Cobham Area Environmental Study: Orthoptera, Dictyoptera, Dermaptera, Mollusca, Hemiptera, and Aculeate Hymenoptera.

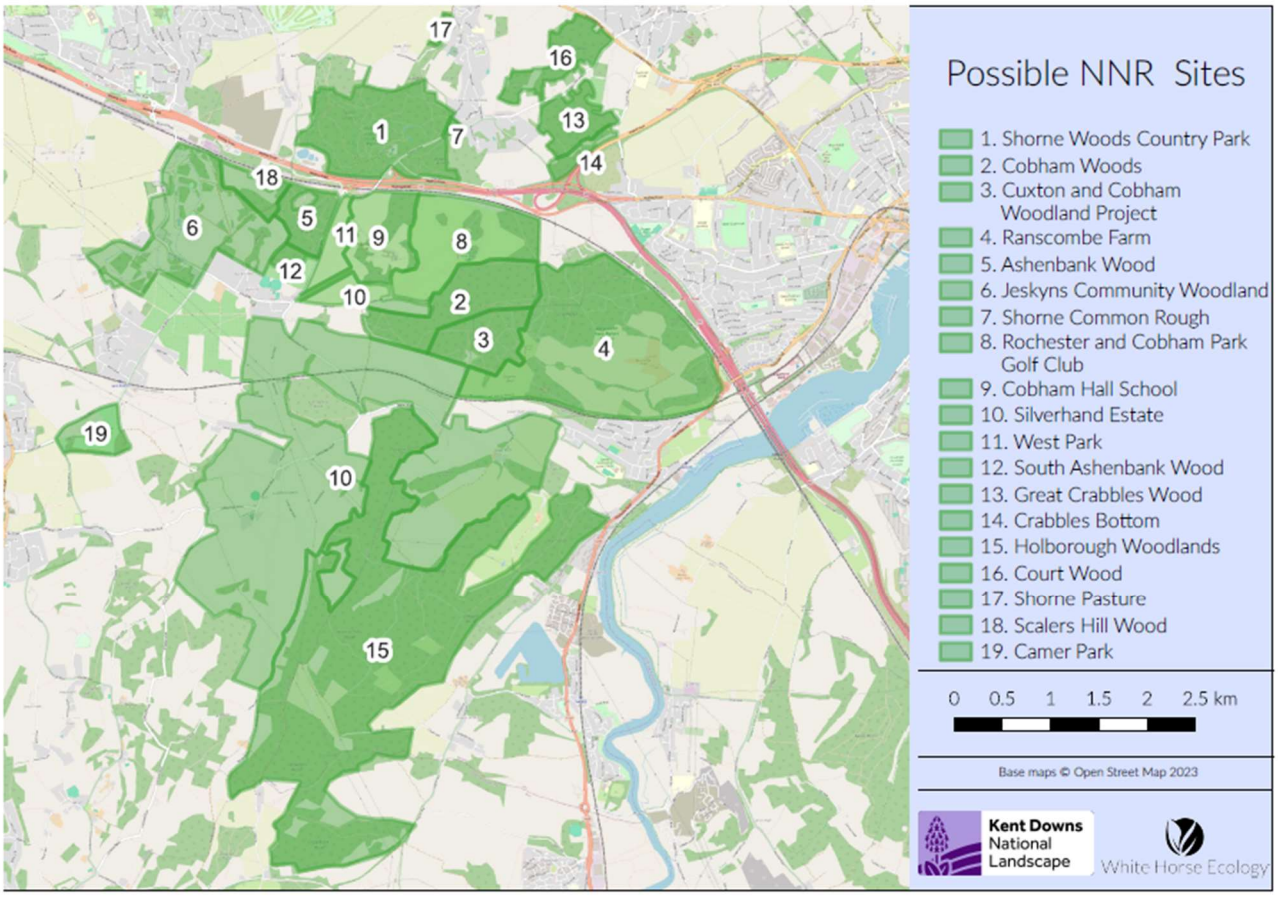
Richard Moyse, 1 July 2024

Introduction

The following report provides notes on those species of greatest importance for nature conservation in areas covered by the Cobham Area Environmental Study (hereafter referred to as the study area, and shown below), and within the following groups:

- Grasshoppers, crickets and allied insects: the Orthoptera, Dictyoptera and Dermaptera.
- Slugs and snails: the Mollusca.
- True bugs: the Hemiptera.
- Bees, wasps and ants: the Aculeate Hymenoptera.

The author, Richard Moyse, is the Kent Field Club's recorder for the Orthoptera, Dictyoptera and Dermaptera, and maintains a county-wide database for the species within these groups. He also has had a long-term interest in the Aculeate Hymenoptera, and researched and wrote the sections on molluscs and true bugs for the *Kent Red Data Book*, edited by Anne Waite, and published by Kent County Council in 2000.



Plan showing the study area for the Cobham Area Environmental Study, shaded green and numbered.

Sources of data

The report below is based primarily on a desk-top study, based on records from the following sources:

- The Kent and Medway Biological Records Centre, which provided those records in its database which intersected with the study area, at resolutions of tetrad (2km square) scale and finer.
- The NBN Species Atlas (https://species.nbnatlas.org/). This online atlas was searched for additional data, particularly for those species for which there is little or no recent published information on their distribution and/or threat status, and was also used to provide background on the national distribution for a number of species.
- iRecord (https://irecord.org.uk/), which was used in a similar way to the NBN Species Atlas.
- Species lists and biological reports relating to Shorne Woods Country Park, Ranscombe Farm Reserve and the National Trust's holding at Cobham Woods, which were provided by White Horse Ecology.

Resolution and precision of data

Records at resolutions of lower than tetrad-scale – i.e. at 10km square (hectad) scale and above – were not used.

Records at tetrad or 1km square (monad) scale were checked where only part of the square fell within the study area. In a number of cases, it was found that the site name attached to the record indicated that the precise location of the record lay outside the study area, and the record was therefore either ignored or appropriately noted in the relevant species account. In some other cases, it was clear from the known habitat associations of the species concerned that the record must have come from outside the study area, and the record was therefore ignored.

Age of data

Consideration was given to old records (some dating back to the late 19th century) as many of the species considered here are undoubtedly under-recorded, either because few recorders are interested in the relevant group, or because the species are difficult to find or to identify with accuracy. However, species with a known rarity or threat status have not been included in this report if:

- The only records within the study area dated from the early part of the 20th Century or before; AND
- There is no indication that the species concerned has shown a recent increase in its range and might therefore now be found if an appropriate survey was carried out.

Identifying species of conservation importance

The species assessed for inclusion in this report are those which have previously been assessed as being rare or scarce at national or county level, or which have a threat status under the most recent Red Data assessment for the group concerned. In the case of the molluscs, Kent Red Data Book status is also taken into account, as only two mollusc species with local records have any national

status. In addition, species have been included if they are listed as being Section 41 Species of Principal Importance for Conservation, even if they have no current national threat status or Red Data List status.

Structure of the report

Each of the groups of invertebrates considered in this report (the Orthoptera, Dictyoptera and Dermaptera; the Mollusca; the Hemiptera; and the Aculeate Hymenoptera) is dealt with in a separate section. Each section of the report starts with a brief summary of the group concerned, including:

- The key species found in the study area.
- The most important sites within the study area for the group as a whole.
- Suggestions for further species survey work.
- Suggestions for future habitat management or creation.

This summary is followed by a more detailed reviews of each of the species, listed roughly in order of conservation importance (i.e. first, Species of Principal Importance or those species under greatest threat nationally; then species not threatened but considered nationally rare or scarce; then species important at county level; and finally, where appropriate, other species considered of local significance). For each species, notes are given on status and distribution at national and local level, habitat, and known distribution within the study area. For those species with a number of records within the study area, a small map is given showing the location of those records as shaded pink squares where the records are at monad or tetrad resolution, and red points where the records give a grid reference of six or more figures (i.e. a resolution of 100m or less).

Ground-truthing

Because the large number of species dealt with here, and the effort needed to survey for them, field work has been limited to a certain amount of checking of habitat features and habitat quality, with very limited recording of species. A little over two days was spent on field work, and the results of this work are noted as appropriate in the accounts given below.

Summary for Orthoptera, Dictyoptera and Dermaptera

What are the key species in the area for the taxa?

The two key species currently known to be present are Rufous Grasshopper *Gomphocerippus rufus* and Tawny Cockroach *Ectobius pallidus*.

The first of these is currently rather localised, with recent records only from Holly Hill and Ranscombe Farm Reserve. It may be present on other high-quality downland in the study area, though it has not yet been found on the Silverhand Estate.

The second appears slightly more widespread, and is probably even more widespread than records suggest, as there is plenty of suitable habitat on the Silverhand Estate.

Which are the most important sites?

On the basis of the known records, the most important sites are Ranscombe Farm Reserve, Shorne Woods Country Park and the downland at southern end of Holborough Woodlands around Holly Hill.

Where does future survey work need to be targeted to fill the gaps?

It is possible that the Nationally Scarce Short-winged Earwig *Apterygida media* and Lesne's Earwig *Forficula lesnei* could be found within the study area, and this would be particularly valuable in the case of Short-winged Earwig as Kent is important for this species and there are few recent records for the county.

Woodland open-space in the Holborough Woodlands would be worth surveying for Woodland Grasshopper *Omocestus rufipes*. In particular, a wide woodland ride, alongside an area of relatively young coppice around TQ687652 (see photo below), noticed during field work in early June 2024, would repay a visit during late July or early August.

With further survey, it may be possible to find additional sites for Rufous Grasshopper on chalk grassland in the south of the area around Holly Hill, and perhaps also on the Silverhand Estate.

Tawny Cockroach is also likely to prove to be more widespread on Silverhand Estate and Cobham Park

Woodland ride at TQ687652

What habitat management and/or creation would be most beneficial (either in general terms or at specific locations)?

The management, restoration and creation of chalk grassland is likely to be most important. This should include both short and longer sward, as the latter is preferred by Rufous Grasshopper.

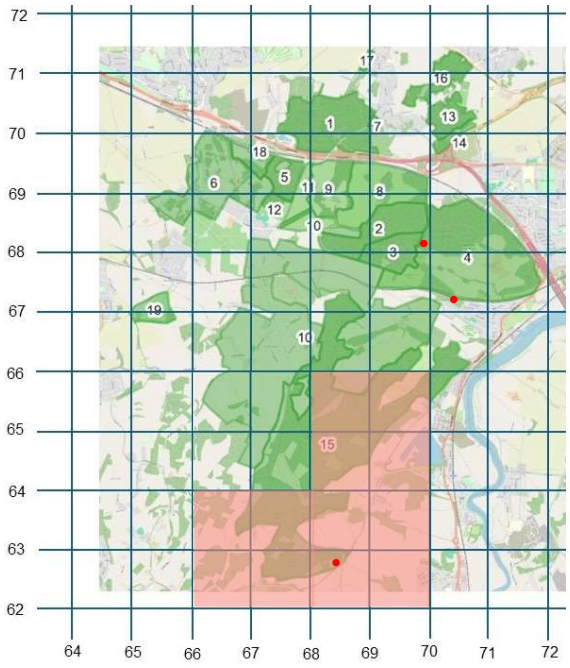
Other important habitat to be restored, created or maintained includes permanent woodland open space such as wide-rides and glades, scrub and scrubby woodland edges, and other open grassland. The possible or actual association of some species (Mottled Grasshopper and Lesser Cockroach) with chalk quarries suggests that establishment of some areas of very sparse, open vegetation may be of value.

Orthoptera

Assessments exist for this group under the 2001 IUCN Red Data List criteria (P.G. Sutton, *A review of the Orthoptera (Grasshoppers and crickets) and allied species of Great Britain, Natural England Commissioned Report NECR187*, published in 2015 by Natural England). There are no known species of Orthoptera in the study area with a threat status: all are considered Least Concern. In preparing the text for the species listed here, reference has been made to the Orthoptera & Allied Insects website https://orthoptera.org.uk/, and to the data held by the author on behalf of Kent Field Club.

Nationally Scarce species

Gomphocerippus rufus Rufous Grasshopper



Nationally, there are populations across Southern England, from Kent to Cornwall, generally on calcareous substrates.

In Kent, it is a species of chalk grassland on the North Downs, with a disjunct distribution: there are populations on the Downs north of Folkestone, another patch around Wye, and then a more-or-less continuous series of sites from Stockbury westwards to the county border.

Rufous Grasshopper is a species of taller, sometimes scrubby vegetation, generally on high quality downland sites, mostly sites of SSSI status or quality.

Within the study area, this species has been recorded at Ranscombe Farm Reserve, Ladds Farm and Holly Hill, with older records from the Paddlesworth and Cuxton Warren areas.

Omocestus rufipes Woodland Grasshopper

Nationally, this is a species with a strong south-easterly distribution, though there are also scattered populations westwards as far as the western tip of Cornwall, and well as on the East Anglian coast.

In Kent, there are populations scattered across the county from the North Downs to the High Weald.

The Woodland Grasshopper is a species of open woodland and heathland near woodland and scrub. It is found in open areas within woodland, including wide woodland rides, and is also known to use recently coppiced woodland.

Within the study area, there are records from woodland near Halling TQ6865 in the 1990s and from Mill Hill Wood in Ranscombe Farm Reserve in 2001. It was not seen by the author at Ranscombe Farm between 2011 and 2020, despite active coppicing and the creation of wide rides during this period. It should be searched for in woodland open space in the Holborough Woodlands.

Other species of local significance

Conocephalus dorsalis Short-winged Conehead

This species is widespread in England, as well as in Kent. It is a wetland species, found in a range of wetland habitats, including fens, bogs, river margins, and coastal ditches and pools. It may be in decline in Kent due to competition from Long-winged Conehead *Conocephalus fuscus* which is able to take advantage of similar habitats.

