
Extended Phase 1 Habitat Survey

WARE PARK, HERTFORD

Lawrence Graham Trust Corporation

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1 INTRODUCTION

1.1 Background and Methodology

- 1.1.1 The following ecological appraisal report includes the results of an extended Phase 1 Habitat Survey and subsequent specialist survey for a planning application site located at Ware Park near Hertford. The appraisal has been prepared to accompany the planning application proposals for a mineral extraction scheme. It aims to provide an assessment of any potential ecological constraints to the development, along with the scope for mitigating and off-setting any adverse impacts.
- 1.1.2 Whilst the mineral extraction site area is the main focus of the ecological appraisal, consideration has also been given to the positive benefits that can be afforded in terms of ecological enhancement of the adjoining woodland and hedgerow habitats, including opportunities for new habitat creation and restoration / long term management of new and existing habitats.
- 1.1.3 The information included in this report is based both on field survey and the interrogation of ecological records. A preliminary Phase 1 Habitat Survey was undertaken in April 2013. The appraisal also included specialist badger survey and made recommendations for further specialist survey that was considered necessary. The report also summarises the results of subsequent specialist bat and herpetological survey undertaken during the spring / summer 2013.
- 1.1.4 This report is accompanied by a Phase 1 Habitat Zonation Drawing (Appendix A).
- 1.1.5 Available information relating to the site and its surroundings was sought from HMBRC (Hertfordshire and Middlesex Biological Records Centre), the MAGIC interactive map, including data derived from Natural England and other environmental consultees, as appropriate. The results of the data search are included in Appendix B. The results of specialist ecological survey (bats and herpetological) are included in Appendix C.
- 1.1.6 There follows in Section 2 of the Report, a description of the existing ecological interests of the site, including:
- statutory protection and other notifications
 - site context
 - habitat types and species present
 - ecological evaluation.

1.1.7

Section 3 sets out in general terms the impact of the scheme proposals and highlights any critical constraints with respect to nature conservation issues, with a preliminary assessment of the ecological impact of the scheme. The results of the survey also provide useful baseline data to highlight the potential for enhancing the nature conservation interest of the development site, through the implementation of appropriate habitat improvement, restoration and creation schemes

2 EXISTING ECOLOGICAL INTERESTS

2.1 Site Environs

- 2.1.1 The proposed mineral extraction site comprises an extensive area of land under arable production, with a small number of mature, specimen trees and peripheral hedgerows, arable margins and woodland. It is situated on the northern margins of Hertford.
- 2.1.2 The major part of the application site is located to the west of Wadesmill Road, with a smaller triangular area of land generally under arable production and a small area of woodland at its northern apex, located to the east of Wadesmill Road, which is bounded by highway planting and hedgerow. This smaller sector of land is bounded by a public footpath and open arable land to the east and a partially hedged boundary with a residential area to the south.
- 2.1.3 Sacombe Road, with generally dense hedgerows and Waterford Heath Local Nature Reserve beyond, forms the western boundary of the main part of the site, with a nursery and residential dwelling to the south. The north-western part of the main site adjoins a hedged public footpath with Rickneys Quarry beyond, which is partially restored with some areas in current active use. St John's Wood and the access road to the quarry form the northern site boundary.

2.2 Statutory Protected and Other Notified Sites

- 2.2.1 The development site does not contain or include any statutorily designated sites of ecological interest, such as Sites of Special Scientific Interest (SSSI), National Nature Reserves, Special Protection Areas (SPAs) or other sites designated under UK or European Directives. It does, however lie in very close proximity to Waterford Heath Local Nature Reserve (a national designation), which abuts Sacombe Road, adjoining the western side of the site.
- 2.2.2 Neither does the site contain or include any non- statutorily notified sites of ecological interest at the County level (Local Wildlife Sites - LoWS), or Local level, of importance.
- 2.2.3 There are, however, a large number of other LoWS within 2km of the application site, with several located adjacent to the application site. The closest of these LoWS's is St John's Wood (ref 45/018), which immediately adjoins the northern boundary of the main western sector of the application site. This is semi-natural broadleaved woodland, possibly ancient at least in part (included in the Ancient Woodland Inventory). The woodland possesses a number of attributes of ancient woodland, particularly in the eastern part, which is dominated by ash, with ancient woodland indicators including bluebell, yellow archangel, dog's mercury, with hornbeam coppice stools and steep boundary banks.

- 2.2.4 Four other LoWS are located within very close proximity of the western / north-western boundary of the main application site. Rickneys Quarry LoWS (ref 45/094) adjoins the western end of St John's Wood and is separated from the site only by a public footpath and associated hedgerows. This consists of restored mineral workings, including grazed neutral grassland and young plantation woodland. It is important for its diversity of flora and fauna including a wide range of notable butterflies and moths, such as the Red List and UK BAP Grizzled Skipper.
- 2.2.5 Waterford Heath South LoWS (ref 59/062) adjoins Sacombe Road on the western boundary of the site, which along with the adjacent Waterford Heath North LoWS (ref 45/022), form a conjoined area (including the Waterford Heath LNR, see above and Hertfordshire and Middlesex Wildlife Trust (HMWT) Reserve), of restored gravel pits, with a mosaic of habitats including several ponds and regenerating acid and calcareous grassland (supporting a number of orchids and other grassland indicator species, along with a range of notable butterflies including the Grizzled Skipper and Brown Argus), with scattered young scrub and more established scrub and remnant ancient, semi-natural woodland in the northern part. The southern sector is an old gravel pit with settling beds and steep slopes and cliffs supporting a mosaic of habitats and a diverse flora. The floor of the pit is generally neutral to calcareous grassland and the sandy cliffs tend to be dominated by dense tree and shrub cover, with open areas providing good habitat for invertebrates and nesting sand martins, along with several reptile species.
- 2.2.6 Great Mole Wood LoWS (ref 59/015), a small disjointed area of semi-natural ancient woodland (on the Ancient Woodland Inventory) adjoins the southern boundary of Waterford Heath South, adjacent to Sacombe Road and lies close to the southern part of the application site.
- 2.2.7 There are a relatively large number of other LoWS within the wider vicinity of the site including several other remnant areas of ancient woodland, mainly to the north of the application site. There are also substantial areas of meadowland associated with the Rivers Beane, Lea and Rib, including the Kings Mead HMWT Reserve (ref 59/003) and the Beane Marsh (ref 59/002).
- 2.2.8 None of these sites will be affected in any way by the scheme proposals, with the possible exception of St. John's Wood, the southern peripheral parts of Rickneys Quarry and the eastern periphery of Waterford Heath South. It is expected to be possible to avoid adverse impact through careful design and the implementation of a comprehensive regime of mitigation measures.

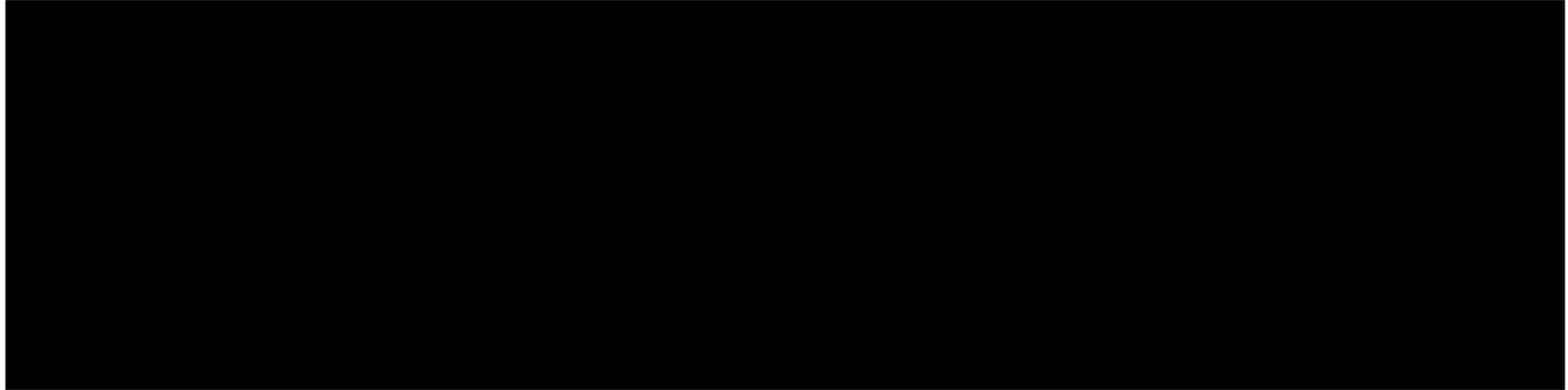
2.3 Statutorily Protected and Other Notable Species

- 2.3.1 In terms of species protected under The Wildlife and Countryside Act, 1981 (as amended) and European legislation, there are no records of any protected or notable species within the application site. The majority of the application site comprises land under arable production which is generally unsuitable for most statutorily protected or other notable species. However, the small number of mature specimen trees within the arable land could have potential as bat roosting habitat (see below).

The peripheral areas of rough grass / ruderal vegetation on the arable margins, along with the adjoining hedgerows and woodland /tree belts are also of some potential for use by a range of wildlife including a number of protected species including badgers, bats and reptiles / amphibians.

Badgers

- 2.3.2 Badgers are afforded specific protection under The Protection of Badgers Act, 1992.



- 2.3.3



Bats

- 2.3.4 All species of bats are European Protected Species (EPS) statutorily protected under UK and European statute. The five mature specimen trees on the proposed application site, were considered to be of some low potential as bat roosting habitat. There are also several hedgerows, tree belts, woodland edges and other areas of vegetation that could provide flight corridors for bat species such as common pipistrelle.
- 2.3.5 The desk study indicated HBRC records of several species of bats within the wider vicinity of the application site, including records of brown long eared bat activity along Sacombe Road, on the western site boundary and in Rickneys Quarry, to the immediate north of the site. Natterer's bats have been recorded from Waterford Hall Farm and Daubenton's bats from the River Rib. Common and soprano pipistrelle bats have been recorded from various locations in the general vicinity of Hertford, including the nearby Waterford Heath.
- 2.3.6 Due to the potential for bat presence in and around the application site it was considered necessary to undertake specialist bat survey prior to submission of the planning application. Bat survey has been undertaken between June and August 2013 by Andrew Waller of ASW Ecology and this included a daytime assessment of the 5 mature specimen trees within the site, along with bat emergence and activity surveys of the specimen trees and peripheral hedgerows.

- 2.3.7 The results of the survey are set out in the bat survey report (Appendix C); A Bat Assessment of the Ware Park Estate, Wadesmill Road, North of Hertford, Hertfordshire, SG14, ASW Ecology September 2013. The detailed inspection of the specimen trees indicated that they have overall low bat roost potential, with limited roosting opportunities and none of the trees have bat roosts except the western-most oak tree near Sacombe Road / Hedge 1. This tree which is nominated Tree 1 in the Bat Assessment Report), contains deadwood crevices and niches and is used as a very small occasional roost site for common pipistrelle bats. Only one bat was seen to emerge from this tree roost during the survey period.
- 2.3.8 The activity survey indicated 3 bat species detected foraging and commuting along the peripheral hedgerows during 6 bat survey visits; relatively frequent common pipistrelle, with rare detection of soprano pipistrelles and noctules. There was very little use of the arable fields by foraging bats.
- 2.3.9 The bat survey report concluded that, due to the presence of a bat roost, albeit a very small, occasional roost, an EPS licence from Natural England (under the 2010 Regulations) will be required for bats in respect of development, to permit the predicted loss of a bat resting place during the tree felling. A bat mitigation scheme will be required based on the proposed felling of the oak tree within the study area (see 4.2.5 below).

Amphibians and Reptiles

- 2.3.10 Whilst it was considered that there is a small possibility that peripheral rough grass in the arable margins around the application site may be used as terrestrial habitat by the European protected great crested newt, there are no areas of standing water suited to great crested newts or other amphibians on the site or in close proximity of the site, with the exception of a number of ponds in Waterford Heath North, located some 200m to the NE of the application site.
- 2.3.11 The only record of great crested newts provided in the desk study is from Kings Mead over 500m to the west of the site.
- 2.3.12 The arable / disturbed nature of much of the proposed development site, renders the majority of the area unsuitable for reptilian / amphibian use. However, areas of rough grass and tall ruderal vegetation, along with the margins of the hedgerows, woodland edges and tree belts provide potentially suitable terrestrial habitat both for amphibians and UK protected species of reptiles. The desk study indicates the presence of grass snakes, adders and common lizard in areas of suitable habitat within Waterford Heath and at the junction of Sacombe Road and Vicarage Lane, very close to the western boundary of the site.
- 2.3.13 It was therefore considered necessary to undertake specialist herpetological survey prior to submission of the application. The survey was undertaken by Dan Sullivan of Green Shoots Ecology between 6th July and 21st September 2013. A series of refugia survey visits were also carried out during suitable weather conditions, to identify any use of suitable terrestrial habitats within the proposed development site by amphibians and reptiles.

- 2.3.14 The results of the survey are set out in the accompanying Reptile Survey at Ware Park Estate, Wadesmill Road, Ware, Hertfordshire, October 2013 (Appendix C).
- 2.3.15 The refugia survey recorded low populations of grass snakes and slow worms in most of the peripheral parts of the site (see Annex 1 of the Reptile Report). No common lizard or adders were recorded, despite records adjacent to the western site boundary. Disturbance and theft by the public of the refugia sheets in the western part of the site may have contributed to the lack of sightings of these species in this area, although as habitats in this part of the site tend to be narrower strips, they are intrinsically unlikely to support significant numbers of reptiles.
- 2.3.16 Population sizes of grass snakes and slow worms were estimated as 'low' with 'very low' numbers of common lizards and adders considered to be possibly present.
- 2.3.17 On the basis that the development proposals are likely to impact on some of the peripheral areas of reptile habitat, protected species mitigation is likely to be required (see 4.1.4 below).

Other Protected Species

- 2.3.18 HBRC records also indicate the presence of water vole, kingfisher, freshwater crayfish and otter in watercourses some distance to the east of the application site, including the Rivers Rib and Lea. There has also been limited recorded evidence of hazel dormouse in the wider vicinity of the site, at Flowersash Wood to the north of Rickneys Quarry.

Birds and Other Species of Wildlife

- 2.3.19 Peripheral parts of the proposed development site provide marginally suitable habitat for a number of bird species. At the initial site visit a number of characteristic farmland / woodland species were noted, including starling and wood pigeon, pheasant, French partridge, magpie, blackbird, dunnock, blue tit, great tit and robin. Starling is included in the RSPB Red List of conservation concern.
- 2.3.20 HBRC records also indicate the presence of a range of notable bird species in Waterford Heath, Rickneys Quarry and other habitats near the application site, including white stork, Eurasian hobby, little egret, greater and lesser spotted woodpecker, green woodpecker, willow warbler and tawny owl.
- 2.3.21 During the survey there was evidence of use of the arable land within the proposed development site by the Biodiversity Action Plan (BAP) Priority Species, brown hare and skylark. A number of common mammals were recorded, including grey squirrel, stoat, harvest mouse and brown rat, with evidence of fox, along with a range of characteristic invertebrates

2.4 Habitat Types and Species Present

- 2.4.1 The major western part of the application site consists predominantly of arable land, with areas of rough grass associated with arable margins, mainly in the western part of the area and along the open tracks crossing the site. There are five specimen mature trees (oak and sweet chestnut) within the arable land. The majority of the site boundaries consist of road-side or path-side hedges, with the southern edge of St John's Wood forming the northern site boundary.
- 2.4.2 The smaller eastern sector of the application site is similarly land under arable production, with an open track to the east and road-side hedges adjoining residential dwellings to the south and a small triangular area of woodland in the northern part.
- 2.4.3 The location and types of habitat present on the application site are shown on the accompanying Phase 1 Habitat Zonation Drawing (Appendix A).
- 2.4.4 For each habitat type present on the site, a target note and evaluation is provided in terms of ecological interest. This is categorised according to minimal, low, moderate or high value, in the local, county or national context.
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3 HABITAT SCHEDULE (TARGET NOTES)

3.1 Hedgerows

Hedge 1

- 3.1.1 The major part of the hedge adjoining Sacombe Road is unmanaged and of width 2-5m and height 3-10m, it is variably dominated by elm (some dead and dying from Dutch elm disease), with frequent hawthorn, blackthorn, elder and occasional dog rose and holly, with reasonably heavy ivy infestation. The hedge contains a number of semi-mature and mature, multi-stemmed hedgerow oaks and occasional ash, field maple and willow specimens.
- 3.1.2 The southern part tends to be dominated by poor elm, with dense bramble and some blackthorn. The central part becomes more patchy, with open sections dominated by bramble and other parts dominated by poor elm, bramble and blackthorn. Towards the north the hedge is trimmed to height 3m, it is dominated by blackthorn, with ivy and gaps, with bracken, bramble and tall ruderal species including nettle and hogweed.
- 3.1.3 The base of the hedge and adjoining road verge are dominated by coarse grasses, with nettle, creeping thistle, dead nettle, cleavers and dandelion, cow parsley, ivy, ground ivy, celandine, dog's mercury, hedge garlic, wood avens and speedwell.
- 3.1.4 The bat survey indicated some foraging / commuting use of the hedge. There are animal tracks, including roe deer and fox and the hedge is inhabited by rabbits.
- 3.1.5 Ecological Evaluation: moderate in the local context.

Hedge 2

- 3.1.6 This is a short section of unmanaged hedge on a mounded bank on the southern site boundary, adjoining Sacombe Road at its western end. It adjoins a close-boarded fence, with a nursery beyond, there is a mast on the eastern corner of the hedge, which then continues in a southerly direction for a short distance adjacent to a public footpath. It contains a number of mature, semi-mature and young oaks, ash, sycamore and lime specimens, with unmanaged hawthorn, holly, blackthorn and bramble in the under-storey. The base of the hedge tends to be dominated with ivy and rough grass, with frequent cocks foot and hogweed.
- 3.1.7 Ecological Evaluation: moderate in the local context.

Hedge 3

- 3.1.8 The hedge adjacent to the north-western site boundary adjoins a footpath, the far side of which abuts Rickneys Quarry and has been planted with a line of poplars and ash, now semi-mature (height 15-18m). The site side of the path supports an unmanaged hedgerow of variable width, from 2-5m up to 10m. The western part includes frequent mature / semi-mature oaks, some of which are multi-stemmed, with some field maples, within an unmanaged under-storey of height up to 6m, dominated by hawthorn and blackthorn, with some young oak and occasional holly, elm, field maple, suckering poplar and over-mature elder and frequent bramble and gappy sections, with some fallen dead wood. There has been some recent gapping up planting of the hedge.
- 3.1.9 The hedge has some low level of bat activity and is inhabited by rabbits and there has been some deer damage, the ground layer includes bracken, coarse grasses, nettle, with some daffodils, bare areas and mossy ground. There is a 2m wide grassy path on the site side of the hedge.
- 3.1.10 Ecological Evaluation: moderate in the local context.

Hedge 4

- 3.1.11 Unmanaged hedge adjoining an access track along the eastern part of the northern site boundary, leading from Wadesmill Road to St John's Wood and beyond to Rickney's Quarry. The hedge (height 4-7m) is dominated by blackthorn, with occasional hawthorn, holly, young oak and elder. There is some recent infill planting and a mature oak towards the eastern end of the hedge. The ground layer is dominated by ivy and coarse grasses, with some bare / mossy sections and occasional arum, cow parsley and nettle.
- 3.1.12 Ecological Evaluation: moderate in the local context.

Hedge 5

- 3.1.13 This comprises a narrow belt of semi-mature, highway planting (off-site) of height 5-10m, on the Wadesmill Road verge side of a post and rail, highways fence and a dry ditch. The predominant species are ash, with young oak, hawthorn and sporadic suckering blackthorn. There are areas of dense tangled bramble and blackthorn, with some fallen dead wood and adjoining verge vegetation dominated by coarse grasses, cow parsley and nettle, with some violet. There is some rabbit inhabitation.
- 3.1.14 NOTE. The southern part of Hedge 5 adjoins Waterworks Cottage, Pumping Station and electricity sub-station. The northern side of the cottage boundary is adjoined by railings with garden vegetation, with conifers, holly, laurel, privet and frequent ivy, with two cherries by the house and a willow. The western side is more open, with sycamore, blackthorn and elder and it is inhabited by rabbits. The southern section is dominated by faced up blackthorn, with occasional elm and holly, of height 8m
- 3.1.15 Ecological Evaluation: low / moderate in the local context.

Hedge 6

3.1.16 Similar to Hedge 5, highway planting (off-site) on the southern section of the western Wadesmill Road boundary verge, with a steep dry ditch. Dominated by semi-mature ash, with field maple, and scrubby vegetation dominated by hawthorn, dogwood, blackthorn, bramble, occasional hazel and some old elm and fallen deadwood. The vegetated belt becomes narrower and more gappy to the south, with less understorey and more sporadic mature and semi-mature sycamore and ash trees. The hedge is used to a small extent by foraging bats and is inhabited by rabbits.

3.1.17 Ecological Evaluation: low / moderate in the local context.

Hedge 7

3.1.18 Similar to Hedges 5 and 6, highway planting belt on the eastern Wadesmill Road boundary verge (on the western boundary of the smaller eastern sector of the site). It contains semi-mature tree and shrub planting of height 3-8m in the northern part, dominated by oak, ash, field maple and hawthorn, with the central section of verge wider, with semi-mature bushy thicket of the same species and a large open gap of rough grass and tall ruderal species. The southern sector becomes much wider with mature oak, ash and sycamore specimens.

3.1.19 Ecological Evaluation: low in the local context.

Hedge 8

3.1.20 Variable hedge vegetation along the southern edge of the eastern sector of the site, with sections of fence and off-site mature oak and sycamore trees, hybrid poplars and conifers interspersed with ivy infested thickets containing hawthorn, blackthorn and ash saplings, beyond and rough grassy banks with cow parsley and ruderal species. Around the houses at the western end, the fence sections alternate with garden planting including lilac, privet hedging and semi-mature trees, including ash, sycamore and maple, with some bramble and rose thicket.

3.1.21 Ecological Evaluation: low in the local context.

Hedge 9

3.1.22 Garden and nursery boundaries along part of the southern boundary of the main western sector of the site, adjoining a fence. The vegetation consists largely of rough bramble dominated scrub, with some sycamore saplings and a massive fallen stump. There is a mature ash specimen in the adjoining garden.

3.1.23 Ecological Evaluation: low in the local context

3.2 Mature Specimen Trees

- 3.2.1 There are 5 mature specimen trees located within the arable land in the western sector of the application site. A row of three mature oaks extend into the western part on a former hedge-line extending westwards from Hedge 1 and lie adjacent to the northern part of Grassland / Tall Ruderal 1, with rough grass and bramble in the ground layer.
- 3.2.2 A further mature oak is located in the centre of the arable land, adjoining an open agricultural track. These oaks are all in reasonable condition and are likely to support a wide range of invertebrates and other wildlife.
- 3.2.3 An over-mature sweet chestnut specimen occurs towards the SE part of the site. It has a dead upper canopy but strong basal growth.
- 3.2.4 The bat survey indicated that these trees have overall low bat roost potential, with limited roosting opportunities and none of the trees have bat roosts except the western-most oak tree near Sacombe Road / Hedge 1, nominated Tree 1 in the Bat Assessment Report), which is an occasional roost site for common pipistrelle bats. Only one bat was seen to emerge during the survey period.
- 3.2.5 Ecological Evaluation: low / moderate in the local context, except Tree 1, which is high on account of the small bat roost present.

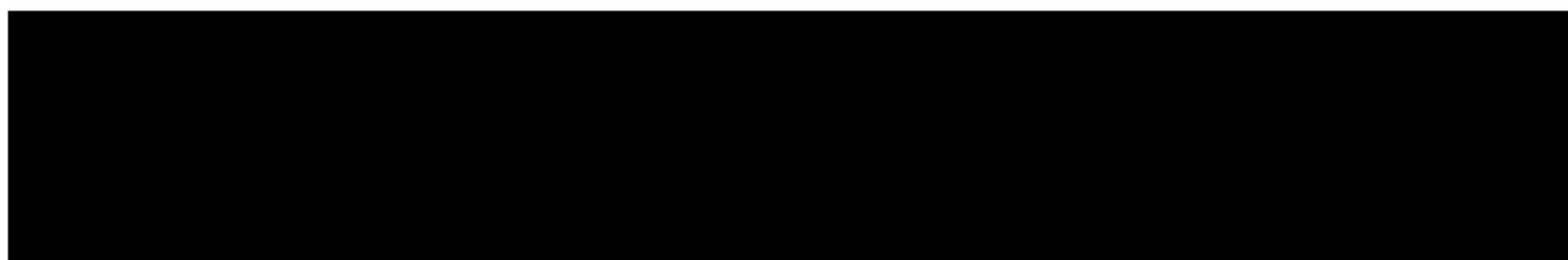
3.3 Woodland

Wood 1

- 3.3.1 St John's Wood LoWS is a small block of woodland adjoining the northern site boundary (off-site). The western part consists of mature / semi-mature plantation woodland dominated by beech, with ash, elm and sweet chestnut, of height 12-18m, with some coppiced stools. The topography is variable and parts of the wood lie on sloping banks. The ground layer is variably bare, with some fallen dead wood and brash and old stumps but also supports ivy and woodland indicator species including bluebell, yellow archangel, wood anemone, three-nerved sandwort and dogs mercury, as well as celandine, nettle, arum, mosses and some growth of cow parsley, ground ivy, cleavers etc on more open banks. There is some elder, elm, wild privet and young holly in the under-storey layer.
- 3.3.2 The southern woodland edge of the western part is relatively diverse, with frequent oak, ash, hornbeam, holly, hawthorn and elder. The central section of the wood is relatively disturbed and uneven, with regenerating young oak, elder and elm and occasional hazel and relatively large areas are dominated by long established bramble, with bracken, dense nettle and new planting in shelters. It retains some evidence of heathy grassland origins.
- 3.3.3 The eastern part of the wood is considered to be ancient semi-natural woodland, dominated by ash, with mature oaks and an under-storey dominated by hawthorn,

elder and hazel, with more frequent sweet chestnut and hornbeam towards the northern part.

3.3.4



3.3.5

Ecological Evaluation: high in the regional context.

Wood 2

3.3.6

A small triangular shaped wedge of woodland on undulating ground at the northern end of the smaller eastern sector of the site, containing frequent mature, closely spaced oaks of height 12-15m. The under-storey consists of scattered hawthorn and elder, with more frequent holly towards the southern part. The ground layer is dominated by rough grass, with nettle, cleavers, plantain and ivy, which is also invading some of the trees. There is some fallen dead wood.

3.3.7

Ecological Evaluation: high in the local context.

3.4

Grassland / Tall Ruderal / Arable

Grassland 1

3.4.1

The western margin of the site comprises a variably wide arable margin, which widens out in the central part and also in the north-western corner, to form two triangular blocks. There is a 4m wide grassy path adjacent to Hedge 1, dominated by rye, meadow grass, Yorkshire fog, false oat, cock's foot and other, generally coarse grasses. The remainder of the areas are variably bare but also dominated by tall ruderal vegetation with coarse grasses with frequent moss and ingress of willow sapling growth and ruderal weeds including nettle, broad leaved dock, creeping thistle and bristly sow thistle, other occasional broad leaved species include scentless chamomile, lanceolate plantain, common daisy, and occasional dandelion, yarrow, red dead nettle, mallow and ragwort.

3.4.2

Ecological Evaluation: low in the local context.

Grassland 2

3.4.3

Similar grassy / tall ruderal arable margins occur, to a variable width (generally 4-7m) around the northern, eastern and southern margins of the western sector of the site and the southern periphery of the eastern sector of the site. The arable margins along the Wadesmill Road boundaries tend to be much narrower (1-2m). Some of the wider margins are used as grassy peripheral tracks. The dominant species are false oat, cock's foot and other, generally coarse grasses. There is a variable degree of ruderal weed growth including nettle, broad leaved dock, creeping thistle, hogweed and bristly sow thistle, other broad leaved species include lanceolate plantain, red

campion, and occasional dandelion, yarrow, self-heal, red dead nettle, mallow and ragwort.

3.4.4 A triangle of rough grass at the southern end of the eastern sector of the site contains ash saplings and some hawthorn and bramble thicket.

3.4.5 Ecological Evaluation: low in the local context.

Arable

3.4.6 Land under arable production forms the major part of both the main western sector of the site and the smaller eastern sector, which is bounded to the east by an open grassy path. The main western part is bisected by a number of open tracks, without internal hedges. The mature trees within the western part are described above.

3.4.7 During the site survey brown hare was noted, along with ground nesting birds including skylark, pheasant and French partridge.

