

UKBAP Priority invertebrates associated with Aggregate Sites

Bees & wasps (Hymenoptera):

Banded mining bee (*Andrena gravis*)

Status: UK BAP Priority, RDB1

Regions: SE England: Kent, Essex, E Sussex

Habitat requirements: Preferences unclear, but it probably occurs in reasonably open scrub and grassland with plenty of bare or sparsely vegetated soil (including banks and slopes) in warm sunny situations.

Quarry and Brownfield Habitats: Sites with the appropriate conditions could potentially support populations of this rare bee, and play a significant role in its conservation.

Brown-banded carder bee (*Bombus humilis*)

Status: UKBAP Priority,

Regions: Southern England

Habitat requirements: Open flower-rich habitats on drier sites.

Quarry and Brownfield Habitats: Found on many quarry and brownfield sites, both play a significant role in the conservation of this species.

Moss carder bee (*Bombus muscorum*)

Status: UKBAP Priority, nationally declining

Regions: UK-wide distribution, more common in the north and west.

Habitat requirements: Tall open flower-rich grasslands.

Quarry and Brownfield Habitats: Recorded from a number of brownfield and quarry sites.

Red-shanked carder bee (*Bombus rudarius*)

Status: UKBAP Priority, nationally declining

Regions: Patchy distribution, most common in SE England, but also a strong population in NW Scotland.

Habitat requirements: Extensive areas of taller open grassland and scrub.

Quarry and Brownfield Habitats: Recorded from a number of brownfield and quarry sites.

Large garden bumblebee (*Bombus lucorum*)

Status: UKBAP Priority, Nationally Scarce

Regions: Southern England and southern Wales, sparse records from the north.

Habitat requirements: Open flower-rich habitats supporting a good variety of wildflowers (especially labiates and legumes), probably needs larger sites.

Quarry and Brownfield Habitats: Recorded from a number of brownfield and quarry sites.

Shrill carder bee (*Bombus sylvarum*)

Status: UKBAP Priority,

Regions: Local but widespread distribution, mainly in southern England.

Habitat requirements: Open, flower-rich habitats.

Quarry and Brownfield Habitats: Found on many quarry and brownfield sites.

Five-banded weevil wasp (*Cerceris quinquefasciata*)

Status: UKBAP Priority, RDB3

Regions: SE England.

Habitat requirements: Open, sandy situations such as heathland, sand and gravel pits, and other disturbed locations.

Quarry and Brownfield Habitats: Sand and gravel pits.

Black-headed mason wasp (*Odynerus melanocephalus*)

Status: UKBAP Priority, Nationally Scarce

Regions: Southern England: Dorset, Isle of Wight.

Habitat requirements: Open grassland and sparsely vegetated areas on light, clayey soils.

Quarry and Brownfield Habitats: Has been recorded on a brick pits and other extraction sites with exposed clay.

Long-horned mining bee (*Eucera longicornis*)

Status: UKBAP Priority, Nationally Scarce

Regions: Once widespread in southern England and Wales, now largely restricted to coastal sites, and inlands where a continuity of suitable habitat occurs.

Habitat requirements: Wildflower-rich sandy habitats, including coastal soft rock cliffs and landslips (the habitat of most modern populations), heathland and open grassland. Sunny, south facing banks and slopes are the preferred nesting locations. There may be a requirement for leguminous plants.

Quarry and Brownfield Habitats: Sandy sites with south-facing cliffs and slopes.

Flies (Diptera):

Dotted bee-fly (*Bombylius discolor*)

Status: UKBAP Priority, Nationally Scarce

Regions: Southern England and southern Wales

Habitat requirements: Larvae are brood parasites of mining bees so strong populations are necessary to support the species on a site. Patches of bare, light soil in warm, sunny situations with patches of wildflowers are required for host bees.

Quarry and Brownfield Habitats: Sand pits featuring sandy cliffs and slopes, and wildflowers.

Mottled bee-fly (*Thyridanthrax fenestratus*)

Status: UKBAP Priority, RDB3

Regions: Dorset, Hampshire, W Sussex, Surrey

Habitat requirements: South-facing sandy banks and areas of bare soil or sand to encourage burrowing wasps (the host species), also a rich and varied flora for adult feeding.

Quarry and Brownfield Habitats: Sand pits with developing dry heath vegetation.

Phoenix fly (*Dorycera graminum*)

Status: UKBAP Priority, RDB3

Regions: SE England: S Essex, N Kent.

Habitat requirements: Open, unimproved grassland.

Quarry and Brownfield Habitats: Regularly recorded on brownfield sites and quarries in the Thames Estuary region.

Beetles (Coleoptera):

Heath tiger beetle (*Cicindela sylvatica*)

Status: UKBAP Priority, Nationally Scarce
Regions: Dorset, Hampshire and Surrey.
Habitat requirements: Sandy heath with open patches.
Quarry and Brownfield Habitats: Can benefit from heathland restoration on sand pits.

Rugged oil beetle (*Meloe rugosus*)

Status: UKBAP Priority, RDB3
Regions: Post-1970 records in S Devon, N Somerset, Gloucestershire, Oxfordshire, Worcestershire and E Sussex
Habitat requirements: Open flower-rich grassland. Larvae are parasitic on solitary bees, and so need strong populations of host species (*Anthophora* and *Osmia* species).
Quarry and Brownfield Habitats: Has been recorded on sandpits supporting suitable habitat. Quarries and other aggregate sites are likely to be at least of local importance for other oil beetle species.