Within the study area, the only records are from Shorne Woods Country Park, where the species is most likely to be associated with tall, emergent pond vegetation.

Myrmeleotettix maculatus Mottled Grasshopper

A very widespread species nationally, though in Kent it has a very restricted distribution, primarily in coastal habitats in the east of the county. Populations appear to have been lost from a number of inland sites over the last forty to fifty years.

This is a species of very short, open, dry swards on sandy or chalky soils, in sunny situations. There are records for TQ7167 (around Cuxton) and TQ66W (around Upper Halling), though it is possible or even likely that both may be associated with chalk pits outside the study area.

Dictyoptera

Assessments exist for this group under the 2001 IUCN Red Data List criteria (P.G. Sutton, *A review of the Orthoptera (Grasshoppers and crickets) and allied species of Great Britain, Natural England Commissioned Report NECR187*, published in 2015 by Natural England). There are no known species of Dictyoptera in the study area with a threat status: all are considered Least Concern. In preparing the text for the species listed here, reference has been made to the Orthoptera & Allied Insects website https://orthoptera.org.uk/, and to the data held by the author on behalf of Kent Field Club.

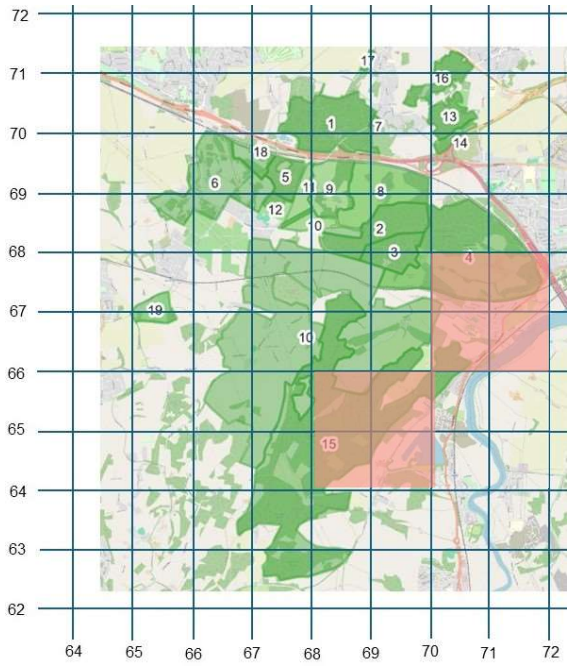
Nationally Scarce species

Capraiellus panzeri Lesser Cockroach

In Britain, its distribution is concentrated around the coast of Southern England, though there are also records on the Welsh coast north to Anglesey.

In Kent, this is mainly a species of coastal habitats, particularly at Dungeness and Sandwich Bay, though there are reliable records from chalk grassland sites to the south and west of the Medway Towns. However, it has recently become apparent that there are several continental species of cockroach present in Kent, some of which might be confused with Lesser Cockroach unless very closely examined.

This is a small species generally associated with open ground, low vegetation and scrub: habitats include sand dunes, shingle, heathland and chalk downland.



There are records given by reliable recorders for Upper Halling TQ66X in 1973 and Cuxton TQ76D in 2000, though these tetrads only partially overlap with the study area, and the records may come from sites (perhaps such as chalk quarries) outside the study area proper.

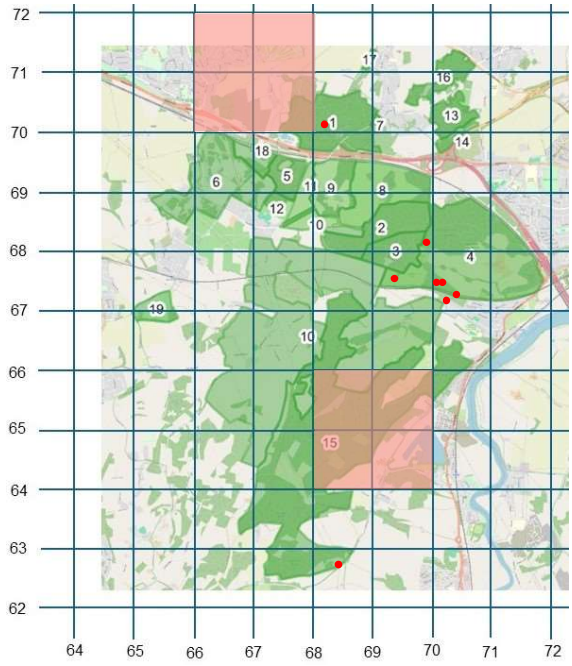
Ectobius pallidus Tawny Cockroach

A species largely restricted to the South-east in Britain, though with coastal populations in the South-west and in South Wales.

In Kent, there are records from across the county, but particularly from around the Medway Gap (including the project area) and on the Downs in East Kent.

This species is associated with woodland rides and clearings, scrub, and chalk grassland.

In the study area, there are records from the 1970s to the late 2010s, with a number of recent records from Ranscombe Farm Reserve. It is likely that this species is under-recorded and is present in suitable habitat across the project area.

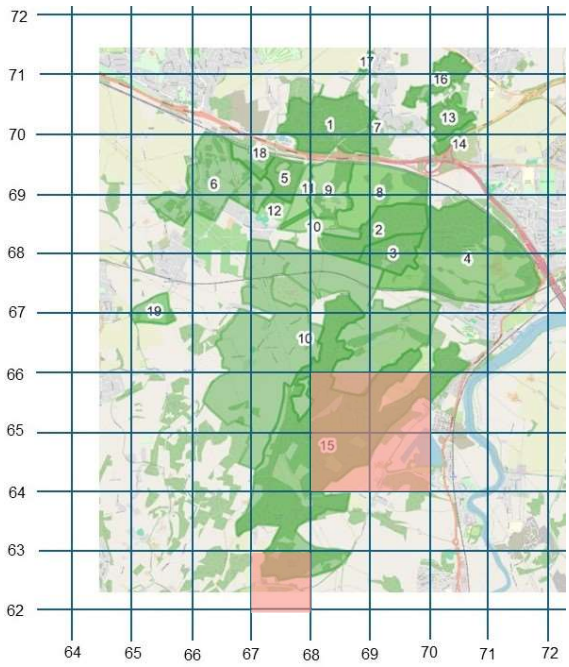


Dermaptera

Assessments exist for this group under the 2001 IUCN Red Data List criteria (P.G. Sutton, *A review of the Orthoptera (Grasshoppers and crickets) and allied species of Great Britain, Natural England Commissioned Report NECR187*, published in 2015 by Natural England). There are no known species of Dermaptera in the study area with a threat status: of the species listed below, *Forficula lesnei* is considered Least Concern, and *Apterygida media* is Not Evaluated. In preparing the text for the species listed here, reference has been made to the Orthoptera & Allied Insects website https://orthoptera.org.uk/, and to the data held by the author on behalf of Kent Field Club.

Nationally Scarce species

Apterygida media Short-winged Earwig



This species has a strongly restricted distribution, with almost all records coming from Kent (up into South-east London) and the eastern parts of East Anglia.

Records are scattered across Kent, showing a concentration around Maidstone. However, this may be due to recorder effort: the bulk of records in the author's database are by Gerald Dicker in the 1970s and Eric Philp from the 1970s to 2008. There are few records from the 21st Century – just 13 out of 79 – though this species is almost certainly under-recorded.

Considered to be a species of scrub, wood edges and hedgerows, perhaps with a preference for Field Maple *Acer campestre* (according to the account of this species on the Essex Field Club's website), though the Orthoptera Recording Scheme website also gives leaf-litter in woodlands as its habitat. Previously this species was very much associated with hop-gardens, and recent declines may be associated with increased insecticide use.

Within, or perhaps just outside the study area, this species was recorded at Birling TQ6762 in 1975 and at Cuxton Warren TQ66X in 1979. It may prove to be more widely present, and further survey would be of value: for example, the Silverhand Estate includes a number of suitable hedgerows, including one along Buckland Road with a large amount of Field Maple.

Forficula lesnei Lesne's Earwig

A species which is widespread across the southern half of England and South Wales, and with most records apparently coming from base-rich areas. In Kent, records are scattered across North Kent, the Downs and South-east Kent.

This is a species associated with scrub and rough vegetation including nettle beds, and likely to be under-recorded. It is not clear whether any records exist for the study area: the only ones appear to be from Cuxton TQ7267 (just outside the study area) and Shorne TQ67V, which may refer to Shorne Woods Country Park.

Summary for Molluscs

What are the key species in the area for the taxa?

From the records currently available, there are six species of mollusc that could be considered key species. These are:

- Roman Snail *Helix pomatia*, which is legally protected. Hote, however, that the presence of this species within the study area needs to be confirmed, and, if the species is present, the extent of its population needs to be established.
- *Backeljaia gigaxii*, a Nationally Scarce species for which a relatively old record exists. However, as with Roman Snail, the presence of this species within the study area needs to be confirmed, and, if the species is present, the extent of its population needs to be established.
- Heath Snail *Helicella itala,* a Kent Red Data Book species for which a relatively old record exists and which would be worth searching for in established areas of chalk grassland.
- Lapidary Snail *Helicigona lapicida*, another Kent Red Data Book species, with a recent record from Ranscombe Farm Reserve, and for which further survey may be desirable.
- Ash-black Slug *Limax cinereoniger,* a Kent Red Data Book species associated with ancient woodland.
- Smooth Jet Slug *Milax gagates*, a Kent Red Data Book species relatively recently recorded from Great Crabbles Wood.

Which are the most important sites?

It is unclear which sites should be considered most important. Calcareous soils generally support the best snail assemblages, though slugs are frequent on acidic sites. Ancient woodland and chalk grassland are both likely to support good assemblages of molluscs.

Roman Snail and *B. gigaxii* are recorded from the Great Buckland area, but further survey would be needed to identify if still present and establish extent of populations. A field visit to the Great Buckland area on 29 May 2024 identified the presence of scrubby woodland which might be suitable for Roman Snail, though the species was not seen.

Heath Snail also has a record from the Great Buckland area, and further survey of high-quality chalk grassland is recommended. The species was not noted during any of the brief visits to chalk grassland areas within the Silverhand Estate.

In the case of Lapidary Snail, the only confirmed record so far is from secondary woodland at Mill Hill, Ranscombe.

It is likely that Ash-black Slug is more widespread in ancient woodland through the area.

Where does future survey work need to be targeted to fill the gaps?

See above.

What habitat management and/or creation would be most beneficial (either in general terms or at specific locations)?

Unfortunately, any recommendations in this regard would have to await the outcome of further survey work. However, the Ash-black Slug is said to tolerate traditional woodland management.

Molluscs

Assessments exist for this group under the 2001 IUCN Red Data List criteria (M.B. Seddon, I.J. Killeen and A.P. Fowles, *A Review of the Non-marine Mollusca of Great Britain: Species Status No. 17. NRW Evidence Report No: 14*, published in 2014 by Natural Resources Wales). There are no known species of mollusc in the study area with a threat status: all the species below are considered Least Concern. In preparing the text for the species listed here, reference has been made to the *Kent Red Data Book*, edited by Anne Waite, and published by Kent County Council in 2000; to *A Field Guide to the Land Snails of Britain and North-west Europe*, by M.P. Kerney and R.A.D. Cameron, published by Collins in 1979; *Slugs of Britain and Ireland* by Ben Rowson *et al*, published in 2014 by FSC Publications; and to the website of the Conchological Society of Great Britain and Ireland.

Nationally Scarce species

Helix pomatia Roman Snail

Helix pomatia is protected under the Wildlife and Countryside Act 1981, so that it is an offence to intentionally kill, injure, take, possess, or offer for sale this species.

This is a non-native species, originally brought to Britain as a foodstuff. It is now distributed widely across the southern parts of Britain, with scattered records up to Northern Scotland. The North Downs appear to be something of a stronghold for the species.

In Kent, almost all records are from the North Downs, with strong clusters of records in the Darenth Valley and between the M2 and A20 to the south-west of Faversham.

This species is associated with woodland, wood edges and scrub, and Kerney and Cameron remark that it is known as a pest species in vineyards (presumably in Europe).

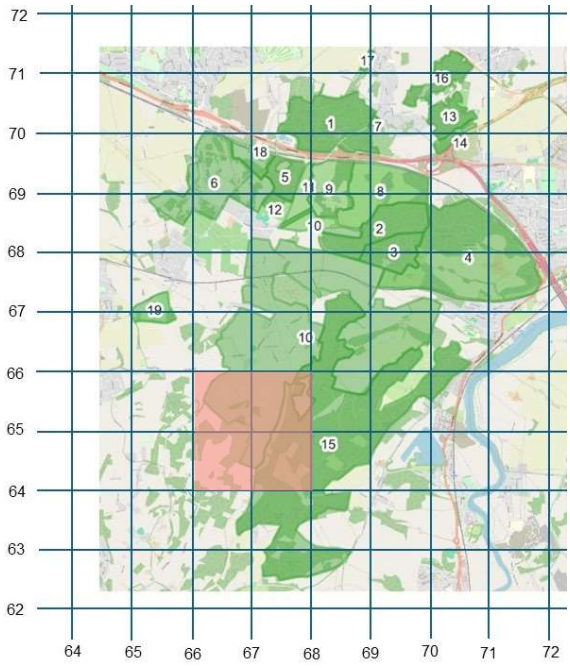
The online NBN Species Atlas shows a record in the study area in 1970 at Great Buckland TQ668636. However, this a large and easily recognisable snail, so it might be expected that there would be additional records if a population were present: no such records are shown on either NBN or iRecord. A visit to the area on 29 May 2024, in suitably damp and cool conditions, noted apparently suitable scrubby woodland habitat, although no Roman Snails were seen. Some grassy open space, which might be suitable for this species, was noted in the area, but was clearly privately owned and not accessible.