3.4.8 Ecological Evaluation: low in the local context.

4 ECOLOGICAL IMPACT, MITIGATION MEASURES AND HABITAT CREATION PROPOSALS

4.1 Ecological Impact

- 4.1.1 In this section an appraisal is made of any potential adverse ecological impacts that could be posed by the proposed Ware Park mineral extraction scheme proposals, along with measures to mitigate against any adverse impacts. Opportunities for enhancing nature conservation interests in the wider vicinity of the application site and thus providing an overall positive ecological impact are also discussed.
- 4.1.2 Impacts can be sub-divided into direct losses and indirect effects, short and medium term impacts caused by construction and longer term impacts resulting from ongoing operational use of the site. These impacts may be temporary or permanent in duration and there is also a possibility of cumulative or secondary effects.
- 4.1.3 In terms of **direct losses** of habitat, the mineral extraction proposals will generally be restricted to the arable land of intrinsically low ecological value, although the arable land is used by UK BAP species brown hare and skylark, along with other ground nesting bird species including pheasant and French partridge. It is not expected that there will be any significant loss of the peripheral hedgerows, except some possible localised loss of the highway planting on Sacombe Road (Hedge 6) to enable site access. The access proposals are not finalised at this stage but may exert some minor level of negative effect on foraging bats, reptiles and other wildlife.
- 4.1.4 Specialist survey undertaken in spring / summer 2013 indicates that, in addition to foraging and commuting use of the peripheral hedgerows, there is a low level of bat inhabitation of one of the five mature oak and sweet chestnut trees within the application site. This tree, along with three of the other trees, will be lost to the development and this will be a direct impact of some potential negative significance. Due to the European protected status of bats, Natural England will need to be satisfied that the local bat population will not be detrimentally affected by the felling of this tree. It will be necessary for an EPS licence to be obtained to permit the predicted loss of a bat resting place. The Bat Report (Appendix C) sets out detailed recommendations for mitigation in this respect (see 4.2.5 below).
- 4.1.5 The herpetological survey indicates low level presence of grass snakes and slow worms and possible very low presence of adders and common lizard in suitable habitat around the periphery of the site. Whilst the majority of these habitats will be retained as a buffer around the scheme proposals, there will be some impact on habitats currently inhabited by protected species of reptile. This is not considered to be a highly significant impact and in the longer term, it is expected that restoration proposals for the site will include habitats of particular value for reptiles. The Reptile Report (Appendix C) sets out detailed recommendations for mitigation in this respect (see 4.2.3 below).

4.1.6

Similarly, it is expected that the peripheral hedges will be retained and protected by a 8-10m+ buffer zone. This offset zone will effectively accommodate most of the arable margins currently provided around the periphery of the site. These are of some value to wildlife including low level use by reptiles, including grass snakes, common lizards and breeding birds.

4.1.7

During the proposed programme of site clearance there is a potential risk of disturbing ground nesting birds and also breeding hares. Under the Wildlife and Countryside Act, 1981 (as amended), it is illegal to disturb any active bird's nest during the breeding season. It will be necessary for vigilance during the pre-works and works period and to time vegetation clearance, to avoid the bird breeding season (generally late February to August), if necessary.

4.1.8

There will therefore be some minor predicted direct negative impacts as a result of direct land take, although there is also scope for some positive direct impact, in terms of habitat creation, associated with restoration of the mineral workings (see 4.2.10 below).

4.1.9

Indirect impact on the immediate area and also at the wider habitat level can be sub-divided into the short term impacts experienced during the development construction period and any long term effects as a result of ongoing use of the site.

4.1.10

During the period of the site clearance and the subsequent mineral extraction programme there will be some inevitable short term disturbance and potential for adverse impacts on retained habitats within and in close vicinity of the proposed development site. This will be local in extent and may include noise, vibration, light and particulate pollution. The current low level of inhabitation of parts of the site by protected species (including badgers, reptiles and bats) or other notable species, reduces the significance of potential negative indirect impact on these species as a result of scheme implementation.

4.1.11

Potential indirect impacts during the extraction phase on the localised areas of non-sterile habitat within and adjacent to the site include noise, lighting, runoff and aerial pollution and physical disturbance. It is expected in this case it will be possible to minimise the potential indirect effects of construction activities, through adhering to the mitigation measures outline below (see 4.2.2- 4.2.9 below).

4.1.12

Provided that the scheme design incorporates sufficient buffer zones to protect adjacent habitats and that access arrangements are sympathetically located to ensure that vehicular trafficking associated with the mineral extraction programme avoids use of Sacombe Road or the path between Sacombe Road and St John's Wood, there will be no predictable indirect effects on any of the notified sites of nature conservation interest (LoWS) in close vicinity of the application site, either in the long or short term.

- 4.1.13 It will be necessary to ensure that a sufficient buffer (20m is recommended) around the southern and eastern margins of St John's Wood, to minimise the potential for physical disturbance (dust and other aerial contaminants, noise and visual / lighting and human ingress) to the LoWS woodland habitat. This will also minimise the potential for hydrological impacts on the woodland habitat. In this respect the potential impacts of de-watering on the water table will need to be assessed by a hydrologist and it may be necessary to undertake regular monitoring of ground water levels and vegetation condition prior to and during the extraction period and to adopt a programme of mitigation through, for example, artificial recharge.
- 4.1.14 Other peripheral habitats including the hedges around the majority of the application site boundaries and their inhabiting wildlife, will also require to be protected through the installation of a buffer zone of 5-10m (depending on the presence of mature trees and the extent of their root protection area (RPA)).
- 4.1.15 The buffer zones will be subject to an agreed scheme of habitat enhancement, which will include bunding and planting with locally indigenous trees and shrubs, along with additional hedgerow planting. They will be strictly out of bounds during the extraction programme and will be retained post extraction and will contribute to overall biodiversity gain associated with the scheme.
- 4.1.16 It is considered that the scheme proposals offer significant opportunity for achieving positive ecological effects on and around the Ware Park site in the longer term. The proposals have the scope to enhance the existing, generally impoverished nature conservation interests of the area, through the implementation of ecologically sympathetic habitat enhancement measures within the application site both during the extraction process and in the longer term post restoration. These measures are discussed in outline in 4.2 below.

4.2 Mitigation Measures and Ecological Enhancement Measures

- 4.2.1 It is envisaged that through the stipulation of appropriate mitigation measures relating both to the site clearance and subsequent construction period and to the longer term site operation, disturbance will be minimised.

General Mitigation Measures

- 4.2.2 The following general mitigation measures apply to the project:
- the location of BS approved fencing to be agreed prior to commencement of works to protect St John's Wood and its 20m buffer zone, the retained trees and peripheral hedges and other areas of vegetation etc. to be retained, with their associated 5-10m buffer zones (depending on RPA extent).
 - protected areas (within BS approved fencing) to be 'out of bounds' during the demolition and construction phase, for personnel, machinery and for storage of materials, service installation etc., except when these areas are being actively subject to works.

- best practise to be enforced during the site clearance and construction period, in terms of site 'house keeping', control measures, supervision and monitoring, as appropriate. This to include 'safe' siting of potentially hazardous stored materials, such as oil, fuels, cement, chemicals etc.
- daily site routine timed to minimise the need for lighting, this will also restrict noise and vibration disturbance to daylight hours, thus reducing potential disturbance to nocturnal animals and other wildlife.
- works programme designed to minimise disturbance to breeding birds i.e. no clearance of vegetation (including arable crops that may be used by ground nesting birds such as pheasant, partridge and skylark) that is being actively used for bird breeding purposes, during the February to August period.
- if possible (determined by contractual programme and other logistical considerations), areas of proposed new planting in buffer zones around the application site, to commence in advance of the main extraction works programme, to encourage rapid establishment of vegetation and creation of useful new wildlife habitat.
- new areas of planting / habitat to be subject to an initial three year period of intensive establishment management, to aid rapid establishment.
- it is recommended that in the interim prior to onset of development, the peripheral parts of the site and the temporary bunds are kept maintained in a tidy condition to discourage any further colonisation by reptiles or other wildlife.

Reptile Mitigation

4.2.3 Due to the localised presence of low populations of reptiles in peripheral parts of the site to be disturbed by the scheme proposals, it will be necessary to implement a programme of mitigation to ensure that there is no contravention of the legislation regarding protected species. Details of the recommended process of reptile mitigation are set out in the Reptile Report and it is anticipated that the mitigation will consist of habitat manipulation and hand searching during the active season, to be undertaken by a specialist herpetologist, rather than reptile fencing and trapping.

4.2.4 It will also be necessary during the phased extraction process, to ensure that those areas that are not yet being actively worked for minerals are subject to on-going arable production or other management, to prevent colonisation by reptiles. Similarly, the new temporary grass bunds should be regularly cut to prevent the development of habitat suitable for reptiles and also breeding birds.

Bat Mitigation

4.2.5 Due to the presence of a very small common pipistrelle roost in one of the specimen trees within the site to be lost to enable the proposed mineral extraction, it will be necessary to satisfy Natural England that the local bat population will not be detrimentally affected by the scheme proposals. An EPS licence will be required (under 2010 Regulations) for bats in respect of development to permit the felling of a

tree which contains a bat roost. As part of the EPS licence application, Natural England will require a suitable package of mitigation measures to be put in place to ensure that the local bat population will not be detrimentally affected by the development.

4.2.6

Section 5.2 of the Bat Assessment Report (Appendix C) sets out the likely requirements of a Bat Impact Mitigation Scheme, this will aim to provide a net gain in the number of roosting sites available for the bats on a 'like for like' mitigation basis. To this end it is proposed to install 10 no. Schwegler 2F bat boxes in suitable retained mature trees within the peripheral hedgerows. Prior to felling the tree containing a very small bat roost, a process of exclusion of external access points, using thick polythene flap one-way excluders, in association with preliminary examination for bat presence by a licensed bat consultant, will be required. The timing of felling should be Late August – October or April /May, although as in this case, common pipistrelles are present in such extremely small numbers, there may be some flexibility in this respect, as long as Best Practice is followed at all times, with regard to the felling process. In order to ensure compliance, it will also be necessary to instigate a post development bat monitoring scheme.

4.2.7

4.2.8

4.2.9

4.2.10

Due to the absence of other protected or other notable species within the proposed development site there is no need for implementation of any other particular mitigation measures relating to statutorily protected or other notable species of wildlife.

Ecological Enhancement Measures Directly Associated with the Proposed Mineral Extraction Site

4.2.11

It is recommended that specific additional measures for encouraging protected species and other wildlife and to enhance the overall biodiversity value of the area in the longer term are implemented at the Ware Park site. The following 'Key Recommendations' have been put forward to help enhance the ecology of the application site in the long term:

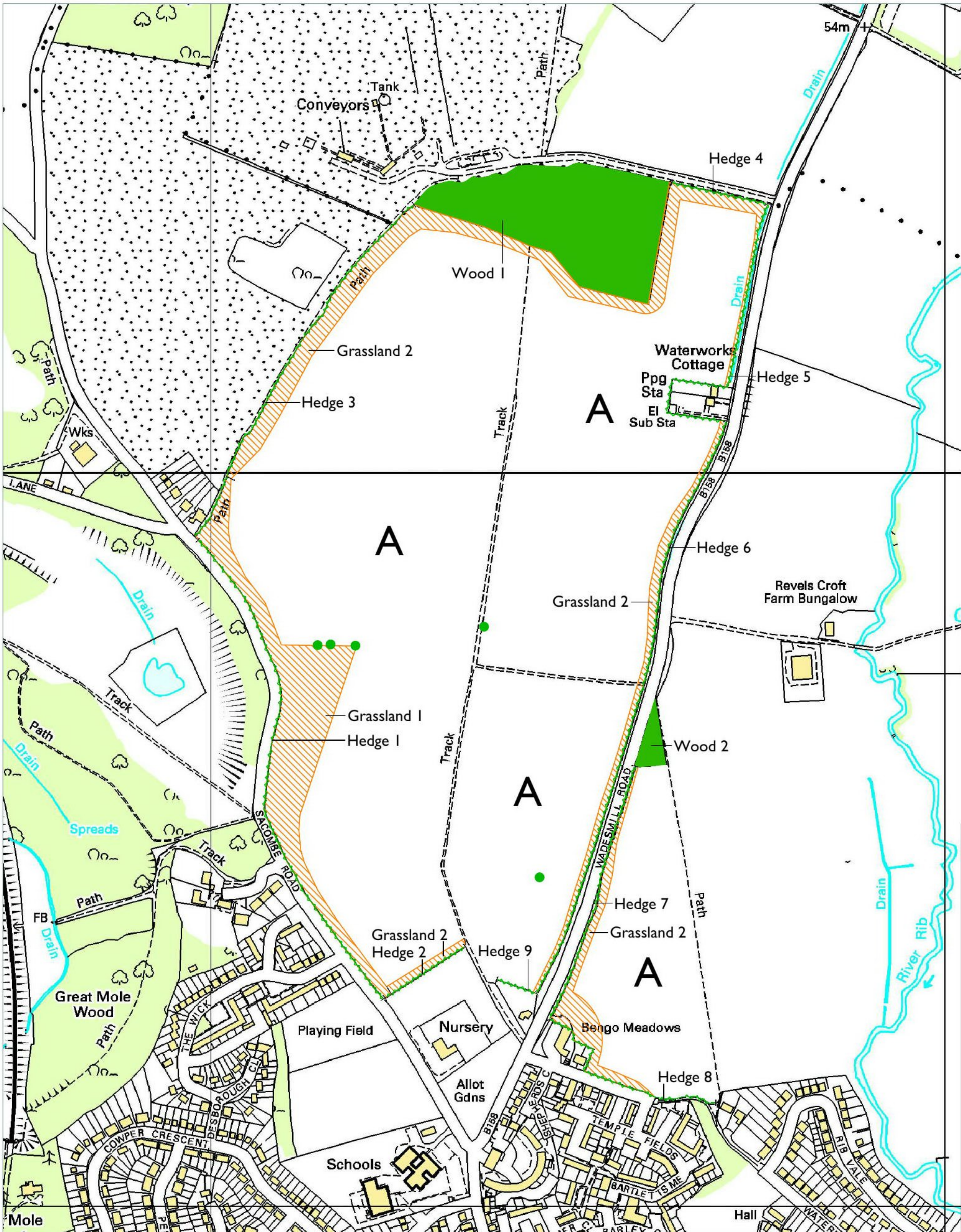
- Habitat creation within and around the mineral extraction area to include substantial tree and shrub planting, particularly on the western and north-western site boundaries, to maximise the use of locally indigenous, native species of trees and shrubs. This will help screen the development and provide an effective buffer to the nearby Waterford Heath (LoWS) Nature Reserve and Rickneys Quarry (LoWS) and it will also create new habitat of value to a range of characteristic species of birds, invertebrates and other wildlife.
- Creation of new wildlife links within the site, including a new hedgerow, with hedgerow oaks, along the existing Public RoW crossing the centre of the site, incorporating the mature oak tree specimen to be retained on the line of the RoW..
- A suitable native wild flower grass mix to be incorporated into the retained and new areas of long-term peripheral grass associated with the scheme as possible (NB. temporary bunds are to be sown with an amenity grass mix and regularly managed as short grass, to prevent colonisation by reptiles, breeding birds etc.).
- Protection of the mature oak tree specimen to be retained within the centre of the site and also those on the site periphery, including their RPA and sympathetic arboricultural management to maximise their lifespan;
- Installation of 10 no Schwegler bat boxes within the retained mature trees (this is part of the EPS mitigation package) along with the installation of bird boxes on suitable retained trees within the peripheral hedgerows.
- On-going protection, restoration and management of peripheral hedges and other existing vegetation to be retained on the margins of the site.
- Effective protection of the established woodland habitat in St John's Wood, through provision of an appropriate buffer zone (of width 20m) to be planted with appropriate locally indigenous trees and shrubs, including oak, hornbeam and

hazel. This will effectively complement and extend the woodland habitat in the long term.

Appendix A

WARE PARK, HERTFORD

PHASE 1 HABITAT ZONATION DRAWING



LEGEND

	Arable
	Grassland / Tall ruderal
	Woodland
	Hedge
	Mature specimen tree



LIZ LAKE ASSOCIATES

Chartered Landscape Architects ■ Urban Designers ■ Landscape Planners

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Title:	Phase I Habitat Zonation Drawing
Project:	Ware Park
Client:	Lawrence Graham Trust Corporation
Date:	September 2013
Scale:	1:5000 @ A3
Drawing No:	1389 A2 01
Rev:	B

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Appendix B

WARE PARK, HERTFORD

DATASEARCH RESULTS



**Hertfordshire
Biological
Records
Centre**

Environment
County Hall
Hertford
Herts SG13 8DN

Tel: 01992 555220

Email: biorec.info@hertsc.gov.uk
or anita.parry@hertfordshire.gov.uk

Website: <http://enquire.hertsc.gov.uk/hbrc/>

KEY INTERNATIONAL, NATIONAL & LOCAL SITE DESIGNATIONS

Statutory designations

RAMSAR

Ramsar sites are designated under the Convention on Wetlands of International Importance especially as Waterfowl Habitat. Wetlands are designated, protected and promoted in order to stem the progressive encroachment on and loss of wetlands, which are broadly defined to include marsh, fen, peatland and water.

There is 1 Ramsar site in Hertfordshire. All designated Ramsar sites are SSSIs.

Special Area of Conservation (SAC)

Special Areas of Conservation are sites designated by Member States under the EC Habitats Directive. The aim is to establish a European network of important high quality conservation sites that will make a significant contribution to conserving habitats and species considered to be most in need of conservation at a European level.

There are 2 SAC sites in Hertfordshire.

Special Protection Area (SPA)

Special Protection Areas are designated under the EC Birds Directive, to conserve the habitat of certain rare or vulnerable birds and regularly occurring migratory birds. Any significant pollution or disturbance to or deterioration of these sites has to be avoided.

There is 1 SPA site in Hertfordshire, All designated SPAs are SSSIs.

National Nature Reserve (NNR)

National Nature Reserves are statutory reserves established for the nation under the Wildlife and Countryside Act, 1981. NNRs may be owned by relevant national body (e.g. Natural England in England) or established by agreement; a few are owned and managed by non-statutory bodies. NNRs cover a selection of the most important sites for nature conservation in the UK. There is 1 NNR in Hertfordshire.

Site of Special Scientific Interest (SSSI)

Sites of Special Scientific Interest are areas notified under the Wildlife and Countryside Act, 1981, as being of 'special interest for nature conservation'. They represent the finest sites for wildlife and natural features in Great Britain supporting many characteristic, rare and endangered species, habitats and natural features. Notification as a SSSI is primarily a legal mechanism organised by Natural England and selected according to specific criteria. The

Guidelines for the Selection of Biological SSSIs, published in 1989 by the Joint Nature Conservancy Council, set down the selection criteria for both biological and geological SSSIs. There are 43 SSSIs in Hertfordshire.

Area of Outstanding Natural Beauty (AONB)

AONBs are nationally important landscapes that are not National Parks, designated by the Countryside Agency to aid their protection and management. An AONB cannot be included in a simplified planning zone and it is not promoted for active recreation such as a National Parks. The AONB in Hertfordshire has an associated body concerned with the area's conservation.

There is 1 AONB (part) in Hertfordshire.

Local Nature Reserve (LNR)

Land owned, leased or managed by Local Authorities and designated under the National Parks and Access to the Countryside Act. A site of some nature conservation value managed for educational objectives - no need for SSSI status. Some reserves are managed by a non-statutory body. Local authorities have the power to pass bylaws controlling (e.g.) access, special protection measures. There are 38 LNRs in Hertfordshire.

Non-statutory Site designations

Local Wildlife Site / Wildlife Sites

Local Wildlife Sites are non-statutory sites designated at a county level as being of conservation importance and often recognised in Local authority development plans. The aim of this identification is to protect such sites from land management changes, which may lessen their nature conservation interest, and to encourage sensitive management to maintain and enhance their importance. Although WS have no statutory protection they need to be considered in the planning process through Planning Policy Guidance like PPG9 which refers to the Town & Country Planning Act 1990 Section 30. This states that nature conservation issues should be included in the surveys of local authority areas to ensure that the plans are based on fully adequate information about local species, habitats, geology and landform. Plans should be concerned not only with designated areas but also with other land of conservation value and the possible provision of new habitats.

At the end of September 2012, there were 1896 Local Wildlife Sites in Hertfordshire.

[N.B. this is an interim figure whilst work continues to assess species Wildlife Sites and it is likely to reduce later this year.]

Regionally Important Geological / Geomorphological Site (RIGS)

Regionally Important Geological/Geomorphological Sites are non-statutory earth science sites. The RIGS networks are locally based voluntary groups drawing on both professional and interest groups identifying sites using a methodical and rational approach. RIGS are analogous to non-statutory biological sites - they are not a second tier but sites of regionally or local importance in their own right. There are 21 RIGS in Hertfordshire.

Ancient woodland

Ancient Woodland is land that has had a continuous woodland cover since at least 1600 AD and has only been cleared for underwood or timber production. It can be placed in two categories:

Ancient Semi-natural Woodland (ASNW) – woodland that retains a native tree and shrub cover that has not been planted, although it may have been managed by coppicing or felling and allowed to regenerate naturally. This covers all stands of ancient woodland which do not obviously originate from planting.

Ancient replanted Woodland (AWS - ancient woodland site or PAWS - plantation on ancient woodland site) – woodland where the original tree cover has been felled and replaced by planting, often with conifers and usually this century.
There are 657 ASNW, AWS and PAWS in Hertfordshire.

Ecology Database Site (EDS) / Ecosites

These sites are considered to be of significance for their wildlife and/or geological features in at least a local context. They are sites with some semi-natural habitat features and/or species interest and are supported by data held in the Hertfordshire Biological Records Centre database. At the end of September 2012, there were 2867 Ecosites in Hertfordshire.

[N.B. this is an interim figure whilst work continues to assess these sites and it will reduce later this year].

HBRC, Oct 2012



**Hertfordshire
Biological
Records
Centre**

Environment
County Hall
Hertford
Herts SG13 8DN

Tel: 01992 555220

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Website: <http://enquire.hertscc.gov.uk/hbrc/>

HERTFORDSHIRE NATURAL HISTORY SPECIALIST GROUPS

AMPHIBIANS AND REPTILES

London, Essex and Herts Amphibians and Reptile Trust (LEHART)

Clive Herbert
67a Ridgeway Avenue, East Barnet, Herts EN4 8TL
Tel: 0208 440 6314

or

5 Roughdown Villas Road, Boxmoor, Hertfordshire, HP3 0AX

Tel: 01442 263893 Fax: 01442 263893

E-Mail: leharttrust@hotmail.com

County Recorder for Amphibians and Reptiles– Dr Jenny Jones Tel: 01992 552407

MAMMALS

Hertfordshire & Middlesex Bat Group

Chairman – Jenny Jones (until April 2013)
23 North Road, Hertford, Herts SG14 1LN
jenny@jonez.info

Bat enquiries should preferably be directed to the web site:
www.hmbg.org.uk

Hertfordshire Bat Helpline: 07517 123200

County Recorder for Mammals - Dr Jenny Jones jenny@jonez.info

BIRDS

Herts Bird Club

County Recorder for Birds – Email:- birdrecorder@hnhs.org.ukk

BUTTERFLIES

Butterfly Conservation – Herts and Middx Branch

Secretary/Branch Contact - Liz Goodyear
7 Chestnut Avenue, Ware, Herts SG12 7JE

Tel:- 01920 487066

Email:- elizabethgoodyear@talk21.com

HERTFORDSHIRE BIOLOGICAL RECORDS CENTRE

SHORT_NAME	DESCRIPTION
Badgers:1992	An Act to consolidate the Badgers Act 1973, the Badgers Act 1991 and the Badgers (Further Protection) Act 1991. Prohibits the wilful injuring, killing or taking of badgers, except as permitted by or under the Act.
BAP:2007	The UK List of Priority Species and Habitats contains 1150 species and 65 habitats that have been listed as priorities for conservation action under the UK Biodiversity Action Plan (UK BAP).
Berne:A1	Special protection (‘appropriate and necessary legislative and administrative measures’) for the plant taxa listed, including prohibition of deliberate picking, collecting, cutting, uprooting and, as appropriate, possession or sale.
Berne:A2	Special protection (‘appropriate and necessary legislative and administrative measures’) for the animal taxa listed, including: All forms of deliberate capture and keeping and deliberate killing; The deliberate damage to or destruction of breeding or r
Berne:A3	Exploitation of listed animal taxa to be subject to regulation, including: Closed seasons and/or other procedures regulating the exploitation; The temporary or local prohibition of exploitation, as appropriate, in order to restore satisfactory populati
Bird:Amber	Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeder
Bird:Red	Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.
BirdsDir:A1	Birds which are the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. As appropriate, Special Protection Areas to be established to assist conservation measures
BoCC2002:Amber	Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeder
BoCC2002:Red	Red list species are classified as ‘high conservation concern’ and include those species that are globally threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historical
Bonn:A1	Endangered migratory species in danger of extinction throughout all or a significant portion of their range, and for which Range States are obliged to prohibit taking and to take protective measures to conserve. (Note that taking may be permitted in some
Bonn:A2	Migratory species having an unfavourable conservation status for which Range States are encouraged to conclude international agreements for their benefit.
ConReg:S2	European protected species of animals (i.e. species listed in Annex IVa of the Habitats Directive).
ConReg:S3	Animals which may not be taken or killed in certain ways (i.e. species listed in Annex Va of the Habitats Directive).
ConReg:S4	European protected species of plants (i.e. species listed in Annex IVb of the Habitats Directive).
ConsRegs:Sch2	Schedule 2: European protected species of animals.
ConsRegs:Sch4	Schedule 4: European protected species of plants.
England NERC S.41	Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to c
HabDir:A2	Species which are endangered, the conservation of which the Community has a particular responsibility in view of the proportion of their natural range which falls within the territory of the Community. They require the designation of special areas of cons
HabDir:A2*	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) whose conservation requires the designation of special areas of conservation. Note that the contents of this annex have been updated in
HabDir:A4	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) in need of strict protection. They are protected from killing, disturbance or the destruction of them or their habitat. Note that the c

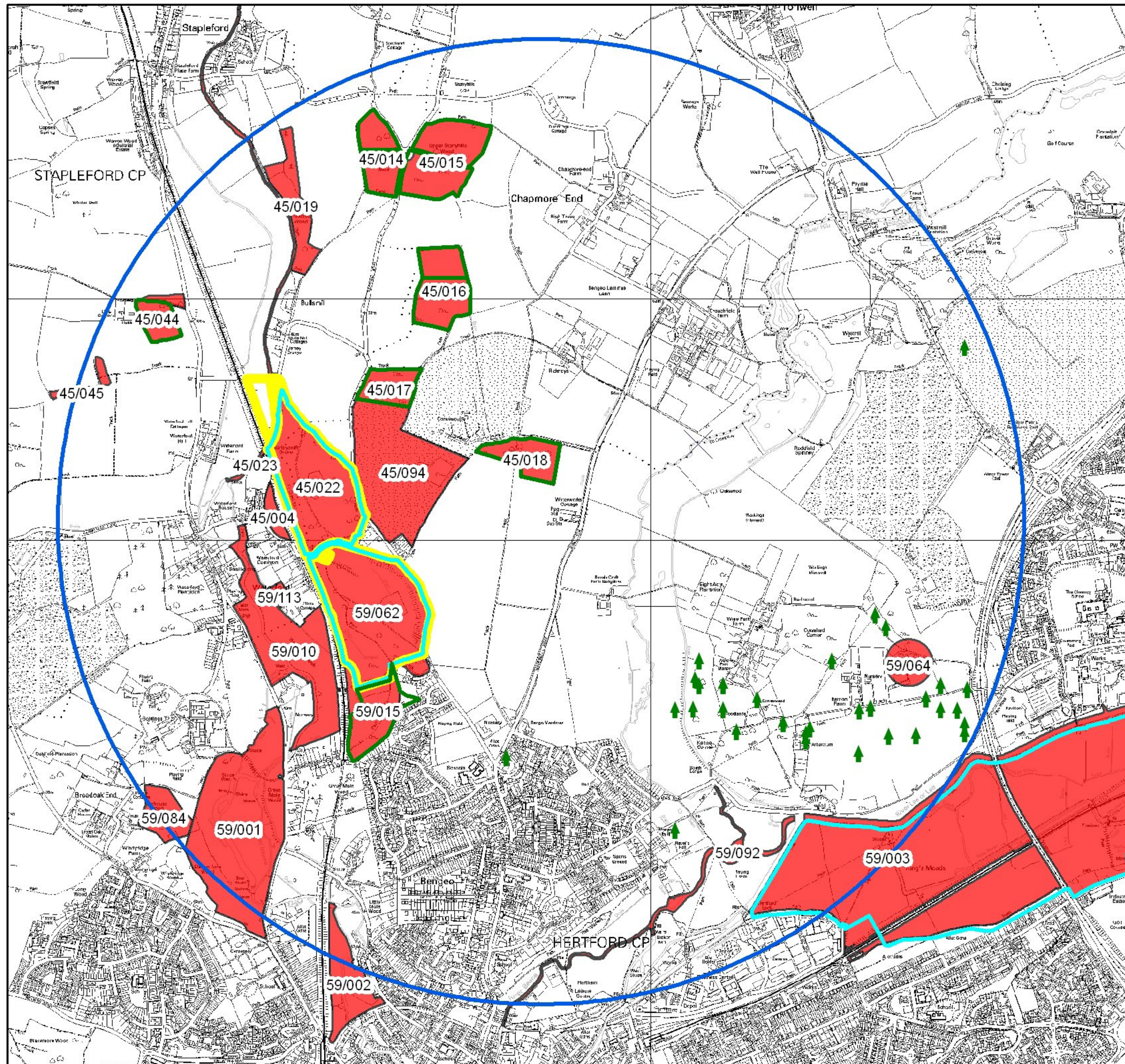
HabDir:A5	Animal and plant species of Community interest whose taking in the wild and exploitation may be subject to management measures.
Herts Extinct	Published status in Flora of Hertfordshire 2010
Herts Extinct as Native	Published status in Flora of Hertfordshire 2010
Herts ExtinctQ	Published status in Flora of Hertfordshire 2010
Herts Rare	Published status in Flora of Hertfordshire 2010
Herts Rare as Native	Published status in Flora of Hertfordshire 2010
Herts Rare/Herts ExtinctQ	Published status in Flora of Hertfordshire 2010
Herts Rare/Herts ExtinctQ as NativeQ	Published status in Flora of Hertfordshire 2010
Herts RareQ	Published status in Flora of Hertfordshire 2010
Herts Vulnerable	Published status in Flora of Hertfordshire 2010
Herts Vulnerable/Herts RareQ	Published status in Flora of Hertfordshire 2010
Herts VulnerableQ	Published status in Flora of Hertfordshire 2010
HertsAWI	Hertfordshire Ancient Woodland Indicator
LBAP	Local BAP species
Notable	Species which are estimated to occur within the range of 16 to 100 10km squares. (subdivision into Notable A and Notable B is not always possible because there may be insufficient information available). Superseded by Nationally Scarce, and therefore no I
Notable:A	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties. Superseded by
Notable:B	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties. Super
Protection of Badgers Act (1992)	The Protection of Badgers Act 1992 protects badgers from taking, injuring, killing, cruel treatment, selling, possessing, marking and having their setts interfered with, subject to exceptions.
RedList_GB_post2001:CR	A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria A to E.
RedList_GB_post2001:DD	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known
RedList_GB_post2001:EN	A taxon is Endangered when it is not Critically endangered but is facing a very high risk of extinction in the wild in the near future.
RedList_GB_post2001:EW	A taxon is Extinct in the wild when it is known to survive only in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed extinct in the wild when exhaustive surveys in known and/or expec
RedList_GB_post2001:EX	Taxa which are no longer known to exist in the wild after repeated searches of their localities and other known likely places. Superseded by new IUCN categories in 1994, but still applicable to lists that have not been reviewed since 1994.
RedList_GB_post2001:NT	Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or V
RedList_GB_post2001:VU	A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future.
RedList_GB_post2003:RE	Category for a taxon when there is no reasonable doubt that the last individual potentially capable of reproduction within the region has died or has disappeared from the wild in the region, or when, if it is a former visiting taxon, the last individual h
RedList_GB_post94:CR	A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria A to E.
RedList_GB_post94:DD	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known

