only known from handful of sites in the UK. Rare in West Sussex. Found in wet ruts and hollows in arable fields. Recorded from Thorney Island, Chichester Harbour.	1. Maintain conditions at known sites. 2. Investigate translocations and potential habitat enhancement and expansion.

Species	Information	Measures
<p>Lesser marshwort <i>Apium inundatum</i></p>	<p>VU, Sussex Rare.</p> <p>Rare in Sussex. Although never common, formerly known from number of ponds on Wealden commons scattered across Sussex. Decreasing.</p> <p>Found in shallow ditches and ponds. Recorded at Iping Common, Fittleworth, Broadmere Common.</p>	<ol style="list-style-type: none"> 1. Maintain and safeguard small farm ponds and grazed commons. 2. Create new small ponds in suitable locations.
<p>Marsh clubmoss <i>Lycopodiella inundata</i></p>	<p>S41, EN, NS, Sussex Rare.</p> <p>Main populations found in southern England, in the New Forest, and on heaths in Hampshire and Surrey. Rare in West Sussex.</p> <p>Recorded at Trotton Common, Wheatsheaf Common, Graffham Common. Found on damp heathland, bare peaty soil.</p> <p>Requires bespoke conservation action, including conservation translocation within known sites.</p>	<ol style="list-style-type: none"> 1. <i>Protect known site through education and raised awareness.</i> 2. Protect site and maintain managed heath and hydrology. 3. Create areas of bare exposed peat to boost regeneration. 4. Expand habitat to improve connectivity.
<p>Petty whin <i>Genista anglica</i></p>	<p>NT (GB), VU (England).</p> <p>Predominantly lowland. Nationally, dramatic decline since 1960s. Rare in West Sussex and steady decrease and dwindling to extinction.</p> <p>Found on heathland and sandy commons. Recorded from Heyshott Common, Copthorne Common, Henfield Common.</p>	<p>Graze sites to reduce encroachment by bracken and scrub.</p>
<p>Upright chickweed <i>Moenchia erecta</i></p>	<p>VU.</p> <p>Occasional in Britain, predominantly in southern England and Wales. Rare in West Sussex. In some sites, present in abundance but has disappeared in some locations where vegetation has become denser and coarser.</p> <p>Found on heathland, acid grassland, coastal sand. Records from West Wittering, Lower Greensand.</p>	<ol style="list-style-type: none"> 1. Maintain short grazed or mown turf with some disturbance to maintain open areas. 2. Remove scrub.

Species	Information	Measures
Rusty fork-moss <i>Dicranum spurium</i>	S41. Rare moss of heathland, both dry and wet. Suffered severe decline in England but recent records from five sites in West Sussex.	<ol style="list-style-type: none"> 1. Survey to establish distribution and abundance. 2. Maintain open heath canopy with patches of bare peaty soil.
Great tassel stonewort <i>Tolypella prolifera</i>	S41, EN, Sussex Rare. Not seen in any of its four Sussex ditches (one on the Adur Brooks, three in the Arun Valley) lately due to lack of ditch maintenance. Ditch clearance would benefit a whole suite of other species which are declining.	<ol style="list-style-type: none"> 1. Ditch clearance at known sites to remove silt and provide bare mineral sediment. 2. Monitor to assess presence/absence.
A lichen <i>Cladonia rei</i>	NT, NR, Sussex Rare. Probably overlooked but uncommon and largely recorded from S and E England. Can occasionally be abundant on high quality heathland.	<ol style="list-style-type: none"> 1. Graze wet and dry heath whilst maintaining structural diversity. 2. Grazing levels should be appropriate to site's hydrological conditions. 3. Seek to expand habitat to improve connectivity.

Assemblage Measures

Coastal

Breeding and Migrating/Wintering Shore Birds Assemblage	
Measures: <ul style="list-style-type: none">• Protect from disturbance and predators. Wardening is key.• Create network of new breeding areas including use of mesh-sided rafts, shingle islands, and scrapes and pools to benefit species all year.• Potential for some managed realignment and creation of new saltmarsh.• <i>Monitor populations.</i>	
Species	Additional Information & resources
Little tern <i>Sternula albifrons</i>	Legal protection, BoCC Amber. Scarce breeding summer visitor and fairly common passage migrant. Only breeds at Chichester Harbour and Pagham Harbour and declining. Concerted effort required to reverse decline.
Mediterranean gull <i>Ichthyaetus melanocephalus</i>	Legal protection, Notable Bird, BoCC Amber. Fairly common winter visitor and passage migrant; scarce breeder. Breeding in Chichester Harbour.
Ringed plover <i>Charadrius hiaticula</i>	BoCC Red. Scarce breeder; fairly common passage migrant and winter visitor. Breeding pairs restricted to short stretches of coast, almost always on shingle beaches.
Sandwich tern <i>Thalasseus sandvicensis</i>	BoCC Amber. Fairly common although localised breeding summer visitor and common passage migrant; very scarce winter visitor. Breeding restricted to Chichester Harbour.

Coastal Grazing Marsh & Upper Saltmarsh Assemblage
Measures: <ul style="list-style-type: none">• Maintenance of existing habitat inside and peripheral to protected sites.• Light grazing, aiming for low levels of disturbance/trampling, which could damage the flora and fauna and contribute to erosion.

- Expand areas of grazing marsh by re-introducing appropriate water level management on improved grassland and arable land. Target to ensure the expansion and linkage of existing sites and to promote functioning coastal floodplains.