Backeljaia gigaxii a snail

Although this species is given as Nationally Scarce, data on the online NBN Species Atlas suggests it is widespread, and there are more than 1,000 confirmed records. These records show the species to be well distributed throughout Central, Southern and Eastern England.

However, the NBN Species Atlas gives few very recent records for Kent, with the exception of 15 records dated 1998 and given only at 10km resolution. Each of the 1998 records is for a separate 10km square (so 15 squares out of a total of around 45) and the list includes TQ66 and TQ67.

In Kerney and Cameron, this is noted as being a species of dry, open habitats on calcareous soils.



The data provided by KMBRC gives a 1983 record for Great Buckland TQ66S; this tetrad overlaps to a degree with land within the study area. It seems highly likely that this species is under-recorded (for example, the iRecord website shows just 11 records nationally).

Other species of local significance

Helicella itala Heath Snail

In the Kent Red Data Book, this species is given as KRDB2 – Vulnerable in Kent.

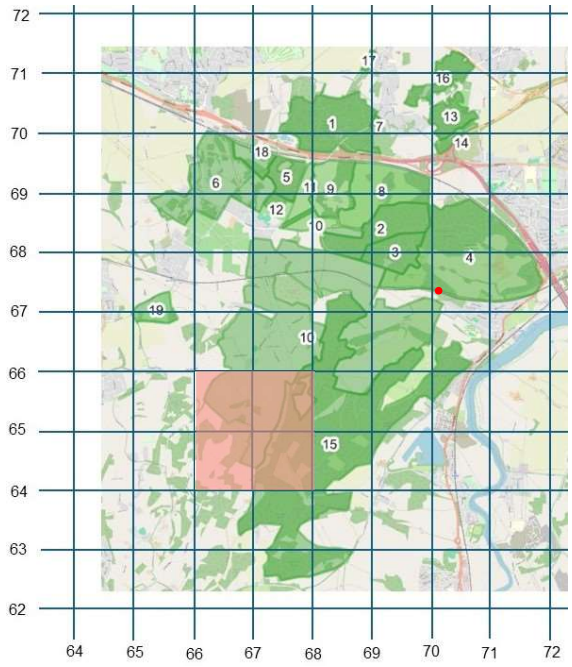
The NBN Species Atlas shows widespread records across Britain, from the south up to the coast of Northern Scotland. However, on the website of the Conchological Society of Great Britain and Ireland, it is noted that "there is growing evidence that the populations in southern and eastern England have declined sharply over the last century."

In Kent, this species appears to have previously been widespread, but the Kent Red Data Book account suggests that the species had declined in Kent by 2000, probably due to habitat loss. Post-2000 records come from Trosley, Queendown Warren, and the Dover Cliffs.

A species of calcareous grassland, though the Kent Red Data Book also notes road and rail embankments. The account on the Conchological Society website notes it as a species of dry, sunny situations in short grassland on chalk and limestone.

The KMBRC records show one record from Great Buckland TQ66S in 1984. A field visit to the Great Buckland area in late May 2024 did not identify any apparently suitable chalk grassland in the immediate area (the whole tetrad was not searched). A visit to parts of the Silverhand Estate in June did find some good-quality chalk grassland, but the snail was not noted during the brief visits made to these areas. Given the apparent decline of this species, there would be value in further survey of chalk grassland sites within the study area, particularly around Holly Hill.

Helicigona lapicida Lapidary Snail



In the Kent Red Data Book, this species is given as KRDB2 – Vulnerable in Kent.

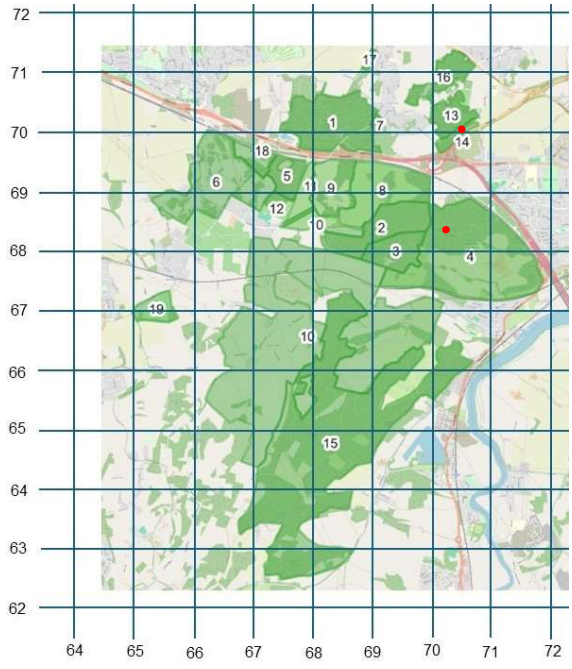
The NBN Species Atlas shows this species as very widespread across England, particularly on limestone geology.

However, the Kent Red Data Book notes that 'this snail has noticeably decreased in numbers and occupied sites in the last half of the 20th Century. It has been recorded from only ten sites in the last fifty years in Kent'. However, since 2000 (when the KRDB was published) there have been a scattering of records (at least on NBN), mostly in the east of the county around Folkestone and Dover, but also around the Medway Gap, including at Bluebell Hill in 2010, and Wouldham in 2015 and 2017. It was also found in Blean Woods in 2021.

Kerney and Cameron give it as a species of old walls and rocky ground, as well as old woodland and hedgerows. At Mill Hill, Ranscombe, it was found in secondary woodland over broken, very chalky soil.

Within the study area are two records, one from Great Buckland TQ66S in 1983 and a record at Mill Hill (by the current author) TQ70056744 in 2014: the Mill Hill record was of an empty, though fairly fresh, shell. Field work during May and June 2024 identified a number of areas of apparently suitable habitat (i.e. broken, chalky ground in woodland, similar to the habitat at Ranscombe) on steeper slopes in the Holborough Woodlands (including above Great Buckland), though a few short periods of searching failed to find any signs of the species. Further survey work may yet find it to be present.

Limax cinereoniger Ash-black Slug



In the Kent Red Data Book, this species is given as KRDB3 – Rare in Kent.

Rowson et al. note this species as being widespread but local in Britain, and becoming rare in the lowlands of South-east England, where it is restricted to ancient woods. The NBN Species Atlas and iRecord show just a handful of recent records for Kent, these being scattered across the county.

Within the study area, there are just two records: at Crabbles Bottom TQ705700 in 2008, and in Cobham Woods at Ranscombe Farm TQ702685 in 2018. However, it is nocturnal and highly mobile, and likely to be under-recorded.

Milax gagates Smooth Jet Slug

In the Kent Red Data Book, this species is given as KRDBK – of importance in the county, but not known sufficiently for any further breakdown to be possible.

This species is apparently widespread but very local in Britain, and with very few Kent records (the Kent Red Data Book says just three). Considered to be possibly native or introduced, and in Britain generally associated with gardens, waste ground, and coastal cliffs and rough pasture. A subterranean species.

The one record for the study area is from Crabbles Wood TQ702702 in 2009.

Summary for Hemiptera

What are the key species in the area for the taxa?

Six species of true bug with records within the study area appear to be of particular note. These are:

- *Iassus scutellaris*, a Nationally Rare leafhopper associated with Elm.
- Vernal Shieldbug *Peribalus strictus*, Nationally Rare though apparently spreading.
- *Asiraca clavicornis*, a Nationally Scarce planthopper.
- Cryptic Leatherbug *Bathysolen nubilis*, which is Nationally Scarce and with a localised distribution.
- Slender-horned Leatherbug *Ceraleptus lividus*, a Nationally Scarce but possibly increasing species.
- Scarce Tortoise Shieldbug *Eurygaster maura*, a Nationally Scarce species.
- *Hebrus pusillus*, a Nationally Scarce, semi-aquatic bug.

However, it should be noted that the Scarce Tortoise Shieldbug appears to be expanding its British range substantially at present, and its presence should perhaps no longer be considered of significance. The planthopper *Asiraca clavicornis* is also apparently spreading, though it does appear to be uncommon (or at least uncommonly recorded) in Kent.

Which are the most important sites?

More survey is likely to be necessary to establish this, as the records seem to strongly reflect survey effort. This is reflected in records for several important species coming from chalk quarries outside the study area itself, e.g. Cuxton Pit, where survey work has been carried out as part of the development planning process.

Where does future survey work need to be targeted to fill the gaps?

Bugs are undoubtedly under-recorded. Further survey for *Asiraca clavicornis, Bathysolen nubilis*, *Ceraleptus lividus***,** and *Eurygaster maura* would be likely to extend the known range within study area. *Peribalus strictus* may also prove to be more widespread.

Survey is also needed to establish whether *Hebrus pusillus* continues to be present within the study area.

Finally, it would be worth searching within the study area for *Hallodapus montandoni*, Sand-runner Shieldbug *Sciocoris cursitans* and Scarab Shieldbug *Thyreocoris scarabaeoides*.

What habitat management and/or creation would be most beneficial (either in general terms or at specific locations)?

Many of the important species in and around the study area are dependent on dry, sunny, open, herb-rich grassland. Field survey work carried out in May and June 2024 found that much of the more species-rich grassland in the area was relatively tall and dense, and it is likely that grazing or other management regimes which produce a shorter and more open sward would benefit the area's

scarcer species of bug. The association of several notable species with chalk quarries suggests that very short, sparse vegetation in sunny locations is likely to be of value to this group.

Maintenance of areas of existing regenerating elm scrub or trees is likely to be important for *Iassus scutellaris*.

Ponds and vegetated pond edges will be important for *Hebrus pusillus*, if this species is still present.

Hemiptera

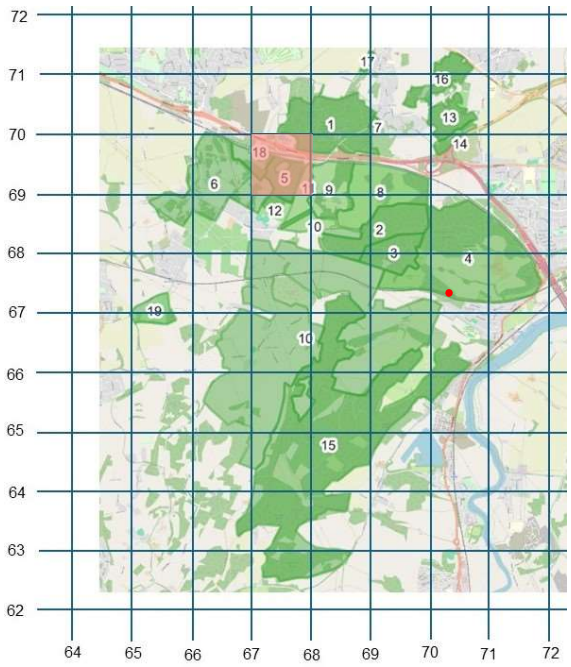
Assessments exist for some members of this group under the 2001 IUCN Red Data List criteria (A. A. Cook, *A review of the Hemiptera of Great Britain: The Aquatic and Semi-aquatic Bugs, Natural England Commissioned Report NECR188*, published in 2015 by Natural England; and T. Bantock, *A review of the Hemiptera of Great Britain: The shieldbugs and allied families, Natural England Commissioned Report NECR190*, published in 2016 by Natural England). Otherwise, the most recent assessments are from 1992 (P. Kirby, *UK Nature Conservation No. 2 – A Review of the Scarce and Threatened Hemiptera of Great Britain*, published in 1992 by JNCC). Within the study area, there are no known species of Hemiptera for which an assessment under the IUCN Red List criteria exists and which are considered to be threatened: all the species assessed are considered Least Concern. In preparing the text for the species listed here, reference has been made to the *Kent Red Data Book*, edited by Anne Waite, and published by Kent County Council in 2000; to the Kirby review of 1992; and to the British Bugs website www.britishbugs.org.uk and the Essex Field Club website www.essexfieldclub.org.uk.

Note also that for the more recently reviewed species, rarity (as opposed to threat) status is given as Nationally Rare or Nationally Scarce, whereas other species may be given as Nationally Notable A (equivalent to Nationally Rare) or Nationally Notable B (equivalent to Nationally Scarce). In older reviews, 'Rare' is a Red List category (RDB3) under the older system of categorisation.

Care needs to be taken when considering the status and distribution of bug species, as many of those previously considered rare are currently undergoing rapid expansions in their ranges as a result of climate change. Where such expansions are known, it is noted in the text below.

Nationally Rare species

Iassus scutellaris a leafhopper



This species was not recognised until 1998, and at the time of Kirby's review in 1992, there had been just eight records; in the absence of more recent review, the status of Nationally Notable A still stands. This seems reasonable, given that the NBN Species Atlas shows only 52 records, mainly from Eastern England, but shows only a few records (and none confirmed) from Kent.

This species is strongly associated with elm. The British Bugs website notes that though considered scarce, it may be common where it occurs.

Within the study area, there are records from TQ6769 (the Jeskyns area) and at Mill Hill in Ranscombe. Brief survey on 24 June of English Elm *Ulmus procera* in a hedgerow along Buckland Road on the Silverhand Estate did find a number of leafhopper nymphs strongly resembling the nymphs of *Iassus scutellaris*. Further survey of this hedge later in the summer, as well as survey of other stands of elm (for example, on the southern edge of Cobham Woods around TQ682680, may be of value.

Probable nymph of Iassus scutellaris*, beaten from elm on the Silverhand Estate.*

Lygus pratensis a plant bug

A species considered as Rare (RDB3) at the time of Kirby's review, but which has undergone recent spread across much of England.

