

**Land at Ainsdale Hope Centre
An Invertebrate Assessment**

Final Report

**A report for:
Ecology Services Limited**

24 October 2023

**By:
Conops Entomology Ltd**

Report Number: 23.16





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1 Introduction

- 1.1 Conops Entomology Ltd was commissioned in March 2023 by Ecology Services Limited to undertake a survey of land at Ainsdale Hope Centre, Ainsdale, prior to possible development.
- 1.2 The scope of this survey is to undertake an invertebrate assessment of land at Ainsdale Hope Centre that may be impacted by a proposed development (referred to hereafter as ‘the site’). The assessment appraised the key habitats and/or features of the site through the recording of invertebrates. The data are used to assess the value to invertebrates of those habitats or features in order to evaluate the site for its importance as an invertebrate resource. From the collection of data and subsequent assessment and valuation, suitable recommendations could then be put forward in the event that some or all of those features or key habitats may be impacted by a proposed development.
- The site is located at OS grid reference SD3123212973.

Methods and timings

- 1.3 The methods used for the assessment are those recommended in the Natural England guidance document *Surveying Terrestrial and Freshwater Invertebrates for Conservation Evaluation* (Drake *et al.*, 2007). In some instances, a bespoke method has been created for the site assessment but still retains the overall approach to assessing features and habitats for conservation assessment. The bespoke methods relate to the extent of the free-ranging sampling.
- **Sweep netting**
- 1.4 This method provides the main proportion of the survey element and is the most efficient method for cataloguing a site’s invertebrate resource. Sweep netting involves the use of a long-handled sweep net being swept over vegetation such as stands of grasses or flowers, or along scrub fringes in order to gather invertebrate material.
- **Spot sampling**
- 1.5 Spot sampling is employed to collect large, conspicuous invertebrates such as bees and wasps from flowering plants, and to supplement the sweep samples. Spot sampling is often the most effective method for recording species from high-fidelity niches.
- **Beating**
- 1.6 Trees and scrub are beaten to dislodge any invertebrates on the leaves and branches. These are collected from a white sheet, and the contents retained for later examination.
- **Vacuum sampling**
- 1.7 Suction sampling was undertaken on tall and short swards during each visit to the site.
- **Pitfall trapping**
- 1.8 A series of pitfall traps were originally installed in grassland areas but owing to the potential for European protected reptiles and amphibians to be present, these were removed to avoid risk of their capture. As passive trapping could not be utilised to record ground-running beetles and bugs, increased usage of vacuum sampling was undertaken to compensate for this.

Survey timing

1.9 The site was visited on five occasions:

Visit dates

03 May 2023 – sunny, 15–18°C;

30 May 2023 – sunny, 16–18°C;

04 July 2023 – sunny, 18–21°C;

01 August 2023 – sunny, 19–20°C; and

06 September 2023 – sunny, 21–25°C.

Results analysis

1.10 Tables 1 and 2 provide a breakdown of the site’s invertebrate resources and highlight any species of significance recorded during the surveys.

1.11 Tables 3 has been generated using the Pantheon software package. Pantheon is an analytical tool developed by Natural England and the Centre for Ecology & Hydrology to assist invertebrate nature conservation in England. Site data in the form of species lists can be imported into Pantheon, which then analyses the species within the lists, assigning them to habitats and resources. Pantheon also consigns the most up-to-date national status to the species where it is available.

1.12 Pantheon is also capable of other outputs such as Specific Assemblage Types (SATs) (see Table 4).

1.13 A SAT is characterized by stenotopic species (those that can withstand only a narrow range of environmental conditions). SATs are therefore more tightly defined than ‘habitats’ or ‘resources’ and sit within a parent habitat or Broad Assemblage Type (BAT). More than one SAT can sit within a parent BAT.

Example:

BAT: F2 – grassland and scrub matrix

SAT: F211 – herb-rich dense sward

F212 – dense scrub

1.14 The information obtained from Pantheon can then be used to assign quality to sites and their features, assist in management decisions, and facilitate requirement for further surveys, where required and appropriate.

1.15 Pantheon was first made publicly accessible in April 2018 and is the primary analytical tool used by entomologists in site evaluation. It is also the tool recognized and preferred by Natural England. For more information on this new resource, see <http://www.brc.ac.uk/pantheon/>.

1.16 Not all species of importance are expressed in the following tables, as they do not form part of the Pantheon analysis and/or their specific requirements are not yet fully understood.

2 Results summary

2.1 A total of 201 species from the sampled groups were recorded during the surveys.

2.2 A total of six species recorded have a national status (see Appendix I for explanation of the various status grades), though it is recognized by many of the national recording schemes that a number of these no longer warrant their current status and that they may need revising. This total does not include research-only moths. These moths are only on the S41 list owing to a potential threat to become scarce and are not currently under threat.

2.3 The full list of species recorded can be found in Appendix II.

Table 1 Species breakdown

Site	Total no. of species recorded	Total no. of species of importance*	Species of importance (%)
Site	201	6	2.9

*Note: some species do not warrant nationally significant status.