Species	Additional Information & resources
Borrer's saltmarsh-grass <i>Puccinellia fasciculata</i>	S41, NT, NS, Sussex Rare. Local and decreasing on coasts in south and SE BI. Rare in West Sussex and most recent record c. 2007. Shingle, tidal river banks and other brackish habitats. Bracklesham.
Parsley water-dropwort <i>Oenanthe lachenalia</i>	NT. Distributed widely around the coastline of GB. Declining in inland sites. Scarce, local in West Sussex. Appears to have decreased in Chichester and Pagham areas. Damp coastal grassland and marsh, rarely inland grassland and fen. Manhood Peninsula.
Saltmarsh goosefoot <i>Chenopodium (Oxybasis) chenopodioides</i>	NS, Sussex Rare. In mainland Britain, may now occur only in Thames Estuary, Kent and Sussex. Rare in Sussex.
Sea aster bee <i>Colletes halophilus</i>	S41, Notable A, Sussex Rare. Common in East Anglia and Thames estuary, occurs more sporadically along S coast of England. Strong evidence that it is expanding its range. Currently only known from two locations in county: Medmerry and West Wittering. Dependent on sea aster.
Sea barley <i>Hordeum marinum</i>	S41, VU, NS, Sussex Rare. Recorded around coast primarily in southern England and south Wales. Has decreased in Britain, particularly from The Wash northwards. Rare in West Sussex but formerly more frequent. Only extant colonies at Medmerry and Shoreham. Coastal grassland, shingle, tidal rivers.
Sea clover <i>Trifolium squamosum</i>	NS, Sussex Rare. Records predominantly restricted to southern England and Wales. Rare in West Sussex but still found in some quantity on several sites around Chichester Harbour and on Manhood Peninsula. Coastal- open brackish grassland; sand and shingle; seawalls and banks; tidal riverbanks.

Slender hare's-ear <i>Bupleurum tenuissimum</i>	S41, VU (GB), VU (England), NS, Sussex Rare. Vulnerable nationally, scarce in West Sussex. Saltmarsh. Thorney and the Midrips.
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Shingle and Sand Dune Assemblage	
Measures: <ul style="list-style-type: none"> • Maintain existing habitat inside and peripheral to protected sites and have regard to these species in the consideration of any coastal defence works. • Expand existing populations where possible by managing habitat adjacent to known locations. • <i>Educate to minimise disturbance from trampling and recreational pressures.</i> • <i>Safeguard sparsely vegetated shingle from loss and damage.</i> • <i>Develop local policies to prevent further development of coastal sites.</i> • Coastal vegetated shingle- Buglife 	
Species	Additional Information & resources
A true bug <i>Chlamydatus (Eurymerocoris) evanescens</i>	R. Although become more widespread nationally, the species is restricted to the vegetated shingle at Shoreham. It feeds on Sedum sp.
Childing pink <i>Petrorhagia nanteuilii</i>	Legal protection, VU (GB), VU (England), NR, Sussex Rare. Still present as a native in Jersey, but West Sussex populations are now the only ones on mainland Britain and the most northerly in Europe. Needs bespoke conservation action.
Frosted orache <i>Atriplex laciniata</i>	Sussex Rare. Not listed nationally but scarce in Sussex. Numbers can vary according to the movement of sand and shingle and could re-appear at former sites in the future.
Little-robin <i>Geranium purpureum</i>	NR, NS, Sussex Rare. Confined to southern coasts in BI. Long known in Sussex but always rare.
Saltwort	VU.

<i>Salsola kali</i>	Widespread around coasts of BI. Had declined since 1960s with considerable loss in some areas, often due to recreational pressure. Rare in West Sussex.
Sea knotgrass <i>Polygonum maritimum</i>	Legal protection, EN (GB), VU (England), NR, Sussex Rare. Rare in the BI on southern coasts. Rare in West Sussex. Present at East Head.
Sea rocket <i>Cakile maritima</i>	Sussex Rare. Very locally frequent in Sussex. Can colonise new areas.
Sea-kale (<i>Crame maritima</i>)	Locally common in Sussex, likely reflecting the fact that Sussex is a stronghold for the habitat. Useful as a habitat indicator. Considered iconic.

Farmed Landscape and Soils

Farmland Birds	
Measures: <ul style="list-style-type: none"> • Aim for a range of different crops and habitats including fallow areas throughout the year and retain areas of stubble. • Create and manage set aside areas that could support a mosaic of scrub, species-rich grassland, rough grassland, beetle banks, some bare ground and ponds or small wader scrapes to provide water and muddy edges. • Create flower rich arable margins. • Manage hay meadows to produce a range of seeds for seed eating species. • Create areas of scrub and avoid cutting all hedgerows annually to allow them to develop. • For stone-curlew, create 1 ha to 5ha uncropped fallow plots with 30% bare ground. Retain plot until crop is harvested from late July. Monitor breeding while protecting nests and chicks. 	
Species	Additional Information & resources
Corn bunting <i>Emberiza calandra</i>	S41, BoCC Red. Fairly common resident. Focus of conservation projects. Corn Bunting conservation- Advice for Farmers
Cuckoo <i>Cuculus canorus</i>	S41, BoCC Red. Fairly common but declining summer visitor. Reasons for national decline poorly understood.