In the study area, there are records from TQ687689 in 1998 and TQ691682 in 2014, and it is listed as having been recorded at Ranscombe Farm Reserve. However, given the recent increase and spread of the species (for instance, the Essex Field Club website shows a large number of widespread records from the period 2000-2023), its presence should probably not be considered significant.

Peribalus strictus Vernal Shieldbug

A species considered Rare (RDB3) in the Kirby review, when it was unclear whether it was a very rare and localised resident species, or an occasional migrant which established temporary populations. At the time, most records appeared to be from North Kent. However, in the journal *British Wildlife* (volume 35, number 7) it was recently reported that the species has been widely recorded in southern England since 2020, with records being concentrated in Kent and Sussex.

Vernal Shieldbug collected on 24 June 2024

On 24 June, the current author swept a single individual of this species from tall grassland along Bush Road at TQ 6845 6734, this apparently being the first record for the hectad. The site from which it was taken is a small island of land excluded from but completely surrounded by the study area, so, although the record is not strictly from the study area itself, it does suggest that the species may yet be found there.

Nationally Scarce species

Asiraca clavicornis a planthopper

Nationally Notable B (roughly equivalent to Nationally Scarce).

This species was historically recorded from much of Southern England, and the NBN Species Atlas shows records across East Anglia, around London and the Thames Estuary and across North Kent, though these are scattered. There are suggestions that its range has contracted, becoming concentrated on an area around London and the Thames Estuary, though it is apparently spreading once again and the iRecord website shows recent records from west of Oxford, throughout East Anglia, and scattered across Kent.

Kirby gives this as a species of dry, sunny, open grassland, where it is usually found low down amongst grasses.

The only precise record for the study area appears to be from Shorne Wood Country Park TQ684701 in 2006, though it is listed as having been recorded at Ranscombe Farm Reserve. The frequency of its occurrence along the Thames Estuary in South Essex suggests that it may be worth searching for in suitable habitats elsewhere in the study area.

Bathysolen nubilis Cryptic Leatherbug

Previously, this was a very scarce species, though apparently now more widespread across southern England and East Anglia. Nonetheless, there are only 115 records on the NBN Species Atlas, with a distinct concentration in North-west Kent and around the Thames Estuary.

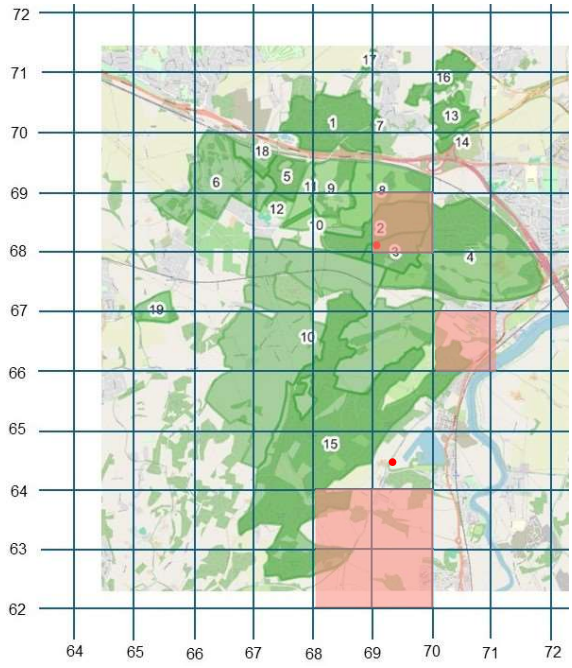
In Kent, records are scattered across the northern half of the county, from the London borders to the East Coast, but with something of a concentration in the Medway Gap.

This is a species of squashbug that feeds on members of the pea family and is particularly associated with Black Medick and Tall Melilot. It appears to mainly occur on bare shingly or chalky ground.

In and around the study area, it was recorded in the Cuxton area TQ7066 in 1977; in the Cobham Park area TQ6968 in 1998 as well as in chalk grassland in this same monad at TQ69068 in 2009; and in the Paddlesworth area TQ66W in 1998.

There are also recent records for chalk quarries just outside the study area in Upper Halling (TQ693645) and Cuxton Pit (the Medway Gate development).

It seems likely that further survey would find it at other sites within the study area.



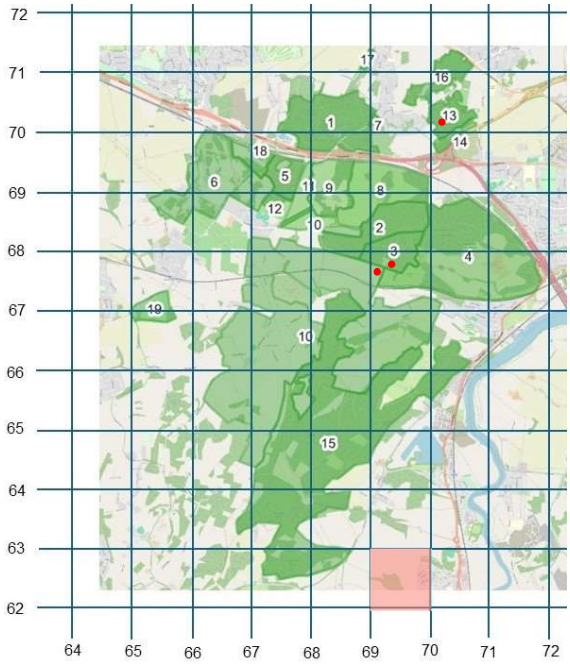
Ceraleptus lividus Slender-horned Leatherbug

A local species with a southern and central distribution in Britain: the NBN Species Atlas shows records scattered across England but with a concentration in the South-east. It is a species which may be increasing in Britain. There are scattered records from across Kent.

This is a species of squashbug which feeds on herbaceous legumes in dry, open habitats, including grassland and chalk pits.

Within the study area, this species was recorded from the old orchard in the Cuxton and Cobham Woodland Project area TQ692678 in 2018. However, it may well be worth searching for it in suitable habitat elsewhere within the project area, and perhaps particularly on Ranscombe Farm Reserve and the Silverhand Estate.

Eurygaster maura Scarce Tortoise Shieldbug



This is a species with a south-eastern distribution, and which until recently was largely restricted to the chalk downs of Hampshire, Surrey and Kent. However, it has recently been found in East Anglia for the first time. In Kent, there are records across the full breadth of the northern half of the county, and it does not appear uncommon.

Eurygaster maura appears to be a species of dry calcareous grassland, where it feeds on grasses. The current author's experience during the early summer of 2024 suggests that the species is now widespread in taller grassland, including relatively young, sown wildflower grasslands.

There are records from the Holborough Quarries, just outside the study area. Within the study area are records from Great Crabbles Wood (2006) and on the Silverhand Estate just south of Cobham Woods (2020). It is also listed as having been recorded at Brewers Wood (Shorne Woods Country Park) and at Ranscombe Farm Reserve (and a short field visit by the author on 7 June 2024 found the species in Brockles Field at TQ693674). It seems very likely that additional survey would find it to be more widespread within the study area.

Hebrus pusillus

Considered a very local species, with a distribution across Southern England and Wales: the NBN Species Atlas shows a scattered, largely coastal distribution south of a line between Anglesey and North Norfolk.

Most recent Kent records are from the western edge of Romney Marsh, and there are records from the Thames Marshes near Higham and Cliffe dating from the 1990s.

This is a very small species of predatory, semi-aquatic bug, which occurs among vegetation in shallow water and on the edges of pools and ditches.

Within the study area, there is one record from Cobham Park (given only as TQ66Z) in 1983. Further survey at Cobham Park and in Shorne Woods Country Park might therefore be of value.

Other species of note

The three species included below do not appear to have any records specifically from within the study area. However, all have been categorized as Nationally Rare or Scarce in the most recent review for the species, even though this review was in 1992 in the case of *Hallodapus montandoni.* They are therefore included as it is considered that further survey within the study area may well discover each of them to be present.

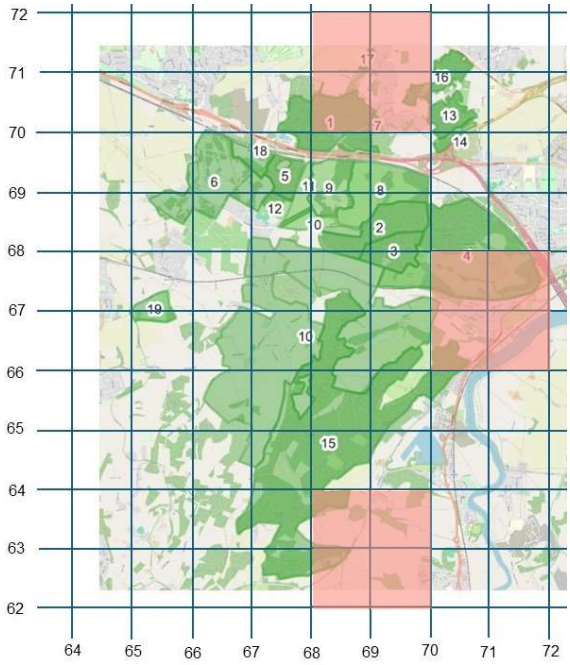
Hallodapus montandoni a plant bug

Regarded as RDB3 – Rare in the Kirby review of 1992. In the Kent Red Data Book, this species is categorised as KRDB2 – Vulnerable in Kent. This is apparently a rare and localised species, with most records coming from Kent.

This is a species of dry, sparsely vegetated ground, including chalk pits and chalk grassland, where it is associated with the ant *Myrmica scabrinodis*.

There are no records specific to the study area, but the Kent Red Data Book notes that it has been recorded at Cuxton.

The map, right, shows those tetrads with records for *Myrmica scabrinodis*, taken from *Bees, Wasps and Ants of Kent*, 2nd edition, by G. Allen.



Aquarius paludum a pond-skater

A Nationally Scarce species which the NBN Species Atlas shows this species to have a widespread distribution in southern England, particularly towards the south-east corner. Regarded as spreading, at least in Surrey, according to *Water Bugs and Water Beetles of Surrey*, by J. Denton, published in 2007 by Surrey Wildlife Trust. However, in Kent, records are from the west of the county only, and few in number.

Recorded recently from Cuxton Pit (i.e. the Medway Gate development), just outside the study area, and possibly lost from there depending on the status of any standing water habitat.

An old (1932) record from Shorne TQ6971 looks to be outside the study area. However, it may perhaps be worth searching for in Shorne Woods Country Park.

Sciocoris cursitans Sand-runner Shieldbug

A Nationally Scarce species. The NBN Species Atlas shows a scattered and localised distribution, with concentrations of records in West Cornwall, around Bristol, and particularly in South Essex and the northern half of Kent. However, it is currently undergoing an apparently substantial expansion in its British range.

The only records close to the study area are from Cuxton Pit (now Medway Gate) in 2005-06. However, the UK Bugs website describes this species as being "associated with Mouse-ear Hawkweed in sandy areas, brownfield sites and warm, sheltered slopes on calcareous grassland." This suggests that searching in suitable habitat within the study area may yet find the species there: a brief visit to Brockles Field, Ranscombe on 7 June 2024 identified a number of reasonably extensive patches of Mouse-ear Hawkweed in sunny, sheltered positions, though the species was not seen.

Thyreocoris scarabaeoides Scarab Shieldbug

A Nationally Scarce species. The NBN Species Atlas and iRecord both show scattered records across the southern parts of England, but with an apparent greater concentration on the chalklands of the south-east.

The only record for the study area is for Upper Halling TQ66X in 1973. This may be the same record shown on NBN for TQ698656, apparently at the upper edge of Cuxton Warren and therefore just outside the boundary of the study area.

According to the UK Bugs website, this species can be found in moss or litter where violets are growing on dry, chalky soils in sunny places. Field work to date has not identified any areas of such habitat, and the former site at Cuxton Warren may no longer be suitable, much now being intensively grazed by horses.

Summary for Aculeate Hymenoptera

What are the key species in the area for the taxa?

The Aculeate Hymenoptera have been investigated more thoroughly than many other invertebrate groups within the study area, and it is likely that this accounts, in part, for the relatively long list of important species recorded. However, other factors, including the local microclimate, the area's botanical richness, the range of soil types, and the proximity to the rich invertebrate sites of the East Thames Corridor, may all play a role.

Three Section 41 Species of Principal Importance for Conservation have been recently recorded within the study area. These are:

- Four-banded Weevil-wasp *Cerceris quadricincta*.
- Black-headed Mason Wasp *Odynerus melanocephalus* (Great Crabbles Wood only).
- Brown-banded Carder Bee *Bombus humilis* (this the least threatened of the three, and apparently on the increase in Kent).

Nine species have been assessed as RDB2 Vulnerable or RDB3 Rare under the pre-1994 Red Listing process, and area also given Kent Red List (KRDB) status in the most recent edition of *Bees, Wasps and Ants of Kent.* These are:

- Long-fringed Mini-miner *Andrena niveata*, KRDB Endangered.
- Plain Dark Bee *Stelis phaeoptera*, KRDB Vulnerable.
- Fringeless Nomad Bee *Nomada conjungens*, KRDB Near Threatened.
- Five-banded Weevil-wasp *Cerceris quinquefasciata*, KRDB Near Threatened.
- Blue Carpenter Bee *Ceratina cyanea*, KRDB Near Threatened.
- Small Shiny Furrow Bee *Lasioglossum semilucens*, KRDB Near Threatened.
- Spotted Dark Bee *Stelis ornatula*, KRDB Near Threatened.
- *Crossocerus exiguus*, KRDB Near Threatened.
- *Passaloecus eremita*, KRDB Near Threatened.