Table 2 Species of importance

Scientific name	Vernacular name	National/local status	Habitat preferences and species notes
<i>Agelastica alni</i>	Alder leaf beetle	Data Deficient; Nationally Rare*	Feeds on alders (<i>Alnus</i> spp.). Now very common across England and no longer deserves a nationally significant status.
<i>Coenonympha pamphilus</i>	Small heath butterfly	Near Threatened; NERC Act Section 41	Fine-leaved grassy swards.
<i>Didea intermedia</i>	A hoverfly	Nationally Scarce	Associated with pines (<i>Pinus</i> spp.) where its larvae predate aphids.
<i>Megachile leachella</i>	Silvery leafcutter bee	Notable b*	Loose sand species, mainly coastal. Forages from <i>Lotus</i> and other Fabaceae.
<i>Megalonotus dilatatus</i>	A ground bug	Notable b	Associated with open sands and patchy swards.
<i>Polydrusus formosus</i>	A weevil	Notable a*	Scrub fringe species. Now much more common than status suggests.

*Accepted as being more common than this status suggests; likely to be downgraded.

Table 3 Resource-usage table (taken from Webb *et al.*, 2017¹)

Broad biotope	Habitat	No. of species	No. of species with conservation status (excluding research-only moths)	Species with conservation status (excluding research-only moths)
open habitats	tall sward & scrub	95	—	—
open habitats	short sward & bare ground	36	3	<i>Megalonotus dilatatus</i> (Nb); <i>Megachile leachella</i> (Nb*); <i>Coenonympha pamphilus</i> (NT; S41)
tree-associated	arboreal	24	3	<i>Agelastica alni</i> (DD; NR*); <i>Didea intermidea</i> (NS); <i>Polydrusus formosus</i> (Na*)
wetland	marshland	11	—	—
tree-associated	shaded woodland floor	11	—	—
tree-associated	decaying wood	7	—	—
wetland	acid & sedge peats	5	—	—
wetland	running water	4	—	—

*Accepted as being more common than this status suggests; likely to be downgraded.

¹ Webb, J., Heaver, D., Lott, D., Dean, H.J., van Breda, J., Curson, J., Harvey, M.C., Gurney, M., Roy, D.B., van Breda, A., Drake, M., Alexander, K.N.A. and Foster, G. (2017). *Pantheon - database version 3.7.6*. [online] Available at: <http://www.brc.ac.uk> [Accessed 03/10/23].

Table 4 SAT table (taken from Webb *et al.*, 2017)

Broad biotope	SAT	SAT code	No. of species	No. of species with conservation status (excluding research-only moths)	Conservation status	Reported condition*
open habitats	rich flower resource	F002	15	1	<i>Megachile leachella</i> (Nb*)	Favourable (15 species, 15 required)
tree-associated	bark & sapwood decay	A212	6	–	–	Unfavourable (6 species, 19 required)
open habitats	bare sand & chalk	F111	6	1	<i>Megachile leachella</i> (Nb*)	Unfavourable (6 species, 19 required)
open habitats	open short sward	F112	5	1	<i>Coenonympha pamphilus</i> (NT; S41)	Unfavourable (5 species, 13 required)
open habitats	scrub edge	F001	4	–	–	Unfavourable (4 species, 11 required)
open habitats	scrub-heath & moorland	F003	3	–	–	Unfavourable (3 species, 9 required)
wetland	reed-fen & pools	W314	1	–	–	Unfavourable (1 species, 11 required)
tree-associated	heartwood decay	A211	1	–	–	Unfavourable (1 species, 6 required)

*Accepted as being more common than this status suggests; likely to be downgraded.

3 Discussion

Limitations

- 3.1 2023 experienced extremes in weather from a dry and cold spring to a hot and dry June followed by a wet July and August, off the back of 2022, which saw a protracted drought and a series of heatwaves. Little to no rain for many months over the two years coupled with extreme heat events has widely been reported as having a significant impact on invertebrate numbers. This rapid decline of invertebrates results in difficulty recording species diversity, as many species are now operating at very low densities and numbers.
- 3.2 Results therefore are on average lower than expected, and species lists are broadly dominated by common species. It is still possible to reflect fairly the value of a site, though, through the analysis and discussion, and by using the experience of the invertebrate ecologist.

Habitats

- 3.3 The site is represented by a range of habitats broadly covering three biotopes: ‘open habitats’, ‘tree-associated’, and ‘wetland’. However, it is the open terrestrial biotope that overwhelmingly dominates the site in terms of species associations and physical extent of each habitat. This is supported by the tree-associated biotope, with the wetland being noted, and although not intrinsic to the site (i.e. there are no pools or marshy ground on the site), the invertebrates associated with this biotope utilize the site for other purposes. These are most likely for shelter, foraging, or aggregating to find a mate.
- 3.4 The habitat that is the most prominent across all areas of the site is the tall sward and scrub habitat, with a strong total of 95 species of association recorded. The resource is dominated by solitary bees and wasps, true bugs such as shield bugs and ground bugs, and also flies. There are no species of conservation significance associated with this generic habitat matrix.
- 3.5 The second most speciose habitat on the site is the short sward and bare ground habitat, with 36 species of association, including three species with a nationally significant status, though one of these species (*Megachile leachella*) possibly no longer warrants a nationally significant status. The habitat is most evident along the northern and north-western boundary of the site where it adjoins the dune systems.
- 3.6 There are woodland elements to the site. These are again along the northern boundary where the site adjoins a small mixed woodland. The arboreal resource on the site includes 24 species with three having a nationally significant status, but only one of these truly warrants that status. Along with the arboreal habitat, there is a shaded woodland floor element. This is represented by 11 species of association. The decaying wood habitat at the site is very limited. Seven species are noted in the analysis, but it is thought more likely that these species are more strongly associated with the adjoining mixed woodland but utilize the site for other reasons, for example flower-foraging.
- 3.7 The marshland element, although not ‘important’ to the site in terms of habitat presence, still supports 11 species of association. However, as previously mentioned, they are likely utilizing the site for other purposes, but this does highlight the importance of mixed landscapes to invertebrates and that juxtaposed habitats and features across all scales are important.
- 3.8 There are other habitats noted in the analysis, but they are of very low prominence and not considered important to the site or assessment.