RedList_GB_post94:EN	A taxon is Endangered when it is not Critically endangered but is facing a very high risk of extinction in the wild in the near future.
RedList_GB_post94:EW	A taxon is Extinct in the wild when it is known to survive only in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed extinct in the wild when exhaustive surveys in known and/or expected
RedList_GB_post94:EX	Taxa which are no longer known to exist in the wild after repeated searches of their localities and other known likely places. Superseded by new IUCN categories in 1994, but still applicable to lists that have not been reviewed since 1994.
RedList_GB_post94:NT	Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or V
RedList_GB_post94:VU	A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future.
RedList_Global_post2001:CR	A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V), and it is therefore considered to be facing an extremely high risk of extinction in the wild.
RedList_Global_post2001:EN	A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.
RedList_Global_post2001:VU	A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Section V), and it is therefore considered to be facing a high risk of extinction in the wild.
RedList_Global_post94:CR	A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria A to E.
RedList_Global_post94:EN	Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating. Superseded by new IUCN categories in 1994, but still applicable to lists that have not been reviewed since 1994.
RedList_Global_post94:LR(cd)	Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation programme targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period
RedList_Global_post94:NT	Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or V
RedList_Global_post94:VU	Taxa believed likely to move into the Endangered category in the near future if the causal factors continue operating. Superseded by new IUCN categories in 1994, but still applicable to lists that have not been reviewed since 1994.
RedList_post94:CR	A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria A to E.
RedList_post94:CR(A)	Population reduction in the form of either of the following: 1. An observed, estimated, inferred or suspected reduction of at least 80% over the last 10 years or three generations, whichever is the longer, based on (and specifying) any of the following: □
RedList_post94:CR(B)	Extent of occurrence estimated to be less than 100 km ² or areas of occupancy estimated to be less than 10 km ² , and estimates indicating any two of the following: 1. Severely fragmented or known to exist at only a single location. 2. Continuing decline
RedList_post94:CR(C)	Population estimated to number less than 250 mature individuals and either: 1. An estimated continuing decline of at least 25% within 3 years or one generation, whichever is longer or 2. A continuing decline, observed, projected, or inferred, in numbers
RedList_post94:CR(D)	Population estimated to number less than 50 mature individuals.
RedList_post94:DD	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known
RedList_post94:EN	A taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future, as defined by any of the criteria A to E.

RedList_post94:EN(A)	Population reduction in the form of either of the following: 1. An observed, estimated, inferred or suspected reduction of at least 50% over the last 10 years or three generations, whichever is the longer, based on (and specifying) any of the following:□
RedList_post94:EN(B)	Extent of occurrence estimated to be less than 5,000 km ² or area of occupancy estimated to be less than 500 km ² , and estimates indicating any two of the following: 1. Severely fragmented or known to exist at no more than five locations. 2. Continuing de
RedList_post94:EN(C)	Population estimated to number less than 2,500 mature individuals and either: 1. An estimated continuing decline of at least 20% within 5 years or 2 generations, whichever is longer, or 2. A continuing decline, observed, projected or inferred, in number
RedList_post94:EN(D)	Population estimated to number less than 250 mature individuals.
RedList_post94:EW	A taxon is Extinct in the wild when it is known to survive only in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed extinct in the wild when exhaustive surveys in known and/or expec
RedList_post94:II	Taxa that are common and/or widespread, but considered to be Rare or Threatened in the European Community. These taxa are listed in Annex I of the Birds Directive and/or Appendix II of the Bern Convention and/or Annexes II,III and V of the Habitats Direct
RedList_post94:LR(cd)	Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation programme targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a peri
RedList_post94:LR(lc)	Taxa which do not qualify for Lower Risk (conservation dependent) or Lower Risk (near threatened) or (in Britain) Nationally Scarce.
RedList_post94:LR(ns)	A taxon is Lower Risk when it has been evaluated but does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable. If taxa do not meet the criteria for Near Threatened or Conmservation Dependent sub-categories, b
RedList_post94:LR(nt)	Taxa which do not qualify for Lower Risk (conservation dependent), but which are close to qualifying for Vulnerable. In Britain, this category includes species which occur in 15 or fewer hectads but do not qualify as Critically Endangered, Endangered or V
RedList_post94:V	A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future, as defined by any of the criteria A to E.
RedList_post94:V(A)	Population reduction in the form of either of the following: 1. An observed, estimated, inferred or suspected reduction of at least 20% over the last 10 years or three generations, whichever is the longer, based on (and specifying) any of the following:□
RedList_post94:V(B)	Extent of occurrence estimated to be less than 20,000 km ² or area of occupancy estimated to be less than 2000 km ² , and estimates indicating any two of the following: 1. Severely fragmented or known to exist at no more than ten locations. 2. Continuing d
RedList_post94:V(C)	Population estimated to number less than 10,000 mature individuals and either: 1. An estimated continuing decline of at least 10% within 10 years or 3 generations, whichever is longer, or 2. A continuing decline, observed, projected, or inferred, in num
RedList_post94:V(D)	Population very small or restricted in the form of either of the following: 1. Population estimated to number less than 1,000 mature individuals 2. Population is characterised by an acute restriction in its area of occupancy (typically less than 100 km ²
Status:NR	Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
Status:NR (excl RedListed)	Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
Status:NR (incl RedListed)	Occurring in 15 or fewer hectads in Great Britain (includes all red listed species under IUCN criteria
Status:NS	Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
WACA:Sch1_part1	Birds which are protected by special penalties at all times.

WACA:Sch1_part2	Birds which are protected by special penalties during the close season.
WACA:Sch5_sect9.1(kill/injuring)	Section 9.1. Animals which are protected from intentional killing or injuring.
WACA:Sch5_sect9.1(taking)	Section 9.1 Animals which are protected from taking.
WACA:Sch5_sect9.2	Section 9.2 Animals which are protected from being possessed or controlled (live or dead).
WACA:Sch5_sect9.4a	Section 9.4 Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.
WACA:Sch5_sect9.4b	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
WACA:Sch5Sect9.4c	Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WACA:Sch8	Plants which are protected from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) f

HERTFORDSHIRE STATUTORY & NON-STATUTORY SITES and VETERAN / MATURE TREE RECORDS



-  2km search area
-  Veteran & mature tree
-  Ancient Woodland Inventory site
-  HMWT reserve
-  Local Nature Reserve
-  Wildlife Site



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HERTFORDSHIRE
BIOLOGICAL
RECORDS
CENTRE

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Herts and Middlesex Wildlife Trust reserve

NAME	SITeref	AREA (ha)
Kings Meads / The Meads	59/003	100.30
Waterford Heath (North)	45/022+	32.88

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Lesser Spotted Woodpecker	Dendrocopos minor	bird			Stapleford - near Patchendon Farm	23/09/2010	TL3117	None	1 Exact; Nesting habitat	HBRC Bird Records	LC0000140000PMCH					BRed		Berne2	
Little Egret	Egretta garzetta	bird		TL31C	Waterford	03/03/2003	TL313148	None	2 Exact	Herts Bird Club	LC0000140000QYHY					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird		TL31C	Waterford	07/03/2003	TL313148	None	1 Exact	Herts Bird Club	LC0000140000QQMK					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird			Hertford, Goldings	16/03/2009	TL318136	None	1 Exact	HBRC Bird Records	LC0000140000PNRT					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird			Hertford, Goldings	26/03/2009	TL318136	None	1 Exact	HBRC Bird Records	LC0000140000PNSA					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird			Hertford, Goldings; River Beane	29/07/2009	TL313137	None	1 Exact	HBRC Bird Records	LC0000140000PNRZ					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	Hertford, River Beane, Goldings	01/11/2009	TL314142	None	1 Exact	HBRC Bird Records	LC0000140000PNY6					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	Hertford, River Beane, Goldings	23/11/2009	TL314142	None	1 Exact	HBRC Bird Records	LC0000140000PNVA					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird			Waterford	26/07/2011	TL3113	None	1 Exact	HBRC Bird Records	LC0000140000QPHF					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	River Beane, Goldings; north of Hertford	14/02/2011	TL3113	None	1 Exact	HBRC Bird Records	LC0000140000QPHD					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	Hertford, Goldings	08/12/2011	TL3113	None	1 Exact	HBRC Bird Records	LC0000140000QPHC					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	Goldings, north of Hertford	16/11/2011	TL3113	None	1 Exact	HBRC Bird Records	LC0000140000QPH9					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	Goldings, north of Hertford	12/10/2011	TL3113	None	3 Exact	HBRC Bird Records	LC0000140000QPH8					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	Goldings, north of Hertford	09/03/2011	TL3113	None	1 Exact	HBRC Bird Records	LC0000140000QPHB					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	Goldings, north of Hertford	03/05/2011	TL3113	None	1 Exact	HBRC Bird Records	LC0000140000QPHA					BAmb		BD1, Berne2	
Little Egret	Egretta garzetta	bird	59/001	Goldings Meadows & Woods	River Beane, Goldings; north of Hertford	13/01/2011	TL3113	None	1 Exact	HBRC Bird Records	LC0000140000QPHE					BAmb		BD1, Berne2	
Corn Bunting	Emberiza calandra	bird			Stapleford - surrounding farmland	09/06/2008	TL318165	None	1 Male Exact	HBRC Bird Records	LC0000140000PNCZ					BRed			
Yellowhammer	Emberiza citrinella	bird			Stoney Hills Road	19/06/2010	TL3217	None	2 Exact; Singing male	HBRC Bird Records	LC0000140000PMDK			Sect.41	BAP:2007	BRed		Berne2	
European Robin	Erithacus rubecula	bird			Stoney Hills Road	19/06/2010	TL3217	None	2 Exact; Nesting habitat	HBRC Bird Records	LC0000140000PMDD							Berne2	
Eurasian Hobby	Falco subbuteo	bird	45/094	Rickneys Quarry	Rickney's Quarry	11/06/2008	TL324157	None	1 Exact	HBRC Bird Records	LC0000140000PN92		WCA1i					Berne2, Bonn2	
Eurasian Hobby	Falco subbuteo	bird			Waterford	12/07/2010	TL3115	None	1 Exact; Flying over	HBRC Bird Records	LC0000140000PM8E		WCA1i					Berne2, Bonn2	
Common Kestrel	Falco tinnunculus	bird			Waterford	03/03/2008	TL312155	None	1 Exact	HBRC Bird Records	LC0000140000PNBI					BAmb		Berne2, Bonn2	
Common Kestrel	Falco tinnunculus	bird			Stoney Hills Road	19/06/2010	TL3217	None	1 Male Exact; Nesting habitat	HBRC Bird Records	LC0000140000PMDH					BAmb		Berne2, Bonn2	
Common Snipe	Gallinago gallinago	bird	59/003	King's Meads	Kings Mead, Hertford	02/01/2004	TL332137	None	1 Exact	HBRC Bird Records	LC0000140000PMRT					BAmb		Bonn2	
Barn Swallow	Hirundo rustica	bird			Stoney Hills Road	19/06/2010	TL3217	None	1 Exact; Nesting habitat	HBRC Bird Records	LC0000140000PMD6					BAmb		Berne2	
Herring Gull	Larus argentatus	bird		TL31M	Westmill Quarry, Ware	30/09/2003	TL341155	None	25 Exact	Herts Bird Club	LC0000140000QQF3					BAmb, BRed			
Herring Gull	Larus argentatus	bird		TL31M	Westmill Quarry, Ware	27/01/2003	TL341155	None	300 Exact	Herts Bird Club	LC0000140000QQEI					BAmb, BRed			
Herring Gull	Larus argentatus	bird		TL31M	Westmill Quarry, Ware	24/12/2003	TL341155	None	370 Exact	Herts Bird Club	LC0000140000QQFB					BAmb, BRed			
Herring Gull	Larus argentatus	bird		TL31M	Westmill Quarry, Ware	01/12/2003	TL341155	None	70 Exact	Herts Bird Club	LC0000140000QQFJ					BAmb, BRed			
Herring Gull	Larus argentatus	bird	45/001	Westmill Quarry	Westmill Quarry, Ware	07/11/2002	TL341155	None	30 Exact	Herts Bird Club	LC0000140000Q4CZ					BAmb, BRed			
Mew Gull	Larus canus	bird		TL31M	Westmill Quarry, Ware	24/12/2003	TL341155	None	400 Exact	Herts Bird Club	LC0000140000QQF9					BAmb			
Mew Gull	Larus canus	bird		TL31M	Westmill Quarry, Ware	30/09/2003	TL341155	None	4 Exact	Herts Bird Club	LC0000140000QQF1					BAmb			
Lesser Black-backed Gull	Larus fuscus	bird	45/001	Westmill Quarry	Westmill Quarry, Ware	04/11/2002	TL341155	None	300 Exact	Herts Bird Club	LC0000140000Q4D2					BAmb			
Lesser Black-backed Gull	Larus fuscus	bird		TL31M	Westmill Quarry, Ware	01/12/2003	TL341155	None	300 Exact	Herts Bird Club	LC0000140000QQFK					BAmb			
Lesser Black-backed Gull	Larus fuscus	bird		TL31M	Westmill Quarry, Ware	17/10/2003	TL341155	None	500 Exact	Herts Bird Club	LC0000140000QQET					BAmb			
Lesser Black-backed Gull	Larus fuscus	bird		TL31M	Westmill Quarry, Ware	24/12/2003	TL341155	None	131 Exact	Herts Bird Club	LC0000140000QQFC					BAmb			
Lesser Black-backed Gull	Larus fuscus	bird		TL31M	Westmill Quarry, Ware	27/01/2003	TL341155	None	90 Exact	Herts Bird Club	LC0000140000QQEJ					BAmb			
Lesser Black-backed Gull	Larus fuscus	bird		TL31M	Westmill Quarry, Ware	30/09/2003	TL341155	None	500 Exact	Herts Bird Club	LC0000140000QQF4					BAmb			
Great Black-backed Gull	Larus marinus	bird	45/001	Westmill Quarry	Westmill Quarry, Ware	07/11/2002	TL341155	None	6 Exact	Herts Bird Club	LC0000140000Q4CY					BAmb			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Great Black-backed Gull	Larus marinus	bird		TL31M	Westmill Quarry, Ware	31/12/2003	TL341155	None	166 Exact	Herts Bird Club	LC0000140000QQC5					BAmb			
Great Black-backed Gull	Larus marinus	bird		TL31M	Westmill Quarry, Ware	30/09/2003	TL341155	None	1 Exact	Herts Bird Club	LC0000140000QQF2					BAmb			
Great Black-backed Gull	Larus marinus	bird		TL31M	Westmill Quarry, Ware	27/01/2003	TL341155	None	70 Exact	Herts Bird Club	LC0000140000QQEH					BAmb			
Great Black-backed Gull	Larus marinus	bird		TL31M	Westmill Quarry, Ware	24/12/2003	TL341155	None	88 Exact	Herts Bird Club	LC0000140000QQFA					BAmb			
Great Black-backed Gull	Larus marinus	bird		TL31M	Westmill Quarry, Ware	17/10/2003	TL341155	None	2 Exact	Herts Bird Club	LC0000140000QQES					BAmb			
Great Black-backed Gull	Larus marinus	bird		TL31M	Westmill Quarry, Ware	01/12/2003	TL341155	None	4 Exact	Herts Bird Club	LC0000140000QQFI					BAmb			
Yellow-legged Gull	Larus michahellis	bird		TL31M	Westmill Quarry, Ware	31/12/2003	TL341155	None	3 Exact	Herts Bird Club	LC0000140000QQC7					BAmb			
Yellow-legged Gull	Larus michahellis	bird		TL31M	Westmill Quarry, Ware	30/09/2003	TL341155	None	4 Exact	Herts Bird Club	LC0000140000QQF5					BAmb			
Yellow-legged Gull	Larus michahellis	bird		TL31M	Westmill Quarry, Ware	24/12/2003	TL341155	None	1 Exact	Herts Bird Club	LC0000140000QQFD					BAmb			
Yellow-legged Gull	Larus michahellis	bird		TL31M	Westmill Quarry, Ware	17/10/2003	TL341155	None	3 Exact	Herts Bird Club	LC0000140000QQEU					BAmb			
Yellow-legged Gull	Larus michahellis	bird		TL31M	Westmill Quarry, Ware	01/12/2003	TL341155	None	1 Exact	Herts Bird Club	LC0000140000QQFL					BAmb			
Yellow-legged Gull	Larus michahellis	bird		TL31M	Westmill Quarry, Ware	01/12/2003	TL341155	None	1 Exact	Herts Bird Club	LC0000140000QQFM					BAmb			
Yellow-legged Gull	Larus michahellis	bird	45/001	Westmill Quarry	Westmill Quarry, Ware	07/11/2002	TL341155	None	2 Exact	Herts Bird Club	LC0000140000Q4D0					BAmb			
Black-headed Gull	Larus ridibundus	bird		TL31M	Westmill Quarry, Ware	30/09/2003	TL341155	None	300 Exact	Herts Bird Club	LC0000140000QQF0					BAmb			
Common Grasshopper Warbler	Locustella naevia	bird	59/003	King's Meads	King's Meads nr Hertford	13/07/2010	TL3414	None	1 Exact; Permanent territory	HBRC Bird Records	LC0000140000PMH4			Sect.41	BAP:2007	BRed			
Red Kite	Milvus milvus	bird		TL31G	Bengeo, Hertford	31/05/2003	TL320135	None	1 Exact	Herts Bird Club	LC0000140000QTON		WCA1i			BAmb		BD1, Bonn2	
Pied Wagtail	Motacilla alba	bird		TL31N	Westmill, Ware.	13/04/2003	TL340160	None	1 Exact	Herts Bird Club	LC0000140000QYJT					BRed		Berne2	
Pied Wagtail	Motacilla alba	bird			Stoney Hills Road	19/06/2010	TL3217	None	2 Exact; Nesting habitat	HBRC Bird Records	LC0000140000PMD8					BRed		Berne2	
Grey Wagtail	Motacilla cinerea	bird			Dicker Mill weir, Hertford	18/09/2002	TL331134	None	1 Exact	HBRC Bird Records	LC0000140000PMZP					BRed		Berne2	
Yellow Wagtail	Motacilla flava	bird		TL31M	Westmill Quarry, Ware	20/09/2003	TL341155	None	1 Exact	Herts Bird Club	LC0000140000QY4K					BRed		Berne2	
Yellow Wagtail	Motacilla flava	bird			Stoney Hills Road	19/06/2010	TL3217	None	1 Exact; Nesting habitat	HBRC Bird Records	LC0000140000PMDG					BRed		Berne2	
House Sparrow	Passer domesticus	bird			Stoney Hills Road	19/06/2010	TL3217	None	3 Exact; Nesting habitat	HBRC Bird Records	LC0000140000PMDB			Sect.41	BAP:2007	BRed			
House Sparrow	Passer domesticus	bird			Stoney Hills Road	19/06/2010	TL3217	None	10 Exact; Courtship and displa	HBRC Bird Records	LC0000140000PMD4			Sect.41	BAP:2007	BRed			
Willow Warbler	Phylloscopus trochilus	bird		TL31C	Waterford	18/04/2003	TL313148	None	7 Exact	Herts Bird Club	LC0000140000R1XH					BRed		Berne2	
Green Woodpecker	Picus viridis	bird	45/094	Rickneys Quarry	Rickney's Quarry	11/06/2008	TL324157	None	2 Exact	HBRC Bird Records	LC0000140000PN94					BRed		Berne2	
Hedge Accentor	Prunella modularis	bird			Stoney Hills Road	19/06/2010	TL3217	None	1 Exact; Singing male	HBRC Bird Records	LC0000140000PMDL					BRed		Berne2	
Water Rail	Rallus aquaticus	bird			River Beane, Hertford	30/12/2003	TL327133	None	1 Exact	HBRC Bird Records	LC0000140000PMTL					BRed		Berne2	
Water Rail	Rallus aquaticus	bird			Hartham Park, Hertford	21/02/2004	TL325131	None	1 Exact	HBRC Bird Records	LC0000140000PMTM					BRed		Berne2	
Water Rail	Rallus aquaticus	bird	59/003	King's Meads	Kings Mead, Hertford	09/01/2004	TL336138	None	1 Exact	HBRC Bird Records	LC0000140000PMQZ					BRed		Berne2	
Tawny Owl	Strix aluco	bird		TL31H	B158 north of Bengeo	24/09/2009	TL325145	dead on road		HBRC - Miscellaneous records	LC0000140000QIHW					BRed		Berne2	
Common Whitethroat	Sylvia communis	bird	45/094	Rickneys Quarry	Rickney's Quarry	11/06/2008	TL324157	None	2 Exact	HBRC Bird Records	LC0000140000PN93					BRed		Berne2	
Common Whitethroat	Sylvia communis	bird			Stoney Hills Road	19/06/2010	TL3217	None	3 Exact; Singing male	HBRC Bird Records	LC0000140000PMD0					BRed		Berne2	
Redwing	Turdus iliacus	bird			Rickney's Quarry nr Hertford	04/11/2010	TL3215	None	2 Exact; Migrant	HBRC Bird Records	LC0000140000PM98		WCA1i			BRed		Berne2	
Bullhead	Cottus gobio	bony fish (Actinopterygii)			River Bean, Waterford	23/05/2010	TL311150	None	2 Exact	HBRC - Miscellaneous records	LC0000140000RHCU	HSD2p				BRed		Berne2	
Freshwater Crayfish	Austropotamobius pallipes	crustacean	59/003	King's Meads	River Lea, Hartham	14/01/1980	TL330134	None	1 present Default	Recorder 3 Freshwater Crayfish records	LC0000140000D6A	HSD2p, HSD5		Sect.41	BAP:2007, LBAP	BRed		Berne2	
Freshwater Crayfish	Austropotamobius pallipes	crustacean	59/003	King's Meads	River Lea	23/07/1975	TL338138	None	1 present Default	Recorder 3 Freshwater Crayfish records	LC00001400000AXT	HSD2p, HSD5		Sect.41	BAP:2007, LBAP	BRed		Berne2	
Freshwater Crayfish	Austropotamobius pallipes	crustacean		TL31N	River Rib, Westmill Trout Farm	1981	TL34051625	None	1 present Default	Recorder 3 Freshwater Crayfish records	LC00001400000DU7	HSD2p, HSD5		Sect.41	BAP:2007, LBAP	BRed		Berne2	
Freshwater Crayfish	Austropotamobius pallipes	crustacean		TL31G	River Lee, Hertford Lock	1981	TL33251335	None	1 present Default	Recorder 3 Freshwater Crayfish records	LC00001400000DTV	HSD2p, HSD5		Sect.41	BAP:2007, LBAP	BRed		Berne2	

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31I		River Rib, Paynes Hall	1981	TL33851645	None	1 present Default	Recorder 3 Freshwater	LC00001400000DU2	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31H		River Rib, Wadesmill	1981	TL33551575	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DU0	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31H		River Rib, Herts Training School	1977	TL33051535	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000BHT	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31H		River Rib, Bengoe, Ware Park	1981	TL33351405	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DTZ	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31H		River Rib below Westmill Farm	25/07/1977	TL330153	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000BTN	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		River Lee, Revel s Footbridge	1981	TL33351365	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DTW	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31L		New River, Ware	1981	TL34051385	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DU4	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		River Lee nr Revel s Hall A10 bridge	1981	TL33851385	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DTY	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		River Lee confluence River Beane	1981	TL33051345	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DTT	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		River Rib, Bengoe, Ware Park	1981	TL33151395	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DTU	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31I		River Rib, Wadesmill	1981	TL33551605	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DU1	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		Dickermill stream, Hertford Lock	1972	TL33251335	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000A66	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		Dickermill Stream, River Lee	1981	TL33451345	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DTX	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31C		River Beane, Hertford	1978	TL31651425	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000C2G	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		Dickermill stream, Hertford Lock	1971	TL33251335	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC000014000006M0	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		Dickermill stream, Hertford Lock	1969	TL33251335	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000C8D	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		Dickermill stream, Hertford Lock	1968	TL33251335	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC0000140000034Z	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31D		River Beane, Stapleford	1981	TL31551655	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DTO	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31C		River Beane, Waterford	1978	TL31251515	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000C2F	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31C		River Beane, Horseshoe Weir	1981	TL31551425	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000DTN	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31G		Dickermill Stream, Hertford Lock	1976	TL33251335	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000B26	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Freshwater Crayfish	<i>Austropotamobius pallipes</i>	crustacean	TL31C		River Beane, Waterford	1973	TL31151515	None	1 present Default	Crayfish records Recorder 3 Freshwater	LC00001400000A8U	HSD2p, HSD5		Sect.41	BAP:2007, LBAP				
Stinking Chamomile	<i>Anthemis cotula</i>	flowering plant	TL31N		Wadesmill	1990	TL31N	field record		R3 Hertfordshire Flora Survey Records 1986- 2005	LC000047000030RM					RLGB.VU			
Hound's-tongue	<i>Cynoglossum officinale</i>	flowering plant	TL31N		Westmill Gravel Pit: by track	Jun-92	TL3416	field record		R3 Hertfordshire Flora Survey Records 1986- 2005	LC000047000034E1					RLGB.Lr(NT)			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Green-flowered Helleborine	<i>Epipactis phyllanthes</i>	flowering plant		TL31C	Waterford Gravel Pit (south)	07/07/1995	TL318144	field record	7 present Default	R3 Hertfordshire Flora Survey Records 1986-2005	LC000047000009H						NS		
Green-flowered Helleborine	<i>Epipactis phyllanthes</i>	flowering plant		TL31C	Waterford Gravel Pit (south)	1998	TL318144	voucher specimen	1 present Default	R3 Hertfordshire Flora Survey Records 1986-2005	LC000047000003VM						NS		
Common Cudweed	<i>Filago vulgaris</i>	flowering plant		TL31C	Waterford Gravel Pit (north)	16/06/2005	TL316152	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700003D55						RLGB.Lr(NT)		
Snowdrop	<i>Galanthus nivalis</i>	flowering plant		TL31N	Thundridge/Wadesmill area	1987 - 1999	TL31N	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001L18	HSD5							
Snowdrop	<i>Galanthus nivalis</i>	flowering plant		TL31M	Ware area	1987 - 1999	TL31M	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001L85	HSD5							
Snowdrop	<i>Galanthus nivalis</i>	flowering plant		TL31L	Hertford-Ware area	1987 - 1999	TL31L	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001KYF	HSD5							
Snowdrop	<i>Galanthus nivalis</i>	flowering plant		TL31I	Chapmore End/Tonwell area	1987 - 1999	TL31I	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001KFR	HSD5							
Snowdrop	<i>Galanthus nivalis</i>	flowering plant		TL31H	Ware Park area (west)	1987 - 1999	TL31H	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001K3N	HSD5							
Snowdrop	<i>Galanthus nivalis</i>	flowering plant		TL31C	Waterford	1987 - 1999	TL31C	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001IZP	HSD5							
Long-stalked Crane's-bill	<i>Geranium columbinum</i>	flowering plant		TL31C	By Waterford Marsh: rough grassland	28/07/1988	TL316146	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700002Y06								HV/H RQ
Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant		TL31D	Stapleford area	1987 - 1999	TL31D	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001J6V		WCA8						
Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant		TL31C	Waterford	1987 - 1999	TL31C	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001J00		WCA8						
Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant		TL31B	Hertford (west)	1987 - 1999	TL31B	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001IV1		WCA8						
Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant		TL31G	Hertford	1987 - 1999	TL31G	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001JY7		WCA8						
Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant		TL31M	Ware area	1987 - 1999	TL31M	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001L7U		WCA8						
Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant		TL31N	Thundridge/Wadesmill area	1987 - 1999	TL31N	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001LH1		WCA8						
Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant		TL31L	Hertford-Ware area	1987 - 1999	TL31L	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001L3B		WCA8						
Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant		TL31I	Chapmore End/Tonwell area	1987 - 1999	TL31I	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001KH0		WCA8						