Five species have been assessed as RDB3 Rare under the pre-1994 Red Listing process. They have no KRDB status, but none appear to have shown any clear sign of recent increase:

- Squat Furrow Bee *Lasioglossum pauperatum*.
- Alfken's Mini-miner *Andrena alfkenella*.
- Large Scabious Mining Bee *Andrena hattorfiana*.
- Broad-faced Mining Bee *Andrena proxima*.
- *Hedychridium coriaceum*.

Fifteen species are regarded as Nationally Rare. These are:

- Four-spotted Furrow Bee *Lasioglossum quadrinotatum*.
- *Argogorytes fargei*.
- *Omalus puncticollis*.
- Fringe-horned Mason Bee *Osmia pilicornis*.
- Hawksbeard Mining Bee *Andrena fulvago*.
- Red-tailed Blood Bee *Sphecodes rubicundus*.
- *Chrysura radians*.
- *Aporus unicolor*.
- *Crossocerus distinguendus*, a species of wasp which appears to be increasing.
- Brown Tree Ant *Lasius brunneus*, a species which appears to be increasing, at least in Kent.
- Big-headed Mining Bee *Andrena bucephala*.
- Plain Mini-miner *Andrena minutuloides*.
- *Didineis lunicornis*.
- False Margined Blood bee *Sphecodes miniatus.*
- *Crossocerus binotatus*.

One species is considered Nationally Scarce and appears to be declining. This is:

- Orange-footed Furrow Bee *Lasioglossum xanthopus*.

Which are the most important sites?

The greatest number of records of important species come from Ranscombe Farm Reserve and Shorne Woods Country Park. However, this almost certainly reflects the level of survey effort. Two surveys focussed on Hymenoptera were carried out during the 2010s at Ranscombe, while the current author also deliberately searched for and recorded a number of species during this period.

Other significant records come from the Silverhand Estate (these appear to be the result of visits by Kent Field Club to Henley Down), Cobham Park, and Great Crabbles Wood.

There are also some older records from the area around Birling and Holly Hill.

Where does future survey work need to be targeted to fill the gaps?

There are undoubtedly more species, perhaps including species of significance, to be found across the study area. However, there may be particular value in more detailed survey of land within the Silverhand Estate, which is under-recorded but looks to have great potential, and Cobham Park.

The chalk grassland at the southern end of the study area mainly has old records, and deserves further visits; this part of the area is closest to Trosley, where the Maidstone Mining Bee *Andrena polita* was recently rediscovered.

Relocating Fringe-horned Mason Bee *Osmia pilicornis* would be of value, and the woodland should be explored for open rides and glades with abundant Ground-ivy and/or Bugle. To this end, field visits in late May and Early June 2024 focused on woodland between Holly Hill and Bush Valley, including seeking to locate rides and other open space that might be suitable. However, most rides were narrow and shady, and there appeared to be to be little very recent coppice. A wide ride at TQ687652 did contain bugle (gone over at the time of the visit) though probably not in sufficient quantity.

What habitat management and/or creation would be most beneficial (either in general terms or at specific locations)?

Bees and wasps all benefit from flower-rich habitats, including chalk grassland, flower-rich crop margins (these proved a rich Hymenopteran habitat at Ranscombe Farm Reserve), and woodland open space. The limited amount of field survey work carried out during May and June 2024 suggests that an increase in woodland open species, particularly glades and wide rides with short, open vegetation, would be potentially beneficial.

Open habitats, bare ground, and sandy banks in sunny, sheltered situations provided important nesting locations for many species, and the need for such habitats may be reflected in the number of species listed here which have been recorded in local, disused quarries. However, a range of grassland sward heights is also important, as are scrub margins. It was noted during field survey that much of the flower-rich grassland visited within the Holborough Woodlands and Silverhand Estate areas was relatively tall and dense, which would restrict its value to ground-nesting hymenoptera; grazing or other management which produced areas of short, open sward would therefore be highly beneficial.

Standing dead wood, again in sunny, sheltered locations, is also used for nesting by many species.

Aculeate Hymenoptera

There is no up-to-date assessment of the Red List status of any Aculeate Hymenoptera, with the most recent being *A Review of the Scarce and Threatened Bees, Wasps and Ants of Great Britain* by S. Falk, published in 1991 by the Nature Conservancy Council. Since the publication of that review, the statuses of many species have changed substantially, probably in the most part due to climate change, and many species once considered rare would no longer merit the status. Reference has therefore also been made to the *Kent Red Data Book*, edited by Anne Waite, and published by Kent County Council in 2000; *Bees, Wasps and Ants of Kent*, 2nd Edition, by G.W. Allen, published by Kent Field Club in 2020; *Field Guide to the Bees of Great Britain and Ireland*, by S. Falk, published by British Wildlife Publishing in 2015; and the website of the Bees, Wasps and Ants Recording Society (BWARS) (https://bwars.com/).

The species accounts below are divided into those for bees, wasps and then ants.

Bees

RDB2 Vulnerable

Andrena niveata Long-fringed Mini-miner

A rare species which is restricted to parts of Kent, Surrey and Sussex. There are few Kent records, and it is considered Endangered in the county.

Pollen is gathered from crucifers including Charlock, Hedge Mustard and Rape, and so the species is found in habitats where such species are abundant, including arable field margins.

The only records within the study area are from Ranscombe in 2016, where it was found on three widely separated arable field margins on chalk and clay soils. This is a species for which further survey may be find additional records, though its association with arable margins may mean that few suitable sites lie within the study area itself.

Nomada conjungens Fringeless Nomad Bee

This species has a very scattered and localised distribution across Southern England. In Kent, this species is regarded as Near Threatened in Kent.

The host of this cuckoo bee is *Andrena proxima* (a species also listed below).

Apart from records from Upper Halling in 1901, there is only one record in the study area, from the Silverhand Estate Vineyards at TQ667666 in 2022.

Stelis phaeoptera Plain Dark Bee

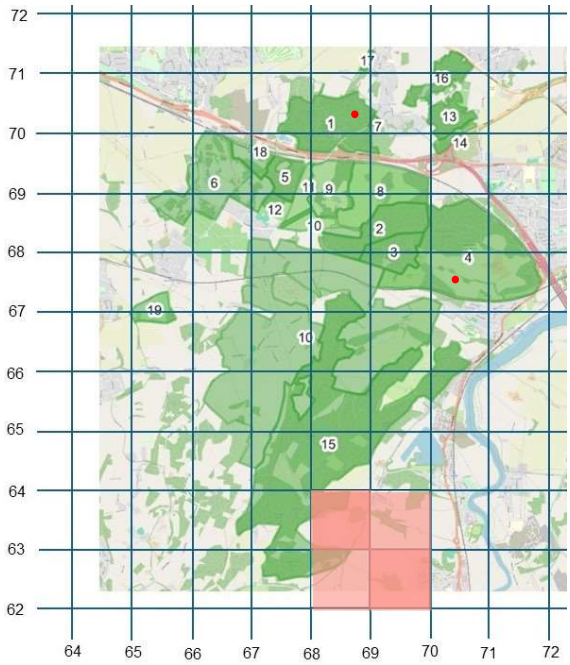
This formerly widespread species has declined in recent years. In Kent, it is thought not to be declining, but is still listed as Vulnerable.

A cuckoo of the Orange-vented Mason Bee *Osmia leaiana*.

In the study area, one was found in a vane trap in Cobham Park TQ68636819 in 2014. There is also a record from TQ7071 in 2007, though this is at the northern extreme of the study area and it is not clear whether or not it refers to a site within the study area or just outside.

RDB3 Rare

Andrena alfkenella Alfken's Mini-miner



This species was listed as KRDB1 – Endangered in Kent in the *Kent Red Data Book*, which notes only two reliable Kent records. However, *Bees, Wasps and Ants of Kent* notes records from 18 tetrads in Watsonian Kent in the period 1990-2020, and it is regarded as Least Concern in the county, though it remains scarce here.

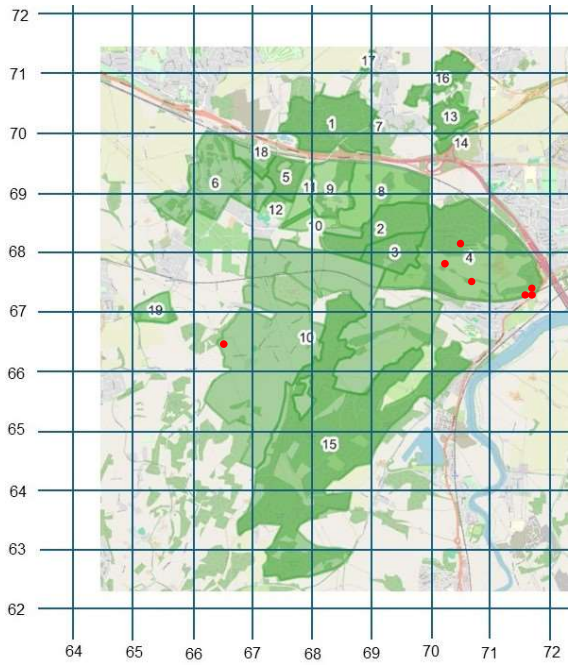
This bee is thought to nest in open ground in a range of habitats including woodland glades and calcareous grassland. Forages on members of the Brassicaceae, Blackthorn, Daisy, and umbellifers.

The KMBRC records include four records for the study area, the most recent of which are from 2016 and 2020, from Ranscombe and Shorne Woods respectively. The Paddlesworth record TQ66W is probably the same as the record from the Holborough Quarry TQ6962, and therefore outside the study area.

Andrena florea Bryony Mining Bee

Previously considered to be rare and very localised, it has recently undergone a rapid expansion in range, and its presence in the study area is not of significance. It is perhaps of note that the first Kent record for this species was made at Ranscombe Farm Reserve, around ten years ago.

Andrena hattorfiana Large Scabious Mining Bee



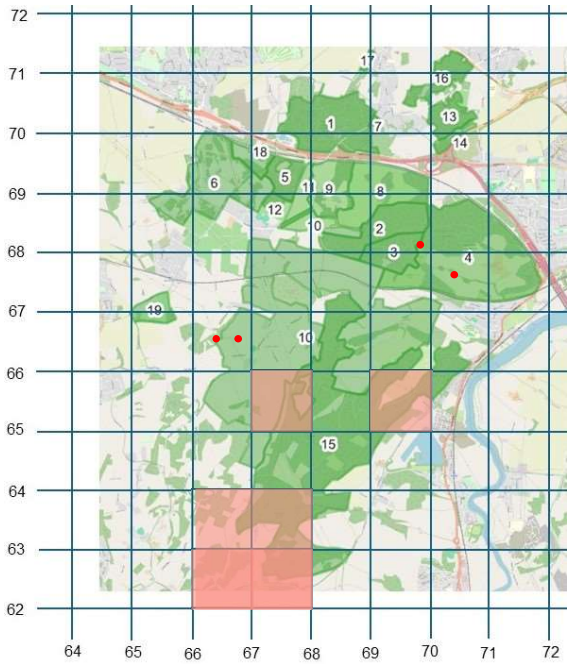
A scarce species nationally, with a scattered distribution across south and south-east England. Currently without status, however, and considered Least Concern in Kent.

Within Kent, there are scattered records, with a cluster around the Medway Gap.

A large and distinctive species of chalk grassland and field edges where its main forage species, Field Scabious *Knautia arvensis*, is abundant. Likely to be present in suitable habitat elsewhere within the south-facing, chalky parts of the study area.

Within the study area, most records come from Ranscombe Farm Reserve, which may well reflect recorder effort. Also recorded from Henley Down (Silverhand Estate) and just outside the study area in Cuxton Pit.

Andrena proxima Broad-faced Mining Bee



A scarce species with a scattered distribution in southern England.

In Kent, it is well represented, with records from 43 tetrads over the period 1990-2020.

Particularly associated with chalk grassland, where it collects pollen from a range of umbelliferous plants.

Since 1990, the only records within the study area appear to be from Ranscombe Farm and Henley Down (Silverhand Estate). Prior to this, there are records from Upper Halling, Holly Hill, Birling and Luddesdown over the period from 1969 and 1989.

Ceratina cyanea Blue Carpenter Bee

This is still regarded as a scarce species. Its distribution in Britain is limited to South-east England, and it is considered Near Threatened in Kent.

A small bee which nests in the hollow, pithy stems of (usually) bramble.

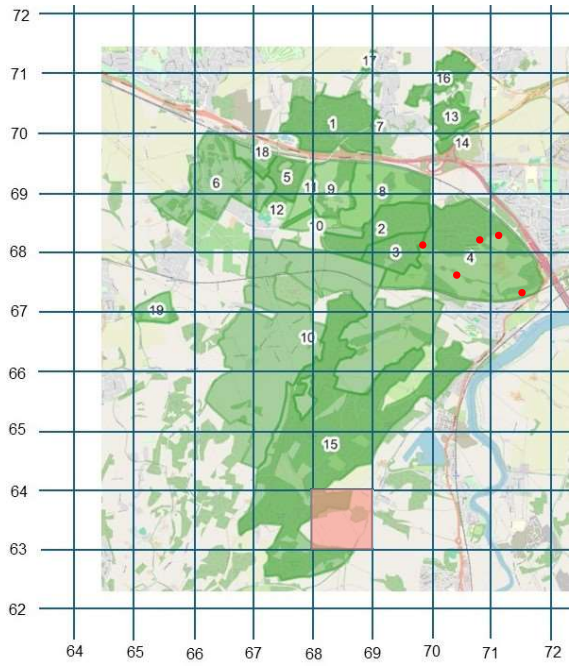
Apart from a 1902 record for Upper Halling, there is one record for the study area from Shorne Woods Country Park in 2020.