Grey partridge <i>Perdix perdix</i>	S41, BoCC Red. Scarce resident; much declined but benefiting locally through conservation effort. Grey Partridge- advice for Farmers
Linnet <i>Linaria cannabina</i>	BoCC Red. Common but decreasing resident and partial migrant. Widespread and locally common but numbers nationally have declined.
Skylark <i>Alauda arvensis</i>	BoCC Red. Slight increase in range but population decline. Populations in non-agricultural habitats seem to have held up. Very common but declining resident in West Sussex and probably common passage migrant and winter visitor.
Stone-curlew <i>Burhinus oediconemus</i>	Legal protection, S41, BoCC Amber. Scarce breeding summer visitor and passage migrant. Also found on chalky downland and grassy heaths. Create 1 ha to 5ha uncropped fallow plots with 30% bare ground. Retain plot until crop is harvested from late July. Monitor breeding while protective nests and chicks.
Turtle dove <i>Treptopelia turtur</i>	S41, BoCC Red. Scarce and declining summer visitor and passage migrant. Breeding has drastically declined. Sussex holds c. 4.5% of the national population. Requires bespoke action. Rye Bay, Ashdown Forest. Providing feeding resources for turtle doves
Yellowhammer <i>Emberiza citrinella</i>	BoCC Red. Common resident. Declined, and dependent on management of arable margins and heathland.

Rare Arable Plants Assemblage	
Measures: <ul style="list-style-type: none"> • Low-input arable management, adjacent or on known sites. • Cultivate margins in the spring between February and April or in the autumn between September and November. • Do not apply any fertilisers or manures or pesticides except for herbicides to weed-wipe or spot-treat for the control of injurious weeds or invasive non-natives. 	

<ul style="list-style-type: none"> Managing Arable Farm Land- Plantlife 	
Species	Additional Information & resources
Annual knawel <i>Scleranthus annuus</i>	S41, EN (GB), EN (England). Generally lowland, has declined significantly throughout its range. Rare in West Sussex.
Corn buttercup <i>Ranunculus arvensis</i>	S41, CR (GB), EN (England), Sussex Rare. Archaeophyte. Formerly widespread across lowland England and Wales, extending to Scotland. Population declined by more than 80% across core range during 20th century. Rare in West Sussex and declining, as elsewhere in BI.
Field gromwell <i>Lithospermum arvense</i>	EN (GB), EN (England), Sussex Rare. Archaeophyte. Arable weed in Britain since Bronze Age, declined substantially since 1960s. Rare in West Sussex. Has decreased greatly although can appear in large numbers.
Shepherd's-needle <i>Scandix pecten-veneris</i>	S41, CR (GB), EN (England), Sussex Rare. Archaeophyte. Once an abundant arable weed, but now on the verge of extinction. Rare in East Sussex.
Spreading hedge-parsley <i>Torilis arvensis</i>	S41, EN, Nat Scarce, Sussex Rare. Archaeophyte. Formerly widely distributed across England as far north as Yorkshire, with majority of records in south and east. Distribution has significantly reduced. Scarce in West Sussex.

Grasslands

Breeding Waders – Wet Grassland & Heathland Assemblage	
Measures: <ul style="list-style-type: none"> Restore and expand areas of wet meadow, heathland, mire and saltmarsh. Graze (ideally cattle) to provide a mosaic of suitable sward heights for nesting and feeding. Minimise grazing during the breeding season to reduce chance of trampling from livestock. Create small wader scrapes, hollows and pools to provide muddy areas for feeding. Consider use of predator fencing to protect nests and chicks. <i>Minimise disturbance from human activity during breeding season.</i> 	
Species	Additional Information & resources
Redshank	BoCC Amber.

<i>Tringa totanus</i>	Scarce resident; common winter visitor and autumn passage migrant; fairly common spring migrant. Breeding pairs declined more steeply in Sussex than nationally. Wintering numbers declining but not as fast as nationally. Redshank conservation- advice for farmers
Lapwing <i>Vanellus vanellus</i>	S41, BoCC Red. Scarce or fairly common resident and very common winter visitor. Coastal wetlands, rivers valleys and levels are core breeding areas, but pairs scattered across West Sussex Downs. Target conservation work has brought increases in breeding pairs, but recovery likely to be slow. Wintering birds spread more widely over Downs and along the coast than breeders but river valleys and wetlands still key areas. Lapwing- advice for Farmers

Chalk Grassland Assemblage	
Measures: <ul style="list-style-type: none"> • Grazing with sheep or cattle between mid-July and April to maintain structural diversity with mixture of short turf, longer vegetation, small areas of scattered scrub and some bare ground. • For Duke of Burgundy, allow development of very short, scattered scrub allowing growth of cowslip <i>Primula</i> (mainly <i>veris</i>) that will not desiccate by early summer while larvae still feeding. • Avoid use of fertilisers to keep nutrient levels low. • If necessary (if grazing not possible), a late summer cut with removal of arisings and control scattered scrub with cutting between November and February as required. • Safeguard existing sites and seek to expand habitat to improve connectivity. • <i>Survey and monitor.</i> 	
Species	Additional Information & resources
Adonis blue <i>Polyommatus bellargus</i>	Legal protection, NT, Sussex Rare. Thermophilic, requires short sward grassland with ants and Horseshoe Vetch. Iconic. c0874 Adonis Blue
A planthopper <i>Tettigometra impressopunctata</i>	Sussex Rare. Scarce species restricted to high quality downland and calcareous dunes in southern England and Wales. Excellent indicator of high quality chalk grassland.