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Lime	<i>Tilia platyphyllos</i> x <i>cordata</i> = <i>T. x europaea</i>	flowering plant		TL31N	Thundridge/Wadesmill area	1987 - 1999	TL31N	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001LIS						NS		
Lime	<i>Tilia platyphyllos</i> x <i>cordata</i> = <i>T. x europaea</i>	flowering plant		TL31G	Hertford	1987 - 1999	TL31G	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001JY2								NS
Lime	<i>Tilia platyphyllos</i> x <i>cordata</i> = <i>T. x europaea</i>	flowering plant		TL31D	Stapleford area	1987 - 1999	TL31D	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001J7N								NS
Lime	<i>Tilia platyphyllos</i> x <i>cordata</i> = <i>T. x europaea</i>	flowering plant		TL31C	Waterford	1987 - 1999	TL31C	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001IXE								NS
Lime	<i>Tilia platyphyllos</i> x <i>cordata</i> = <i>T. x europaea</i>	flowering plant		TL31L	Hertford-Ware area	1987 - 1999	TL31L	field record		R3 Hertfordshire Flora Survey Records 1986-2005	LC00004700001L05								NS
Stag Beetle	<i>Lucanus cervus</i>	insect - beetle (Coleoptera)			Hertford area	02/07/1948	TL31	None	1 present Default	Recorder 3 Stag Beetle records	LC000014000002JQ	HSD2p		Sect.41	BAP:2007, LBAP		Nb		
Stag Beetle	<i>Lucanus cervus</i>	insect - beetle (Coleoptera)		TL31G	Bengeo, Palmer Road	24/07/1997	TL31G	field record	1 male Default	Stag Beetle Survey	LC0000140000062P	HSD2p		Sect.41	BAP:2007, LBAP		Nb		
Stag Beetle	<i>Lucanus cervus</i>	insect - beetle (Coleoptera)		TL31L	Presdales School	29/07/1997	TL31L	field record	1 male Default	Stag Beetle Survey	LC00001400000630	HSD2p		Sect.41	BAP:2007, LBAP		Nb		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	21/06/2009	TL317149	None	2 Exact	Herts Butterflies	LC00001400000OSDB			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	15/07/2009	TL317149	None	1 Exact	Herts Butterflies	LC00001400000OSDF			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	16/06/2010	TL317149	None	1 Exact	Herts Butterflies	LC00001400000Q9MA			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	16/08/2008	TL317149	None	2 Exact	Herts Butterflies	LC00001400000OSD0			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	16/08/2009	TL317149	None	2 Exact	Herts Butterflies	LC00001400000OSDI			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	18/07/2010	TL317149	None	1 Exact	Herts Butterflies	LC00001400000QAST			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	19/05/2009	TL317149	None	1 Exact	Herts Butterflies	LC00001400000OSD8			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	19/08/2009	TL317149	None	1 Exact	Herts Butterflies	LC00001400000OSDJ			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	20/09/2008	TL317149	None	4 Exact	Herts Butterflies	LC00001400000OSD5			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	13/05/2008	TL317149	None	1 Exact	Herts Butterflies	LC00001400000OG95			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	22/05/2010	TL317149	None	1 Exact	Herts Butterflies	LC00001400000Q5IH			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	22/08/2008	TL317149	None	2 Exact	Herts Butterflies	LC00001400000OSD1			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	22/08/2010	TL317149	None	3 Exact	Herts Butterflies	LC00001400000QC8J			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	23/06/2010	TL317149	None	6 Exact	Herts Butterflies	LC00001400000Q9QS			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	24/06/2009	TL317149	None	1 Exact	Herts Butterflies	LC00001400000OSDC			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	25/06/2008	TL317149	None	6 Exact	Herts Butterflies	LC00001400000OSCV			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	26/06/1999	TL317146	None	1 Exact	Herts Butterflies	LC00001400000OG90			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	20/06/2008	TL317149	None	2 Exact	Herts Butterflies	LC00001400000OG98			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	06/09/2009	TL317149	None	1 Exact	Herts Butterflies	LC00001400000OSDK			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	03/07/2010	TL317149	None	2 Exact	Herts Butterflies	LC00001400000Q7FP			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	03/09/1999	TL317146	None	4 Exact	Herts Butterflies	LC00001400000OG94			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	03/09/2008	TL317149	None	1 Exact	Herts Butterflies	LC00001400000OSD3			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	03/09/2010	TL317149	None	2 Exact	Herts Butterflies	LC00001400000QCH1			Sect.41	BAP:2007		RLGB.Lr(NT)		
Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	04/07/2009	TL317149	None	2 Exact	Herts Butterflies	LC00001400000OSDD			Sect.41	BAP:2007		RLGB.Lr(NT)		

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Small Heath	Coenonympha pamphilus	insect - butterfly	59/003	King's Meads	Kings Mead Ware	06/07/1996	TL341139	None	1 Exact	Herts Butterflies	LC0000140000O72V			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/003	King's Meads	Kings Mead Ware	18/06/1996	TL341139	None	1 Exact	Herts Butterflies	LC0000140000O72U			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/003	King's Meads	The Meads Hertford Nr Hertford Lock	25/05/1997	TL335135	None	1 Exact	Herts Butterflies	LC0000140000ORYX			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/010	Waterford Marsh		22/06/2008	TL315145	None	1 Exact	Herts Butterflies	LC0000140000OSDO			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	02/08/2009	TL317149	None	1 Exact	Herts Butterflies	LC0000140000OSDG			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S	14/05/1999	TL318148	None	1 Exact	Herts Butterflies	LC0000140000OG88			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	26/05/2010	TL319146	None	1 Exact	Herts Butterflies	LC0000140000Q5K9			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	S Pit Waterford Heath	08/06/1997	TL318148	None	5 Exact	Herts Butterflies	LC0000140000OG8O			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	16/07/2006	TL319145	None	1 Exact	Herts Butterflies	LC0000140000OG8R			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	18/08/2010	TL319146	None	1 Exact	Herts Butterflies	LC0000140000QC5A			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	20/05/2007	TL319145	None	2 Exact	Herts Butterflies	LC0000140000OG8S			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	22/06/2010	TL319146	None	1 Exact	Herts Butterflies	LC0000140000Q5OJ			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	23/05/1997	TL318148	None	1 Exact	Herts Butterflies	LC0000140000OG8N			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	16/06/2010	TL319146	None	2 Exact	Herts Butterflies	LC0000140000Q9MJ			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	25/08/2010	TL319146	None	1 Exact	Herts Butterflies	LC0000140000QC9U			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	13/06/2010	TL319146	None	2 Exact	Herts Butterflies	LC0000140000Q9LK			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	28/06/2009	TL317148	None	1 Exact	Herts Butterflies	LC0000140000OG8M			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	31/07/2004	TL319147	None	1 Exact	Herts Butterflies	LC0000140000OG8T			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	31/07/2004	TL319147	None	1 Exact	Herts Butterflies	LC0000140000OG8U			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath south pit Sacombe Rd escarpment (TL14 tetrad	07/09/2010	TL320146	None	1 Exact	Herts Butterflies	LC0000140000QCIX			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	01/07/2008	TL317149	None	4 Exact	Herts Butterflies	LC0000140000OSCW			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	23/05/2010	TL319146	None	1 Exact	Herts Butterflies	LC0000140000Q75Z			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	05/08/2009	TL317149	None	4 Exact	Herts Butterflies	LC0000140000OSDH			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S	22/05/1999	TL318145	None	1 Exact	Herts Butterflies	LC0000140000OG87			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	03/06/2000	TL318147	None	2 Exact	Herts Butterflies	LC0000140000OG8B			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	16/08/1997	TL315146	None	7 Exact	Herts Butterflies	LC0000140000OG89			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	18/08/2002	TL317145	None	1 Exact	Herts Butterflies	LC0000140000OG8A			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	21/07/1997	TL318148	None	2 Exact	Herts Butterflies	LC0000140000OG8E			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	24/08/2000	TL318147	None	1 Exact	Herts Butterflies	LC0000140000OG8C			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	27/08/2000	TL318147	None	2 Exact	Herts Butterflies	LC0000140000OG8D			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	16/07/2006	TL317147	None	7 Exact	Herts Butterflies	LC0000140000OG8K			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	05/08/2009	TL317149	None	4 Exact	Herts Butterflies	LC0000140000OG8G			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	02/08/2008	TL317149	None	1 Exact	Herts Butterflies	LC0000140000OSCY			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	09/06/2009	TL317149	None	1 Exact	Herts Butterflies	LC0000140000OG8H			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	01/07/1997	TL318148	None	6 Exact	Herts Butterflies	LC0000140000OG8P			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	01/09/2010	TL319146	None	6 Exact	Herts Butterflies	LC0000140000QCFH			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	02/06/2005	TL320148	None	1 Exact	Herts Butterflies	LC0000140000OG8V			Sect.41	BAP:2007	RLGB.Lr(NT)			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	03/09/2006	TL317147	None	1 Exact	Herts Butterflies	LC0000140000OG8L			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	06/06/2010	TL319146	None	3 Exact	Herts Butterflies	LC0000140000Q9IV			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	08/07/1997	TL318148	None	3 Exact	Herts Butterflies	LC0000140000OG8Q			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	09/06/2010	TL319146	None	1 Exact	Herts Butterflies	LC0000140000Q9K6			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	30/08/1999	TL319147	None	2 Exact	Herts Butterflies	LC0000140000OG8F			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Hillside Above Waterford	10/08/1997	TL315142	None	3 Exact	Herts Butterflies	LC0000140000ORLS			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Nr Ware Park Monastery	31/08/2004	TL341146	None	1 Exact	Herts Butterflies	LC0000140000ORQZ			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Nr Ware Park Monastery	31/08/2004	TL341146	None	1 Exact	Herts Butterflies	LC0000140000ORR0			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Nr Rickneys Quarry	25/07/1998	TL325157	None	1 Exact	Herts Butterflies	LC0000140000ORQX			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Nr Rickneys Quarry	30/08/1999	TL324156	None	2 Exact	Herts Butterflies	LC0000140000ORQW			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			N Of Hertford	14/07/1997	TL324156	None	7 Exact	Herts Butterflies	LC0000140000ORPJ			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			N Of Hertford	13/06/1996	TL324153	None	17 Exact	Herts Butterflies	LC0000140000ORPI			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			N Hertford	12/07/1996	TL318148	None	1 Exact	Herts Butterflies	LC0000140000ORP8			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			N Hertford	05/09/1996	TL318148	None	4 Exact	Herts Butterflies	LC0000140000ORPA			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			N Hertford	11/06/1996	TL318148	None	4 Exact	Herts Butterflies	LC0000140000ORP7			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			N Hertford	16/09/1996	TL318148	None	1 Exact	Herts Butterflies	LC0000140000ORPB			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			N Hertford	17/08/1996	TL318148	None	8 Exact	Herts Butterflies	LC0000140000ORP9			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			N Hertford	10/06/1996	TL318148	None	2 Exact	Herts Butterflies	LC0000140000ORP6			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Edge of Flowersash Wood	18/06/2005	TL322162	None	5 Exact	Herts Butterflies	LC0000140000ORJR			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Footpath Westmill Road to Ware Park quarry	07/09/2010	TL344152	None	1 Exact	Herts Butterflies	LC0000140000Q8EF			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Waterford Heath North	22/05/2010	TL315155	None	1 Exact	Herts Butterflies	LC0000140000Q5I8			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Waterford Heath South extra walk	20/06/2008	TL317149	None	2 Exact	Herts Butterflies	LC0000140000OG8I			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Wick Sacombe Rd Bengoe	16/08/1997	TL323143	None	1 Exact	Herts Butterflies	LC0000140000OSEK			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Stapleford	09/08/1997	TL314165	None	1 Exact	Herts Butterflies	LC0000140000OG2L			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Rickneys Quarry Area	23/08/1997	TL325155	None	21 Exact	Herts Butterflies	LC0000140000ORTQ			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Set aside Field Rib Valley	16/06/2006	TL332139	None	2 Exact	Herts Butterflies	LC0000140000OG1B			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Setaside between Sacombe Rd and Rickneys	18/06/2005	TL322147	None	1 Exact	Herts Butterflies	LC0000140000OG1C			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			setaside east of River Rib near Bengoe	05/09/2010	TL330143	None	1 Exact	Herts Butterflies	LC0000140000QCHS			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	16/06/2008	TL317154	None	1 Exact	Herts Butterflies	LC0000140000OSCK			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	02/09/2004	TL317154	None	2 Exact	Herts Butterflies	LC0000140000OG82			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	08/08/2004	TL317154	None	3 Exact	Herts Butterflies	LC0000140000OSCU			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	09/09/2004	TL317154	None	4 Exact	Herts Butterflies	LC0000140000OG83			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	10/07/2008	TL317154	None	2 Exact	Herts Butterflies	LC0000140000OSCL			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	11/09/2006	TL317154	None	1 Exact	Herts Butterflies	LC0000140000OSCE			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	13/06/2007	TL317154	None	1 Exact	Herts Butterflies	LC0000140000OSCF			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	23/08/2003	TL317154	None	1 Exact	Herts Butterflies	LC0000140000OSCS			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	15/06/2006	TL317154	None	3 Exact	Herts Butterflies	LC0000140000OSCD			Sect.41	BAP:2007	RLGB.Lr(NT)			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath N Transect	31/05/2000	TL317154	None	1 Exact	Herts Butterflies	LC0000140000OSBN			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford heath North	03/09/2008	TL317154	None	3 Exact	Herts Butterflies	LC0000140000OSC2			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford heath North	03/09/2008	TL317154	None	3 Exact	Herts Butterflies	LC0000140000OSC3			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Quarry	24/08/1996	TL317147	None	2 Exact	Herts Butterflies	LC0000140000O7DX			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	31/05/1997	TL318147	None	10 Exact	Herts Butterflies	LC0000140000OSBL			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North	04/07/2009	TL315155	None	1 Exact	Herts Butterflies	LC0000140000OSBV			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath,North Pit	22/06/2008	TL316153	None	1 Exact	Herts Butterflies	LC0000140000OSDN			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	24/05/2009	TL318153	None	3 Exact	Herts Butterflies	LC0000140000ORUB			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	27/05/2009	TL318153	None	1 Exact	Herts Butterflies	LC0000140000ORUC			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	29/04/2007	TL318153	None	1 Exact	Herts Butterflies	LC0000140000ORU8			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	29/05/2007	TL318153	None	1 Exact	Herts Butterflies	LC0000140000ORU7			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	30/05/2005	TL318153	None	3 Exact	Herts Butterflies	LC0000140000ORTZ			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickneys	06/09/2009	TL319154	None	1 Exact	Herts Butterflies	LC0000140000O75Z			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickneys	15/08/2004	TL322154	None	4 Exact	Herts Butterflies	LC0000140000O760			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickneys	18/06/2005	TL325155	None	1 Exact	Herts Butterflies	LC0000140000O761			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	20/04/2007	TL318153	None	1 Exact	Herts Butterflies	LC0000140000ORU5			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		20/05/2010	TL318155	None	1 Exact	Herts Butterflies	LC0000140000Q96F			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		13/06/2009	TL318155	None	5 Exact	Herts Butterflies	LC0000140000ORT5			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		16/06/2010	TL318155	None	6 Exact	Herts Butterflies	LC0000140000Q9MG			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		16/08/2009	TL318155	None	4 Exact	Herts Butterflies	LC0000140000ORTC			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		18/07/2010	TL318155	None	2 Exact	Herts Butterflies	LC0000140000Q64N			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		18/09/2010	TL318155	None	2 Exact	Herts Butterflies	LC0000140000Q8GS			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		19/05/1998	TL318156	None	1 Exact	Herts Butterflies	LC0000140000ORTH			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	24/05/2005	TL318153	None	2 Exact	Herts Butterflies	LC0000140000ORTY			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		19/08/2009	TL318155	None	7 Exact	Herts Butterflies	LC0000140000ORTD			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		11/08/2009	TL318155	None	2 Exact	Herts Butterflies	LC0000140000ORTB			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		20/09/2009	TL318155	None	3 Exact	Herts Butterflies	LC0000140000ORTF			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		21/06/2009	TL318155	None	2 Exact	Herts Butterflies	LC0000140000ORT6			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		21/09/2008	TL320164	None	3 Exact	Herts Butterflies	LC0000140000ORTJ			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		22/08/2010	TL318155	None	2 Exact	Herts Butterflies	LC0000140000QC8P			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		23/06/2010	TL318155	None	4 Exact	Herts Butterflies	LC0000140000Q9QX			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		24/06/2009	TL318155	None	5 Exact	Herts Butterflies	LC0000140000ORT7			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		24/09/2009	TL318155	None	2 Exact	Herts Butterflies	LC0000140000ORTG			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		19/05/2009	TL318155	None	2 Exact	Herts Butterflies	LC0000140000ORT2			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		03/07/2010	TL318155	None	3 Exact	Herts Butterflies	LC0000140000Q7G2			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Quarry	25/08/1996	TL317147	None	2 Exact	Herts Butterflies	LC0000140000O7DY			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/033	Ware Quarry	Ware Park Quarry	05/07/2010	TL342149	None	1 Exact	Herts Butterflies	LC0000140000Q5V3			Sect.41	BAP:2007	RLGB.Lr(NT)			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		28/07/2009	TL318155	None	3 Exact	Herts Butterflies	LC0000140000ORT9			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		28/08/2010	TL318155	None	1 Exact	Herts Butterflies	LC0000140000QCB0			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		28/09/2008	TL320164	None	1 Exact	Herts Butterflies	LC0000140000ORTL			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		30/05/2009	TL318155	None	6 Exact	Herts Butterflies	LC0000140000ORT3			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	05/06/2005	TL318153	None	1 Exact	Herts Butterflies	LC0000140000ORU0			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Pit	16/05/2006	TL317155	None	3 Exact	Herts Butterflies	LC0000140000ORT1			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry		26/06/2010	TL318155	None	2 Exact	Herts Butterflies	LC0000140000Q5Q2			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry	05/06/2010	TL324155	None	7 Exact	Herts Butterflies	LC0000140000Q5MC			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry	10/05/2009	TL324155	None	2 Exact	Herts Butterflies	LC0000140000ORTO			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry	13/09/2007	TL324155	None	1 Exact	Herts Butterflies	LC0000140000ORTN			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry	18/08/2010	TL324155	None	11 Exact	Herts Butterflies	LC0000140000Q89K			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry	19/08/2009	TL324155	None	13 Exact	Herts Butterflies	LC0000140000ORTP			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry	22/05/2010	TL324155	None	5 Exact	Herts Butterflies	LC0000140000Q5IU			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry	26/05/2010	TL324155	None	2 Exact	Herts Butterflies	LC0000140000Q5KE			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickney's	03/09/2006	TL318153	None	1 Exact	Herts Butterflies	LC0000140000O762			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford South Pit	15/09/2007	TL3114	None	1 Exact	Herts Butterflies	LC0000140000O7E2			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford South Pit	22/09/2007	TL3114	None	1 Exact	Herts Butterflies	LC0000140000O7E3			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford South Pit	28/08/2007	TL3114	None	1 Exact	Herts Butterflies	LC0000140000O7DZ			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford South Pit	31/08/2007	TL3114	None	1 Exact	Herts Butterflies	LC0000140000O7E0			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford South Pit	07/09/2007	TL3114	None	1 Exact	Herts Butterflies	LC0000140000O7E1			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/019	Balls Park		06/08/1998	TL31G	None	1 Exact	Herts Butterflies	LC0000140000ORD3			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	22/05/2007	TL3114	None	1 Exact	Herts Butterflies	LC0000140000OG8J			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit general area	13/09/2007	TL3114	None	1 Exact	Herts Butterflies	LC0000140000OG8X			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit general area	25/05/2006	TL3114	None	5 Exact	Herts Butterflies	LC0000140000OG8W			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Footpath Nr Ware	18/08/1997	TL3415	None	8 Exact	Herts Butterflies	LC0000140000OFVF			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly			Waterford	06/08/1995	TL31C	None	1 Exact	Herts Butterflies	LC0000140000OSBF			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit	08/05/1998	TL3114	None	3 Exact	Herts Butterflies	LC0000140000OSE3			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North general area	03/05/2007	TL3115	None	1 Exact	Herts Butterflies	LC0000140000OSEE			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	16/05/2004	TL3014	None	1 Exact	Herts Butterflies	LC0000140000OSBG			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North general area	18/04/2007	TL3115	None	1 Exact	Herts Butterflies	LC0000140000OSED			Sect.41	BAP:2007	RLGB.Lr(NT)			
Small Heath	Coenonympha pamphilus	insect - butterfly	45/094	Rickneys Quarry	Rickneys Pit	23/09/2006	TL3115	None	2 Exact	Herts Butterflies	LC0000140000O763			Sect.41	BAP:2007	RLGB.Lr(NT)			
Wall	Lasiommata megera	insect - butterfly			Bengeo St Hertford	26/08/1995	TL324137	None	1 Exact	Herts Butterflies	LC0000140000PC51			Sect.41	BAP:2007	RLGB.Lr(NT)			
Wall	Lasiommata megera	insect - butterfly			Bengeo Street Hertford	15/05/1995	TL324137	None	1 Exact	Herts Butterflies	LC0000140000PC52			Sect.41	BAP:2007	RLGB.Lr(NT)			
Wall	Lasiommata megera	insect - butterfly			N Hertford	17/08/1996	TL318148	None	1 Exact	Herts Butterflies	LC0000140000P87L			Sect.41	BAP:2007	RLGB.Lr(NT)			
Wall	Lasiommata megera	insect - butterfly	45/094	Rickneys Quarry	Rickneys G P	05/05/1997	TL321155	None	1 Exact	Herts Butterflies	LC0000140000P889			Sect.41	BAP:2007	RLGB.Lr(NT)			
Wall	Lasiommata megera	insect - butterfly			W Of Ware	18/08/1996	TL344152	None	1 Exact	Herts Butterflies	LC0000140000P88R			Sect.41	BAP:2007	RLGB.Lr(NT)			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	19/05/2010	TL318153	None	1 Exact	Herts Butterflies	LC0000140000Q95D			Sect.41	BAP:2007, LBAP	RLGB.VU			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	02/05/2006	TL317154	None	2 Exact	Herts Butterflies	LC0000140000M6NY			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	01/05/2005	TL317154	None	2 Exact	Herts Butterflies	LC0000140000M6NQ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit N	23/04/2003	TL317152	None	2 Exact	Herts Butterflies	LC0000140000M6NM			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit	31/05/1997	TL318148	None	2 Exact	Herts Butterflies	LC0000140000M6NL			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	08/06/2006	TL317154	None	2 Exact	Herts Butterflies	LC0000140000M6O0			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	09/05/2009	TL317154	None	9 Exact	Herts Butterflies	LC0000140000M6O5			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit	11/05/1997	TL318148	None	5 Exact	Herts Butterflies	LC0000140000M6NK			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit	10/05/1997	TL318148	None	1 Exact	Herts Butterflies	LC0000140000M6NJ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford North Transect	31/05/2005	TL317154	None	1 Exact	Herts Butterflies	LC0000140000M6NC			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford North Transect	25/05/2005	TL317154	None	3 Exact	Herts Butterflies	LC0000140000M6NB			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford North Transect	22/05/2001	TL317154	None	2 Exact	Herts Butterflies	LC0000140000MUVY			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford North Transect	18/05/2005	TL317154	None	1 Exact	Herts Butterflies	LC0000140000M6NA			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit	20/05/1998	TL318146	None	1 Exact	Herts Butterflies	LC0000140000M6NI			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	30/04/2005	TL317154	None	3 Exact	Herts Butterflies	LC0000140000M6NS			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/094	Rickneys Quarry		02/06/2010	TL318155	None	2 Exact	Herts Butterflies	LC0000140000Q5LD			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Quarry	30/05/1996	TL318145	None	35 Exact	Herts Butterflies	LC0000140000MUWO			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Quarry	28/05/1996	TL318145	None	8 Exact	Herts Butterflies	LC0000140000MUWN			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	07/05/2005	TL317154	None	1 Exact	Herts Butterflies	LC0000140000M6NT			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	30/05/2001	TL317154	None	1 Exact	Herts Butterflies	LC0000140000M6NP			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/094	Rickneys Quarry		03/05/2009	TL318155	None	3 Exact	Herts Butterflies	LC0000140000MURV			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	29/04/2007	TL317154	None	5 Exact	Herts Butterflies	LC0000140000M6O2			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	24/05/2005	TL317154	None	8 Exact	Herts Butterflies	LC0000140000M6NW			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	22/05/2010	TL317154	None	2 Exact	Herts Butterflies	LC0000140000Q5IL			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	22/05/2008	TL317154	None	11 Exact	Herts Butterflies	LC0000140000M6O4			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	21/05/2005	TL317154	None	5 Exact	Herts Butterflies	LC0000140000M6NV			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	21/04/2009	TL317154	None	8 Exact	Herts Butterflies	LC0000140000M6O6			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	20/04/2007	TL317154	None	1 Exact	Herts Butterflies	LC0000140000M6O1			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	12/05/2010	TL317154	None	3 Exact	Herts Butterflies	LC0000140000Q91W			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Pit North	11/05/2005	TL317154	None	1 Exact	Herts Butterflies	LC0000140000M6NU			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford North Transect	12/06/2001	TL317154	None	1 Exact	Herts Butterflies	LC0000140000MUVZ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly			Sacombe Rd By Waterford G P	05/05/1997	TL322146	None	2 Exact	Herts Butterflies	LC0000140000MUSM			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly			N Hertford	10/06/1996	TL318148	None	5 Exact	Herts Butterflies	LC0000140000MURL			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly			Field margin along Sacombe Road, Hertford	30/05/2010	TL321146	None	1 Exact	Herts Butterflies	LC0000140000Q77R			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly			N Hertford	11/06/1996	TL318148	None	12 Exact	Herts Butterflies	LC0000140000MURM			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly			Waterfiord Heath North	25/05/2010	TL315155	None	4 Exact	Herts Butterflies	LC0000140000Q9C0			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly			Waterford	05/05/1997	TL318147	None	10 Exact	Herts Butterflies	LC0000140000MUTE			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly			Waterfiord Heath North	22/05/2010	TL315155	None	4 Exact	Herts Butterflies	LC0000140000Q5I4			Sect.41	BAP:2007, LBAP	RLGB.VU			