Lasioglossum pauperatum Squat Furrow Bee

A species which is restricted to South-east England.

In *Bees, Wasps and Ants of Kent*, this species is given as Least Concern, and it is suggested that it may be increasing in the county.

All the post-2000 records come from Ranscombe Farm Reserve, where it is widespread, though this probably reflects survey effort, and it is likely to be present elsewhere in the study area.



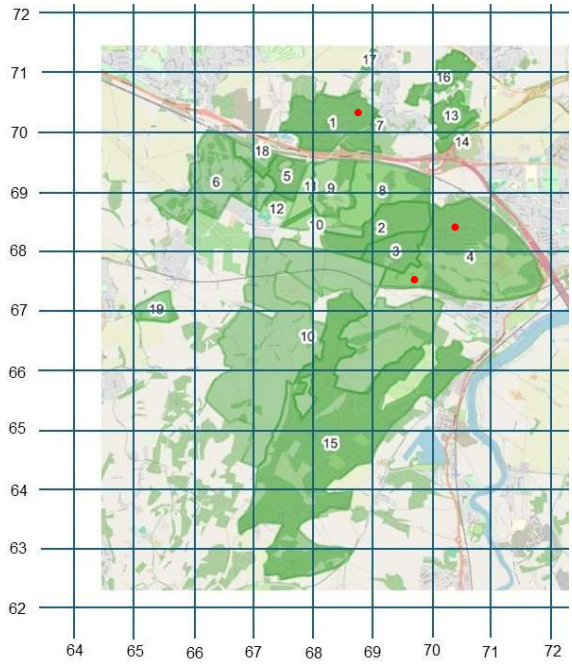
Lasioglossum semilucens Small Shiny Furrow Bee

Still a rare species nationally, and with a localised distribution within a fairly small part of South-east England.

In Kent it is also very local, and regarded as Near Threatened.

This species is found in sandy habitats and on chalk grassland.

Within the study area, it has been recorded at Shorne Woods Country Park (where there are records from 1984 and 2020) and at Ranscombe Farm Reserve (where it has been found in Cobham Woods and on the chalk grassland of Brockles Field).



Nomada lathburiana Lathbury's Nomad Bee

This is previously rare cuckoo bee is expanding its distribution as its host species, especially *Andrena cineraria*, also expand. As a result, it is suggested on the BWARS website that its status should be downgraded.

In Kent it still appears rather sparsely distributed, but it is regarded in *Bees Wasps and Ants of Kent* as being of Least Concern.

Within the study area, there is just one record, from Ranscombe Farm TQ7067 in 2019.

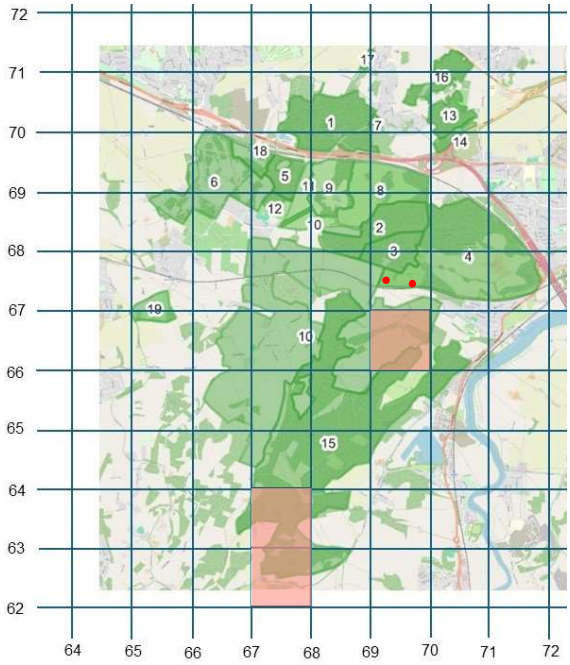
Sphecodes niger Dark Blood Bee

This is a species which has apparently increased and spread in recent years, and it is now widespread in the south half of England and Wales.

In Kent it is considered of Least Concern, and is widespread though apparently not especially common.

Associated with a range of habitats, including calcareous grassland. The host of this cuckoo bee is probably *Lasioglossum morio*, a common and widespread species in Southern England.

Within the study area, this species has been recorded in the birling and Halling area, and in Upper Halling, in the 1980s, and from Brockles Field at Ranscombe Farm Reserve in 2018.



Stelis ornatula Spotted Dark Bee

Nationally, this species has a scattered distribution, mainly across Southern England.

In Kent, this species is considered Near Threatened.

In the study area, it was found at Ranscombe Farm Reserve TQ704676 in 2016, though its host, *Hoplitis claviventris*, has yet to be recorded there. The only other record is from Upper Halling in 1902.

RDBK Insufficiently Known

Heriades truncorum Large-headed Resin Bee

This was previously considered a rare species, and listed as KRDB1 in the Kent Red Data Book. Is has subsequently undergone a significant expansion in range, and *Bees, Wasps and Ants of Kent* gives it as Least Concern in Kent.

The KMBRC data includes just one record (from Shorne Woods Country Park) but it has also been recorded at Ranscombe Farm Reserve, and is likely to be found in other suitable habitats across the study area. However, its recent increase in population (it is frequently found in garden bee-hotels) mean that its presence in the study area should not be considered of significance.

Stelis breviuscula Litte Dark Bee

A rare species in Britain, with a strongly south-eastern distribution. First recorded in Britain in 1984 and not known well enough at the time of the 1992 review for a more detailed assessment of its status to be made. This cuckoo bee species is now apparently expanding with its host, *Heriades truncorum*.

In Kent, this species is considered Least Concern.

In the study area, this species was recorded at Ranscombe Farm Reserve TQ707675 in 2018.

Nationally Rare (Nationally Notable A) species

Andrena bucephala Big-headed Mining Bee

A species which is widespread across England, though still regarded as scarce. Considered as Least Concern in Kent.

In Kent, this species is often associated with calcareous grassland, especially on the scarp slope of the North Downs. It is known to forage on Hawthorn and Field Maple, as well as some other trees.

The only record for the study area appears to be from Birling TQ6762 in 1979.

Andrena fulvago Hawksbeard Mining Bee

A species with a widespread though scattered distribution in the southern half of England. In Kent, it is considered Near Threatened.

A species mainly of coastal sites in Kent, but it can also be found on chalk and acid grasslands. It forages on yellow-flowered composites, such as hawk's-beards, Mouse-ear Hawkweed and others.

Within the study area, it was recorded in 2020 at Shorne Woods Country Park.

Andrena minutuloides Plain Mini-miner

In Britain, this species is confined to the South-east of England westwards to Dorset. In Kent, it is well distributed mainly on the chalk, but with populations along the North Kent coast, including on brownfield sites, and in the High Weald. There appears to be a concentration of records along the Medway north of Maidstone.

It has a strong association with chalk grassland. Forage species include a range of shrubs and herbs in spring, with the summer generation attracted to umbellifers, particularly Wild Carrot, Wild Parsnip, Upright Hedge-parsley and Burnet-saxifrage.

There are records from quarries outside the study area at Cuxton Pit (Medway Gate), and Holborough. Within the study area, the records from Paddlesworth TQ66W appear to refer to records from the quarries outside the study area. The only confirmed records within the study area are therefore from Ranscombe: the record given for Ranscombe Farm at TQ689681 may possibly be in error, as the grid reference appears to lie within woodland to the north of the site. However, it was recorded in Brockles Field at Ranscombe in 2018, and there is also a recent record from the south-east corner of the reserve.

This is small species requiring microscopic examination for determination, and it seems likely that it would be found elsewhere within the study area if further survey were carried out.

Lasioglossum pauxillum Lobe-spurred Furrow bee

Though once rare, this has more recently become a widespread and frequent species in Southern England.

In Bees, Wasps and Ants of Kent, it is noted that it this species had increased enormously over the previous three decades and that it is abundant in the county.

Within the study area, it has been recorded at Shorne Woods Country Park and at Ranscombe Farm Reserve. Ranscombe accounts for most of the records in the area, but this almost certainly reflects the amount of survey effort.

Lasioglossum quadrinotatum Four-spotted Furrow Bee

This species remains rare and locally distributed in Britain, with most records coming from heathland districts. In Kent, it is very rare and regarded as Vulnerable in Kent.

There is one record from the study area, from Cobham TQ6768 in 1969.

Nomada fucata Painted Nomad Bee

This species has undergone a substantial increase and spread in recent decades, and the BWARS website suggests that this status should be revised.

The host of this cuckoo species, *Andrena flavipes*, is widespread and common, and *Nomada fucata* can usually be found where its host occurs.

Osmia pilicornis Fringe-horned Mason Bee

A species which has much declined in recent decades. In Kent it is regarded as Near Threatened, with just a scattering of recent records.

In the study area, the only records (apart from one late-19th Century record) are from the southern parts of the Holborough Woodlands in the 1970s and 1980s, and it may no longer be present. However, it should be searched for woodland rides and areas of open coppice where its pollen-forage plants, Ground Ivy and Bugle, are abundant. It should be noted that no such suitable habitat was located by the current author during field work in May and June 2024, though visits were only made to the more easily accessible parts of the Holborough Woodlands.

Sphecodes rubicundus Red-tailed Blood Bee

This remains a scarce and localised species, with a scattered distribution over the southern half of England and Wales. In Kent, it is scarce and considered Near Threatened.

In the study area, it was recorded in 2022 from Henley Down TQ664665 on the Silverhand Estate.

Nationally Scarce (Nationally Notable B) species

Andrena trimmerana Trimmer's Mining Bee

A species with a strongly southerly distribution in England.

Widespread in Kent, in a variety of habitats, and nesting in sandy banks, on south-facing slopes or in upturned root-plates of trees.

Recorded in the 1980s from Paddlesworth TQ6862 and Birling TQ6662 (just outside the study area), though the *Bees, Wasps and Ants of Kent* shows a post-1990 record for TQ76D. It is also given on the species list for Ranscombe Farm Reserve.

Bombus rupestris Hill Cuckoo Bee

Listed as Nationally Notable B. This was once a scarce species, but has increased substantially over the last couple of decades. It is widespread and frequent across North Kent, in the south-east of the county and around Tunbridge Wells.

Dasypoda hirtipes Pantaloon Bee

The UK distribution of this species is strongly skewed towards the south and east of the country.

In Kent, it is regarded as Least Concern, being widespread in open, sandy habitats. It nests in hard-packed, sandy or gravelly soils.

The is one record in the study area, from Shorne Woods Country Park in 2020. However, the species does sometimes appear well away from suitable nesting habitat, and it is not clear whether this record is significant; further survey would be of value.

Hylaeus signatus Large Yellow-face Bee

This species widespread but apparently local in England.

In Kent, it is well-recorded from the East Thames Corridor, Medway Valley and North Downs. Strongly associated with Weld and Wild Mignonette.

There are recent records from quarries just outside the study area, and it has been recorded at Ranscombe, and may well be found elsewhere in the study area.

Lasioglossum puncticolle Ridge-cheeked Furrow Bee

This species is still considered scarce nationally, but is regarded as Least Concern in Kent, where it is reasonably frequent.

The species is associated with woodland rides, estuarine areas and coastal soft cliffs.

In the study area, there are records from Shorne Woods Country Park and from Ranscombe Farm Reserve.

Lasioglossum Orange-footed Furrow Bee

A species which is widespread in Southern England, but which does appear to have declined in recent decades.

In Kent, it is regarded as Least Concern in Kent, and it is widespread across the chalk downs.

Within the study area, the only records since 2000 are from Ranscombe Farm Reserve, where it appears to be widespread in grassy habitats and field edges, though it is highly likely that this reflects survey effort and that the species is more widely distributed. This assumption is supported by the species being recorded on 24 June 2024 close to Cobhambury Road at TQ 6809 6752 on the Silverhand Estate.

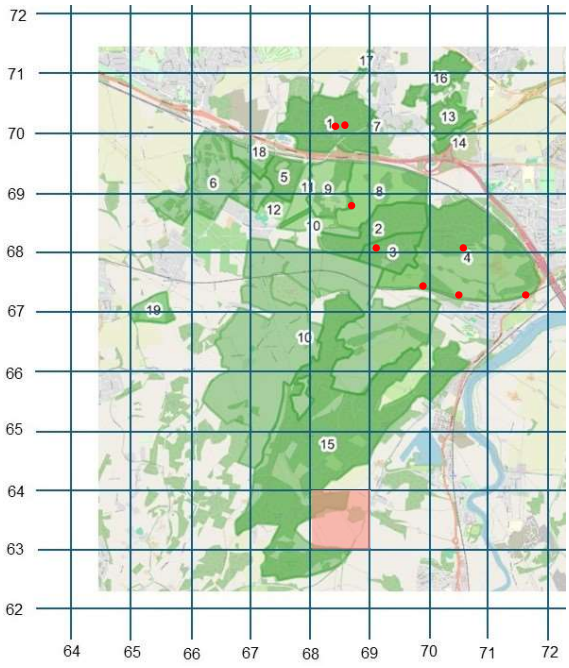
Orange-footed Furrow Bee foraging on Greater Knapweed, Silverhand Estate 24 June

Melitta tricincta Red Bartsia Bee

A species with a distinctly southern and eastern distribution in the UK.

In Kent, this species is not uncommon on the downs and around the north and east coasts where its host plant (the female collects pollen only from Red Bartsia *Odontites vernus*) occurs.

Within the study area, there are post-2000 records from Cobham Woods, Shorne Woods Country Park and Ranscombe Farm Reserve, and an older ones from Cobham Park TQ687689 in 1998 and Snodland TQ6863 in 1991. However, wider searching is likely to find further locations for this species across the study area.