SATs

- 3.9 The site is comparatively small with a largely homogeneous interior comprising fine-leaved sward grassland with patches of flowers. However, there are a number of SATs expressed in the analysis.
- 3.10 The F002 SAT 'rich flower resource' possesses 15 species (where the threshold for favourable status is 15). The extensive flowery character of parts of the site is the reason for this status. The patchwork of short swards with *Lotus* and yellow composites and ruderal species such as umbellifers and bramble (*Rubus fruticosus* agg.) provide a long continuity of flower-foraging for invertebrates that use the site.
- 3.11 The saproxylic assemblage of bark and sapwood decay (A212) holds a species-of-fidelity total of 6 (where the threshold is 19). This resource of invertebrates is not significant, nor is it suggested to be important to the site, but it is expressed in the analysis owing to the site's proximity to mixed woodland. The site is the nectar-foraging location for species breeding within deadwood features in the adjacent woodland.
- 3.12 The bare sand and chalk SAT (F111) is not well represented on the site. A total of six species are recorded (where the threshold is 13). The resource is limited to small open areas toward the north-western boundary of the site where exposed sands are present.
- 3.13 The scrub fringe SAT (F001) is also present on the site, being the interface between the off-site mixed woodland and the open grassland habitats of the site. Owing to the limited extent and variation of the fringe though, only four species of association are noted.
- 3.14 There are other SATs noted by the analysis, but they are represented by only one or two species of fidelity and not thought to be intrinsic to the assessment.

Species

- 3.15 The survey of the site recorded 201 species and six species identified by Pantheon as being of value, three of which are more common now than their status suggests, so in time, this number would be revised downwards as further status reviews are completed.
- 3.16 Owing to the challenging weather conditions of 2023, the lists of species is slightly lower than expected, but the total is still thought to be a strong total for a site where there are few areas of significant structural variation.
- 3.17 All of the relevant scarce species are associated with on-site early successional type habitats (short swards and patchy sandy ground). Another species, the hoverfly *Didea intermedia* (NS), is associated with the off-site pine trees (*Pinus sylvestris*) but was recorded along the scrub fringe of the site where it was basking.
- 3.18 The majority of the invertebrate fauna comprises typical and ubiquitous species of either open, parched and fine-leaved grassy swards or scrub fringes.

Site assessment summary

- 3.19 The survey recorded 201 species from the target groups, including six species of importance. This constitutes 2.9% of the total species recorded, which is a low total.
- 3.20 The overall number of species recorded is slightly lower than expected but is still considered a strong list for a site
- 3.21 The site has few habitat types, being predominantly a homogeneous fine-leaved sward grassland with patchy flowery areas and scrub fringe. This is reflected in the low scarce species percentage (2.9%), although the overall list of species is quite high for a site with few niche opportunities. The reason for this may be the site's proximity to a high-value Site of Special Scientific Interest (SSSI) with an element of species drift occurring onto the site for foraging, mating, or some other reason.
- 3.22 Despite the low value of the site to scarce species, it still holds a significant resource of common and localized invertebrates of sandy ground and short flowery swards. In light of this, it is considered to be of value to invertebrates (see Site evaluation section), in particular, how the site fits into the local landscape, as it may be an important component of a wider landscape matrix, supporting species that may be breeding off-site but utilize the on-site feature for some part of their ecologies or life cycle such as foraging or lekking (for a mate).

Site evaluation

- 3.23 The site comprises, or is thought to comprise (see Limitations section), a moderate invertebrate fauna but not of highly specialized species that have nationally significant statuses. It appears the site may be a useful resource for the wider landscape invertebrate resources and as such holds value.
- 3.24 The valuation of the site takes into consideration the range of species recorded, including the scarce species, the overall assemblages, and the importance of the habitats to the species. It also considers the context of the year's weather, the site, and/or its species and resources in relation to the local area and further afield.
- 3.25 From considering the above summary information and data collected from the surveys, it is suggested that any impact on the site's key features and species should be considered to be of **District (low) importance**.
- 3.26 The site is considered to be of District (low) importance and not one of a lower status, owing to the site's potential importance to the wider landscape, in particular as a contributory resource to the adjacent SSSI and also mixed woodland.