Basil thyme <i>Clinopodium acinos</i>	S41, VU (GB), VU (England). Thinly scattered across southern, central and eastern England, becoming increasingly common in northern England. Scarce in West Sussex.
Brown-banded carder bee <i>Bombus humilis</i>	S41, Sussex Rare. Intermittently present along south and west coasts of England and Wales. Significant decline during 20th Century, coinciding with loss of large areas of flower-rich grassland. Largely restricted to chalk grassland of South Downs.
Burnt orchid <i>Neotinea ustulata</i>	S41, EN (GB), EN (England), NS, Sussex Rare. Distributed throughout central and south Europe and southern Sweden in the north. Rare in West Sussex, always local on downland, formerly more widespread. Now only known as small vulnerable colony.
Chalk hill blue <i>Polyommatus coridon</i>	Legal protection, NT. More widespread than the other chalk grassland blues, larvae feed on Horseshoe Vetch. Iconic.
Chalk milkwort <i>Polygala calcarea</i>	Sussex Rare. Infrequent and local plant in Britain, restricted to southern England. Rare in West Sussex. There has been a decline.
Curly beardless-moss <i>Weissia condensa</i>	S41, Sussex Rare. Needs well grazed steep chalk grassland, with closely grazed turf and bare areas. South Downs considered within top five National Character Areas for this species.
Duke of Burgundy <i>Hamearis lucina</i>	Legal protection, S41, EN, Sussex Rare. Nationally scarce and local but well established in West Sussex because of targeted habitat management.
Field fleawort <i>Tephrosia integrifolia</i>	VU, NS, Sussex Rare. In the BI, restricted to southern England with core areas in Sussex and Wiltshire Downs. Rare in West Sussex and has always been scarcer than East Sussex. Rare to the west of the Adur.
Frog orchid <i>Coeloglossum viride</i> (<i>Dactylorhiza viridis</i>)	S41, RedList GB post2001 VU, RedList ENG post2001 VU. Vulnerable nationally and scarce in Sussex. South Downs NCA considered within the top 5 for this species. Would benefit from targeted action.
Hairy rock-cress <i>Arabis hirsuta</i>	NT. Scarce in West Sussex. Usually in the most species-rich short dry turf. Decline since 1980s and several surviving colonies are small and vulnerable.

Heath snail <i>Helicella itala</i>	LC. Although only assessed as LC in the 2014 RDB, states “Records imply distinct decline over recent decades. Loss of populations in southern and central England are a cause for concern.” Very local in West Sussex, typically found on a few of the best chalk grassland sites where it indicates long-term sympathetic traditional management. Habitat management and habitat connectivity are key.
Man orchid <i>Orchis anthropophora</i>	S41, EN (GB), EN (England), NS, Sussex Rare. In the BI, most frequent in Surrey on North Downs, but rare elsewhere and at its northern European limit. Always rare in Sussex.
Moss carder bee <i>Bombus muscorum</i>	EN (European), S41. Widely distributed throughout Britain and Ireland but showing signs of continuing severe decline since 1970. In southern areas, largely retreated to coast.
Musk orchid <i>Herminium monorchis</i>	S41, VU (GB), EN (England), NS, Sussex Rare. Considered Regionally Extinct in Wales, now restricted to southern areas of England and is assessed as Endangered due to substantial and continuing decline. Rare across Sussex. Still good colonies on Didling Down, Heyshott Down and Ditchling.
Red-shanked carder bee <i>Bombus ruderarius</i>	S41. Catastrophic decline in abundance and distribution throughout BI. Scarce and declining in West Sussex.
Round-headed rampion <i>Phyteuma orbiculare</i>	NS, Sussex Rare. Occurs on downland in Wiltshire, Hants and Surrey, but nowhere so frequent as in Sussex- locally frequent in West Sussex. "Pride of Sussex".
Silver-spotted skipper <i>Hesperia comma</i>	Legal protection, NT, Sussex Rare. Found on the chalk of southern England, including the North and South Downs, the Chilterns, Dorset, Hampshire and Wiltshire. Abundance has increased but distribution has declined. Needs unimproved open chalk grasslands with short, patchy swards. Prefers warm, south-facing slopes. c0874 Silver-spotted Skipper
Small blue <i>Cupido minimus</i>	Legal protection, S41, NT. Early successional member of chalk grassland assemblage- areas of hot bare chalk where Kidney Vetch is pioneer species required. Iconic.

	Small Blue
Sterile beardless-moss <i>Weissia sterilis</i>	S41, Sussex Rare. Needs well grazed steep chalk grassland, with closely grazed turf and bare areas. South Downs considered within top five National Character Areas for this species.