Nomada flavopicta Blunthorn Nomad Bee

A widespread but very localised species in England.

In Kent, it is also widespread, though not frequently reported.

This cuckoo parasitises the bees *Melitta leporina*, and *Melitta tricincta*.

The KMBRC records for this species look to be associated with surveys of quarry sites just outside the study area. However, this species was recorded by Peter Kirby in Cobham Park TQ6968, and was also recorded in Brockles Field, Ranscombe TQ692676 in 2018. Given that both the known host species occur within the study area, further study might reveal it to be more widespread.

Osmia bicolor Red-tailed Mason Bee

A species which is very widespread across the chalk and limestone geology of Southern England and Wales. In Kent, it is found on chalk soils across the county and considered Least Concern.

Within the study area, most records come from Ranscombe Farm Reserve and the Henley Down area, though the species is likely to be present on flower-rich chalk grassland soils throughout the study area, including field edges.

Sphecodes crassus Swollen-thighed Blood Bee

Though previously considered scarce, this species has expanded in range and numbers, and is now widespread throughout England and parts of Wales.

In Kent it is regarded as common and Least Concern. Records from the study area are therefore probably not of significance.

Sphecodes miniatus False Margined Blood bee

A species with a strongly south-eastern distribution in Britain. Considered Near Threatened in Kent.

A cuckoo of *Lasioglossum nitidiusculum* and *L. parvulum*, and mostly associated with sandy habitats. It is similar to the more common *Sphecodes geofrellus*, with which it can be confused.

This species appears to have been recorded just once in the study area, at Shorne Woods Country Park TQ688703 in 2020.

Stelis punctulatissima Banded Dark Bee

A widely distributed though very scarce species, with a distribution which is concentrated in South-east England.

In Kent, it is scarce but considered of Least Concern.

A cuckoo species, most commonly exploiting the Wool Carder Bee *Anthidium manicatum*, but also on several species of Mason Bee *Osmia* spp.

In the study area, there is a record from Upper Halling TQ6965 in 1967, and another from TQ6864 in 1902.

Other species of note

Species are included here where they either have no formal threat or rarity status but remain significant (as in the case of Bombus humilis), or where their presence in locations immediately outside the study area suggests that they may be worth searching for *within* the study area.

Andrena polita Maidstone Mining Bee

Originally known only from a chalkpit in Northfleet and Cuxton Warren in Upper Halling, where it was last recorded in 1934. Considered extinct until rediscovered at Trosley Country Park in 2020. This location is sufficiently close to the study area that there may be value in searching for this species in suitable habitat.

Anthophora quadrimaculata Four-banded Flower Bee

This species has as a strong south-easterly distribution in England.

Not apparently recorded from within the study area since 1900, but with a 2003 record from Cuxton Pit (Medway Gate), suggesting that it may yet be found.

Bombus humilis Brown-banded Carder Bee

A species of Principal Importance in England under s41 of the Natural Environment and Rural Communities Act. This species underwent a substantial decline in range and numbers during the 20th Century, and is largely restricted to extensive areas of flower-rich, mainly cosatl habitat, in the south of England and Wales.

In Kent, it is widespread around the coast and is apparently increasing.

Within the study area, there were regular records from grassland and field edges in the southern half of across Ranscombe Farm Reserve in the late 2010s. It was also recorded from Cobham Park in 2018 Shorne Woods Country Park in 2021.

Bombus sylvarum Shrill Carder Bee

A species of Principal Importance in England under s41 of the Natural Environment and Rural Communities Act, and Nationally Notable B (roughly equivalent to Nationally Scarce), as a result of the steep decline in its numbers during the late 20th Century.

There have been no records within the study area since 1901. However, iRecord shows recent records 2017/18 from Kent Wildlife Trust's Nashenden Reserve, and from Holborough in 2019. This suggests that this may be a species to look out for in the study area.

Hylaeus cornutus Spined Hylaeus

A rare, though possibly increasing, species, largely restricted to the south-east corner of England. It is regarded as Least Concern in Kent.

This is a small bee which nests in the pithy stems of plants such as dock and wild parsnip.

There are local records for the period 1995-2003, though this all appear to be associated with studies of quarry sites (Cuxton Pit and Holborough Quarry) which are outside the study area. Nonetheless, further survey may find the species within the study area.

Sphecodes longulus Little Sickle-jawed Blood Bee

Nationally Notable A, with a distribution mainly south-east of a line from Hampshire to The Wash. Scarce in Kent and regarded as Vulnerable.

Recorded in 2003, just outside the study area in Cuxton Pit (Medway Gate). Primarily a species of open, sandy areas, and perhaps worthy of further survey. The main hosts of this cuckoo bee, *Lasioglossum morio* and *L. minutissimum*, both occur within the study area.

***Sphecodes spinulosus* Spined Blood Bee**

A rare species (RDB2 in the 1992 review) with a scattered distribution in Southern England. In Kent, it is considered very rare and Vulnerable.

In the study area, the only records are from Upper Halling in the period 1900-1902. Its host is thought to be *Lasioglossum xanthopus*, so it may prove to still be present at Ranscombe Farm Reserve or other locations.

Wasps

RDB1 Endangered

Cerceris quadricincta Four-banded Weevil-wasp

A s41 species of Principal Importance in England under the Natural Environment and Rural Communities Act. This species has a very localised distribution in the UK, being limited to Kent and Essex.

In Kent, at least, the species has recently become more widespread with records mainly from sandy habitats and coastal soft rock cliffs, as well as some records from downland. It is given as Near Threatened in Kent.

There is one recent record from Brockles Field at Ranscombe, in 2019

RDB2 Vulnerable

Philanthus triangulum Bee Wolf

This species was previously considered rare and Vulnerable in Britain, but it has expanded its range substantially in recent decades. It is now widespread in Kent, and records from the study area are unlikely to be of importance.

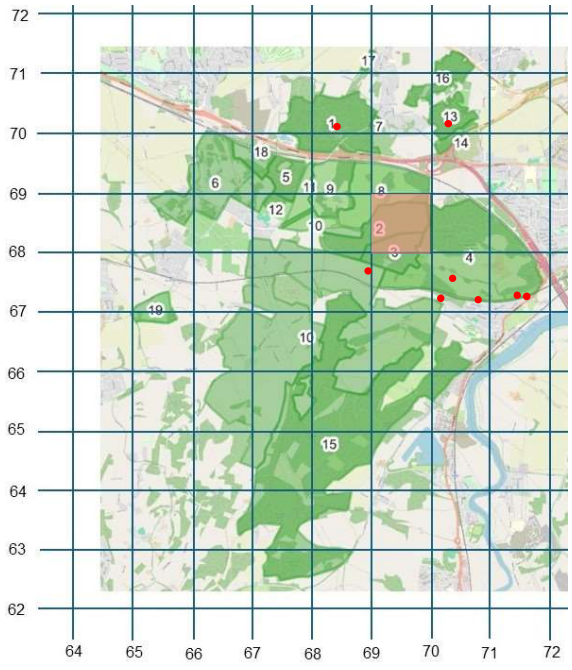
RDB3 Rare

Cerceris quinquefasciata Five-banded Weevil-wasp

This species has a very localised distribution in the UK and one of the invertebrate species associated with the brownfield and other habitats of the East Thames Corridor. It is a s41 species of Principal Importance.

In *Bees, Wasps and Ants of Kent*, it is noted that it has increased in range and frequency, though still being found predominantly in the East Thames Corridor and Medway and Darenth Valleys. It is therefore regarded as Near Threatened in Kent.

All the records for the study area are for the period from 2000 onwards, and are concentrated in the northern part of the area. However, its presence at Ranscombe (and a record of a male taken on the Silverhand Estate south of Cobham Woods on 24 June 2024) suggests that similar habitat further south in the study area may also support the species.



Chrysis longula a ruby-tailed wasp

Apparently, a very rare species. Neither NBN nor iRecord hold any records, and only three hectads records – all pre-1994 – are shown on the BWARS website. In Bees, Wasps and Ants of Kent, it is listed as Extinct in the county.

The data from KMBRC gives a single record for Jeskyns Farm in 2019. However, given the difficulties associated with identification of *Chrysis ignita* group of species (to which *C. longula* belongs), this record should be regarded as likely to be in error unless it is from a recognised expert or there is an associated specimen which can be verified.

Crossocerus exiguus

In the UK, this species is known only from Kent, Surrey and Sussex, and it is apparently scarce, though widespread, throughout its world range.

It is regarded as Near Threatened in Kent, and *Bees, Wasps and Ants of Kent* notes that records often come from coppiced chestnut woodland in the early stages of regrowth.

In the study area, there are two records, both from Birling TQ6762, and both in August 1986.

Hedychridium coriaceum a jewel wasp

A rare species associated with open, sandy habitats, and with a very localised distribution in South-east England. *Bees, Wasps and Ants of Kent* gives only one tetrad in the extreme north-west of the vice-county 16 (and therefore well into London), and notes the species as only recently being recorded in the area.

This species is a cuckoo of wasp *Lindenius albilabris*, which has been recorded in the study area, including at Shorne Woods.

There is a single record of *H. coriaceum* for the study area from 2020 from Shorne Woods Country Park at TQ688703.

Hedychrum nielmelai a jewel wasp

A scarce but apparently increasing species. In Kent, this species is considered of Least Concern.

A cuckoo of *Cerceris quinquefasciata* and, less often, *C. quadricincta*.

In the study area, there is a record at Brockles Field, Ranscombe Farm Reserve TQ695674 in 2016.

Passaloecus eremita

A species which was added to the British list in 1978, and with a distribution confined to the south-east of England.

In Kent, this species is regarded as Near Threatened.

Although no records are shown in *Bees, Wasps and Ants of Kent* for this part of Kent, KMBRC has records for the Holly Hill/Upper Halling area TQ6763 from 1983 and 1984. A species associated with pine trees.

RDBK Insufficiently Known

Dolichovespula saxonica Saxon Wasp

A species of social wasp which was once considered rare but is now widespread throughout Great Britain.

There is only a single record from the study area (from 2015, at Ranscombe Farm), but *Bees, Wasps and Ants of Kent* notes that this species "is certainly under recorded." Its presence in the study area is therefore unlikely to be significant.

Stigmus pendulus

The first British record for this species was from Kent in 1986, and it has subsequently spread through the Home Counties and northwards to Yorkshire and beyond.

In Kent, it is considered Least Concern.

In the study area, there is a record of this species from Ashenbank Wood TQ6769 in 2005.

Nationally Rare (Nationally Notable A) species

Chrysura radians a ruby-tailed wasp

A species with a scattered distribution across England and parts of Wales north to Yorkshire.

In Kent it is rare but probably under-recorded, and considered Near Threatened.

A parasitoid (cuckoo) on Mason Bees *Osmia* spp. which nest in wood.

There is one record from Upper Halling from 1971. Recent records are from 2014 in the National Trust property at Cobham Woods, and from 2018 at Ranscombe Farm.

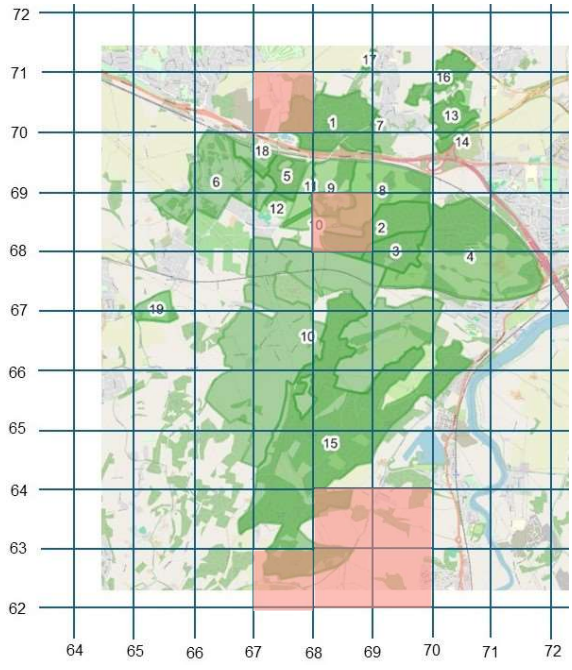
Crossocerus distinguendus

This species has scattered distribution across England, with a concentration in the South East. First added to the British list from a specimen taken in Kent in 1978, but reported as having rapidly expanded its range subsequently.

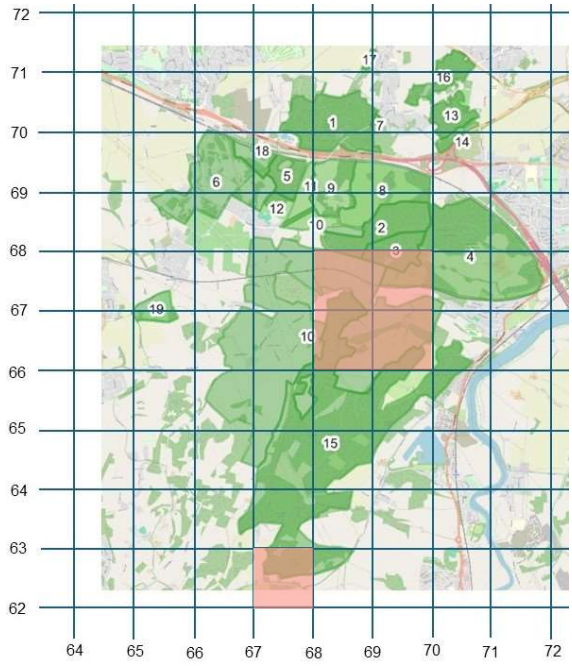
In Kent, it is no longer regarded as deserving scarce status, and it is considered Least Concern here.