4 Recommendations

Important note

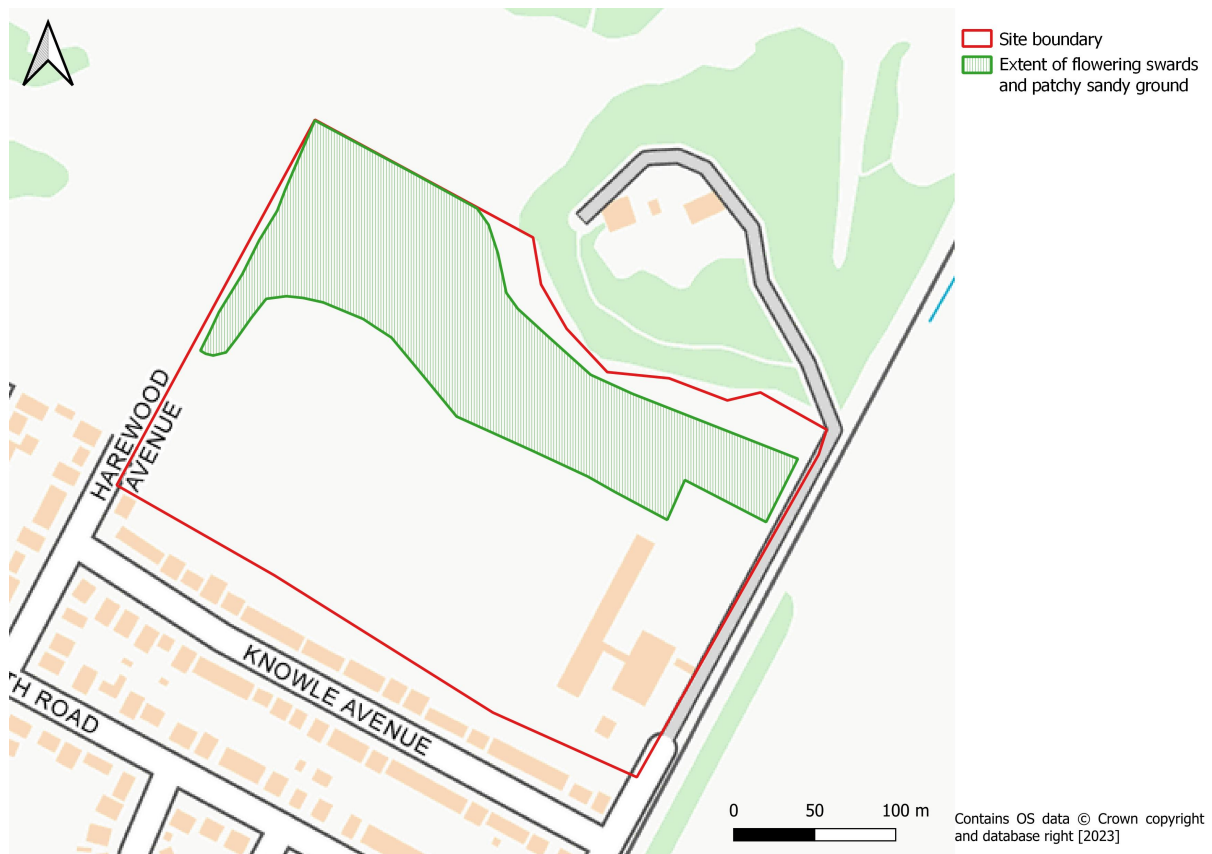
- 4.1 The priority should always be to retain key areas of habitat *in situ*.
- 4.2 Where this cannot be done, a further replicant habitat **mosaic** should be created. This should be of high quality and managed to retain its desirable character.
- 4.3 All invertebrate-related mitigation should be undertaken on **low-fertility sandy soils**.
- 4.4 As the site and its fauna are largely associated with open sandy habitat with scrub fringes, a complex mosaic of features is required to support the invertebrates that currently use the site.
- 4.5 The success of any mitigation for loss of part or all of the site's key features will be dependent on incorporating key features in juxtaposition with one another and creating features that are **abundant, extensive, and optimal**.

Flowering swards and patchy sandy ground

- 4.6 As the site is noted for its rich flower resource, particularly short sward fine-leaved grassland and patchy sandy ground (see map 1 for location of greatest concentration of this resource), it is important to retain as much of this as possible. Where it cannot be retained, a replicant habitat should be created. This should comprise a strong Fabaceae and yellow Asteraceae element, and should form dense patches within a matrix of fine-leaved grasses dominated by fescues (*Festuca* spp.). A breakdown of useful plants to consider is as follows:

- common bird's-foot trefoil (*Lotus corniculatus*);
- bush vetch (*Vicia sepium*);
- hawkbits (*Leontodon* spp.);
- hawkweeds (*Hieracium* spp.);
- labiates (Lamiaceae);
- ragwort (*Jacobaea vulgaris*);
- meadow vetchling (*Lathyrus pratensis*);
- kidney vetch (*Anthyllis vulneraria*);
- other trefoils (Fabaceae);
- other vetches (*Vicia* spp.);
- viper's bugloss (*Echium vulgare*);
- common fleabane (*Pulicaria dysenterica*);
- ox-eye daisy (*Leucanthemum vulgare*);
- yellow rattle (*Rhinanthus minor*); and
- red clover (*Trifolium pratense*).