Waxcap and Other Grassland Fungi Assemblage	
Measures: <ul style="list-style-type: none"> • West Sussex known to be important for waxcap grasslands, with sites often found in old cemeteries. • Maintenance of existing habitat inside and peripheral to protected sites. • Traditional land management that created the necessary habitat for this species should be maintained and taken up at adjacent/nearby sites to expand habitat, including short-sward grazing or cutting and removing cut material, and no fertilisation, herbicides or ploughing. • <i>Raise awareness with landowner/manager.</i> • <i>Survey and monitor.</i> • Waxcaps and grassland fungi: A guide to identification and management. Plantlife. 	
Species	Additional Information & resources
Citrine waxcap <i>Hygrocybe citrinovirens</i>	Widespread but rare throughout Europe. Widely distributed across UK, although apparently absent from eastern England.
Crimson waxcap <i>Hygrocybe punicea</i>	Sussex Rare. Widespread but generally rare throughout Europe. Similarly, widespread across UK.
Dingy waxcap <i>Neohygrocybe ingrata</i>	European distribution. Scattered records across UK in England, Wales, Scotland and Ireland. English records restricted to SE (East and West Sussex), west and NW England.
Excentric pinkgill <i>Entoloma excentricum</i>	Sussex Rare. Records highly fragmented but scattered across UK. Unknown if significant population.
Felted pinkgill <i>Entoloma griseocyanum</i>	Sussex Rare. Rare but widespread in Europe. UK records scattered and widespread, although absent from East Anglia.
Glistening waxcap <i>Gloioxanthomyces vitellinus</i>	Rare but widespread in Europe. Widespread records across UK.

Lilac pinkgill <i>Entoloma porphyrophaeum</i>	Widespread across UK and recently recorded locally.
Mealy pinkgill <i>Entoloma prunuloides</i>	Sussex Rare. Uncommon in Britain and Ireland but widely distributed.
Pink waxcap <i>Porpolomopsis calyptriformis</i>	Sussex Rare. European distribution. Widespread across UK, rare in West Sussex.
Splendid waxcap <i>Hygrocybe splendidissima</i>	Widespread by generally rare throughout Europe, with largest populations in UK, Germany, Sweden, Denmark and Norway.
Toasted waxcap <i>Cuphophyllus colemannianus</i>	Globally vulnerable because of threats to habitat. European distribution. Widespread across UK.

Woodland, Hedgerow and Scrub

Deciduous Woodland and Wood Pasture Fungi	
Measures: <ul style="list-style-type: none"> • Maintain woodland cover, reversing habitat fragmentation and expansion of existing habitat. • Prioritise expansion/connection at known sites. • Wood-banks and other earthworks should be retained and protected from damage. • Retain a conifer element in PAWs restoration. • Sweet chestnut coppice with known toothed fungi communities should be retained and if possible managed along traditional methods of cutting on a 10 to 12-year rotation. • Invasive rhododendron should be controlled or eliminated. • Reduce levels of atmospheric nitrogen deposition. • <i>Raise awareness with landowner/manager and avoid tree felling at known locations.</i> • <i>Survey and monitor.</i> • Woodland Wildlife Toolkit 	
Species	Additional Information & resources
Beautiful bonnet <i>Mycena renati</i>	S41.

	In Great Britain and Ireland, only recorded from England (Durham, Mid-west Yorkshire, NE Yorkshire, North Lincolnshire, South Wiltshire and West Sussex. Saprophytic fungi on beech Retain decaying wood of deciduous trees.
Bilious bolete <i>Boletus (Rubroboletus) legaliae</i>	VU. Uncommon in southern England and Europe. Grows with oak and beech, often on neutral to acid soils. Unknown if a significant population, but shortlisted given recent record and extent of suitable habitat locally.
Coral tooth <i>Hericium coralloides</i>	S41, Sussex Rare. Fairly widespread in England, although not particularly common. Records largely confined to south and east England. Saprophytic fungi on beech. Shortlisted given extent of suitable habitat and relatively recent records from West Sussex. Retain living or dead trunks of standing or fallen beech.
Dusky bolete <i>Porphyrellus porphyrosporus</i>	NT. Widespread in Europe, especially in north, but nowhere particularly common. Scarce, scattered records from UK across SE and SW England, Wales, northern England and Scotland.
Gilded bolete <i>Aureoboletus gentilis</i>	NT. Scattered records in SE, Wales, NE and Scotland. Needs better evidence base. Given historic presence, and extent of habitat in county, considered worthy of inclusion.
Tawny bolete <i>Boletus (Aureoboletus) moravicus</i>	VU. NBN records predominantly confined to SE England. Unknown if significant population but given relatively recent record and extent of suitable habitat in county, shortlisted.

Open Parkland Mature and Veteran Trees Lichens
<p>Measures:</p> <ul style="list-style-type: none"> • Maintain open well-lit conditions around mature and veteran native trees in locations that support these species by thinning regeneration (whilst being mindful of the need to retain some younger trees) and controlling invasive species such as ivy, holly and rhododendron. • Remove or reduce sources of locally generated atmospheric pollutants, e.g. by reducing high stocking levels and by limiting fertilising of grasslands. • If possible, convert arable land adjacent to veteran trees to pasture. • Create new pollards out of younger trees and maintaining them by periodic recutting. • Necessary tree surgery of veteran trees may be needed to improve the stability of the tree and prolong its life without damaging the lichen. • <i>Monitor the habitat and species to ensure that the landowner is aware of the presence of these species.</i> • <i>Survey suitable veteran trees.</i>

- [Woodland Wildlife Toolkit](#) > Lichens.