Species records

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Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath north pit	30/05/2006	TL320150	None	3 Exact	Herts Butterflies	LC0000140000MFJN			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Pit	29/04/2007	TL316152	None	5 Exact	Herts Butterflies	LC0000140000MFJJ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Pit	28/04/2010	TL315150	None	2 Exact	Herts Butterflies	LC0000140000Q8XZ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Pit	24/04/2009	TL315150	None	6 Exact	Herts Butterflies	LC0000140000MFJF			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath North Transect	22/04/2003	TL317154	None	1 Exact	Herts Butterflies	LC0000140000MFJU			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath N	05/05/1999	TL316151	None	1 Exact	Herts Butterflies	LC0000140000MUU1			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Redlland Gravel Pit	15/06/1996	TL315153	None	4 Exact	Herts Butterflies	LC0000140000MURU			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford North Transect	12/05/2005	TL317154	None	1 Exact	Herts Butterflies	LC0000140000M6N9			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	16/05/1998	TL321146	None	3 Exact	Herts Butterflies	LC0000140000MUTZ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	30/05/1998	TL318146	None	9 Exact	Herts Butterflies	LC0000140000MUTS			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	24/05/1999	TL317145	None	2 Exact	Herts Butterflies	LC0000140000MUTL			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	23/04/1997	TL318146	None	5 Exact	Herts Butterflies	LC0000140000MUTR			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	22/05/2000	TL317146	None	5 Exact	Herts Butterflies	LC0000140000MUTM			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	22/05/1999	TL317147	None	1 Exact	Herts Butterflies	LC0000140000MUTP			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	19/05/1999	TL317151	None	3 Exact	Herts Butterflies	LC0000140000MUTY			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	17/04/1997	TL318148	None	5 Exact	Herts Butterflies	LC0000140000MUTV			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath, North Pit	09/05/2008	TL316152	None	5 Exact	Herts Butterflies	LC0000140000MUVW			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	11/05/2002	TL317146	None	6 Exact	Herts Butterflies	LC0000140000MUTN			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	05/05/2006	TL315151	None	6 Exact	Herts Butterflies	LC0000140000MUTX			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	05/05/2006	TL315151	None	1 Exact	Herts Butterflies	LC0000140000M6NO			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	05/05/1997	TL318147	None	30 Exact	Herts Butterflies	LC0000140000MUTT			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	03/05/2006	TL315151	None	4 Exact	Herts Butterflies	LC0000140000MUTW			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	03/05/1999	TL318145	None	1 Exact	Herts Butterflies	LC0000140000MUTQ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford G P	05/05/1997	TL317147	None	1 Exact	Herts Butterflies	LC0000140000MUTG			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath - North pit by railway	27/04/2010	TL315151	None	1 Exact	Herts Butterflies	LC0000140000Q70M			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	45/022	Waterford Heath (North)	Waterford Heath	19/05/1998	TL317147	None	1 Exact	Herts Butterflies	LC0000140000MUTO			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	05/06/2008	TL317146	None	3 Exact	Herts Butterflies	LC0000140000MUWK			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect extra walk	12/06/2010	TL317149	None	1 Exact	Herts Butterflies	LC0000140000Q7AF			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit S	07/05/2003	TL317146	None	9 Exact	Herts Butterflies	LC0000140000M6OI			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit S	09/05/2002	TL317146	None	6 Exact	Herts Butterflies	LC0000140000M6OH			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit S	20/05/2001	TL317146	None	1 Exact	Herts Butterflies	LC0000140000M6OF			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit S	21/05/2001	TL317146	None	1 Exact	Herts Butterflies	LC0000140000M6OG			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit S	21/05/2001	TL317152	None	1 Exact	Herts Butterflies	LC0000140000MUW1			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit S	31/05/2002	TL315154	None	1 Exact	Herts Butterflies	LC0000140000MUW0			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	03/05/2007	TL317146	None	10 Exact	Herts Butterflies	LC0000140000MUWF			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	05/06/2005	TL317146	None	1 Exact	Herts Butterflies	LC0000140000MUWC			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	30/05/2008	TL317149	None	1 Exact	Herts Butterflies	LC0000140000MUVI			Sect.41	BAP:2007, LBAP	RLGB.VU			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	06/05/2008	TL317146	None	8 Exact	Herts Butterflies	LC0000140000MUWH			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	08/05/2010	TL317146	None	13 Exact	Herts Butterflies	LC0000140000Q90G			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	08/06/2006	TL317146	None	3 Exact	Herts Butterflies	LC0000140000MUWD			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	09/05/2004	TL317146	None	3 Exact	Herts Butterflies	LC0000140000MUW4			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	09/05/2009	TL317146	None	9 Exact	Herts Butterflies	LC0000140000MUWL			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	11/05/2005	TL317146	None	1 Exact	Herts Butterflies	LC0000140000MUW9			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	12/05/2010	TL317146	None	1 Exact	Herts Butterflies	LC0000140000Q91V			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	13/05/2005	TL317146	None	3 Exact	Herts Butterflies	LC0000140000MUWA			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	14/06/2005	TL317146	None	1 Exact	Herts Butterflies	LC0000140000MUW6			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	04/05/2005	TL317146	None	5 Exact	Herts Butterflies	LC0000140000MUW5			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	09/05/2008	TL317149	None	9 Exact	Herts Butterflies	LC0000140000MUVF			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath south pit Sacombe Rd escarpment (TL14 tetrad	30/04/2010	TL320146	None	2 Exact	Herts Butterflies	LC0000140000Q5F4			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath south pit Sacombe Rd escarpment (TL3214 tetrad	07/05/2006	TL320146	None	3 Exact	Herts Butterflies	LC0000140000MUV9			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath south pit Sacombe Rd escarpment (TL3214 tetrad	10/05/2008	TL320146	None	7 Exact	Herts Butterflies	LC0000140000MUVB			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath south pit Sacombe Rd escarpment (TL3214 tetrad	12/05/2007	TL320146	None	1 Exact	Herts Butterflies	LC0000140000MUVA			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit Sacombe Rd Escarpment (TL3214 Tetrad	18/05/2009	TL320146	None	3 Exact	Herts Butterflies	LC0000140000MUVD			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit Sacombe Rd Escarpment (TL3214 Tetrad	21/04/2009	TL320146	None	3 Exact	Herts Butterflies	LC0000140000MUVK			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect extra walk	07/05/2008	TL317149	None	2 Exact	Herts Butterflies	LC0000140000MUVR			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	06/06/2010	TL317149	None	4 Exact	Herts Butterflies	LC0000140000Q5N1			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	31/05/2010	TL317149	None	2 Exact	Herts Butterflies	LC0000140000Q9DT			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	10/05/2009	TL317149	None	19 Exact	Herts Butterflies	LC0000140000MUVK			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	10/05/2009	TL317149	None	20 Exact	Herts Butterflies	LC0000140000MFKA			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	10/06/2008	TL317149	None	1 Exact	Herts Butterflies	LC0000140000MUVJ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	13/05/2008	TL317149	None	23 Exact	Herts Butterflies	LC0000140000MUVG			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	15/05/2010	TL317149	None	1 Exact	Herts Butterflies	LC0000140000Q93H			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	20/05/1999	TL317146	None	1 Exact	Herts Butterflies	LC0000140000MUVE			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	20/05/2008	TL317149	None	8 Exact	Herts Butterflies	LC0000140000MUVH			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	22/05/2010	TL317149	None	4 Exact	Herts Butterflies	LC0000140000Q5ID			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	17/05/2008	TL317146	None	12 Exact	Herts Butterflies	LC0000140000MUWI			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Transect	01/05/2010	TL317149	None	4 Exact	Herts Butterflies	LC0000140000Q8Z4			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	16/05/2006	TL320146	None	11 Exact	Herts Butterflies	LC0000140000MUWM			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	22/05/2008	TL317146	None	15 Exact	Herts Butterflies	LC0000140000MUWJ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	22/05/2000	TL316146	None	3 Exact	Herts Butterflies	LC0000140000MUW2			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	22/05/2005	TL317146	None	3 Exact	Herts Butterflies	LC0000140000MUWB			Sect.41	BAP:2007, LBAP	RLGB.VU			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	29/04/2007	TL317146	None	6 Exact	Herts Butterflies	LC0000140000MUWE			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	30/05/2001	TL317146	None	1 Exact	Herts Butterflies	LC0000140000MUW3			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford S	07/05/2003	TL318147	None	2 Exact	Herts Butterflies	LC0000140000MUWQ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford S Pit	08/05/2002	TL317146	None	12 Exact	Herts Butterflies	LC0000140000MUWR			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	17/05/2007	TL317146	None	16 Exact	Herts Butterflies	LC0000140000MUWG			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	13/04/1997	TL318146	None	3 Exact	Herts Butterflies	LC0000140000MFK1			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath, Sourth Pit	09/05/2008	TL319145	None	1 Exact	Herts Butterflies	LC0000140000MUVX			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	S Pit Waterford Heath	08/06/1997	TL318148	None	5 Exact	Herts Butterflies	LC0000140000MUUS			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	S Pit Waterford Heath	08/06/1997	TL318148	None	6 Exact	Herts Butterflies	LC0000140000MUSL			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S	19/05/1999	TL318145	None	1 Exact	Herts Butterflies	LC0000140000MFJY			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	01/06/1997	TL318146	None	1 Exact	Herts Butterflies	LC0000140000MFK4			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	22/04/2009	TL317149	None	5 Exact	Herts Butterflies	LC0000140000MFK8			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	07/05/2000	TL317146	None	1 Exact	Herts Butterflies	LC0000140000MFJZ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	17/05/1997	TL318146	None	6 Exact	Herts Butterflies	LC0000140000MFK3			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	20/05/1999	TL317147	None	1 Exact	Herts Butterflies	LC0000140000MFK0			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	waterford Heath South	03/05/2008	TL317146	None	5 Exact	Herts Butterflies	LC0000140000MFK7			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford heath South	05/05/2008	TL317146	None	4 Exact	Herts Butterflies	LC0000140000MFK6			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	13/06/2009	TL317149	None	1 Exact	Herts Butterflies	LC0000140000MFKE			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	13/06/2009	TL317149	None	1 Exact	Herts Butterflies	LC0000140000MUVQ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	19/05/2009	TL317149	None	6 Exact	Herts Butterflies	LC0000140000MFKB			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	19/05/2009	TL317149	None	6 Exact	Herts Butterflies	LC0000140000MUVN			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Pit	03/05/1997	TL318146	None	4 Exact	Herts Butterflies	LC0000140000MFK2			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Pit South	30/04/2005	TL317146	None	1 Exact	Herts Butterflies	LC0000140000MUW7			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	28/04/2010	TL319146	None	3 Exact	Herts Butterflies	LC0000140000Q8Y3			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	10/05/2009	TL319146	None	6 Exact	Herts Butterflies	LC0000140000MUUW			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	13/05/2004	TL319146	None	3 Exact	Herts Butterflies	LC0000140000MUUV			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	13/06/2010	TL319146	None	2 Exact	Herts Butterflies	LC0000140000Q9LG			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	16/05/2004	TL317146	None	11 Exact	Herts Butterflies	LC0000140000MUUK			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	29/04/2007	TL319145	None	1 Exact	Herts Butterflies	LC0000140000MUUT			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	15/05/2005	TL318145	None	1 Exact	Herts Butterflies	LC0000140000MUUP			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath south pit	24/04/2010	TL320146	None	4 Exact	Herts Butterflies	LC0000140000Q8UT			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	23/05/2010	TL319146	None	1 Exact	Herts Butterflies	LC0000140000Q75W			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South	22/04/2009	TL317149	None	5 Exact	Herts Butterflies	LC0000140000MUVK			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	22/06/2010	TL319146	None	2 Exact	Herts Butterflies	LC0000140000Q5OG			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	23/05/1997	TL318148	None	5 Exact	Herts Butterflies	LC0000140000MUUR			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	23/04/2010	TL319146	None	2 Exact	Herts Butterflies	LC0000140000Q8TI			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	04/05/2003	TL321147	None	1 Exact	Herts Butterflies	LC0000140000MUUZ			Sect.41	BAP:2007, LBAP	RLGB.VU			

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit General Area	18/05/2009	TL3114	None	1 Exact	Herts Butterflies	LC0000140000MUV8			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit general area	19/04/2009	TL3114	None	7 Exact	Herts Butterflies	LC0000140000MUV7			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit general area	25/05/2006	TL3114	None	19 Exact	Herts Butterflies	LC0000140000MUV4			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford South Pit	25/04/2009	TL3214	None	12 Exact	Herts Butterflies	LC0000140000MUWS			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath S Transect	14/05/2000	TL3114	None	2 Exact	Herts Butterflies	LC0000140000MFK5			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit general area	10/05/2008	TL3114	None	2 Exact	Herts Butterflies	LC0000140000MUV6			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	11/05/2006	TL3114	None	6 Exact	Herts Butterflies	LC0000140000MFKG			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	11/05/2009	TL3114	None	3 Exact	Herts Butterflies	LC0000140000MUUI			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	12/05/2006	TL3114	None	8 Exact	Herts Butterflies	LC0000140000MFKH			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	19/04/2007	TL3114	None	4 Exact	Herts Butterflies	LC0000140000MUUF			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	10/05/2006	TL3214	None	3 Exact	Herts Butterflies	LC0000140000MUV1			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	28/05/2006	TL3114	None	2 Exact	Herts Butterflies	LC0000140000MUUC			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	28/04/2007	TL3114	None	1 Exact	Herts Butterflies	LC0000140000MUUE			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	23/04/2009	TL3114	None	5 Exact	Herts Butterflies	LC0000140000MUUH			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	29/04/2007	TL3114	None	2 Exact	Herts Butterflies	LC0000140000MUUG			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit general area	07/05/2006	TL3114	None	2 Exact	Herts Butterflies	LC0000140000MUV3			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	17/05/2009	TL3114	None	5 Exact	Herts Butterflies	LC0000140000MUUJ			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit general area	07/05/2006	TL3114	None	2 Exact	Herts Butterflies	LC0000140000MUV2			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	02/05/2007	TL3114	None	5 Exact	Herts Butterflies	LC0000140000MUUD			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	07/05/2006	TL3214	None	3 Exact	Herts Butterflies	LC0000140000MUV0			Sect.41	BAP:2007, LBAP	RLGB.VU			
Grizzled Skipper	Pyrgus malvae	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath South Pit	09/05/2006	TL3114	None	4 Exact	Herts Butterflies	LC0000140000MFKF			Sect.41	BAP:2007, LBAP	RLGB.VU			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			A10 Ware Park	15/07/1996	TL343143	None	4 Exact	Herts Butterflies	LC0000140000PKL3			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			A10 Ware Park	16/07/1996	TL343143	None	3 Exact	Herts Butterflies	LC0000140000PKL4			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			A10 Ware Park	17/07/1996	TL330138	None	2 Exact	Herts Butterflies	LC0000140000PKL1			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			A10 Ware Park	19/07/1996	TL330138	None	2 Exact	Herts Butterflies	LC0000140000PKL2			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			A10 Embankment Ware Park	19/07/2000	TL343144	None	1 Exact	Herts Butterflies	LC0000140000PKL0			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly	59/062	Waterford Heath (South)	Waterford Heath south pit Sacombe Rd escarpment (TL3214 tetrad	21/06/2007	TL320146	None	1 Exact	Herts Butterflies	LC0000140000PKTI			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly	45/094	Rickneys Quarry	Rickney's Quarry west escarpment	27/04/2010	TL318153	None	2 Exact	Herts Butterflies	LC0000140000Q70S			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			Ware Park Bardon Farm Transect	25/07/1996	TL336143	None	1 Exact	Herts Butterflies	LC0000140000P8GM			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			Towpath Ware Park	25/07/1996	TL336139	None	3 Exact	Herts Butterflies	LC0000140000P8G1			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			Molewood, Waterford Heath	16/07/2006	TL3114	None	1 Exact	Herts Butterflies	LC0000140000P8EW			Sect.41	BAP:2007	RLGB.EN			
White-letter Hairstreak	Satyrrium w-album	insect - butterfly			Ware - Braziers Quarry	21/06/2007	TL3414	None	1 Exact	Herts Butterflies	LC0000140000P8GH			Sect.41	BAP:2007	RLGB.EN			
Grey Dagger	Acronicta psi	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/08/2005	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004REX			Sect.41	BAP:2007				
Grey Dagger	Acronicta psi	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1998	TL327143	None	1 Adult Exact	Herts Moths	LC000014000055V4			Sect.41	BAP:2007				
Knot Grass	Acronicta rumicis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/08/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005D2U			Sect.41	BAP:2007				
Knot Grass	Acronicta rumicis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	27/05/2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000058V7			Sect.41	BAP:2007				
Knot Grass	Acronicta rumicis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	08/08/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004NKD			Sect.41	BAP:2007				
Knot Grass	Acronicta rumicis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	10/05/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004N12			Sect.41	BAP:2007				
Knot Grass	Acronicta rumicis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	10/05/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004N13			Sect.41	BAP:2007				
Knot Grass	Acronicta rumicis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	15/06/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005EAC			Sect.41	BAP:2007				
Knot Grass	Acronicta rumicis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	16/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PNS			Sect.41	BAP:2007				
Knot Grass	Acronicta rumicis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	18/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005F22			Sect.41	BAP:2007				

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Sprawler	Asteroscopus sphinx	insect - moth	20	Hertfordshire	Bengeo Street Hertford	24/11/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005G0L			Sect.41	BAP:2007				
Sprawler	Asteroscopus sphinx	insect - moth	20	Hertfordshire	Bengeo Street Hertford	19/11/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004Q2G			Sect.41	BAP:2007				
Sprawler	Asteroscopus sphinx	insect - moth	20	Hertfordshire	Bengeo Street Hertford	16/11/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004P5E			Sect.41	BAP:2007				
Sprawler	Asteroscopus sphinx	insect - moth	20	Hertfordshire	Bengeo Street Hertford	13/11/2002	TL327143	None	2 Adult Exact	Herts Moths	LC00001400005DSL			Sect.41	BAP:2007				
Sprawler	Asteroscopus sphinx	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2001	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000FQ5S			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/10/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005DP8			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	08/09/2003	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000502V			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/09/2006	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000574Q			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	02/09/2003	TL327143	None	2 Adult Exact	Herts Moths	LC0000140000502E			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	02/09/2004	TL327143	None	2 Adult Exact	Herts Moths	LC000014000050WB			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	02/09/2005	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005JBI			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	03/09/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PXH			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	03/09/2006	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000574R			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/09/2006	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000574S			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/09/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004NO6			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/09/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PY2			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/09/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004QR5			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/09/2005	TL327143	None	1 Adult Exact	Herts Moths	LC000014000051NJ			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/09/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005FO6			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/09/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005HLS			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/09/2004	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004QQF			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/09/2004	TL327143	None	2 Adult Exact	Herts Moths	LC000014000050VP			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	11/09/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005ABG			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	07/09/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PYK			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2002	TL327143	None	1 Adult Exact	Herts Moths	LC000014000055ZI			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	13/09/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005DL7			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	15/09/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004WG8			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	17/09/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004Z7S			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	18/08/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004XS1			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	19/09/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004P3R			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1996	TL327143	None	1 Adult Exact	Herts Moths	LC000014000055ZH			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1998	TL327143	None	1 Adult Exact	Herts Moths	LC000014000055ZL			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2001	TL327143	None	1 Adult Exact	Herts Moths	LC000014000055ZJ			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2003	TL327143	None	1 Adult Exact	Herts Moths	LC000014000055ZF			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2004	TL327143	None	1 Adult Exact	Herts Moths	LC000014000055ZG			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	25/08/2001	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004UZX			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	25/08/2006	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000574P			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	26/08/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005FK0			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	30/08/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004XU0			Sect.41	BAP:2007				
Centre-barred Sallow	Atethmia centrago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000055ZK			Sect.41	BAP:2007				

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/08/2001	TL327143	None	2 Adult Exact	Herts Moths	LC00001400005BIM			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/07/2006	TL327143	None	1 Adult Exact	Herts Moths	LC000014000057OI			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/07/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005GS1			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/07/2003	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004ZOL			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/07/2000	TL327143	None	2 Adult Exact	Herts Moths	LC000014000059LV			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/07/2000	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004LYX			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	02/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005EO4			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	08/07/2001	TL327143	None	4 Adult Exact	Herts Moths	LC00001400004Y7D			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	13/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004ZRP			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	13/07/2000	TL327143	None	2 Adult Exact	Herts Moths	LC000014000059QY			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	12/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005EYJ			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	12/07/2000	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004XM8			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	11/07/2006	TL327143	None	1 Adult Exact	Herts Moths	LC000014000057OO			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	11/07/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004Y81			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	10/07/2000	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004NFP			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	09/07/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005CSS			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	09/07/2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000059QF			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/07/2006	TL327143	None	1 Adult Exact	Herts Moths	LC000014000057OL			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	08/07/2003	TL327143	None	3 Adult Exact	Herts Moths	LC00001400005ET3			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	08/07/2000	TL327143	None	3 Adult Exact	Herts Moths	LC000014000059OY			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	07/07/2006	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004MJV			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	07/07/2005	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005IQR			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	07/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005ETT			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	07/07/2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000059ON			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/07/2004	TL327143	None	1 Adult Exact	Herts Moths	LC000014000050L4			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/07/2001	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004Y6R			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/07/2006	TL327143	None	1 Adult Exact	Herts Moths	LC000014000057OM			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/07/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005GUL			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005EQJ			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	08/07/2006	TL327143	None	1 Adult Exact	Herts Moths	LC000014000057ON			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	1999	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000FQ2B			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	59/003	King's Meads	Kings Meads	19/07/2003	TL3413	None	1 Adult Exact	Herts Moths	LC0000140000A414			Sect.41	BAP:2007				
Small Emerald	Hemistola chrysoprasaria	insect - moth	20	Hertfordshire	Park Road Ware	2006	TL3414	None	1 Adult Exact	Herts Moths	LC0000140000EYV9			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004LZG			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004LZH			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1998	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004LZI			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/07/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004Y6S			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo Street Hertford	03/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PJ1			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/08/2004	TL327143	None	1 Adult Exact	Herts Moths	LC000014000050NW			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004LZF			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo Street Hertford	30/06/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PI2			Sect.41	BAP:2007				
Ghost Moth	Hepialus humuli	insect - moth	20	Hertfordshire	Bengeo	20/07/2003	TL3214	None	1 Adult Exact	Herts Moths	LC000014000055TI			Sect.41	BAP:2007				

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Shoulder-striped Wainscot	Mythimna comma	insect - moth	20	Hertfordshire	Bengeo Street Hertford	29/06/2006	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000580X			Sect.41	BAP:2007				
Shoulder-striped Wainscot	Mythimna comma	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2004	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056R3			Sect.41	BAP:2007				
Shoulder-striped Wainscot	Mythimna comma	insect - moth	20	Hertfordshire	Bengeo Street Hertford	16/06/2006	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000580W			Sect.41	BAP:2007				
Shoulder-striped Wainscot	Mythimna comma	insect - moth	20	Hertfordshire	Bengeo Street Hertford	14/06/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005EAO			Sect.41	BAP:2007				
Shoulder-striped Wainscot	Mythimna comma	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/07/2006	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000580Y			Sect.41	BAP:2007				
Shoulder-striped Wainscot	Mythimna comma	insect - moth	20	Hertfordshire	Bengeo Street Hertford	28/07/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004QH4			Sect.41	BAP:2007				
Spindle Knot-horn	Nephopterix angustella	insect - moth	20	Hertfordshire	Bengeo Street Hertford	17/06/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004QCA								Nb
Spindle Knot-horn	Nephopterix angustella	insect - moth	20	Hertfordshire	Bengeo Street Hertford	18/06/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005817								Nb
Spindle Knot-horn	Nephopterix angustella	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2004	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056R7								Nb
Straw Obscure	Oegoconia caradjai	insect - moth	20	Hertfordshire	Bengeo Street Hertford	13/08/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004RL4								Nb
Rosy-striped Knot-horn	Oncocera semirubella	insect - moth	20	Hertfordshire	Hertford	1834	TL31	None	1 Adult Exact	Herts Moths	LC0000140000A82C								Nb
Powdered Quaker	Orthosia gracilis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1998	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056IS			Sect.41	BAP:2007				
Powdered Quaker	Orthosia gracilis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	30/03/2005	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005HXY			Sect.41	BAP:2007				
Powdered Quaker	Orthosia gracilis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2002	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056NH			Sect.41	BAP:2007				
Powdered Quaker	Orthosia gracilis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	19/04/2006	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000587E			Sect.41	BAP:2007				
Powdered Quaker	Orthosia gracilis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	14/03/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005G05			Sect.41	BAP:2007				
Powdered Quaker	Orthosia gracilis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	11/04/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004OGI			Sect.41	BAP:2007				
Powdered Quaker	Orthosia gracilis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2004	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056RU			Sect.41	BAP:2007				
Powdered Quaker	Orthosia gracilis	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2003	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000EQV5			Sect.41	BAP:2007				
Dark Spinach	Pelurga comitata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004M4K			Sect.41	BAP:2007				
Dark Spinach	Pelurga comitata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/08/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005FA5			Sect.41	BAP:2007				
Dark Spinach	Pelurga comitata	insect - moth	20	Hertfordshire	Hertford	1828	TL3013	None	1 Adult Exact	Herts Moths	LC0000140000EYSK			Sect.41	BAP:2007				
Hollyhock Seed Moth	Pexicopia malvella	insect - moth	20	Hertfordshire	Bengeo Street Hertford	28/06/2006	TL327143	None	1 Adult Exact	Herts Moths	LC000014000058BB								Nb
Hollyhock Seed Moth	Pexicopia malvella	insect - moth	20	Hertfordshire	Bengeo Street Hertford	28/06/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005BR3								Nb
Large Wainscot	Rhizodra lutosa	insect - moth	20	Hertfordshire	Park Road Ware	2006	TL3414	None	1 Adult Exact	Herts Moths	LC0000140000FNYQ			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2003	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056PY			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2001	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056MD			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	20/07/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004YA5			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1998	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004M20			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	10/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004ZRA			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/08/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005FAE			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/07/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X2E			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/07/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X2D			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2000	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000EQXN			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2003	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000EQVM			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2002	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000FQ91			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2001	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000F64F			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	59/003	King's Meads	Kings Meads	19/07/2003	TL3413	None	1 Adult Exact	Herts Moths	LC00001400009CDQ			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	1999	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000FQ3L			Sect.41	BAP:2007				
Shaded Broad-bar	Scotopteryx chenopodiata	insect - moth	20	Hertfordshire	Park Road Ware	2006	TL3414	None	1 Adult Exact	Herts Moths	LC0000140000EYV4			Sect.41	BAP:2007				
Sulphur Pearl	Sitochroa palealis	insect - moth	20	Hertfordshire	Bengeo Street Hertford	23/08/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004Z4A								N
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/06/2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000058ZK			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	13/05/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X2P			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/06/2005	TL327143	None	2 Adult Exact	Herts Moths	LC00001400005I4Y			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/06/2000	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000590H			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/06/2000	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000590I			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/06/2005	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004QZ8			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/06/2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000058ZJ			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/06/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X2S			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	07/06/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X2T			Sect.41	BAP:2007				
White Ermine	Spilosoma lubricipeda	insect - moth	20	Hertfordshire	Bengeo Street Hertford	09/06/2004	TL327143	None	2 Adult Exact	Herts Moths	LC000014000050F4			Sect.41	BAP:2007				

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Sacombe Road Allotments Hertford	26/06/2005	TL324143	None	1 Adult Exact	Herts Moths	LC0000140000FWNH			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Archers Spring	11/07/2003	TL3013	None	1 Adult Exact	Herts Moths	LC0000140000FUG8			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Wick Playing Field	20/07/2003	TL3214	None	1 Adult Exact	Herts Moths	LC0000140000FW7X			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Ware Park	11/06/2003	TL3414	None	1 Adult Exact	Herts Moths	LC0000140000F1KG			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Ware	06/06/2003	TL3313	None	1 Adult Exact	Herts Moths	LC0000140000FPS1			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Waterford	28/07/1996	TL3114	None	1 larva Exact	Herts Moths	LC0000140000FW71			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	59/003	King's Meads	Kings Meads	25/06/2000	TL3413	None	1 Adult Exact	Herts Moths	LC00001400009CDZ			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	59/062	Waterford Heath (South)	Waterford Pit South	30/05/2001	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000F1SR			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	59/062	Waterford Heath (South)	Waterford Pit South	21/05/2001	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000F1SP			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2001	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000FQ43			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	1999	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000FQ3S			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2003	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000FQ41			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Pit	1999	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000F1SE			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2000	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000FZ7F			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2002	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000FQ98			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/033	Ware Quarry	Ware Park Quarry	08/06/2004	TL3414	None	1 Adult Exact	Herts Moths	LC0000140000F1KK			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Pit North	30/05/2001	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000F1SI			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Pit North	20/05/2001	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000F1SH			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Mead Lane Sewage Works	13/06/2000	TL3313	None	1 Adult Exact	Herts Moths	LC0000140000FVH9			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Mead Lane Sewage Works	13/06/2000	TL3313	None	1 Adult Exact	Herts Moths	LC0000140000FVH8			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	20	Hertfordshire	Park Road Ware	2006	TL3414	None	1 Adult Exact	Herts Moths	LC0000140000FNZ2			Sect.41	BAP:2007				
Cinnabar	Tyria jacobaeae	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2001	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000F640			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1996	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004UTE			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	05/09/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X3K			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	08/06/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005GEP			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	08/09/2003	TL327143	None	1 Adult Exact	Herts Moths	LC0000140000503A			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	12/05/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X3F			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	13/09/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004P2A			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	15/09/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005044			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	23/08/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PW5			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	19/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PPK			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1998	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004M2D			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	20/05/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X3G			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056KV			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004UV7			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2002	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056OM			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2003	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056QW			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	19/05/2004	TL327143	None	1 Adult Exact	Herts Moths	LC000014000050B4			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	03/09/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X3J			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	03/06/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X3H			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	26/08/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004PWG			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2004	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056T7			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	27/08/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005A82			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	28/05/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005GAH			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	30/07/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005BH2			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	30/08/2006	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004X3I			Sect.41	BAP:2007				
Oak Hook-tip	Watsonalla binaria	insect - moth	20	Hertfordshire	Bengeo Street Hertford	31/08/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005024			Sect.41	BAP:2007				
Dusky-lemon Sallow	Xanthia gilvago	insect - moth	20	Hertfordshire	Bengeo Street Hertford	22/09/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005BWW			Sect.41	BAP:2007				
Dusky-lemon Sallow	Xanthia gilvago	insect - moth	20	Hertfordshire	Park Road Ware	2006	TL3414	None	1 Adult Exact	Herts Moths	LC0000140000FNZ8			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Bengeo Street Hertford	17/10/2006	TL327143	None	1 Adult Exact	Herts Moths	LC000014000058I7			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Bengeo Street Hertford	28/09/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005AFG			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004UV9			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056KW			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1996	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004UT7			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Bengeo Street Hertford	14/09/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004NP7			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Bengeo Street Hertford	01/10/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004ODM			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Bengeo Street Hertford	1998	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004M2G			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2002	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000FQ99			Sect.41	BAP:2007				
Sallow	Xanthia icteritia	insect - moth	20	Hertfordshire	Park Road Ware	2006	TL3414	None	1 Adult Exact	Herts Moths	LC0000140000FNZG			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	07/08/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004Z0J			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004UVV			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004UVA			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2000	TL327143	None	1 Adult Exact	Herts Moths	LC000014000056KY			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	20/05/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004XZR			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth</																	