Map 1: Greatest concentration of short-fine flowery swards



Scrub fringe

- 4.7 Scrub is an important interface with open flowery habitats and short turf/bare ground.
- 4.8 It is also important for beetles and flies that utilize its spring blossom as adults.
- 4.9 Scrub, or any trees, should not shade out important flowery areas or bare sand/short turf.
- 4.10 Where additional scrub planting is required, only use native species or species of high conservation value. The following species provide a continuity of flowers from early spring to summer:

- apples (*Malus domestica* agg.);
- blackthorn (*Prunus spinosa*);
- cherry plum (*Prunus cerasifera*);
- field maple (*Acer campestre*);
- hawthorn (*Crataegus monogyna*);
- plums (*Prunus domestica* agg.);
- rowan (*Sorbus aucuparia*); and
- willows (*Salix* spp.).

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6 Appendix

Appendix I: Red Data Book definitions

Appendix II: Survey results

Appendix I: Red Data Book definitions

Red Data Book category 1 (RDB 1) – Endangered

Species that are known or believed to occur as only a single population within one 10-km square of the National Grid.

Red Data Book category 2 (RDB 2) – Vulnerable

Species declining throughout their range or in vulnerable habitats.

Red Data Book category 3 (RDB 3) – Rare

Species that are estimated to exist in only 15 or fewer post-1970 10-km squares. This criterion may be relaxed where populations are likely to exist in over 15 10-km squares but occupy small areas of especially vulnerable habitat.

Nationally Notable (Scarce) category A (NS A) – Notable A

Taxa that do not fall within the RDB category but that are nonetheless uncommon in Great Britain and thought to occur in 30 or fewer 10-km squares of the National Grid or, for less well-recorded groups, between eight and 20 vice counties.

Nationally Notable (Scarce) category B (NS B) – Notable B

Taxa that do not fall within the RDB category but that are nonetheless uncommon in Great Britain and thought to occur in 31–100 10-km squares of the National Grid or, for less well-recorded groups, between eight and 20 vice counties.

Nationally Notable (Scarce) (N) – Notable

Species that are estimated to occur within the range of 16–100 10-km squares. The subdividing of this category into Notable A and Notable B has not been attempted for many species in this part of the review.

IUCN categories

EXTINCT (EX)

A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range, have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

CRITICALLY ENDANGERED (CR)

A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered, and it is therefore considered to be facing an extremely high risk of extinction in the wild.

ENDANGERED (EN)

A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered, and it is therefore considered to be facing a very high risk of extinction in the wild.

VULNERABLE (VU)

A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable, and it is therefore considered to be facing a high risk of extinction in the wild.

NEAR THREATENED (NT)

A taxon is Near Threatened when it has been evaluated against the criteria but does not

qualify for Critically Endangered, Endangered, or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.

LEAST CONCERN (LC)

A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable, or Near Threatened. Widespread and abundant taxa are included in this category.

DATA DEFICIENT

A taxon is Data Deficient (DD) when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. DD is therefore not a category of threat.

GB Rarity Status categories and criteria

Broadly speaking, the Nationally Rare category is equivalent to the Red Data Book, namely: Endangered (RDB1), Vulnerable (RDB2), Rare (RDB3), Insufficiently Known (RDBK), and Extinct, which will not be used in this report.

The Nationally Scarce category is directly equivalent to the combined Nationally Notable A (Na) and Nationally Notable B (Nb) categories used in the assessment of various taxonomic groups, e.g. by Hyman and Parsons (1992) in assessing the status of beetles, but never used in a published format to assess these three families.

Nationally Rare Native species recorded from 15 or fewer hectads of the Ordnance Survey National Grid in Great Britain since 31 December 1989 and where there is reasonable confidence that exhaustive recording would not find them in more than 15 hectads. This category includes species that are probably extinct.

Nationally Scarce Native species that are not regarded as Nationally Rare AND have not been recorded from more than 100 hectads of the Ordnance Survey National Grid in Great Britain since 31 December 1989 and where there is reasonable confidence that exhaustive recording would not find them in more than 100 hectads.

England NERC S.41 Biodiversity Lists – England England NERC S.41 Species ‘of principal importance for the purpose of conserving biodiversity’ covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. 2008 Natural Environment and Rural Communities Act 2006 – Species of Principal Importance in England (section 41) and Wales (section 42).

Appendix II: Survey results

Only species with a national status have been annotated. All others are common or local species.