Species	Additional Information & resources
Lemon tart lichen <i>Lecanora sublivescens</i>	S41, NT, NS, Sussex Rare. Rare in Britain and internationally rare. Primarily a southern species. Well-lit trunks of mature or veteran oak or occasionally ash in parklands and wood pasture. Insufficient evidence but given historic presence and extent of suitable habitat locally, would likely benefit from habitat improvements. Lemon-tart-lichen-species-information-guide-final.v2.pdf
Oak rim lichen <i>Lecanora quercicola</i>	Rare in Britain. Primarily a southern species in GB. Well-lit trunks of mature or veteran oak trees. Insufficient evidence to assess local population but given historic presence and extent of suitable habitat locally, likely to benefit from habitat improvements. Oak-rim-lichen-species-information-guide-final.V2.pdf
A lichen <i>Pertusaria pustulata</i>	VU, NR, Sussex Rare. Rare and confined to southern England, but easily overlooked as <i>Pertusaria leioplaca</i> .

Open Deciduous Woodland Assemblage

Measures:

- Coppice woodland to create open glades and rides with light shade.
- Ensure presence of beech with shady bare ground beneath. Plant young beech trees near existing populations and/or allow natural recolonisation.
- Avoid grazing.
- Maintain fallen dead wood.

Species	Additional Information & resources
Bird's-nest orchid <i>Neottia nidus-avis</i>	NT (GB), VU (England). Widespread across most of Europe. In BI, generally lowland and has decreased. Occasional in West Sussex. Some new sites have been found but overall decrease.
Narrow-leaved helleborine <i>Cephalanthera longifolia</i>	S41, VU (GB), EN (England), NS, Sussex Rare. Declined nationally as well as in Sussex. Rare in West Sussex.
Scarlet shieldbug	R.

<i>Eurydema (Rubrodorsalium) dominulus</i>	Very scarce species which has declined considerably. Only a few recent records from parts of Kent and Sussex. Larvae feed on range of hostplants (Brassicaceae). Woodland rides & clearings.
White helleborine <i>Cephalanthera damasonium</i>	S41, VU (GB), VU (England). Locally fairly frequent- most frequent in more heavily wooded areas of western downs.

Woodland Bats Assemblage	
Measures: <ul style="list-style-type: none"> • Monitor and protect (e.g. through raising awareness with landowners) all existing confirmed roost sites, retain as many potential roosts sites as practically possible, and ensure a succession or continuity of potential roost sites for the future. • Create a good network of habitats for roosting, feeding and commuting, avoiding isolated any areas currently used for feeding and ensure good connectivity between sites. Woodland management is key. • <i>Reduce pesticide use within foraging areas to improve insect diversity.</i> • Woodland specialists- Bats and woodland- Bat Conservation Trust 	
Species	Additional Information & resources
Bechstein's bat <i>Myotis bechsteinii</i>	Legal protection, S41. Very rare species, only found in southern Wales and parts of southern England. The UK is at the northernmost edge of its distribution range. Bechstein's bat is a woodland species similar to Barbastelle, favouring holes and crevices in trees in deciduous woodland to roost in. However, foraging range is less at 2km and is mainly confined to woodland habitat. Surrounding landscape restoration is important for boosting insect numbers.
Western barbastelle <i>Barbastella barbastellus</i>	Legal protection, VU, S41. Very rare, only found in southern and central England and Wales. Barbastelles are crevice dwelling bats that predominantly roost in trees associated with woodland that has a high proportion of standing dead or dying trees that provide the cracks and crevices they prefer to use as roosts. Barbastelles require moth-rich foraging habitats over a 7 km range so an increase in the quality and availability of wetland and riparian habitat species-rich meadow and hedgerows is important.

Woodland Birds Assemblage	
Measures: <ul style="list-style-type: none"> • Re-introduce coppicing, varying lengths of rotation to benefit different species, e.g. tree pipits like newly coppiced areas, whereas medium and long rotation will benefit other species. They should be reasonably sized blocks to create a coarse mosaic of larger patches of scrub and coppice for nightingale and other species. • Create structural diversity by carrying out selective thinning to allow more light to reach the understorey, along with the widening of rides and creation of glades. • Remove invasive woody species. • Avoid heavy disturbance or a sudden/dramatic change in woodland structure. • Improve connectivity in the wider landscape through creation of scrubby areas and hedgerows and soft edges between woodland and open habitats. • <i>Control deer numbers.</i> • <i>Monitor populations.</i> • Retain deadwood where possible. • <i>Tackle recreational disturbance and predation by domestic pets through e.g. the creation or improvement of footpaths, fencing, interpretation and education, defensive planting (using thorny species) etc.</i> • Woodland Wildlife Toolkit > Birds. 	
Species	Additional Information & resources
Eurasian honey-buzzard <i>Pernis apivorus</i>	Legal protection, BoCC Amber. Very scarce breeding summer visitor and passage migrant. In 2011, estimated 12-15 breeding pairs across Sussex, making it one of the most important counties in the species in the UK. Provides excellent base for species to maintain robust population. Honey-buzzard BTO- British Trust for Ornithology
Hawfinch <i>Coccothraustes coccothraustes</i>	S41, BoCC Red. Scarce breeding resident and in most years scarce passage migrant and winter visitor; occasionally more numerous.
Lesser spotted woodpecker <i>Dryobates minor comminutus</i>	S41, BoCC Red. Scarce and declining resident.
Marsh tit <i>Poecile palustris</i>	S41, BoCC Red. Very common resident. Nationally, appears to be a stabilisation of the population, but unlikely they will regain former population levels in Sussex.