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	18/05/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005G8H			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	16/07/2003	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004POL			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	16/05/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004Q5K			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	16/05/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005C8P			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	13/08/2000	TL327143	None	2 Adult Exact	Herts Moths	LC00001400004NLH			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	12/08/2000	TL327143	None	2 Adult Exact	Herts Moths	LC00001400005A36			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004UXX			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	09/08/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005A2H			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	25/05/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005AN5			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	06/08/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004O7V			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	04/08/2004	TL327143	None	4 Adult Exact	Herts Moths	LC00001400004QK8			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	03/08/2001	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005BJ8			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	11/05/2002	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004YNL			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400004UWQ			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	30/07/2003	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005F5T			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	29/07/2004	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005H0K			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	27/07/2004	TL327143	None	2 Adult Exact	Herts Moths	LC000014000050MA			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	20	Hertfordshire	Bengeo Street Hertford	27/07/2000	TL327143	None	1 Adult Exact	Herts Moths	LC00001400005A04			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	2000	TL3115	None	1 Adult Exact	Herts Moths	LC0000140000FZ7H			Sect.41	BAP:2007				
Dark-barred Twin-spot Carpet	Xanthorhoe ferrugata	insect - moth	45/022	Waterford Heath (North)	Waterford Heath	1999	TL3114	None	1 Adult Exact	Herts Moths	LC0000140000FQ3U			Sect.41	BAP:2007				
Roman Snail	Helix (Helix) pomatia	mollusc			Waterford Heath	01/08/2011	TL319145	None	1 colony Exact	HBRC - Miscellaneous records	LC0000140000RHD0	HSD5	WCA5/9.1k /I						
Slow-worm	Anguis fragilis	reptile		TL31G	Ware Park Mill	Sep-04	TL337138	None	1 Adult Exact	Hertfordshire Surveys	LC00001400000RVG		WCA5/9.1k /I	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		Goldings Meadows & Woods	River Beane	1999	TL3113			Recorder 3 Reptile & Amphibian records	LC000014000007UD		WCA5/9.1k /I	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		River Beane, R. Lea & Lower R. Rib Confluence, Hartham		21/07/1988	TL3313			Recorder 3 Reptile & Amphibian records	LC00001400000LJY		WCA5/9.1k /I	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		Waterford Heath (South)		1993	TL3114			Recorder 3 Reptile & Amphibian records	LC00001400000OF0		WCA5/9.1k /I	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		Hartham Common & The Warren (Hertford)		27/06/1993	TL3213			Recorder 3 Reptile & Amphibian records	LC00001400000OY6		WCA5/9.1k /I	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		Waterford Heath (South)		15/07/1987	TL3114			Recorder 3 Reptile & Amphibian records	LC00001400000KDZ		WCA5/9.1k /I	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		junction of Sacombe Road and Vicarage Lane	Waterford Hamel	30/06/2010	TL318149	present	1 Exact	Consultants Surveys	LC0000140000RGPB		WCA5/9.1k /I	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		Hertfordshire	The Avenue, Bengeo	04/08/2007	TL32011387	None	1 Individual Exact	HBRC - Miscellaneous records	LC00001400000ULT		WCA5/9.1k /I	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		TL31G	Warren Park Road, Bengeo	05/08/1991	TL3213			Recorder 3 Reptile & Amphibian records	LC00001400000NBQ		WCA5/9.1k /I	Sect.41	BAP:2007				

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Grass Snake	Natrix natrix	reptile			River Lea	28/08/2011	TL3414	None	1 Exact	HBRC - Miscellaneous records	LC0000140000RHD2		WCA5/9.1k /l	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		TL31M	by Glaxo Factory, Ware	1980	TL31M			Recorder 3 Reptile & Amphibian records	LC00001400000D11		WCA5/9.1k /l	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		TL31G	near County Hall, Hertford	1964	TL31G			Recorder 3 Reptile & Amphibian records	LC000014000000DS		WCA5/9.1k /l	Sect.41	BAP:2007				
Grass Snake	Natrix natrix	reptile		TL31G		1950 - 1980	TL31G			Recorder 3 Reptile & Amphibian records	LC000014000002HM		WCA5/9.1k /l	Sect.41	BAP:2007				
Adder	Vipera berus	reptile			Waterford Heath (South)	05/07/1987	TL3114			Recorder 3 Reptile & Amphibian records	LC00001400000KDW		WCA5/9.1k /l	Sect.41	BAP:2007				
Adder	Vipera berus	reptile		junction of Sacombe Road and Vicarage Lane	Waterford Hamel	21/09/2010	TL318149	present	1 Exact	Consultants Surveys	LC0000140000RGPM		WCA5/9.1k /l	Sect.41	BAP:2007				
Adder	Vipera berus	reptile		junction of Sacombe Road and Vicarage Lane	Waterford Hamel	09/09/2010	TL318149	present	1 Exact	Consultants Surveys	LC0000140000RGPR		WCA5/9.1k /l	Sect.41	BAP:2007				
Adder	Vipera berus	reptile		Waterford Heath (South)		Jul-93	TL3114			Recorder 3 Reptile & Amphibian records	LC00001400000OYL		WCA5/9.1k /l	Sect.41	BAP:2007				
Adder	Vipera berus	reptile		TL31H	Rib Vale, Bengo	Jul-93	TL31H			Recorder 3 Reptile & Amphibian records	LC00001400000OYJ		WCA5/9.1k /l	Sect.41	BAP:2007				
Common Lizard	Zootoca vivipara	reptile		junction of Sacombe Road and Vicarage Lane	Waterford Hamel	27/09/2010	TL318149	present	1 Exact	Consultants Surveys	LC0000140000RGQN		WCA5/9.1k /l	Sect.41	BAP:2007				
Common Lizard	Zootoca vivipara	reptile		junction of Sacombe Road and Vicarage Lane	Waterford Hamel	09/09/2010	TL318149	present	1 Exact	Consultants Surveys	LC0000140000RGPQ		WCA5/9.1k /l	Sect.41	BAP:2007				
European Water Vole	Arvicola terrestris	terrestrial mammal	59/010	Waterford Marsh	River Beane	Summer 1997	TL313149	reported to recorder	2 present Default	Recorder 3 Water Vole records	LC000014000005WB		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
European Water Vole	Arvicola terrestris	terrestrial mammal	59/010	Waterford Marsh		22/05/1995	TL315155	field record	1 present Default	Recorder 3 Water Vole records	LC0000140000035S		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
European Water Vole	Arvicola terrestris	terrestrial mammal	59/003	King's Meads	River Lea	May-89	TL340138	field record	1 present Default	Recorder 3 Water Vole records	LC00001400000M5F		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
European Water Vole	Arvicola terrestris	terrestrial mammal	59/003	King's Meads		21/07/1978	TL330132	field record	1 present Default	Recorder 3 Water Vole records	LC00001400000CED		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
European Water Vole	Arvicola terrestris	terrestrial mammal		TL31G	River Lea (navigation) Hertford	1985	TL333134	field record	1 present Default	Recorder 3 Water Vole records	LC00001400000IP4		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
European Water Vole	Arvicola terrestris	terrestrial mammal	59/003	King's Meads	Manifold ditch	Mar-99	TL3413	field record	1 present Default	Recorder 3 Water Vole records	LC000014000007XZ		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
European Water Vole	Arvicola terrestris	terrestrial mammal		TL31M		1987	TL31M	reported to recorder	1 present Default	Recorder 3 Water Vole records	LC00001400000K54		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
European Water Vole	Arvicola terrestris	terrestrial mammal		TL31L		1987	TL31L	reported to recorder	1 present Default	Recorder 3 Water Vole records	LC00001400000K53		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
European Water Vole	Arvicola terrestris	terrestrial mammal		TL31B		1987	TL31B	reported to recorder	1 present Default	Recorder 3 Water Vole records	LC00001400000K52		WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007, LBAP				
a Bat	Chiroptera	terrestrial mammal			Waterford Church Area	Dec-89	TL3114			Recorder 3 Bat records	LC00001400000ME0	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31I	Chapmore End, Poplars View	Summer 1996	TL3315			Recorder 3 Bat records	LC000014000004QJ	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31B	Bengo, The Avenue	1996	TL3113			Recorder 3 Bat records	LC000014000003SL	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31C	The Wick, Bengo	04/04/2002	TL3114			Recorder 3 Bat records	LC000014000009T9	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31G	Bengo The Avenue	23/04/2001	TL3213			Recorder 3 Bat records	LC000014000009CT	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31G	Hertford, Fanshaw St	15/09/2001	TL3213			Recorder 3 Bat records	LC000014000009LP	Yes	Yes						

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
a Bat	Chiroptera	terrestrial mammal		TL31M		1994	TL3414			Recorder 3 Bat records	LC00001400000PC3	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31B		1994	TL31B			Recorder 3 Bat records	LC00001400000PBZ	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31C		1994	TL31C			Recorder 3 Bat records	LC00001400000PC0	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31H		1994	TL31H			Recorder 3 Bat records	LC00001400000PC1	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31N		1994	TL31N			Recorder 3 Bat records	LC00001400000PC4	Yes	Yes						
a Bat	Chiroptera	terrestrial mammal		TL31L		1994	TL31L			Recorder 3 Bat records	LC00001400000PC2	Yes	Yes						
Serotine	Eptesicus serotinus	terrestrial mammal		TL31M		1985	TL31M	None	1 present Default	Mammals, Amphibians & Reptiles of Hertfordshire Recorder 3	LC00001400000HM9	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
West European Hedgehog	Erinaceus europaeus	terrestrial mammal			Goldings Meadows & Woods	1986	TL3113			Recorder 3 Reptile & Amphibian records	LC00001400000J5O			Sect.41	BAP:2007				
West European Hedgehog	Erinaceus europaeus	terrestrial mammal		TL31M		1985	TL31M	None	1 present Default	Mammals, Amphibians & Reptiles of Hertfordshire Recorder 3	LC00001400000HME			Sect.41	BAP:2007				
West European Hedgehog	Erinaceus europaeus	terrestrial mammal		TL31H		1985	TL31H	None	1 present Default	Mammals, Amphibians & Reptiles of Hertfordshire Recorder 3	LC00001400000HLK			Sect.41	BAP:2007				
Brown Hare	Lepus europaeus	terrestrial mammal				1985	TL31M	reported to recorder		Mammals, Amphibians & Reptiles of Hertfordshire Recorder 3	LC00001400000IOE			Sect.41	BAP:2007				
Brown Hare	Lepus europaeus	terrestrial mammal				1985	TL31H	reported to recorder		Mammals, Amphibians & Reptiles of Hertfordshire Recorder 3	LC00001400000IOC			Sect.41	BAP:2007				
Brown Hare	Lepus europaeus	terrestrial mammal				1985	TL31D	reported to recorder		Mammals, Amphibians & Reptiles of Hertfordshire Recorder 3	LC00001400000IOA			Sect.41	BAP:2007				
Brown Hare	Lepus europaeus	terrestrial mammal				1985	TL31C	reported to recorder		Mammals, Amphibians & Reptiles of Hertfordshire Recorder 3	LC00001400000IO9			Sect.41	BAP:2007				
European Otter	Lutra lutra	terrestrial mammal	59/092	River Beane, R. Lea & Lower R. Rib Confluence, Hartham	Otter Island	1995	TL333137	field record	1 present Default	Recorder 3 Otter records	LC00001400000QAA	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal	59/092	River Beane, R. Lea & Lower R. Rib Confluence, Hartham	River Beane near otter island	19/10/1997	TL33221362	field record	1 present Default	Recorder 3 Otter records	LC0000140000068F	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal	59/092	River Beane, R. Lea & Lower R. Rib Confluence, Hartham	RiverBeane	Nov-01	TL332136	Dung or other signs		Hertfordshire Surveys	LC00001400000R5K	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal	59/003	King's Meads	Kings Meads - Lea/Rib Joe's Island	Sep-07	TL332137	None		Otter Records	LC00001400000SCL	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal	59/092	River Beane, R. Lea & Lower R. Rib Confluence, Hartham	River Rib near otter island	19/10/1997	TL33361385	field record	1 present Default	Recorder 3 Otter records	LC0000140000068G	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal		TL31G	River Rib, Ware Park Rd.	27/10/1992	TL332139	Dung or other signs	1 present Default	Recorder 3 Otter records	LC00001400000O1S	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal		TL311		2009	TL337164	Dung or other signs		HBRC - Miscellaneous records	LC00001400000Q285	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal		TL311	River Rib, Paynes Hall, Westmill	Aug-92	TL337164	Dung or other signs	1 present Default	Recorder 3 Otter records	LC00001400000NZU	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal	59/003	King's Meads	River Lee Hertford-Ware	1994 - 1996	TL3413	field record	1 present Default	Recorder 3 Otter records	LC00001400000P8U	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal		TL31B	Hertingfordbury, River Mimram	1978	TL31B	reported to recorder	3 present Default	Recorder 3 Otter records	LC00001400000C2U	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
European Otter	Lutra lutra	terrestrial mammal	e	TL31G	Hertford, River Lea	1993	TL31G	reported to recorder	1 present Default	Recorder 3 Otter records	LC00001400000OG4	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
European Otter	Lutra lutra	terrestrial mammal		TL31B	Hertingfordbury, River Mimram	1976	TL31B	reported to recorder	2 present Default	Recorder 3 Otter records	LC00001400000B2X	HSD2p, HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP			Berne2	
Harvest Mouse	Micromys minutus	terrestrial mammal		TL31D		1985	TL31D	reported to recorder		Hertfordshire Mammals, Amphibians & Reptiles of Hertfordshire	LC00001400000HL8			Sect.41	BAP:2007				
Hazel Dormouse	Muscardinus avellanarius	terrestrial mammal		TL31I	Chapmore End, Rockfield House, Crouchfield	1993	TL329161	field record	1 present Default	Recorder 3 Dormouse records	LC00001400000OEY	HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP				
Hazel Dormouse	Muscardinus avellanarius	terrestrial mammal	45/016	Flowersash Wood		1989	TL321160	nest	1 present Default	Recorder 3 Dormouse records	LC00001400000LZG	HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007, LBAP				
Daubenton's Bat	Myotis daubentonii	terrestrial mammal		TL31C	Waterford Hall Farm Area	Jul-00	TL3115			Recorder 3 Bat records	LC00001400000918	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Daubenton's Bat	Myotis daubentonii	terrestrial mammal		River Beane, R. Lea & Lower R. Rib Confluence, Hartham	River Lea/Rib	Jun-96	TL3313			Recorder 3 Bat records	LC000014000004Q3	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Daubenton's Bat	Myotis daubentonii	terrestrial mammal		TL31H	River Rib, Westmill Farm Area	Aug-98	TL31H			Recorder 3 Bat records	LC000014000007KF	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Daubenton's Bat	Myotis daubentonii	terrestrial mammal			River Rib, Westmill	Summer 2000	TL3316			Recorder 3 Bat records	LC000014000008Z1	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Natterer's Bat	Myotis nattereri	terrestrial mammal		TL31C	Waterford Hall Farm Area	Jul-00	TL3115			Recorder 3 Bat records	LC00001400000919	HSD4	WCA5/9.1k /I, WCA5/9.		LBAP			Berne2, Bonn2	
Natterer's Bat	Myotis nattereri	terrestrial mammal		TL31C	Waterford Hall Farm Area	08/11/1993	TL31C			Recorder 3 Bat records	LC00001400000P6S	HSD4	WCA5/9.1k /I, WCA5/9.		LBAP			Berne2, Bonn2	
Noctule Bat	Nyctalus noctula	terrestrial mammal			River Rib, Westmill	Summer 2000	TL3316			Recorder 3 Bat records	LC000014000008Z0	HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Noctule Bat	Nyctalus noctula	terrestrial mammal		TL31L	Ware Road, Hertford	18/06/2009	TL31L	None	1 in flight Unknown	HBRC - Miscellaneous records	LC0000140000R9DJ	HSD4	WCA5/9.1k /I, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
a Pipistrelle Bat	Pipistrellus	terrestrial mammal		TL31H	Crouchfield, nr Ware Herts	09/01/2007	TL3315	None		Bat Roost records (HMBG)	LC0000140000R9S7		WCA5/9.1k /I, WCA5/9.					Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			Ware Park Area	1993	TL3414			Recorder 3 Bat records	LC00001400000OF2	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			Little Mole Wood	1996	TL3113			Recorder 3 Bat records	LC0000140000041Z	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			Hartham Common & The Warren (Hertford)	27/06/1996	TL3213			Recorder 3 Bat records	LC000014000004V3	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			Hartham Common & The Warren (Hertford)	Jun-96	TL3213			Recorder 3 Bat records	LC000014000004Q2	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			King's Meads	Summer 1996	TL3313			Recorder 3 Bat records	LC000014000004QM	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			King's Meads	Jun-96	TL3313			Recorder 3 Bat records	LC000014000004Q5	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			Foxleys Wood	10/06/1996	TL3116			Recorder 3 Bat records	LC000014000004RP	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			Waterford Heath (North)	03/09/1998	TL3115			Recorder 3 Bat records	LC000014000007NP	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			Cowshed Corner	01/06/2000	TL3314			Recorder 3 Bat records	LC000014000008YJ	HSD4	WCA5/9.1k /I, WCA5/9.					Berne2, Bonn2	

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal	e	TL31I	Chapmore End	13/07/1995	TL3216			Recorder 3 Bat records	LC000014000003D2	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31H	The Wick, Bengo	11/07/1977	TL3214			Recorder 3 Bat records	LC00001400000BRR	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31H	Hertford, Rib Vale	18/06/1990	TL3214			Recorder 3 Bat records	LC00001400000MRP	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31H	Bengo, The Wick.	10/08/1978	TL3214			Recorder 3 Bat records	LC00001400000CFF	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31H	Bengo, The Wick	07/04/1998	TL3214			Recorder 3 Bat records	LC000014000006SQ	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31G	St Leonard's Church Area (Hertford)	02/09/1998	TL3313			Recorder 3 Bat records	LC000014000007N6	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31G	Church Road, Hertford	07/08/1998	TL3213			Recorder 3 Bat records	LC000014000007L8	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31C	Gobions Lane, Stapleford	08/06/1991	TL3115			Recorder 3 Bat records	LC00001400000N9J	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31C	High Rd. Waterford.	1988	TL3114			Recorder 3 Bat records	LC00001400000KY3	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31C	High Rd. Waterford	1991	TL3114			Recorder 3 Bat records	LC00001400000N4F	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31C	Waterford Hall Farm Area	Jul-00	TL3115			Recorder 3 Bat records	LC00001400000917	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31C	High Rd. Waterford	1990	TL3114			Recorder 3 Bat records	LC00001400000MFT	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31C	High Rd. Waterford	1989	TL3114			Recorder 3 Bat records	LC00001400000LZI	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31B	Cowper Crescent	01/08/1994	TL3113			Recorder 3 Bat records	LC00001400000Q0X	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31C	Bengo	18/08/2004	TL3114			Car Bat Survey	LC00001400000RJO	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31C	Bullsmill	18/08/2004	TL3114			Car Bat Survey	LC00001400000RJN	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31I	Chapmore End area	24/07/2004	TL3216			Car Bat Survey	LC00001400000RC4	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31I	B158 nr Paynes Hall	24/07/2004	TL3316			Car Bat Survey	LC00001400000RC6	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31G	Port Hill	18/08/2004	TL3213			Car Bat Survey	LC00001400000RJQ	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31H	Bengo	18/08/2004	TL3214			Car Bat Survey	LC00001400000RJP	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31H	Westmill Farm Area	04/08/2002	TL3315			Bat Group Survey	LC00001400000RQQ	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31I	B158 nr Paynes Hall	24/07/2004	TL3316			Car Bat Survey	LC00001400000RC5	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31I	Chapmore End area	24/07/2004	TL3216			Car Bat Survey	LC00001400000RC3	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31I	Chapmore End area	24/07/2004	TL3216			Car Bat Survey	LC00001400000RC2	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal			River Rib, Wetsmill	Summer 2000	TL3316			Recorder 3 Bat records	LC000014000008Z2	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	

Species records

Common Name	Scientific Name	Group	FileCode	Sample Location	Location Name	Date	GridRef	RecType	Abundance	Survey	TAXON_OCCU	European	UK_Legal	NERC	BAP2007	IUCN	Scarce Rare	Berne_Bonn	Local
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31I	Tonwell, Ware Road	20/09/1992	TL31I			Recorder 3 Bat records	LC00001400000O11	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31H	Hertford, Rib Vale	Aug-95	TL31H			Recorder 3 Bat records	LC000014000003F8	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31B	Hertingfordbury	21/02/1996	TL31B			Recorder 3 Bat records	LC000014000004DN	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31L	Ware Road, Hertford	18/06/2009	TL31L	None	2-3 in flight Unknown	HBRC - Miscellaneous records	LC0000140000R9DK	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		TL31L	Ware Road, Hertford	25/06/2009	TL31L	None		HBRC - Miscellaneous records	LC0000140000R9DL	HSD4	WCA5/9.1k /l, WCA5/9.					Berne2, Bonn2	
Soprano Pipistrelle	Pipistrellus pygmaeus	terrestrial mammal		TL31I	B158 The Well House	24/07/2004	TL3316			Car Bat Survey	LC00001400000RGA	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Soprano Pipistrelle	Pipistrellus pygmaeus	terrestrial mammal		TL31B	Hertford, Becketts	08/07/2002	TL31			Bat Group Survey	LC00001400000RLJ	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Soprano Pipistrelle	Pipistrellus pygmaeus	terrestrial mammal		TL31L	Ware Road, Hertford	25/06/2009	TL31L	None		HBRC - Miscellaneous records	LC0000140000R9DM	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
a Long-eared Bat	Plecotus	terrestrial mammal		TL31H	Crouchfield, nr Ware Herts	09/01/2007	TL3315	None		Bat Roost records (HMBG)	LC0000140000R9S8		WCA5/9.1k /l, WCA5/9.					Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal		TL31G	St Leonard's Church Area (Hertford)	02/09/1998	TL3313			Recorder 3 Bat records	LC000014000007N7	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal		TL31H	Crouchfield, nr Ware Herts	09/01/2007	TL3315	None		Bat Roost records (HMBG)	LC0000140000R9SH	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal		TL31H	Rickneys Farm Area	20/02/1996	TL3215			Recorder 3 Bat records	LC000014000004DK	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal		TL31H	Rickneys Farm Area	Jan-00	TL3215			Recorder 3 Bat records	LC000014000008QF	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal			Waterford Church Area	21/10/1977	TL3114			Recorder 3 Bat records	LC00001400000BW2	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal			Upper Stonyhills Wood	17/07/1996	TL3216			Recorder 3 Bat records	LC000014000004WT	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal			Goldings Meadows & Woods	31/01/1999	TL3114			Recorder 3 Bat records	LC000014000007WU	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal			Ware Park Area	1993	TL3414			Recorder 3 Bat records	LC00001400000OF1	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal			Waterford Church Area	May-93	TL3114			Recorder 3 Bat records	LC00001400000OV2	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal		TL31B	North Rd. Hertford	08/06/1982	TL31B			Recorder 3 Bat records	LC00001400000EF9	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	
Brown Long-eared Bat	Plecotus auritus	terrestrial mammal		TL31C	Waterford Hall Farm Area	08/11/1993	TL31C			Recorder 3 Bat records	LC00001400000P6R	HSD4	WCA5/9.1k /l, WCA5/9.	Sect.41	BAP:2007			Berne2, Bonn2	

Statutory sites

STATUS	NAME	GRID	AREA (ha)	SITE REFERENCE
LNR	Waterford Heath	TL318146	35.243	45/022, 59/062

Veteran & Mature Tree records

SPECIES	SURVEY DATE	GIRTH (cm)	SITE	ADDRESS	CONTEXT	EASTING	NORTHING	RECORD NUMBER
Other conifers	23/08/2000	457	158 Bury Green Rd	Cheshunt	GD, Garden	534300	215800	656
Oak species	27/08/2000	880	Bengeo Hall	Bengeo, Hertford	PS, Pasture	533100	213800	657
Sweet Chestnut	18/08/2000	492	Bengeo Mews	Bengeo, Hertford	UT, Urban Tree	532400	214100	658
Oak species	18/08/2000	716	Ware park Farm (or Barden Farm?)	Bengeo, Hertford	AR, Arable Field	534200	214300	659
Cedar of Lebanon	21/10/2002	390	Bengeo Mews	Hertford	UT, Urban Tree	532400	214100	1407
Hornbeam	14/10/2002	0	Ware Park		PL, Parkland	533300	214400	2441
Hornbeam	14/10/2002	595	Ware Park		PL, Parkland	533300	214400	2442
Walnut	14/10/2002	255	Ware Park		PL, Parkland	533200	214500	2443
Hornbeam	14/10/2002	0	Ware Park		PL, Parkland	533300	214300	2444
Hornbeam	14/10/2002	0	Ware Park		PL, Parkland	533300	214400	2445
Oak species	14/10/2002	410	Ware Park		PL, Parkland	534271	214296	2446
Oak species	14/10/2002	605	Ware Park		PL, Parkland	534301	214235	2447
Oak species	14/10/2002	280	Ware Park		PL, Parkland	534300	214200	2448
Oak species	14/10/2002	0	Ware Park		PL, Parkland	534097	214191	2449
Lime species	14/10/2002	0	Ware Park		PL, Parkland	533986	214190	2450
Oak species	14/10/2002	737	Ware Park		PL, Parkland	534140	214343	2451
Oak species	14/10/2002	645	Ware Park		PL, Parkland	534311	214381	2452
Oak species	14/10/2002	0	Ware Park		PL, Parkland	534200	214400	2453
Oak species	14/10/2002	673	Ware Park		PL, Parkland	533548	214241	2454
Oak species	14/10/2002	569	Ware Park		PL, Parkland	533861	214116	2455
Lime species	14/10/2002	383	Ware Park		PL, Parkland	533864	214294	2456
Lime species	14/10/2002	421	Ware Park		PL, Parkland	533911	214306	2457
Hornbeam	14/10/2002	0	Ware Park	The Wilderness Field, West side of park.	PL, Parkland	533184	214423	2458
Hornbeam	14/10/2002	595	Ware Park	The Wilderness Field, West side of park.	PL, Parkland	533200	214400	2459
Walnut	14/10/2002	255	Ware Park	The Wilderness Field, West side of park.	PL, Parkland	533200	214500	2460
Hornbeam	14/10/2002	685	Ware Park	The Wilderness Field, West side of park.	PL, Parkland	533175	214303	2461
Hornbeam	14/10/2002	0	Ware Park	The Wilderness Field, West side of park.	PL, Parkland	533100	214300	2462
Oak species	03/11/2002	475	Ware Park	The Wilderness Field, West side of park.	PL, Parkland	533355	214208	2463
Oak species	17/10/2002	410	Ware Park	South East side of park (West of A10)	PL, Parkland	534271	214296	2464
Oak species	17/10/2002	605	Ware Park	South East side of park (West of A10)	PL, Parkland	534301	214235	2465
Walnut	17/10/2002	280	Ware Park	South East side of park (West of A10)	PL, Parkland	534300	214200	2466
Oak species	17/10/2002	0	Ware Park	South East side of park (West of A10)	PL, Parkland	534097	214191	2467
Lime species	17/10/2002	0	Ware Park	South East side of park (West of A10)	PL, Parkland	533986	214190	2468
Oak species	17/10/2002	737	Ware Park	South East side of park (West of A10)	PL, Parkland	534140	214343	2469
Oak species	17/10/2002	645	Ware Park	South East side of park (West of A10)	PL, Parkland	534311	214381	2470
Oak species	17/10/2002	0	Ware Park	South East side of park (West of A10)	PL, Parkland	534200	214400	2471
Oak species	20/10/2002	673	Ware Park	South Central section of park, South of Bardons Fm	PL, Parkland	533548	214241	2472
Oak species	20/10/2002	569	Ware Park	South Central section of park, South of Bardons Fm	PL, Parkland	533861	214116	2473
Lime species	20/10/2002	383	Ware Park	South Central section of park, South of Bardons Fm	PL, Parkland	533864	214294	2474
Lime species	20/10/2002	421	Ware Park	South Central section of park, South of Bardons Fm	PL, Parkland	533911	214306	2523
Oak species	29/10/2002	1100	Ware Park	South Central West Side	PL, Parkland	533641	214200	2524
Hornbeam	29/10/2002	0	Ware Park	South Central West Side	PL, Parkland	533641	214170	2525
Oak species	29/10/2002	590	Ware Park	South Central West Side	PL, Parkland	533658	214218	2526
Oak species	29/10/2002	813	Ware Park	West side of drive south of mansion	PL, Parkland	533441	214341	2527
Oak species	29/10/2002	599	Ware Park	East side of park	PL, Parkland	533750	214500	2528
Oak species	29/10/2002	452	Ware Park	East side of park	PL, Parkland	533930	214693	2529
Oak species	29/10/2002	640	Ware Park	East side of park	PL, Parkland	533973	214638	2530