Butterflies & moths (Lepidoptera):

Dingy Skipper (*Erynnis tages*)

Status: UK BAP – national decline
Regions: UK Wide
Habitat requirements: Bare ground, foodplants Bird's-foot Trefoil, taller vegetation for shelter and roosting
Quarry and Brownfield Habitats: Old quarries, minerals workings, colliery spoil heaps, railway lines and waste ground.

Grizzled Skipper (*Pyrgus malvae*)

Status: UK BAP Priority – long-term decline
Regions: UK Wide
Habitat requirements: Bare ground, food plants Barren Strawberry, Wild Strawberry
Quarry and Brownfield Habitats: Quarries, gravel pits, spoil heaps, railway cuttings, sidings and embankments, rubbish tips.

Small Blue (*Cupido minimus*)

Status: UK BAP Priority –serious and on-going distribution decline.
Regions: South, Midlands, East of England
Habitat requirements: Sparse or eroding vegetation on chalk or limestone with abundant flowering plants. Sole caterpillar foodplant is Kidney Vetch
Quarry and Brownfield Habitats: Quarries, gravels pits, road embankments and disused railway lines

Grayling (*Hipparchia semele*)

Status: UK BAP Priority – Serious long-term decline
Regions: UK wide.
Habitat requirements: Dry well drained, sparse vegetation, plenty of bare ground. Foodplants grasses.
Quarry and Brownfield Habitats: Old mine workings, old quarries, other earthworks and derelict industrial sites.

Silver-studded Blue (*Plebejus argus*)

Status: UK BAP Priority
Regions: Southern England, Wales, Shropshire and East of England

Habitat requirements: Short sparse vegetation e.g. recently burnt heathland or in quarries on thin eroding soils. Foodplants include a variety of ericaceous and leguminous plants. The most common are Heather, Bell Heather, Cross-leaved Heath, gorses. On calcareous sites Bird's-foot trefoil, Common Rock Rose and Horseshoe Vetch.

Quarry and Brownfield Habitats: Old quarries including sand, chalk and limestone.

Silver-spotted skipper (*Hesperia comma*)

Status: UK BAP Priority

Regions: South East

Habitat requirements: South-facing chalk / limestone thin soils. Warm south-facing slopes are preferred. Breeds where sole foodplant Sheep's Fescue, grows as small tufts in short or broken turf with small patches of bare ground. – grazing

Quarry and Brownfield Habitats: Chalk and limestone quarries.

Northern Brown Argus (*Aricia artaxerxes*)

Status: UK BAP Priority

Regions: Northern England and Scotland

Habitat requirements: Sheltered tin base rich soils with bare ground and steep slopes

Quarry and Brownfield Habitats: Limestone and chalk quarries.

Chalkhill Blue (*Lysnadra coridon*)

Status: UK BAP Priority

Regions: Southern England

Habitat requirements: chalk and limestone grassland preferring south and west facing slopes and shorter turf. Sole foodplant is Horseshoe Vetch.

Quarry and Brownfield Habitats: Chalk and limestone quarries.

Bordered Gothic (*Heliophobus reticulata*)

Status: UK BAP Priority, Nationally Scarce

Regions: South, South East, East Anglia, South Wales, Gloucestershire. Formerly more widely north to Lancashire. Much declined with very few records since 2000, and no known site.

Habitat requirements: Foodplant not known for certain, but possibly Soapwort (*Saponaria officinalis*) or Bladder campion (*Silene vulgaris*). Feeds from June to September. Adults have been found feeding at Red valerian (*Centranthus ruber*), campions (*Silene* sp.), Viper's bugloss (*Echium vulgare*) and Wood sage (*Teucrium scorodina*)

Quarry and Brownfield Habitats: Quarries, railway cuttings, embankments, gardens and calcareous brownfield sites with disturbed ground.

Horehound Long-horn moth (*Nemophora fasciella*)

Status: UK BAP Priority, provisionally Nationally Scarce

Regions: South East (Kent, Surrey, Essex, Middlesex, Suffolk; formerly also Devon, Dorset, Sussex, Norfolk, Cambridgeshire, Warwickshire, Staffordshire, Cheshire, Yorkshire and Westmorland)

Habitat requirements: Feeds from August to April on Black horehound (*Ballota nigra*), initially on the seeds and then on the lower leaves from within a fiddle-shaped case. Has been found resting on the foodplant, on Angelica and nectaring at hogweed.

Quarry and brownfield habitats: Rough ground, landfill edges, sludge treatment works. Also on roadside verges, in marshes and on chalk downs.

Chalk Carpet (*Scotopteryx bipunctaria*)

Status: UK BAP Priority, Nationally Scarce

Regions: Major chalk and limestone regions in England and Wales

Habitat requirements: Calcareous soils, with sparsely vegetated ground or short turf.

Typical foodplants on brownfield sites are Bird's-foot trefoil, Red clover, Black medic.

Quarry and brownfield habitats: Chalk or limestone quarries and embankments.

Four-Spotted moth (*Tyta luctuosa*)

Status: UK BAP Priority, RDB2

Regions: Local distribution in Dorset, Suffolk, Hertfordshire, Kent, Surrey, Essex and Nottinghamshire.

Habitat requirements: Bare ground, thin soils sparse vegetation, warm open conditions. Foodplant: Field bindweed

Quarry and Brownfield Habitats: South-facing banks or active and disused railways, quarries, roads verges, ditches and other disturbed ground.

References

Information on butterflies and moths provided by Butterfly Conservation.

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Recorder species accounts.

Bringing Aggregate Sites to Life project

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