Scientific name	Family	Order	National status
<i>Adonia variegata</i>	Coccinellidae	Coleoptera	
<i>Aelia acuminata</i>	Pentatomidae	Hemiptera	
<i>Aeshna grandis</i>	Aeshnidae	Odonata	
<i>Agelastica alni</i>	Chrysomelidae	Coleoptera	Data Deficient; Nationally Rare*
<i>Agriotes obscurus</i>	Elateridae	Coleoptera	
<i>Agrypnus murinus</i>	Elateridae	Coleoptera	
<i>Amara communis</i>	Carabidae	Coleoptera	
<i>Amara convexior</i>	Carabidae	Coleoptera	
<i>Amara familiaris</i>	Carabidae	Coleoptera	
<i>Anatis ocellata</i>	Coccinellidae	Coleoptera	
<i>Andrena bicolor</i>	Andrenidae	Hymenoptera	
<i>Andrena haemorrhoa</i>	Andrenidae	Hymenoptera	
<i>Andrena scotica</i>	Andrenidae	Hymenoptera	
<i>Anobium punctatum</i>	Ptinidae	Coleoptera	
<i>Anomoia purmunda</i>	Tephritidae	Diptera	
<i>Anthocharis cardamines</i>	Pieridae	Lepidoptera	
<i>Anthocoris nemorum</i>	Anthocoridae	Hemiptera	
<i>Athous haemorrhoidalis</i>	Elateridae	Coleoptera	
<i>Autographa gamma</i>	Noctuidae	Lepidoptera	
<i>Bibio marci</i>	Bibionidae	Diptera	
<i>Bombus pascuorum</i>	Apidae	Hymenoptera	
<i>Bombus lapidarius</i>	Apidae	Hymenoptera	
<i>Bombus terrestris</i>	Apidae	Hymenoptera	
<i>Bombus vestalis</i>	Apidae	Hymenoptera	
<i>Brachypterus urticae</i>	Kateretidae	Coleoptera	
<i>Byturus tomentosus</i>	Byturidae	Coleoptera	
<i>Cantharis cryptica</i>	Cantharidae	Coleoptera	
<i>Cantharis lateralis</i>	Cantharidae	Coleoptera	
<i>Cantharis nigricans</i>	Cantharidae	Coleoptera	
<i>Celastrina argiolus</i>	Lycaenidae	Lepidoptera	
<i>Ceutorhynchus assimilis sens. lat.</i> (<i>assimilis/obstrictus</i>)	Curculionidae	Coleoptera	

Scientific name	Family	Order	National status
<i>Cheilosia bergenstammi</i>	Syrphidae	Diptera	
<i>Cheilosia pagana</i>	Syrphidae	Diptera	
<i>Cheilosia variabilis</i>	Syrphidae	Diptera	
<i>Cheilosia vernalis</i>	Syrphidae	Diptera	
<i>Chloromyia formosa</i>	Stratiomyidae	Diptera	
<i>Chorisops tibialis</i>	Stratiomyidae	Diptera	
<i>Chorthippus brunneus</i>	Acrididae	Orthoptera	
<i>Chrysotoxum festivum</i>	Syrphidae	Diptera	
<i>Coccinella septempunctata</i>	Coccinellidae	Coleoptera	
<i>Coelioxys elongata</i>	Megachilidae	Hymenoptera	
<i>Coenagrion puella</i>	Coenagrionidae	Odonata	
<i>Coenonympha pamphilus</i>	Nymphalidae	Lepidoptera	Near Threatened; Section 41 Priority Species
<i>Colletes daviesanus</i>	Colletidae	Hymenoptera	
<i>Conops quadrifasciatus</i>	Conopidae	Diptera	
<i>Coremacera marginata</i>	Sciomyzidae	Diptera	
<i>Coreus marginatus</i>	Coreidae	Hemiptera	
<i>Corizus hyoscyami</i>	Rhopalidae	Hemiptera	
<i>Curtonotus aulicus</i>	Carabidae	Coleoptera	
<i>Dalopius marginatus</i>	Elateridae	Coleoptera	
<i>Dasysyrphus albobristatus</i>	Syrphidae	Diptera	
<i>Dasysyrphus tricinctus</i>	Syrphidae	Diptera	
<i>Deraeocoris (Deraeocoris) ruber</i>	Miridae	Hemiptera	
<i>Didea fasciata</i>	Syrphidae	Diptera	
<i>Didea intermedia</i>	Syrphidae	Diptera	Nationally Scarce
<i>Dioctria atricapilla</i>	Asilidae	Diptera	
<i>Dioctria rufipes</i>	Asilidae	Diptera	
<i>Dolichopus simplex</i>	Dolichopodidae	Diptera	
<i>Dolichopus trivialis</i>	Dolichopodidae	Diptera	
<i>Dolichopus unguis</i>	Dolichopodidae	Diptera	
<i>Dolycoris baccarum</i>	Pentatomidae	Hemiptera	
<i>Dysmachus trigonus</i>	Asilidae	Diptera	
<i>Ectemnius cephalotes</i>	Crabronidae	Hymenoptera	
<i>Elasmotherus interstinctus</i>	Acanthosomatidae	Hemiptera	