Found in a variety of open habitats.

Records for the study area are from the 1980s and 1990s, with the only post-2000 record coming from Cuxton Pit (Medway Gate).



Aporus unicolor a spider-hunting wasp



A scarce species, with a strongly southern distribution in Britain.

There are few records in Kent, where the species is considered Near Threatened.

A species of calcareous grassland, where it is a specialist hunter of the Purse-web Spider *Atypus affinis*, itself Nationally Scarce. Adults have often been taken from Wild Carrot, where they forage for nectar.

Apart from one record from Upper Halling in 1900, the only records of this species within the study area appear to come from Birling TQ6762 between 1982 and 1986. However, *Bees, Wasps and Ants of Kent* also shows a record for tetrad TQ66Y from the period 1990 to 2020. Further survey for both the wasp and its spider prey species may be of value.

Argogorytes fargei

A species with a sparse distribution across England. Considered very rare and Vulnerable in Kent, with only one tetrad shown in *Bees, Wasps and Ants of Kent*.

A mining species associated with light soils.

A specimen was recorded on the National Trust's holding at Cobham Woods, when one was caught in a vane trap.

Didineis lunicornis

A species with a scattered distribution across the south-eastern parts of England, though it may be under-recorded.

Regarded as Near Threatened in Kent, with few and scattered records.

Apparently this species nests in the deep desiccation cracks that appear in clay soil as it dries; In *Bees, Wasps and Ants of Kent*, it is noted that it also nests near water bodies.

Within the study area, it was recorded in 1984 from two contiguous monads (TQ6869 and TQ6870). It is possibly worth further survey effort: the BWARS website notes "It is unclear whether the flush of records over the past two decades indicates an increase in its status and range or whether it had been overlooked as an ichneumon or pompilid. Packer, Dicker and Falk have all managed to locate clusters of nesting aggregations by carefully examining likely sites."

Dolichovespula media Median Wasp

Listed as Nationally Notable A, but now quite common and widespread.

Odynerus melanocephalus Black-headed Mason Wasp

This is a Species of Principal Importance in England under s41 of the Natural Environment and Rural Communities Act, and which has a scattered distribution across Southern England.

In Kent, it is uncommon, but given as Least Concern.

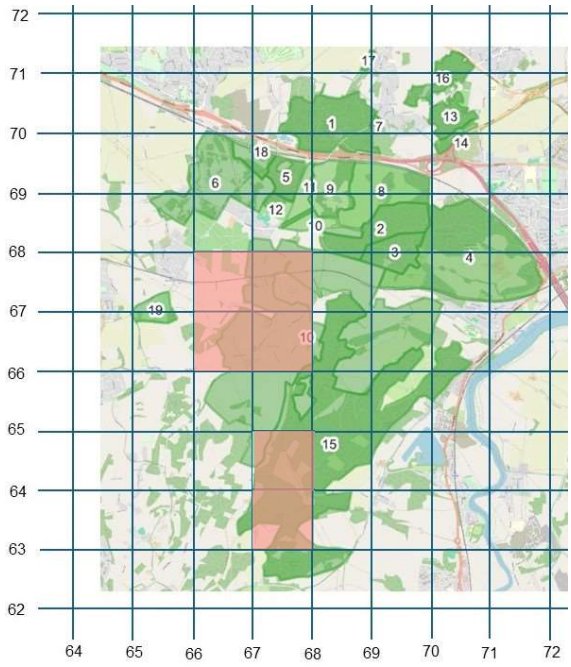
In the study area, apart from a record for Halling in 1902, there is just one record from Great Crabbles Wood TQ70447022 in 2011. This is a species which nests in flat, sloping or vertical faces in light clay soil, so might possible be expected from Shorne Woods Country Park.

Omalus puncticollis a jewel wasp

A species with a sparse distribution across the southern half of England and parts of Wales. In Kent, it is scarce and considered Vulnerable.

A species of open habitats.

In the study area, all records from August 1983 around Luddesdown and in the Upper Halling/Holly Hill area.



Nationally Scarce (Nationally Notable B) species

Crossocerus binotatus

A scarce but widespread insect in Britain. Regarded as Near Threatened in Kent.

A species associated with dead wood and timber in a range of habitats.

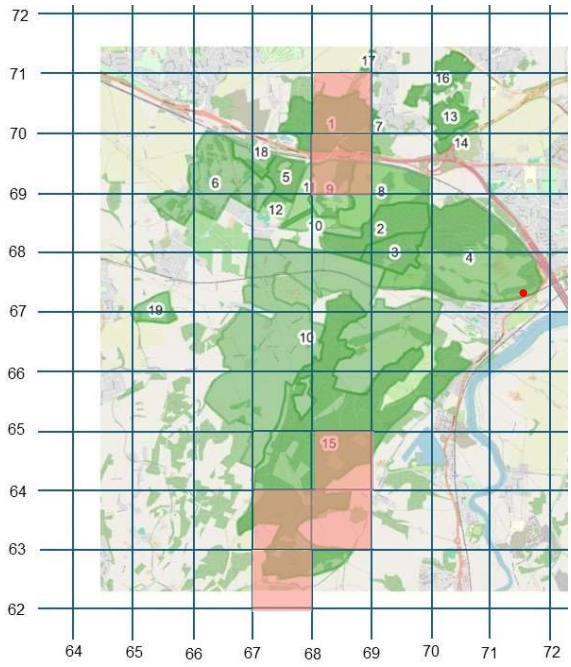
The only record for the study area is from Holly Hill in 1985.

Crossocerus walkeri

A species which is apparently declining nationally. Regarded as Endangered in Kent.

This species nests close to rivers and streams, where it provisions its nests with small mayflies. The only record for the study area is from 1969 and is given as Upper Halling TQ6964: this grid square only just overlaps with the study area, and it seems likely that the record was from outside the study area.

Arachnospila minutula a spider-hunting wasp



Widely distributed in England and Wales. According to *Bees, Wasps and Ants of Kent*, it is 'well-known from the county', though records are only shown for 15 tetrads, and the species appears to be largely limited to Sandwich Bay, the London part of VC16, and the Medway Gap.

A species particularly associated with chalk grassland, but also found in sandy habitats.

There are a number of records from the study area, mostly from the 1980s at Shorne Woods Country Park, Upper Halling and Birling, though it was recorded at Ranscombe in 2016.

Ectemnius sexcinctus

A species with a scattered though widespread distribution in England. Scarce in Kent, though given as Least Concern in Allen (2020).

There is a 1978 record from woodland above Upper Halling, and a possible record (no specimen was obtained) from Cobham Woods in 2014.

Lestiphorus bicinctus

A species with a scattered distribution across Southern and Eastern England. In Kent, it is considered rather local and is associated almost exclusively with sandy soils.

In the study area, the only record is from 1984 in Shorne Woods Country Park TQ6770.

Microdynerus exilis

First recorded in Britain in 1937, and apparently expanding its range. Not particularly frequent in Kent, but regarded as Least Concern in the county.

There is one record from the study area, from Ranscombe Farm in 2018.

Nysson trimaculatus

A species which is widespread in the southern half of England. It is also widespread and of Least Concern in Kent, where it is mainly found on sedimentary sands.

In the study area, there is a record for Shorne Woods (1984) and another for Crabbles Bottom Orchard (2020).

Priocnemis agilis a spider-hunting wasp

A species with a scattered distribution across Southern and Eastern England. In Kent, it is regarded as Least Concern, though there are few records.

In the study area, there is one record, from Birling TQ6762 in 1982.

Priocnemis confusor a spider-hunting wasp

A species with a scattered distribution in Britain, mainly in South-east England. There are scattered records for Kent, where it is considered Least Concern.

This species is associated with woodland on heavy clay as well as with sandy ground. In Kent, it also occurs on coastal marsh.

The only records from the study area are for Shorne Woods in TQ6869 and TQ6870 in the period from 1981 to 1986.

Priocnemis cordivalvata a spider-hunting wasp

A species with scattered records across England, and particularly in the South-east. Considered scarce but of Least Concern in Kent. A species of open woodland, particularly on clay.

It was recorded from Shorne Woods TQ6869 in 1985.

Priocnemis hyalinata a spider-hunting wasp

This species has a predominantly south-eastern distribution in Britain. It is scarce in Kent and regarded as Near Threatened.

Within the study area, there is a single record for Upper Halling TQ6764 in 1986.

Tiphia minuta

Though previously regarded as scarce, this species is widespread and apparently spreading, and the BWARS website suggests that its Nationally Notable B status may no longer be justified. In Kent, it is scarce but considered of Least Concern. In the study area, it was recorded in several locations within Ranscombe Farm Reserve in 2016.

Other species of note

Nysson dimidiatus Small Spurred Digger Wasp

Nationally Notable B (equivalent to Nationally Scarce). A cuckoo species which is widespread in England and Wales.

The only record for this species close to the study area appears to be from a quarry at Upper Halling, just outside the study area. However, its host, the wasp *Harpactus tumidus*, has been recorded in the study area, at Ranscombe Farm Reserve in 2016. It may therefore yet prove to be present.

Ants

RDB3 Rare

Myrmica specioides

The first British record for this species is from 1958, at Whitstable, and it has spread around the coast so that it now ranges from North Norfolk to Hampshire. There are inland sites in Kent, where it is regarded as being of Least Concern.

A species found in sandy habitats and chalk grassland.

Within the study area, this species was recorded at South Hill, Upper Halling TQ683638 in 1992.

Nationally Rare (Nationally Notable A) species

***Lasius brunneus* Brown Tree Ant**

A species restricted to southern and especially central-southern English counties.

A scattered distribution in Kent, but noted in *Bees, Wasps and Ants of Kent* as expanding its range and given as Least Concern in the county.

This species was found in Brewers Wood (Shorne Woods Country Park) in 2011, and an individual was caught in a vane trap in the National Trust property at Cobham Park in 2014. It is a species associated with mature trees in parkland, and it is possible that further records would be forthcoming with further survey.

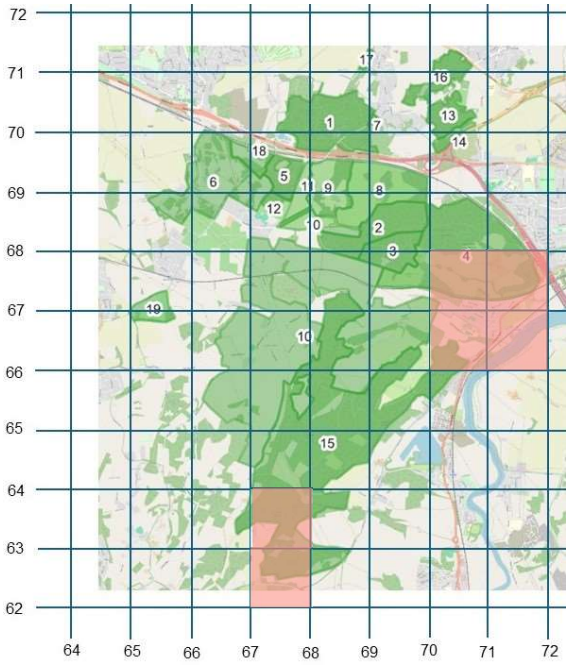
Nationally Scarce (Nationally Notable B) species

Myrmica schenki

A scarce and localised species nationally and in Kent, though in Bees, Wasps and Ants of Kent, it is suggested that it is under-recorded.

A warmth-loving species found in sparse vegetation and short grassland.

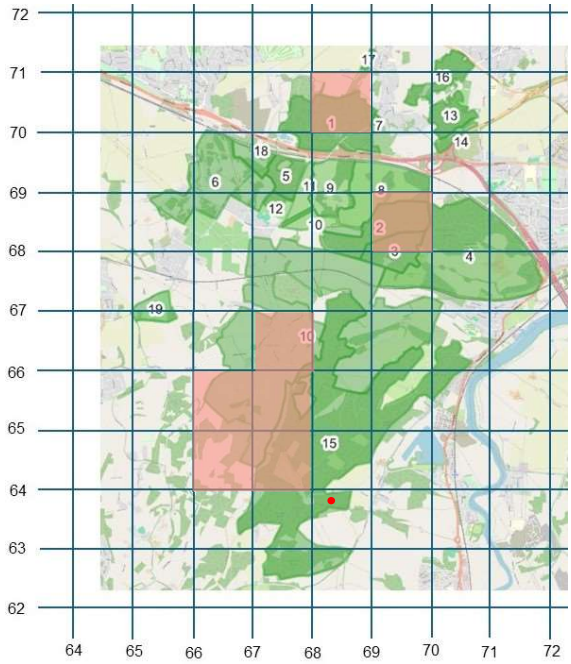
The only records for the study area are all from the 1980s.



Ponera coarctata Indolent Ant

A species restricted to Southern England, particularly the South-east and parts of South Wales. In Kent, it is present across the county, particularly the northern half, and considered of Least Concern.

In the study area, there are records from Shorne Woods Country Park, the Cobham Park/Cobham Woods area, Great Buckland, Luddesdown and South Hill. Possibly present elsewhere, as this is a subterranean species and so likely to be under-recorded.



Other species of note

Formica rufa a wood ant

This is a widespread in southern England and in Wales, and is the species which builds the familiar large mounds from fragments of vegetation. It is not considered of conservation concern in the UK, though has been assessed by IUCN as Near Threatened globally. However, it is not clear that our *F. rufa* is the same as the continental *F. rufa*, with our species possibly being of hybrid origin.

In the study area, there are just two records, both from 2009, at TQ702702 in Great Crabbles Wood. Further investigation of the status of the species here is warranted, simply to confirm its presence and extent.