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SITE REFERENCE	SITE NAME	GRID REFERENCE	AREA(ha)	RATIFIED	DESCRIPTION
45/004	Waterford Common	TL314152	1.04	1997	Area of neutral to calcareous grassland with Hawthorn (<i>Crataegus monogyna</i>) and Elder (<i>Sambucus nigra</i>) scrub on sloping gravelly ground. The site supports habitats which are heavily disturbed by rabbit grazing and burrowing; with an unusual plant community including Common Stork's-bill (<i>Erodium cicutarium</i>), Ploughman's Spikenard (<i>Inula conyzia</i>), Large Thyme (<i>Thymus pulegioides</i>) and the UK Near Threatened species Hoary Cinquefoil (<i>Potentilla argentea</i>). Wildlife Site criteria: Grassland indicators.
45/014	Lower Stonyhills Wood	TL318167	4.61	1997	Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice with standards woodland. The northern half of the wood is largely semi-natural with some old ornamental interplanting of Spruce (<i>Picea</i> sp.) and Common Lime (<i>Tilia x europaea</i>) plus Sycamore (<i>Acer pseudoplatanus</i>) and Ash (<i>Fraxinus excelsior</i>) coppice and standards. The southern part is a mixed plantation of Pedunculate Oak, European Larch (<i>Larix decidua</i>) and Scots Pine (<i>Pinus sylvestris</i>) with some semi-natural remnants around the edge. The ground flora supports ancient woodland indicators including frequent Bluebell (<i>Hyacinthoides non-scripta</i>) plus Dog's Mercury (<i>Mercurialis perennis</i>), Broad Buckler-fern (<i>Dryopteris dilatata</i>), Remote Sedge (<i>Carex remota</i>), Slender St John's-wort (<i>Hypericum pulchrum</i>), <i>Luzula pilosa</i> , Wood Meadow-grass (<i>Poa nemoralis</i>) and Primrose (<i>Primula vulgaris</i>). Old wood banks occur to much of the woodland perimeter and grassy rides and several depressions (possibly swallow holes) are also present. Wildlife Site criteria: Ancient Woodland Inventory site with restorable elements of its previous semi-natural character including some semi-natural canopy and ancient features;

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					woodland indicators.
45/015	Upper Stonyhills Wood	TL322167	8.59	1997	Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice with standards woodland. The northern half of the wood is semi-natural with an open structure while the southern part supports a mixed plantation of Pedunculate Oak, Red Oak (<i>Quercus rubra</i>), European Larch (<i>Larix decidua</i>) and Scots Pine (<i>Pinus sylvestris</i>). The ground flora supports ancient woodland indicators including Bluebell (<i>Hyacinthoides non-scripta</i>), Dog's Mercury (<i>Mercurialis perennis</i>), ferns (<i>Dryopteris</i> spp.), Hairy Wood-rush (<i>Luzula pilosa</i>), Wood Melick (<i>Melica uniflora</i>), Wood Meadow-grass (<i>Poa nemoralis</i>), Pignut (<i>Conopodium majus</i>) and Primrose (<i>Primula vulgaris</i>). Old wood banks occur along the margins of the northern half but only to the west side of the southern half. Grassy rides add habitat diversity. Wildlife Site criteria: Ancient Woodland Inventory site with restorable elements of its previous semi-natural character including some semi-natural canopy and ancient features; woodland indicators.
45/016	Flowersash Wood	TL322162	6.39	1997	Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice with standards woodland. The northern portion of the wood supports a predominantly semi-natural canopy while the southern part is almost entirely Scots Pine (<i>Pinus sylvestris</i>) plantation. The ground flora supports a good diversity of indicator species with abundant Bluebell (<i>Hyacinthoides non-scripta</i>) and Dog's Mercury (<i>Mercurialis perennis</i>) plus other species such as Broad Buckler-fern (<i>Dryopteris dilatata</i>), Pignut (<i>Conopodium majus</i>), Wood Spurge (<i>Euphorbia amygdaloides</i>), Wood Millet (<i>Milium effusum</i>), Primrose (<i>Primula vulgaris</i>) and Wood Meadow-grass (<i>Poa nemoralis</i>). Dormice and other protected species have been recorded within the site. The wood

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					supports numerous ancient features including four old pollarded Hornbeams on the western edge, several hollows, a ditch and banks within the wood and banks around much of the perimeter. Wildlife Site criteria: Ancient Woodland Inventory site with restorable elements of its previous semi-natural character including some semi-natural canopy and ancient features; woodland indicators.
45/017	Bardon Clumps	TL319158	3.04	1997	Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice with standards woodland site which predominantly supports an old Pedunculate Oak plantation. Relict semi-natural woodland occurs around the margins. Woodland indicator species recorded in the ground flora include Dog's Mercury (<i>Mercurialis perennis</i>), Bluebell (<i>Hyacinthoides non-scripta</i>), Wood Millet (<i>Milium effusum</i>), Wood Melick (<i>Melica uniflora</i>), Wood Meadow-grass (<i>Poa nemoralis</i>) and Early Dog-violet (<i>Viola reichenbachiana</i>). Habitats noted within the wood include an open grassy clearing and a small pond. Wildlife Site criteria: Ancient Woodland Inventory site with restorable elements of its previous semi-natural character including some semi-natural canopy and ancient features; woodland indicators.
45/018	St Johns Wood (Rickneys Quarry)	TL325154	3.81	1997	Semi-natural broadleaved woodland site, possibly ancient at least in part. The western half is an old plantation of Beech (<i>Fagus sylvatica</i>), Sweet Chestnut (<i>Castanea sativa</i>), Elm (<i>Ulmus</i> sp.) and Ash (<i>Fraxinus excelsior</i>) while the eastern end is mainly semi-natural Ash woodland and retains some evidence of an ancient character. Pedunculate Oak (<i>Quercus robur</i>) and Hornbeam (<i>Carpinus betulus</i>) are uncommon. The ground flora is not diverse but supports a number of woodland indicators including Bluebell (<i>Hyacinthoides non-scripta</i>), Yellow Archangel (<i>Lamiastrum galeobdolon</i>), Dog's Mercury

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					(<i>Mercurialis perennis</i>) and Three-nerved Sandwort (<i>Moehringia trinervia</i>). Some heathy grassland remnants and Bracken (<i>Pteridium aquilinum</i>) are present in the south-east corner of the site. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.
45/019	Foxleys Wood	TL315164	4.68	1997	Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) and Ash (<i>Fraxinus excelsior</i>)/Field Maple (<i>Acer campestre</i>)/Hazel (<i>Corylus avellana</i>) coppice woodland bordered by the River Beane in the west. To the south-eastern corner is a small area of Ash plantation with some old Pedunculate Oak standards. The ground flora supports a good diversity of species including many woodland indicators, mainly Bluebell (<i>Hyacinthoides non-scripta</i>) and Dog's Mercury (<i>Mercurialis perennis</i>) plus Wood Anemone (<i>Anemone nemorosa</i>), Pignut (<i>Conopodium majus</i>), Giant Fescue (<i>Festuca gigantea</i>), Wood Melick (<i>Melica uniflora</i>), Wood Millet (<i>Milium effusum</i>) and Goldilocks Buttercup (<i>Ranunculus auricomus</i>). Of particular note, both ecologically and geologically, are several peaty spring sources arising within the wood from the underlying gravel and chalky clay. The wet substrate produced supports some Alder (<i>Alnus glutinosa</i>) plus species such as Marsh Marigold (<i>Caltha palustris</i>) and Wood Speedwell (<i>Veronica montana</i>). The northern part of the wood is predominantly a Scots Pine (<i>Pinus sylvestris</i>) plantation. The Roman Snail (<i>Helix pomatia</i>), a protected species, has been recorded. Wildlife Site criteria: Ancient woodland with a semi-natural canopy and evidence suggesting an ancient origin; shown on Bryant's map (1822); >1 ha; woodland indicators.
45/022	Waterford Heath (North)	TL316152	14.3	1997	Restored former gravel pit with a mosaic of habitats. The central area supports disturbed, levelled gravelly ground with sown/regenerating grassland and to the eastern and western

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					edges there are interesting small patches of acidic and calcareous grassland with scattered young scrub. The grassland areas support plants such as Viper's-bugloss (<i>Echium vulgare</i>), Agrimony (<i>Agrimonia eupatoria</i>), Common Centaury (<i>Centaureum erythraea</i>), Bird's-foot Trefoil (<i>Lotus corniculatus</i>), Carline Thistle (<i>Carlina vulgaris</i>) and the orchids Bee Orchid (<i>Ophrys apifera</i>) and Common Spotted-orchid (<i>Dactylorhiza fuchsii</i>). The area is important for the Grizzled Skipper (<i>Pyrgus malvae</i>) and Brown Argus (<i>Aricia agestis</i>) butterflies. The north-west perimeter supports old semi-natural scrub and some remnant ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) woodland by the River Beane. A conifer plantation is present to the east side of the site and more recent areas of mixed broadleaf plantation occur in the south. Ponds in the grassland area add further habitat diversity. Wildlife Site criteria: Grassland indicators.
45/023	River Beane from Waterford Hall to Mill End	TL314160	2.89	1997	A stretch of river with relatively steep banks and a reasonable depth of clear, unpolluted water over a gravel bed. There is a good aquatic emergent community. Water voles recorded within this stretch of river. Wildlife Site criteria: Species.
45/044	Hubbard's Wood	TL309159	2.84	1997	Two groves of ancient woodland separated by a road. The wood was formerly Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) and Ash (<i>Fraxinus excelsior</i>)/Field Maple (<i>Acer campestre</i>)/Hazel (<i>Corylus avellana</i>) mixed coppice with standards. The central portion of the main area has a high canopy of planted Sycamore (<i>Acer pseudoplatanus</i>) standards, with regenerating and invading Sycamore occurring throughout the wood. Some Sweet Chestnut (<i>Castanea sativa</i>) is also present. The ground flora is dominated by Bluebell (<i>Hyacinthoides non-scripta</i>) with frequent Dog's Mercury (<i>Mercurialis perennis</i>), except for the

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					central area which is mainly Bramble (<i>Rubus fruticosus</i> agg.). Steep banks border the wood in the east and Hornbeam coppice stubs are evident on most boundaries. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.
45/045	Copse E. of Priest Wood	TL301156	0.99	1997	Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice with some Ash (<i>Fraxinus excelsior</i>), Field Maple (<i>Acer campestre</i>) and Hazel (<i>Corylus avellana</i>). The ground flora is not diverse but supports ancient woodland indicators such as Bluebell (<i>Hyacinthoides non-scripta</i>), Dog's Mercury (<i>Mercurialis perennis</i>), Wood Spurge (<i>Euphorbia amygdaloides</i>), Wood Meadow-grass (<i>Poa nemoralis</i>) and Wood Millet (<i>Milium effusum</i>). There are wood banks on the margins, with poor coppice hedges, and a dry pond and some marginal scrub add habitat diversity. Wildlife Site criteria: Ancient woodland with a semi-natural canopy and field evidence of an ancient origin; shown on 1st Ed OS (1880) (south part only on Bryant's map (1822)); woodland indicators.
45/094	Rickneys Quarry	TL318153	16.8	2008	An area of restored mineral workings, including grazed neutral grassland and young plantation woodland. The site is important for a range of flora, especially butterflies and in particular for the Grizzled Skipper (<i>Pyrgus malvae</i>), a Red List and UK BAP Priority Species. Wildlife Site criteria: Species.
59/001	Goldings Meadows & Woods	TL313138	24.13	1997	Situated on alluvial and glacial gravels of the lower Beane valley, the site comprises meadows, ancient woodland and several watercourses, including an 18th Century landscape canal, which are of high wildlife and scenic value. The aquatic habitats are particularly rich with plants such as Reed Sweet-grass (<i>Glyceria maxima</i>), Fool's Water-cress (<i>Apium nodiflorum</i>) and Bur-reeds (<i>Sparganium</i> spp.). Mare's-tail (<i>Hippuris vulgaris</i>) and River Water-dropwort (<i>Oenanthe fluviatilis</i>) have also been recorded. Surrounding grazing

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					<p>pastures are of neutral, to somewhat acid, grassland. The ancient Great Mole Wood (west area) supports Pedunculate Oak (<i>Quercus robur</i>) with Hornbeam (<i>Carpinus betulus</i>) standards and coppice plus Sycamore (<i>Acer pseudoplatanus</i>), Field Maple (<i>Acer campestre</i>), Ash (<i>Fraxinus excelsior</i>) and Hazel (<i>Corylus avellana</i>) with the ground flora supporting indicator species such as Dog's Mercury (<i>Mercurialis perennis</i>), Wood Millet (<i>Milium effusum</i>), Wood Melick (<i>Melica uniflora</i>), Wood Sedge (<i>Carex sylvatica</i>) and Wood Anemone (<i>Anemone nemorosa</i>). Some landscape interplanting of conifers and broadleaved species such as Horse-chestnut (<i>Aesculus hippocastanum</i>) is present. Great Mole Wood West is an area of ancient semi-natural Oak/Hornbeam woodland on the Goldings Estate bordered by the River Beane. The canopy is generally dominated by Hornbeam, Oak, Horse chestnut, Scots pine, Birch, Ash and Sycamore with a shrub layer of Ash, Hazel, Field maple, Holly, Sycamore and coppiced Hornbeam. The ground flora supports patches of bramble, Dogs Mercury and Wood Millet. The River Beane is fringed by Alder and Willow. Ancient woodland. Wildlife Site criteria: Grassland indicators; fen and swamp indicators; ancient woodland shown on Bryant's map (1822) with woodland indicators.</p>
59/002	Beane Marsh	TL318132	5.33	1997	<p>Complex of habitats on the floodplain of the River Beane dominated by species-rich neutral to acidic wet/marshy alluvial grassland with some tall fen/swamp vegetation and the river. Away from the river the pasture becomes drier. Species recorded include Marsh Marigold (<i>Caltha palustris</i>), Lady's Smock (<i>Cardamine pratensis</i>), Marsh Horsetail (<i>Equisetum palustre</i>), Meadowsweet (<i>Filipendula ulmaria</i>), Marsh Bedstraw (<i>Galium palustre</i>), Ragged Robin (<i>Lychnis flos-cuculi</i>), Meadow Vetchling (<i>Lathyrus pratensis</i>), Meadow</p>

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					Buttercup (<i>Ranunculus acris</i>) and Greater Tussock-sedge (<i>Carex paniculata</i>). Scattered Hawthorn (<i>Crataegus monogyna</i>) and small groves of willow (<i>Salix</i> spp.) add habitat diversity to the site. Wildlife Site criteria: Grassland indicators; fen and swamp indicators.
59/003	King's Meads	TL352142	100.12	1997	Part of an extensive area of common land on the old flood plain of the River Lea consisting of old hay meadows and grazing pasture crossed by a network of drainage ditches, which are of particular floristic interest. The majority of the grasslands are semi-improved but support a good diversity of grasses and herbs. They become wetter towards the centre of the site and are marshiest just to the east of the A10 flyover. Species present here include Lesser Pond-sedge (<i>Carex acutiformis</i>), Marsh Horsetail (<i>Equisetum palustre</i>), Reed Sweet-grass (<i>Glyceria maxima</i>), Hairy Sedge (<i>Carex hirta</i>) and Meadowsweet (<i>Filipendula ulmaria</i>). Uncommon species recorded here are Pepper-saxifrage (<i>Silaum silaus</i>) and Adder's-tongue (<i>Ophioglossum vulgatum</i>). The field south-west of the flyover supports an interesting sward with areas of acid/calcareous grass, including Sheep's Sorrel (<i>Rumex acetosella</i>) and Common Rest-harrow (<i>Ononis repens</i>), plus more ruderal areas with abundant Musk Thistle (<i>Carduus nutans</i>). Frequently flooded areas by Chadwell Springs supports a range of aquatic species including Brooklime (<i>Veronica beccabunga</i>), Marsh Foxtail (<i>Alopecurus geniculatus</i>) and Ragged Robin (<i>Lychnis flos-cuculi</i>) with small amounts of Meadow Saxifrage (<i>Saxifraga granulata</i>) recorded on the dividing embankment. Steep chalk slopes on the southern side (Chorley Dell) support a species-rich calcareous flora with, for example, Cowslip (<i>Primula veris</i>), Yellow-rattle (<i>Rhinanthus minor</i>), Burnet-saxifrage (<i>Pimpinella saxifraga</i>), Small Scabious (<i>Scabiosa columbaria</i>), Meadow Saxifrage

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					and Pyramidal Orchid (<i>Anacamptis pyramidalis</i>). The Manifold Ditch supports species such as Slender Tufted Sedge (<i>Carex acuta</i>) and Water-violet (<i>Hottonia palustris</i>). The meads are important for breeding and wintering bird populations, reptiles and dragonflies. European (Eurasian) Otter (<i>Lutra lutra</i>) and Water Vole (<i>Arvicola amphibius</i>) have been recorded. Wildlife Site criteria: Grassland indicators; fen and swamp indicators.
59/010	Waterford Marsh	TL316146	14.86	1997	Alluvial flood meadows and river corridor along the River Beane, supporting reasonable quality neutral grassland with a range of fine grasses and herbs. The river itself supports species-rich, abundant marginal and submerged aquatic vegetation including Skullcap (<i>Scutellaria galericulata</i>), Lesser Pond-sedge (<i>Carex acutiformis</i>), Lesser Water-parsnip (<i>Berula erecta</i>), Fool's Water-cress (<i>Apium nodiflorum</i>), Reed Sweet-grass (<i>Glyceria maxima</i>), Reed Canary-grass (<i>Phalaris arundinacea</i>), Stream Water-crowfoot (<i>Ranunculus penicillatus</i>), River Water-dropwort (<i>Oenanthe fluviatilis</i>) and Mare's-tail (<i>Hippuris vulgaris</i>). The river is home to a variety of water birds and Water Voles (<i>Arvicola amphibius</i>) have been recorded. There are some damp areas west of the river with abundant sedges (<i>Carex</i> spp.), Marsh Marigold (<i>Caltha palustris</i>), Meadow Buttercup (<i>Ranunculus acris</i>) and Meadowsweet (<i>Filipendula ulmaria</i>). Wildlife Site criteria: Grassland indicators; flowing waters (rivers and streams).
59/015	Great Mole Wood	TL318140	5.73	1997	Ancient semi-natural Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) woodland situated on a steep gravel escarpment with Wych Elm (<i>Ulmus glabra</i>) coppice on the steeper slope and Hazel on the lower ground. Other frequent trees include Sycamore (<i>Acer pseudoplatanus</i>) and Silver Birch (<i>Betula pendula</i>). The ground flora supports dense Bramble (<i>Rubus fruticosus</i> agg.) with ancient woodland indicators such as Bluebell (<i>Hyacinthoides non-scripta</i>) and

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					Dog's Mercury (<i>Mercurialis perennis</i>). Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.
59/062	Waterford Heath (South)	TL318146	18.58	1997	Old gravel pit with settling beds and steep slopes and cliffs supporting a mosaic of habitats and a diverse flora. The west side and the eastern edge, along the pit top, support areas of broadleaved planting, including Pedunculate Oak (<i>Quercus robur</i>) and Silver Birch (<i>Betula pendula</i>). Much of the floor is covered by grassland on a silty, moderately rich soil derived from the old settling beds. Species recorded predominantly indicate neutral to somewhat calcareous conditions and include Salad Burnet (<i>Sanguisorba minor</i>), Carline Thistle (<i>Carlina vulgaris</i>), Viper's-bugloss (<i>Echium vulgare</i>), Lady's Bedstraw (<i>Galium verum</i>), Oxeye Daisy (<i>Leucanthemum vulgare</i>), Common Knapweed (<i>Centaurea nigra</i>), Agrimony (<i>Agrimonia eupatoria</i>) and Bird's-foot Trefoil (<i>Lotus corniculatus</i>). The sand cliffs are dominated by dense tree and shrub cover. Open areas provide good habitat for invertebrates and nesting Sand Martins (<i>Riparia riparia</i>) have been recorded. A seasonal pond/wetland area is present within the grassland. Several orchid species have been recorded including Common Spotted-orchid (<i>Dactylorhiza fuchsii</i>), Bee Orchid (<i>Ophrys apifera</i>) and Broad-leaved Helleborine (<i>Epipactis helleborine</i>). The site is good for reptiles. Wildlife Site criteria: Grassland indicators.
59/064	Ware Park Monastery	TL34-14-	0	1997	Building and environs important for protected species. Wildlife Site criteria: Species.
59/084	Grassland E. of Icehouse Wood	TL310139	3.32	1997	Old grassland on a moderate north-east facing slope with a good mix of finer grass species and commoner herbs growing on dry neutral to slightly acid soil. The best area, with little evidence of improvement, lies within the central area which supports scattered scrub. Species of interest recorded include Sweet Vernal-grass (<i>Anthoxanthum odoratum</i>), Bird's-foot

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					Trefoil (<i>Lotus corniculatus</i>), Field Wood-rush (<i>Luzula campestris</i>), Common Sorrel (<i>Rumex acetosa</i>), Sheep's Sorrel (<i>Rumex acetosella</i>) and Meadow Buttercup (<i>Ranunculus acris</i>). Spiked Sedge (<i>Carex spicata</i>) has also been recorded. Wildlife Site criteria: Grassland indicators.
59/092	River Beane, R. Lea & Lower R. Rib Confluence, Hartham	TL330135	3.18	1997	System of water courses consisting of lower reaches of the River Beane and River Rib confluencing with a length of the River Lea. The site includes thin strips of riverside marginal vegetation; some large willow (<i>Salix</i> spp.) pollards and riverside Alder (<i>Alnus glutinosa</i>); a small island just below the confluence of the Beane and Lea which is wooded with Ash (<i>Fraxinus excelsior</i>) and Horse-chestnut (<i>Aesculus hippocastanum</i>); and a further, somewhat larger, island at the confluence of the Rib with the Lea (Joe's Island) supporting riparian woodland. Otter (<i>Lutra lutra</i>) and a range of birds and bat species have been recorded along these watercourses. Wildlife Site criteria: Species.
59/113	Meadow adjacent to Waterford Marsh	TL314149	0.61	2001	Grassland supporting a herb rich sward of typical marshy grassland species. Scrub hedges, a boundary ditch with running water and an old pond add to the habitat diversity of the site. Species recorded include Glaucous Sedge (<i>Carex flacca</i>), Marsh Bedstraw (<i>Galium palustre</i>), Meadow Vetchling (<i>Lathyrus pratensis</i>), Greater Bird's-foot Trefoil (<i>Lotus pedunculatus</i>), Ragged Robin (<i>Lychnis flos-cuculi</i>), Creeping Jenny (<i>Lysimachia nummularia</i>) and Common Sorrel (<i>Rumex acetosa</i>). Wildlife Site criteria: Grassland indicators.

Ancient Woodland Inventory sites

NAME	WOOD TYPE	AREA (ha)
Bardon Clumps	Ancient Semi-natural Woodland	3.05
Flowersash Wood	Ancient Semi-natural Woodland	2.28
Flowersash Wood (replanted)	Ancient Replanted Woodland	4.14
Great Mole Wood	Ancient Semi-natural Woodland	4.99
Hubbards Wood	Ancient Semi-natural Woodland	2.25
Lower Stoneyhills Wood	Ancient Semi-natural Woodland	1.93
Lower Stoneyhills Wood (replanted)	Ancient Replanted Woodland	2.72
St Johns Wood	Ancient Semi-natural Woodland	3.71
Upper Stoneyhills Wood	Ancient Semi-natural Woodland	4.36
Upper Stoneyhills Wood (replanted)	Ancient Replanted Woodland	4.06

Appendix C

WARE PARK, HERTFORD

SPECIALIST SURVEY REPORT



**Reptile Survey at Ware Park Estate, Wadesmill Road, Ware,
Hertfordshire**

**Commissioned by Lawrence Graham Trust Corporation
Oct 2013**

**Author: Dan Sullivan (Senior Ecologist, Green Shoots
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1. Introduction

Summary of Results

1.1 A reptile survey was carried out between 6th July and 21st September 2013 on land at Ware Park Estate, Wadesmill Road, Ware, Hertfordshire. The survey found grass snakes (*Natrix natrix*) and slow worms (*Anguis fragilis*) to be present. Common lizards (*Zootoca vivipara*) and adders (*Vipera berus*) were not seen despite recent records of them adjacent to the western edge of the site. Disturbance and theft by the public of survey materials (refugia) in the western edge of the site throughout the survey may have contributed to lack of sightings in this area. Alternatively, as the habitat areas around this part of the site were merely narrow strips unlikely to support significant numbers of reptiles they could be absent or just present in very low numbers. The population sizes for grass snakes and slow worms on the overall site were estimated as low, with very low numbers of common lizards and adders considered possibly present. As all native reptiles are protected species mitigation for impacts of development on reptiles on site will be required if works impact on reptile habitat areas.

Surveyors

1.2 The surveyor and author of this report is Dan Sullivan MCIEEM, Director of Green Shoots Ecology.

Client

1.3 John Spencer-Silver of Lawrence Graham LLP instructed Green Shoots Ecology on behalf of Lawrence Graham Trust Corporation.

Location and scope of surveys

1.4 The site consists of areas of arable fields adjacent to Wadesmill Road, just north of Hertford and forming part of the Ware Park Estate. Wadesmill Road runs north to south and divides the site in two. The overall proposed works site is approximately 60 hectares in extent. The areas of suitable reptile habitat within this consist solely of narrow strips along field edges containing varied habitats including rough semi-improved grassland, scrub, hedgerows or ruderals such as nettles (*Urtica dioica*). These field edges continue for a distance of around 3.45 km on the western side of Wadesmill Road, and on the eastern side for 1.4 km. The fields on the western side of Wadesmill Road also contain a long path running north to south which is around 0.96 km long, although vegetation along this is quite sparse and sub-optimal for reptiles. The field edges overall are estimated to be an average of 2 metres wide giving an approximate total reptile habitat area of 1 hectare within approximately 4.85 km of field edges. Annex 1 to this report is a map showing the survey area and sample areas surveyed. The survey was confined to the suitable reptile habitat areas in the field edges.

Purpose of surveys

1.5 The survey was commissioned to identify the presence or likely absence of reptiles on site and if present to determine:

- The approximate locations of any reptile populations within the site
- The species of reptiles present
- The likely population size classes present.

From these results, constraints on proposed works due to the presence of reptiles could be identified. Recommendations on how to avoid breach of legislation could then be made, including any mitigation required.

2. Desk Study

2.1 Records of reptiles within 2km of the site were obtained from Herts Biological Records Centre.

3. Relevant Legislation

Reptiles

3.1 All native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). They are protected against killing or injuring even during lawful development. A £5000 fine or six months custodial sentence per offence applies.

4. Methodology of surveys

4.1 The survey for reptiles was carried out at a suitable time of year (between July and September), with part of the survey occurring at an optimum time (September). Artificial refugia were used during the reptile surveys. These consisted of a mixture of roofing felt and corrugated bitumen pieces. These absorb heat during the day and attract reptiles, which use them to bask on or under. A total of 120 refugia were placed on site on 6th July 2103. These were then left for 12 days before checking so as to give any reptiles that might be present time to find and begin using them. Refugia were placed in sample areas around the site with 10 refugia placed in each sample area at the start of the survey. Due to disturbance and theft by the public, some areas where surveying began were abandoned and refugia were replaced in new areas to try to avoid or minimise further disturbance. Further details of this are given later in this report. Refugia were placed throughout the survey in lines, with 10 metre gaps between each refugia. A total of 12 sample areas (areas A-L) were originally chosen, these were chosen as representative areas of suitable habitat, with eastern and southern facing areas being favoured over similar west or north facing areas. These areas would be most likely to be in sun at the time of survey visits so reptiles would be more likely to be seen in these areas. Sample areas were spread over the whole survey site. Photos of the sample areas are shown at Annex 2, Annex 1 shows the locations of sample areas within the site.

4.2 Froglife (Froglife, 1999) recommend up to 10 per hectare for reptile surveys, however with only this density low populations of reptiles may not be discovered. With a higher density of refugia the likelihood of finding low populations of reptiles is increased. Also if some refugia are stolen or disturbed (as had occurred) it is more likely enough will remain to enable the survey to still be valid. The site is estimated to contain approximately 1 hectare of suitable reptile habitat. With 120 refugia in 1 hectares of habitat the density is greater than 10 per hectare (in this case 12 times greater). Due to theft and disturbance of refugia during the survey on every visit less than 120 were present or undisturbed. A minimum density of 84 per hectare occurred on the visits where most disturbance and theft had occurred. This still gives a density of 8.4 times higher than the 10 recommended. Refugia on site were checked on 6 visits, with visual checks for reptiles in vegetation made on every visit including the initial site set up. Dates for refugia checking are shown in the table below. Checks were only made on "suitable days", defined by Natural England as warm, without continual rain. Weather conditions during checks are shown below.