Nightingale <i>Luscinia megarhynchos</i>	BoCC Red. Specific habitat requirements: coppiced woodland; dense scrub/thickets; wetland. Fairly common summer visitor and infrequently seen passage migrant. West and East Sussex are important UK counties for breeding, second only to Kent. West Sussex appears to be holding its own in the face of national declines. Stronghold for the species and considered iconic. conservation-advice-notes-001-nightingalesb.pdf
Spotted flycatcher <i>Muscicapa striata</i>	S41, BoCC Red. Fairly common but declining summer visitor; scarce passage migrant in spring and fairly common in autumn. Main problems for West Sussex (and UK) birds relate to wintering ground and migration route. However, woodland management would help maximise breeding success.

Heathland and Sandstone

Dry Heaths with Sand and Gravel Exposures Assemblage	
Measures: <ul style="list-style-type: none"> Low intensity grazing to provide some light poaching to create small pockets of bare peat and sandy ground with areas of sparse, short vegetation that are important to a variety of specialised species including invertebrates. Maintain all seral stages of heathland by rotational management. Maintain, create and enhance some mature heather and pine on heathland. <i>Monitor populations.</i> 	
Species	Additional Information & resources
A solitary wasp <i>Diodontus insidiosus</i>	R, Sussex Rare. Heathland districts, Dorset to Essex.
A spider <i>Euophrys petrensis</i>	NT, NR, Sussex Rare. Common on some heathland sites, but rather local. Recorded from only eight locations post-1992. Area of occupancy has declined by 68% from 25 hectads before 1992. Recent (2021) records from Iping Common. <ul style="list-style-type: none"> Former sites need re-evaluation.
A spider	VU, NR.

<i>Lathys heterophthalma</i>	Species only recorded from Surrey, West Sussex and Hampshire. All West Sussex records post 2023. West Sussex nationally important for the species. Distribution in Europe poorly known.
A spider <i>Micaria silesiaca</i>	NT, NR, Sussex Rare. Confined to southern half of England. Only three recent records (most recent 2023). However, the West Sussex population (Iping Common) is important, representing the southern edge of its main GB stronghold on the Surrey/Sussex/Hampshire heaths.
Gentle groove-head spider <i>Tapinocyba mitis</i>	EN, NR, S41, Sussex Rare. Confined to small part of south-central England. Was frequent in heathland in West Sussex. SxBRC hold one recent (2019) record from Iping Common. NE specialist refers to additional records from Trotton Common. Appears to have declined massively. Records important in national context.
Sand lizard <i>Lacerta agilis</i>	Legal protection, S41, Sussex Rare. One of the UK's rarest reptiles. Patchy distribution with populations found in coastal areas in the south and west of the UK. Reintroduced to sites in West Sussex.
Smooth snake <i>Coronella austriaca</i>	Legal protection, S41, Sussex Rare. UK's rarest reptile. Only found on heathlands of Dorset, Hampshire, Surrey and West Sussex.
Southern bronze furrow bee <i>Halictus confusus</i>	R, Sussex Rare. Southern restricted species, recorded only from Dorset to Kent and north to West Norfolk. Very scarce in Sussex, restricted to handful of heaths on Lower Greensand. Ambersham, Midhurst and Iping Commons.
Wood/Heath tiger beetle <i>Cicindela sylvatica</i>	S41, EN, NS, Sussex Rare. In West Sussex only present in a few locations in the Greensand Heaths where diversity of successional stages present. HLS sheets 1 4 prf21 07.indd The Species The Species Recovery Trust heat tiger beetle

Heathland Birds
Measures: <ul style="list-style-type: none"> Improve connectivity within the wider landscape by connecting open areas to wide rides within woodlands and scrubby edges to woodlands.

<ul style="list-style-type: none"> • Restore open habitats within woodlands, especially heathland, with scattered trees. Ideally these areas should be grazed to create structural diversity and encourage invertebrates. • <i>Monitor populations especially those away from heathlands. These species breed in a range of habitats except for Dartford Warbler which is primarily gorse and heathland, but some are found along the coast.</i> 	
Species	Additional Information & resources
Dartford warbler <i>Curruca undata</i>	Legal protection, NT, BoCC Amber. Scarce to fairly common but localised resident. At northern limit of its European and World range. Stronghold for species and considered iconic. North Wealden Heaths.
Nightjar <i>Caprimulgus europaeus</i>	Legal protection, S41, BoCC Amber. Fairly common but localised summer visitor rarely seen on migration. Heaths relatively small and fragmented, limiting nesting opportunities and increasing risk of disturbance. Stronghold for the species and considered iconic.
Tree pipit <i>Anthus trivialis</i>	S41, BoCC Red. Widespread distribution from Northern Spain and GB in west to Eastern Europe, Russia and Siberia in east. Fairly common but local summer visitor and fairly common passage migrant in West Sussex. Significant decline in breeding population.

Wetlands

Amphibian Ponds Assemblage	
Measures: <ul style="list-style-type: none"> • Restore ponds: de-silt, deepen, maintain water levels and improve water quality. • Establish network of new ponds, with range of sizes and depths. • Maintain/extend undisturbed semi-natural habitat surrounding pond. • Avoid stocking with fish. • <i>Establish toad crossing signage/patrols where roads cross migration routes.</i> • GCN conservation strategy in place through District Licencing. 	
Species	Additional Information & resources
Common toad	Legal protection, S41.