Scientific name	Family	Order	National status
<i>Empis livida</i>	Empididae	Diptera	
<i>Empis tessellata</i>	Empididae	Diptera	
<i>Empis trigramma</i>	Empididae	Diptera	
<i>Enallagma cyathigerum</i>	Coenagrionidae	Odonata	
<i>Epistrophe eligans</i>	Syrphidae	Diptera	
<i>Eristalis horticola</i>	Syrphidae	Diptera	
<i>Eristalis pertinax</i>	Syrphidae	Diptera	
<i>Eristalis tenax</i>	Syrphidae	Diptera	
<i>Eumerus funeralis</i>	Syrphidae	Diptera	
<i>Eupeodes latifasciatus</i>	Syrphidae	Diptera	
<i>Exomias pellucidus</i>	Curculionidae	Coleoptera	
<i>Favonius quercus</i>	Lycaenidae	Lepidoptera	
<i>Galerucella lineola</i>	Chrysomelidae	Coleoptera	
<i>Glocianus distinctus</i>	Curculionidae	Coleoptera	
<i>Gymnocheta viridis</i>	Tachinidae	Diptera	
<i>Halictus tumulorum</i>	Halictidae	Hymenoptera	
<i>Harpalus rufipes</i>	Carabidae	Coleoptera	
<i>Harpocera thoracica</i>	Miridae	Hemiptera	
<i>Helophilus pendulus</i>	Syrphidae	Diptera	
<i>Heringia senilis</i>	Syrphidae	Diptera	
<i>Heterotoma planicornis</i>	Miridae	Hemiptera	
<i>Hilara discoidalis</i>	Empididae	Diptera	
<i>Hybos culiciformis</i>	Hybotidae	Diptera	
<i>Hybos femoratus</i>	Hybotidae	Diptera	
<i>Hylaeus brevicornis</i>	Colletidae	Hymenoptera	
<i>Isomira murina</i>	Tenebrionidae	Coleoptera	
<i>Kleidocerys resedae</i>	Lygaeidae	Hemiptera	
<i>Lagria hirta</i>	Tenebrionidae	Coleoptera	
<i>Lasioglossum albipes</i>	Halictidae	Hymenoptera	
<i>Lasioglossum calceatum</i>	Halictidae	Hymenoptera	
<i>Lasioglossum leucozonium</i>	Halictidae	Hymenoptera	
<i>Lasius flavus</i>	Formicidae	Hymenoptera	
<i>Leptogaster cylindrica</i>	Asilidae	Diptera	
<i>Leptopterna ferrugata</i>	Miridae	Hemiptera	

Scientific name	Family	Order	National status
<i>Libellula depressa</i>	Libellulidae	Odonata	
<i>Libellula quadrimaculata</i>	Libellulidae	Odonata	
<i>Limonium poneli</i>	Elateridae	Coleoptera	
<i>Liocoris tripustulatus</i>	Miridae	Hemiptera	
<i>Longitarsus melanocephalus</i>	Chrysomelidae	Coleoptera	
<i>Lycaena phlaeas</i>	Lycaenidae	Lepidoptera	
<i>Malachius bipustulatus</i>	Malachiidae	Coleoptera	
<i>Maniola jurtina</i>	Nymphalidae	Lepidoptera	
<i>Mecinus pascuorum</i>	Curculionidae	Coleoptera	
<i>Mecinus pyraeaster</i>	Curculionidae	Coleoptera	
<i>Megachile leachella</i>	Megachilidae	Hymenoptera	Notable b*
<i>Megachile versicolor</i>	Megachilidae	Hymenoptera	
<i>Megalonotus dilatatus</i>	Lygaeidae	Hemiptera	Notable b
<i>Melanostoma mellinum</i>	Syrphidae	Diptera	
<i>Meligethes aeneus</i>	Nitidulidae	Coleoptera	
<i>Meliscaeva auricollis</i>	Syrphidae	Diptera	
<i>Merodon equestris</i>	Syrphidae	Diptera	
<i>Microchrysa polita</i>	Stratiomyidae	Diptera	
<i>Myathropa florea</i>	Syrphidae	Diptera	
<i>Nabis (Nabicula) flavomarginatus</i>	Nabidae	Hemiptera	
<i>Neocrepidodera ferruginea</i>	Chrysomelidae	Coleoptera	
<i>Neolygus contaminatus</i>	Miridae	Hemiptera	
<i>Nephrotoma scurra</i>	Tipulidae	Diptera	
<i>Oedemera lurida</i>	Oedemeridae	Coleoptera	
<i>Oedemera nobilis</i>	Oedemeridae	Coleoptera	
<i>Omocestus viridulus</i>	Acrididae	Orthoptera	
<i>Oploadontha viridula</i>	Stratiomyidae	Diptera	
<i>Opomyza florum</i>	Opomyzidae	Diptera	
<i>Otiorhynchus ovatus</i>	Curculionidae	Coleoptera	
<i>Oxycera rara</i>	Stratiomyidae	Diptera	
<i>Oxystoma pomonae</i>	Apionidae	Coleoptera	
<i>Palloptera quinquemaculata</i>	Pallopteridae	Diptera	
<i>Palloptera trimacula</i>	Pallopteridae	Diptera	
<i>Palomena prasina</i>	Pentatomidae	Hemiptera	

Scientific name	Family	Order	National status
<i>Paradromius linearis</i>	Carabidae	Coleoptera	
<i>Paranchus albipes</i>	Carabidae	Coleoptera	
<i>Pararge aegeria</i>	Nymphalidae	Lepidoptera	
<i>Pentatoma rufipes</i>	Pentatomidae	Hemiptera	
<i>Perapion curtirostre</i>	Apionidae	Coleoptera	
<i>Peritrechus geniculatus</i>	Lygaeidae	Hemiptera	
<i>Peritrechus nubilus</i>	Lygaeidae	Hemiptera	
<i>Philopodon plagiatus</i>	Curculionidae	Coleoptera	
<i>Phratora laticollis</i>	Chrysomelidae	Coleoptera	
<i>Phylan gibbus</i>	Tenebrionidae	Coleoptera	
<i>Phyllobius oblongus</i>	Curculionidae	Coleoptera	
<i>Phyllobius pyri</i>	Curculionidae	Coleoptera	
<i>Phyllobius roboretanus</i>	Curculionidae	Coleoptera	
<i>Phyllobius virideaeris</i>	Curculionidae	Coleoptera	
<i>Phytocoris (Ktenocoris) varipes</i>	Miridae	Hemiptera	
<i>Pieris napi</i>	Pieridae	Lepidoptera	
<i>Pieris rapae</i>	Pieridae	Lepidoptera	
<i>Pissodes castaneus</i>	Curculionidae	Coleoptera	
<i>Plagiognathus arbustorum</i>	Miridae	Hemiptera	
<i>Plagiognathus chrysanthemi</i>	Miridae	Hemiptera	
<i>Platycheirus albimanus</i>	Syrphidae	Diptera	
<i>Poecilobothrus nobilitatus</i>	Dolichopodidae	Diptera	
<i>Poecilus versicolor</i>	Carabidae	Coleoptera	
<i>Polydrusus cervinus</i>	Curculionidae	Coleoptera	
<i>Polydrusus formosus</i>	Curculionidae	Coleoptera	Notable a*
<i>Polyommatus icarus</i>	Lycaenidae	Lepidoptera	
<i>Propylea quattuordecimpunctata</i>	Coccinellidae	Coleoptera	
<i>Psallus (Apocremnus) montanus</i>	Miridae	Hemiptera	
<i>Psylliodes chrysocephala</i>	Chrysomelidae	Coleoptera	
<i>Pterostichus madidus</i>	Carabidae	Coleoptera	
<i>Pyronia tithonus</i>	Nymphalidae	Lepidoptera	
<i>Quedius curtipennis</i>	Staphylinidae	Coleoptera	
<i>Quedius semiobscurus</i>	Staphylinidae	Coleoptera	
<i>Rhabdomiris striatellus</i>	Miridae	Hemiptera	

Scientific name	Family	Order	National status
<i>Rhagio tringarius</i>	Rhagionidae	Diptera	
<i>Rhagonycha fulva</i>	Cantharidae	Coleoptera	
<i>Rhagonycha nigriventris</i>	Cantharidae	Coleoptera	
<i>Rhamphomyia tarsata</i>	Empididae	Diptera	
<i>Rhamphomyia variabilis</i>	Empididae	Diptera	
<i>Rhinophora lepida</i>	Calliphoridae	Diptera	
<i>Rivellia syngenesiae</i>	Platystomatidae	Diptera	
<i>Sargus bipunctatus</i>	Stratiomyidae	Diptera	
<i>Scaeva pyrastris</i>	Syrphidae	Diptera	
<i>Scaeva selenitica</i>	Syrphidae	Diptera	
<i>Sermylassa halensis</i>	Chrysomelidae	Coleoptera	
<i>Sicus ferrugineus</i>	Conopidae	Diptera	
<i>Silpha tristis</i>	Silphidae	Coleoptera	
<i>Siphona geniculata</i>	Tachinidae	Diptera	
<i>Sitona obsoletus</i>	Curculionidae	Coleoptera	
<i>Sphaerophoria scripta</i>	Syrphidae	Diptera	
<i>Stenodema calcarata</i>	Miridae	Hemiptera	
<i>Stenus clavicornis</i>	Staphylinidae	Coleoptera	
<i>Strophosoma melanogrammum</i>	Curculionidae	Coleoptera	
<i>Sympetrum striolatum</i>	Libellulidae	Odonata	
<i>Syrphus ribesii</i>	Syrphidae	Diptera	
<i>Tachina fera</i>	Tachinidae	Diptera	
<i>Tephritis vespertina</i>	Tephritidae	Diptera	
<i>Thereva bipunctata</i>	Therevidae	Diptera	
<i>Thereva nobilitata</i>	Therevidae	Diptera	
<i>Thymelicus sylvestris</i>	Hesperiidae	Lepidoptera	
<i>Tipula paludosa</i>	Tipulidae	Diptera	
<i>Tipula vernalis</i>	Tipulidae	Diptera	
<i>Trichosirocalus troglodytes</i>	Curculionidae	Coleoptera	
<i>Tyria jacobaeae</i>	Erebidae	Lepidoptera	
<i>Urophora stylata</i>	Tephritidae	Diptera	
<i>Vanessa atalanta</i>	Nymphalidae	Lepidoptera	
<i>Vespula vulgaris</i>	Vespidae	Hymenoptera	
<i>Volucella bombylans</i>	Syrphidae	Diptera	

Scientific name	Family	Order	National status
<i>Volucella inanis</i>	Syrphidae	Diptera	

*Widely accepted as being much more common than this status suggests; likely to be downgraded.