<i>Bufo bufo</i>	Widespread in the UK but have declined by over 68% in last 30 years. Requires targeted habitat management.
Great crested newt <i>Triturus cristatus</i>	Legal protection, S41. Widespread but patchy distribution in the UK. Sussex is a stronghold for the species. Newt Conservation Partnership

Grazing Marsh Molluscs	
Measures: <ul style="list-style-type: none"> • Manage ditches to maintain high water quality and to reduce shade and vegetation cover. • Maintain water levels in ditches across grazing marsh. • Reduce grazing/provide buffer zones to reduce poaching and eutrophication. 	
Species	Additional Information & resources
A mollusc <i>Euglesa pseudosphaerium</i>	LC, NS. Although only assessed as LC in the 2014 RDB this states, “ <i>This species has a very local distribution within habitats that are vulnerable to inappropriate management, drainage and eutrophication hence susceptible to inappropriate management, drainage and local extinction. A candidate for Near Threatened</i> ”. Species indicative of best flood plain and coastal grazing marshes. Large populations in Arun Valley SAC are of not only of local but also national importance.
Ramshorn snail <i>Anisus (Disculifer) vorticulus</i>	Legal protection, S41, VU, NR, Sussex Rare. The Arun valley populations at Amberley Wild Brooks & Pulborough Brooks both form an SAC for the snail. These are nationally important and both subject to regular monitoring including in 2024. An iconic highly protected snail indicative of a rare and threatened habitat.

Streams and Rivers Assemblage	
Measures: <ul style="list-style-type: none"> • Improve water quality and flow, with well-oxygenated water and clean gravels. • Riparian tree planting where appropriate to increase shading of river channels and counter the effects of increased temperatures, but not where it shades out macrophytes. 	

- Establish passes to overcome or remove barriers to migration upriver.

Species	Additional Information & resources
Brook lamprey <i>Lampetra planeri</i>	Legal protection, Sussex Rare. Widespread in the UK but has declined. Non-migratory.
Brown/Sea trout <i>Salmo trutta</i>	S41. Widespread. Sea trout and brown trout are same species: former is migratory spending most of its life at sea and returning to freshwater to spawn; latter spends all of its life in freshwater. Subspecies included in species given limited number of records for subspecies. Lowland rivers generally have limited populations, but West Sussex rivers appear to support reasonable and possibly unique populations.
Bullhead <i>Cottus gobio</i>	Legal protection, Sussex Rare. Good populations widely distributed in freshwaters across almost the whole of England and Wales. Native fish stocks in West Sussex struggling and are one of the main reasons for many West Sussex rivers failing to reach Good Ecological Status under Water Framework Directive. Predominantly due to barriers and lack of habitat.
Common club-tail <i>Gomphus vulgatissimus</i>	NT, Sussex Rare. In Britain, very localised along stretches of a few rivers. West Sussex hosts a very important and relatively stable population of this dragonfly on the River Arun and its tributaries.
Depressed river mussel <i>Pseudanodonta complanata</i>	Although only assessed as LC in the 2014 RDB: (1) the River Arun supports extensive populations (the mussel can, unusually be present in large numbers) extending over a considerable distance in the tidal river and (2) it seems to be a unionid mussel that (compared to other native unionids) is particularly sensitive to saline intrusion so making it a good indicator species. Depressed River Mussel- Species Directory- Freshwater Habitats Trust
European eel <i>Anguilla anguilla</i>	S41, CR. Widely distributed around British and Irish coasts. Found in rivers and estuaries. In common with global trend, West Sussex eel stocks have fallen by over 90%. European eel
River lamprey <i>Lampetra fluviatilis</i>	Legal protection, S41, Sussex Rare. Widespread but rare in BI. Native fish stocks in Sussex struggling and are one of the main reasons for many West Sussex rivers failing to reach Good Ecological Status under Water Framework Directive. Predominantly due to barriers and lack of habitat.

Sea lamprey <i>Petromyzon marinus</i>	Legal protection, S41. Reasonably widespread in UK rivers. Still common in some places but has declined. Native fish stocks in West Sussex struggling and are one of the main reasons for many West Sussex rivers failing to reach Good Ecological Status under Water Framework Directive. Predominantly due to barriers and lack of habitat.
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Urban

Urban Birds Assemblage	
Measures: <ul style="list-style-type: none"> • Create and improve management of species rich grassland, wetland and pockets of scrub in urban areas and improve connectivity within the landscape. • Encourage the incorporation of sustainable urban drainage systems (SuDS). • Provide suitable nest boxes/cups for swifts and house martins where there are no natural nests present and preserve existing nest sites through partnership working. • <i>Engage with businesses and the public to educate them about these species and encourage their involvement in conservation of threatened urban bird species.</i> • <i>Develop Sussex-wide guidance or standard planning conditions to encourage provision in new development (e.g. BHCC swift brick policy).</i> • 1563785657-wwt-rspb-sustainable-drainage-systems-guide.pdf 	
Species	Additional Information & resources
House martin <i>Delichon urbicum</i>	BoCC Red. Common but declining summer visitor and abundant passage migrant. English population declines appear more severe in SE England.
Starling <i>Sturnus vulgaris</i>	S41, BoCC Red. Common but declining resident and very common to abundant winter visitor. Sussex holds c. 2.1% of GB population. Considered iconic. Steep decline.
Swift <i>Apus apus</i>	BoCC Amber. Common summer visitor and passage migrant in West Sussex. Decline in breeding population. Scored highly in public surveys.