Table showing weather conditions during reptile survey checks

Date	Temperature	Weather
18 th June	18 °C	Hazy sun, calm, no rain
1 st July	17 °C	Sunny, light breeze, no rain
11 th July	13 °C	Cloud with occasional sun, breezy, no rain
18 th August	18 °C	Alternating cloud and sun, breezy, no rain
11 th Sept	14 °C	Overcast, light breeze, no rain
22 nd Sept	18 °C	Overcast, calm, humid, no rain

5. Constraints to surveying

5.1 On the majority of the site (areas A to F, K and L) there were no problems with surveying and no disturbance or theft. In the western part of the site (areas G-J) however theft and disturbance of refugia was discovered on every visit. The client requested that the refugia was replaced each time so that some refugia were available to check in the western area on most occasions. Replacement refugia were added after each check so that the total refugia on site was 120 again at the end of each visit. In an attempt to reduce disturbance replacement refugia were replaced in different areas nearby each time. This meant that in the western side of the site refugia were in an extended area over the whole survey. In addition to theft and disturbance of refugia, between the 2nd and 3rd visits the farmer had mowed close to some field edges and some refugia were destroyed. Despite these issues, the lowest amount of undisturbed refugia checked on any visit was 84 on both of the last two visits, with an average of 91.5 being present and undisturbed on each site visit. Therefore on average over the site the undisturbed refugia density per visit was 91.5 per hectare of suitable habitat. This is over 9 times the density recommended by Froglife. The lowest density on any visit was 84 per hectare. These amounts over the site are considerably higher than the 10 per hectare suggested by Froglife. Therefore overall the survey results are considered valid despite these problems. The possibility of impacts due to disturbance in the western site side in particular has been taken into account in the discussion section.

6. Survey Results

Data search results

- 6.1 The data search found records of reptiles adjacent to the western edge of the site. These were recorded from the junction of Sacombe Road and Vicarage Lane. Records were of common lizards, grass snake and adder all from 2010. Slow worms were also recorded within 2 km of the site.
- 6.2 Grass snakes and a single adult male slow worm were seen on site. Grass snakes were seen in areas A, E and K, the slow worm was seen in area A. The maximum number of adults seen in one day for both species was one.

Table of results for grass snakes:

Date	Grass snake male	Grass snake female	Grass snake juvenile	Total number of adults seen
18 th June	0	0	1 (in A)	0
1 st July	1 (in K)	0	1 (in A)	1
11 th July	0	0	0	0
18 th Aug	0	0	0	0
11 th Sept.	1 (in A)	0	1 (in E)	1
21 st Sept	0	1 (in K)	0	0

Photo 1: Grass snake seen in Area E:



7 Discussion

7.1 The maximum numbers of adult reptiles seen on one visit were one for grass snakes and one for slow worms. Froglife gives a methodology for assessing reptile sites and populations (Froglife, 1999). The assessment is based on the maximum number of adult reptiles seen directly on or under refugia (set at a density of up to 10 per hectare) by one person, in one day as follows:

Species	Low population	Good pop.	Exceptional pop.
Grass snake	<5	5 – 10	>10
Slow-worm	<5	5 – 20	>20
Adder	<5	5 – 10	>10
Common Lizard	<5	5 – 20	>20

When refugia were checked on site the average density of undisturbed refugia for each visit was 91.5. This is much greater than the 10 per hectare recommended by Froglife, which is the density used for the table above. Dividing the maximum number of adults actually seen by 9.15 will give the average number of reptiles which were likely to have been seen per 10 refugia at the density used for the Froglife guidance described above. This gives converted numbers of reptiles per 10 refugia as less than one. This indicates low populations of both species present.

7.2 As suitable reptile habitat can be found in narrow strips all around the site it is likely that low numbers of grass snakes and slow worms might occur on any field edge with suitable habitat with possibly greatest numbers found in the southern and western parts of the site.

7.3 Adders and common lizards were recorded adjacent to the site in 2010 at the junction of Sacombe Road and Vicarage Lane on the western site edge. It therefore seems likely that adders and common lizards may also be present on site in very low numbers or at least occasionally enter the field edges from surrounding areas. As they were recorded adjacent to site then it seems likely that they are present at least in this area in low numbers. As this section of the site areas close by suffered most from disturbance during the survey this may be why they were not seen in this area. They could be present anywhere along field edges on site but are likely to occur only in very low numbers.

7.4 Due to the presence of reptiles there is a risk that they might be killed or injured should works impact on current areas of reptile habitat. They might also be killed or injured if the current areas of unsuitable reptile habitat (arable fields) in the main site areas are allowed to develop into rough grass, scrub or similar. In that case reptiles might colonise these areas before they are quarried and then be killed or injured once works begin. As killing or injuring reptiles would be in breach of the Wildlife and Countryside Act (1981) then mitigation is required to prevent this.

8 Recommendations

8.1 One of two scenarios will occur once works begin, these are:

- 1) Works may be restricted as to how far they can extend into site edges and the narrow areas of reptile habitat which are all currently present only at the site edges would remain unaffected
- 2) Works are required to extend into reptile habitat on site edges with negative impacts likely on reptiles if no mitigation is carried out.

In either of these scenarios there will also be the issue of what will happen to areas currently used as arable farmland once works begin. Once farming stops these areas are likely to fairly quickly develop into rough grass and scrub. As these are good reptile habitats it is likely that the local reptile population would colonise these areas and increase in numbers. There would then be an issue when it came to work in these areas, as it would be necessary to capture and move these reptiles to areas outside the site works areas. This would require reptile fencing of the affected areas and a period of trapping if the areas were of any significant size. It may be better to manage areas to prevent them becoming reptile habitat. This could be achieved by carrying out grazing, regularly mowing the areas or allowing arable farming to continue in areas awaiting works to begin.

In the case of scenario 1 as described above the following recommendations are made:

R1A: A buffer zone of at least 5 metres is left between the current boundary reptile habitats and any works areas. This will reduce impacts on reptiles from noise and disturbance

R1B: Any future works areas not currently being worked on should be either grazed, regularly mown (at least monthly) or farmed as arable farmland until works begin to prevent colonisation of reptiles.

R1C: Plans for the final site layout should include addition of some areas of suitable reptile habitat such as new hedgerows, rough grass or scrub areas, log piles or hibernacula. This will help to mitigate in the long term for any loss of habitat as a result of works or other impacts due to disturbance (due to noise and activity) during works.

In the case of scenario 2 as described above the following recommendations are made:

R2A: Reptile populations on site appear to be very low and areas of habitat are narrow and thin. Therefore it would be impractical to carry out trapping of reptiles to remove them from works areas as this would require extensive amount of reptile fencing to be erected and trapping would be ineffectual because of the low numbers present. Instead, habitat manipulation of reptile areas due to be affected, along with hand searching for reptiles should be carried out. Habitat manipulation should take the form of strimming and where necessary brushcutting. This should take place during the reptile active season, from April to end of September and only when temperatures are 12 degrees centigrade or above. At these temperatures they will be active and will be likely to move from strimmed areas.

While strimming and brushcutting takes place an ecologist should first be present to advise workers on how best to proceed and to check any areas to be strimmed for logs, large rocks, debris or other items which might have reptiles underneath. The ecologist or ecologists should check underneath these for reptiles and move any found. They should place these items outside the works area to provide sheltering areas for reptiles outside the works areas.

Strimming and cutting should be carried out in two stages to reduce risk to reptiles. In the first stage grass should be strimmed to 10-15cms tall and any scrub cut to the same height. It should then be raked and cut materials piled up outside the works area in areas of habitat not due to be worked on to provide additional shelter for reptiles. Once this work is underway if the ecologist is satisfied with the way work is being carried out it may be carried out without supervision, alternatively the strimming and raking could be carried out by an ecologist or ecologists.

After at least 2 days a second cut or strim of vegetation can take place providing temperatures are as mentioned above. Strimming at this stage should be carried out cutting vegetation to ground level starting from areas furthest from the site boundary and working outwards to any areas furthest from the works. Cuttings should again be raked and placed outside the works areas. In this way any remaining reptiles will be encouraged to move away from the works areas.

Once works areas have been strimmed ready for works to begin they should be maintained as short grass by regular strimming if works are delayed for any reason.

R2B: Any future works areas not currently being worked on should be either grazed, regularly mown (at least monthly) or farmed as arable farmland until works begin to prevent colonisation of reptiles.

R2C: Plans for the final site layout should include addition of some areas of suitable reptile habitat such as new hedgerows, rough grass or scrub areas, log piles or hibernacula. This will help to mitigate in the long term for any loss of habitat as a result of works or other impacts due to disturbance (due to noise and activity) during works.

9. References

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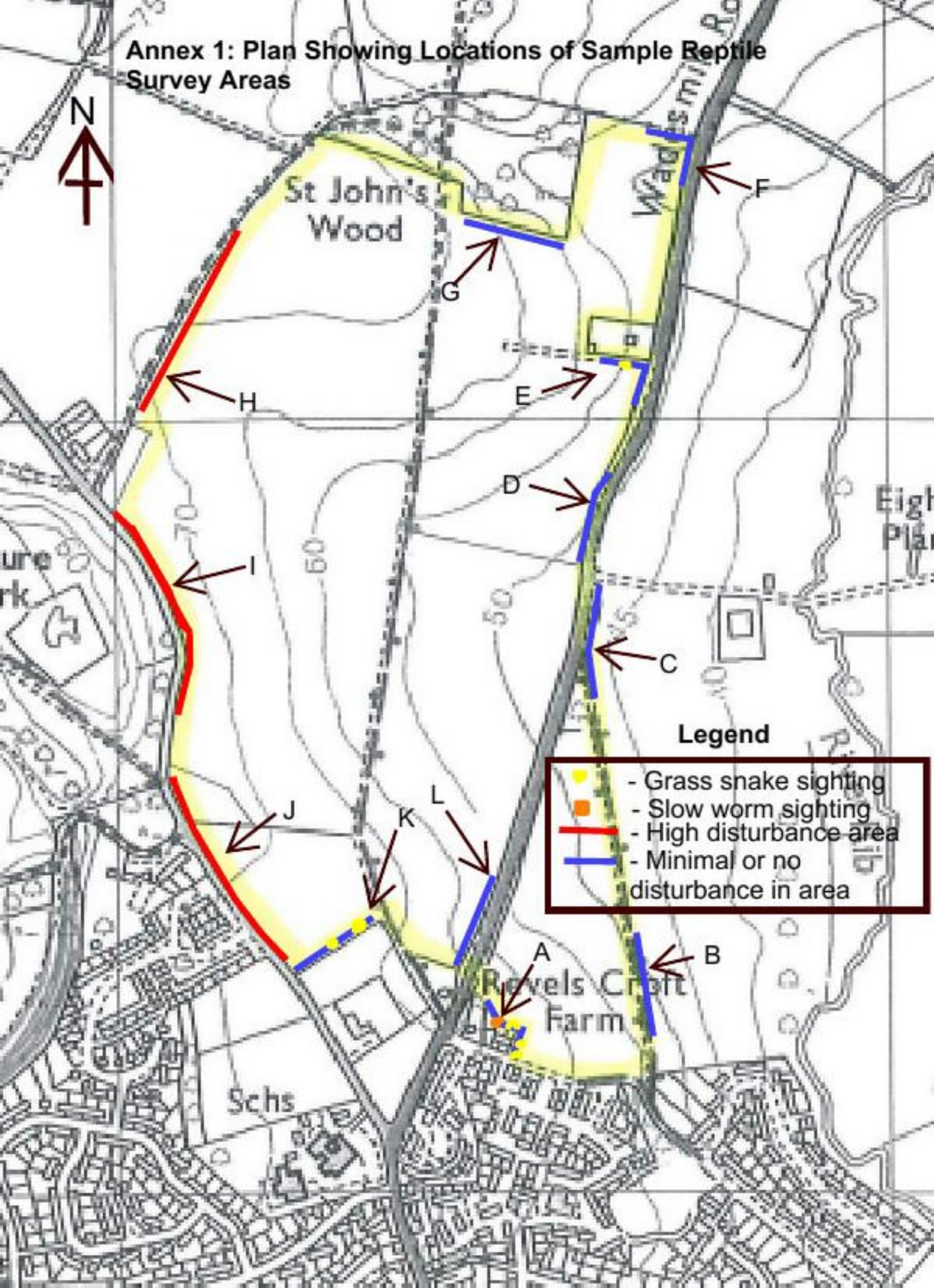
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10. Annexes

Annex 1: Plan showing locations of reptile survey sample areas.

Annex 2: Photos showing sections of each survey area.

Annex 1: Plan Showing Locations of Sample Reptile Survey Areas



Legend

- Grass snake sighting
- Slow worm sighting
- High disturbance area
- Minimal or no disturbance in area

Annex 2: Photos showing sections of each survey area:

Area A: Rough grass and nettles



Area B: Rough tussocky grass on low bank



Area C: Rough grass, nettles & bramble scrub



Area D: Rough grass with sparse areas



Area E: Rough grass



Area F: Rough grass



Area G: Rough grass



Area H: Rough grass



A BAT ASSESSMENT OF THE WARE PARK ESTATE,
WADESMILL ROAD, NORTH OF HERTFORD,
HERTFORDSHIRE SG14

Commissioned by:

Lawrence Graham Trust Corporation

Report Number: ASW/LGTC/052/17/2013
September 2013



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EXECUTIVE SUMMARY

1. A Bat Assessment was undertaken at the Ware Park Estate, Wadesmill Road, North of Hertford, Hertfordshire SG14, during June to August 2013, for: the Lawrence Graham Trust Corporation.
2. A very small common pipistrelle roost was found in the west most mature oak tree (labelled as T1 in this report and map) investigated during the late July bat survey visit at the Ware Park Estate survey area.
3. A total of three bat species were detected during the six bat survey visits at this site, these being common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and noctule (*Nyctalus noctula*).
4. Common pipistrelle was the most common species, with the latter two species being found only rarely.
5. The arable fields present were hardly used by bats for foraging, probably due to the risk of predation over such open spaces.
6. The hedgerows were used by some bats for commuting, but at a lower density than expected often.
7. Overall, this site was considered to have low bat roost potential, despite a small bat roost being found, with only limited roosting opportunities found within the current trees. However the survey visits did reveal that the site is currently used for the purposes of foraging and commuting by low numbers of bats.
8. A European Protected Species Licence (EPS) (under the 2010 Regulations) for Bats in respect of development will be required from Natural England to permit the predicted loss of a bat resting place during the tree felling at the Ware Park Estate e.g. a very small common pipistrelle bat roost where one bat emerged, as bats are fully protected by UK and European law.
9. A proposed bat mitigation scheme is put forward in this report based on the proposed felling of the oak trees, within the survey area.

1. INTRODUCTION

- A Bat Assessment was undertaken at the Ware Park Estate, Wadesmill Road, North of Hertford, Hertfordshire SG14, during June to August 2013, for: the Lawrence Graham Trust Corporation.
- This bat assessment was required due to the proposal for mineral extraction at this site, and hence is was required to investigate if any bats were using the site, and especially the potential for any bat roosts to be present.
- The main method used for this bat assessment, as well as the full results and the recommendations can be found within this report.
- Both this bat assessment and report were undertaken and compiled by Mr Andrew S. Waller, Consultant Ecologist, ASW Ecology, with the kind help from a number of assistants.
- Mr Andrew S. Waller has been a Consultant Ecologist since 1997, and has very extensive experience/knowledge of protected wildlife species/issues including bats, for which he is fully licensed to survey throughout England by Natural England for consultancy purposes (Licence Number: 20130245). He is also a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

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2. METHODOLOGY

2.1 Bat assessment method

- During June to August 2013, a total of three bat emergence survey visits and three bat activity survey visits were undertaken at the Ware Park Estate. Three experienced bat surveyors using Bat Box Duet bat detectors were present on each survey visit to investigate for any bats emerging out of any of the trees present and to investigate the general bat commuting/foraging activity at the site.
- All bat survey visits were undertaken in suitable weather conditions only, so there was the best chance of finding any possible emerging bats.
- Indications of bats roosting at any site during bat detector surveying can include the sighting of early emerging bats; roost noises from a bat roost as bats get prepared for emergence; and bat “streams”- where bats may emerge one after the other in quick succession.
- Additionally, a daytime assessment of the five mature trees at the survey area was undertaken from the ground and using a ladder too. Binoculars were utilised to assess the tree for any bat roost potential and for any obvious external bat evidence such as droppings under existing cavities.

2.2 Constraints to bat assessment

- Due to the timing of this commissioned bat assessment, only the Spring and Summer 2013 period could be covered by this study, and there was no opportunity to investigate other times of this current year. This though is a standard constraint for any bat survey which can only investigate part of the year. But given the results of this survey, this is not therefore seen as a constraint.
- The June to August period is critical to bats since this is when maternity roosts are present and young bats will be born. Large roosts are sometimes present within structures, and can be very visible during such bat emergence surveys. This survey was indeed commissioned when such colonies will have been present and then dispersed later in the survey period.
- As always though, without taking into account any further active surveying or monitoring, this study can only provide a “snapshot” of the presence of bats at the Ware Park Estate site during the time of the survey visits.

3. BAT ASSESSMENT RESULTS

Please note that all tree reference number e.g. T1 to T5 refer to the five trees assessed for this survey and their locations can be found in Appendix 2

3.1 Bat emergence survey

Bat emergence survey - visit 1 – 5/6/2013

Sunset time: 9.13pm

Weather: dry, mostly clear, light breeze and mild

Temp (sunset): 14°C

Windspeed (max): 6mph

Inverts present: flies, craneflies and moths

- 9.57pm – 1 noctule (*Nyctalus noctula*) – from west to east over centre of the survey area
- 10.25pm – 1 common pipistrelle (*Pipistrellus pipistrellus*) – along west most hedgerow, near to oak tree (T1)
- 10.50pm – 1 common pipistrelle – along eastward most hedgerow, close to car entrance from road
- 10.54pm – 1 common pipistrelle – as above

Bat emergence survey - visit 2 – 11/7/2013

Sunset time: 9.17pm

Weather: clear, mild, dry with light breeze

Temp (sunset): 18°C

Windspeed (max): 5mph

Inverts present: mosquitoes, flies, spiders and moths

- 9.57pm – 2 common pipistrelles – foraging next to hedge close to oak (T1)
- 10.04pm – 1 common pipistrelle – as above
- 10.09pm – 1 common pipistrelle – heard north of the three oak trees
- 10.16pm – 1 common pipistrelle – as above.
- 10.28pm – 1 common pipistrelle – close to oak tree (T2)
- 10.33pm – 1 common pipistrelle – foraging close to oak tree (T1)
- 10.42pm – 1 common pipistrelle – feeding along hedge west of the three oaks
- 10.57pm – 1 common pipistrelle – over track leading to car entrance

Bat emergence survey - visit 3 – 26/7/2013

Sunset time: 8.59pm

Weather: cloudy, warm, dry and calm

Temp (sunset): 22°C

Windspeed (max): 0mph

Inverts present: mosquitoes, flies and moths

- 9.29pm – 1 common pipistrelle – emerged quickly from a south facing crevice most likely in oak tree (T1) and flew direct to west most hedgerow, not seen again. **CONFIRMED BAT ROOST**
- 9.47pm – 1 common pipistrelle – north of oaks (T1 to T3)
- 9.50pm – 1 common pipistrelle – through oak trees as above
- 10.05pm – 1 common pipistrelle – close to oak tree (T3)
- 10.11pm – 1 common pipistrelle – close to oak tree (T1) then along hedge
- 10.29pm – 1 common pipistrelle – close to oak tree (T3) then flew to hedge
- 10.45pm – 1 common pipistrelle – heard along west most hedge

3.2 Bat activity survey

Bat activity survey - visit 1 – 9/6/2013

Sunset time: 9.17pm

Weather: dry, overcast, light breeze and mild

Temp (sunset): 14°C

Windspeed (max): 7mph

Inverts present: flies, craneflies and moths

- 9.37pm – 1 soprano pipistrelle (*Pipistrellus pygmaeus*) - 1 pass at north part of site near wood, along hedgerow
- 9.46pm – 1 common pipistrelle – 2 passes along east hedgerow next to car exit
- 9.51pm – 1 common pipistrelle – 6 passes at above hedgerow
- 9.58pm – 1 common pipistrelle – 2 passes at hedgerow to west of oak tree (T1)
- 10.07pm – 1 soprano pipistrelle – 3 passes along north most hedgerow
- 10.25pm – 2 common pipistrelles – 12 passes along east most hedgerow next to car exit
- 10.28pm – 1 common pipistrelle – 4 passes at west most hedgerow next to oak tree (T1)
- 10.37pm – 1 common pipistrelle – 3 passes as above

Bat activity survey - visit 2 – 5/8/2013

Sunset time: 8.42pm

Weather: cloudy, mild, dry with light breeze

Temp (sunset): 18°C

Windspeed (max): 6mph

Inverts present: mosquitoes, flies and moths

- 9.15pm – 2 common pipistrelles – 8 passes at east most hedge at car exit
- 9.21pm – 1 common pipistrelle – 1 pass at west most hedge near oak (T1)
- 9.28pm – 1 soprano pipistrelle – 2 passes at north most hedge near wood
- 9.44pm – 1 common pipistrelle – 6 passes at east most hedge at car exit
- 9.50pm – 1 noctule – just 1 pass high over the middle of the survey area
- 10.02pm – 1 common pipistrelle – 2 passes at west most hedge near oak (T1)
- 10.14pm – 1 common pipistrelle – 5 passes near east most hedge near car exit
- 10.21pm – 1 common pipistrelle – 2 passes as above

Bat activity survey - visit 3 – 14/8/2013

Sunset time: 8.25pm

Weather: cloudy, mild, drizzle with light breeze

Temp (sunset): 18°C

Windspeed (max): 5mph

Inverts present: mosquitoes, flies and moths

- 8.50pm to 9.46pm – 1 common pipistrelle – 32 passes at east most hedge to north of car park exit and road. Very good sustained activity here only
- 8.55pm – 2 common pipistrelles – 1 pass each at east most hedge near car exit
- 9.03pm – 1 common pipistrelle – 1 pass at above
- 9.04pm – 1 common pipistrelle – 1 pass at west most hedge near oak (T1)
- 9.05pm – 1 common pipistrelle – 1 pass from road into field
- 9:11pm – 1 common pipistrelle – 1 pass over track at east area
- 9.25pm – 1 common pipistrelle – 1 pass as above and flew to east most hedge
- 9.36pm – 1 common pipistrelles – 2 passes near east most hedge
- 9.45pm – 1 common pipistrelle – 1 pass near car exit at east most hedge

3.3 Daytime bat assessment of trees

Please note that all trees numbered below can be found in Map B in Appendix 2 at the end of this report, and all gradings refer to the daytime assessment work only

Tree number	Bat roosting opportunities found at tree	Bat roost potential grading
T1	<ul style="list-style-type: none"> Oak - with deadwood crevices and niches in old branch bases, including a good quality crevice half way up tree, which is south facing 	<ul style="list-style-type: none"> Moderate
T2	<ul style="list-style-type: none"> Oak - with deadwood crevices and niches in old branch bases 	<ul style="list-style-type: none"> Moderate
T3	<ul style="list-style-type: none"> Oak - with deadwood crevices and niches in old branch bases 	<ul style="list-style-type: none"> Moderate
T4	<ul style="list-style-type: none"> Oak - with two knot holes on west side, about half way up. And a south facing crevice three quarters up the tree 	<ul style="list-style-type: none"> Low/Moderate
T5	<ul style="list-style-type: none"> Sweet chestnut – with crack in tree branch, which is south facing, and some deadwood and bark plates present 	<ul style="list-style-type: none"> Low/Moderate

4. CONCLUSIONS

4.1 Significance of bat assessment results

- A very small common pipistrelle roost was found in the west most mature oak tree (T1) investigated during the late July bat survey visit at the Ware Park Estate survey area.
- Just one common pipistrelle emerged from a crevice noted at this oak, and therefore is being used on an occasional basis as a roost site.
- A total of three bat species were detected during the six bat survey visits at this site, these being common pipistrelle, soprano pipistrelle and noctule. Common pipistrelle was the most common species, with the latter two species being found only rarely.
- Overall, this site was considered to have low bat roost potential, despite a small bat roost being found, with only limited roosting opportunities found within the current trees. However the survey visits did reveal that the site is currently used for the purposes of foraging and commuting by low numbers of bats.
- The arable fields present were hardly used by bats for foraging, probably due to the risk of predation over such open spaces. The hedgerows were used regularly by some bats for commuting, but at a lower density than expected often.
- In regards to the proposed mineral extraction, the loss of the main habitat, arable fields, will have minimal impact on bats, but the loss of the oak trees, or some of them, plus any hedgerows, will need to be fully mitigated.
- Therefore, a Bats EPS Licence for development purposes from Natural England will need to be applied for from Natural England before the oak tree (T1) with the bat roost can be felled.

4.2 Impact assessment

In the absence of any mitigation measures or precautions, the following direct or indirect impacts from the proposed tree felling works at the Ware Park Estate site on bats would be predicted as:

- **DIRECT:** Since a bat roost would be lost in the west most mature oak tree (T1) surveyed, without any mitigation, there would be direct disturbance, damage and loss of a bat resting place by the proposed tree felling works. **Impact magnitude predicted: High**
- **INDIRECT:** Given that bats were noted to be currently using the hedgerows for the purpose of foraging and commuting on occasions, it could be considered that the loss of this linear habitat would negatively impact to some extent on local bats and therefore mitigation measures should be used in order to limit these impacts. **Impact magnitude predicted: Low to Moderate**

4.3 Legal protection of bats in the UK (Simplified current summary only of the legislation – please see other texts for full details)

4.3.1 THE LEGAL PROTECTION OF BATS IN ENGLAND AND WALES

Introduction

All species of bats in England and Wales are protected by law. Their legal protection derives from two sources:

- the strict species protection provisions of the EU Habitats Directive as implemented in England and Wales by Part 3 of the Conservation of Habitats and Species Regulations 2010 (the "**2010 Regulations**"); and
- Part 1 of the Wildlife and Countryside Act 1981 (as amended).

Conservation of Habitats and Species Regulations 2010 ("2010 Regulations")

The 2010 Regulations came into force on 1 April 2010. They replace the previously applicable regulations (Conservation (Natural Habitats, &c) Regulations 1994) in relation to England and Wales. The 2010 Regulations are the principal means by which the EU Habitats Directive is transposed in England and Wales.

The Regulations contain a number of Parts but Part 3 sets out the protection to be afforded to "European Protected Species" ("EPS"), which includes all species of British bats. The list also includes other species which are rare on a European scale, such as great crested newts, otters and dormice.

Under Part 3 of the 2010 Regulations both bats themselves and their "breeding sites and resting places" (most commonly their roosts) are protected.

Part 3 provides that it is a criminal offence to do the following (note that this is not an exhaustive list of all offences but rather a list of offences which will be of most relevance to developers):

- a. to damage or destroy a breeding site or resting place of a bat (Reg 41(1)(d));
- b. to deliberately capture, injure or kill any bat (Reg 41(1)(a));
- c. to deliberately disturb bats [note, wherever they are occurring] (Reg 41(1)(b)), in particular:
 - i. any disturbance of bats which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young (Reg 41(2)(a)(i)); or
 - ii. any disturbance of bats which is likely to impair their ability to hibernate or migrate (Reg 41(2)(a)(ii)); or
 - iii. any disturbance of bats which is likely to affect significantly the local distribution or abundance of the species to which they belong (Reg 41(2)(b));
- d. to have in one's possession or to control or to transport or to sell or exchange or offer to sell or exchange any live or dead bat or part of a bat which has

been taken from the wild; or any part of, or anything derived from, a bat or any part of a bat (Reg 41(3) and (4)); and

- e. to attempt any of the above (Reg 116(1)).

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of the company may also be prosecuted if the offence has been committed with their consent or connivance, or is attributable to their neglect (Reg 124).

Wildlife and Countryside Act 1981 ("WCA 1981")

The WCA 1981 protects a wide range of animals, plants and habitats in the UK. All British bat species are afforded protection under Part 1 of the WCA 1981, in addition to the protection they have under the 2010 Regulations.

As regards England and Wales the following offences apply to protect bats under the W&CA 1981:

- a. to intentionally or recklessly disturb any bat while it is occupying a structure or place which it uses for shelter or protection (s9(4)(b) WCA 1981);
- b. to intentionally or recklessly obstruct access to any structure or place which any bat uses for shelter or protection (s9(4)(c) WCA 1981);
- c. attempting either of the above (s18(1) WCA 1981).

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of that company may also be prosecuted if the offence has been committed with their consent or connivance or is attributable to their neglect (s69(1) WCA 1981).

5. RECOMMENDATIONS

5.1 Bat EPS Licence requirement

- **A European Protected Species Licence (EPS) (under the 2010 Regulations) for Bats in respect of development** will be required from Natural England to permit the predicted loss of a bat resting place during the tree felling at the Ware Park Estate e.g. a very small common pipistrelle bat roost, as bats are fully protected by UK and European law. **It will be proposed that the licence is required for “overriding public interest”, that there is indeed no satisfactory alternative to what is being proposed and that the stated works will not be detrimental to maintaining the bat species present at a Favourable Conservation Status. This will all be fully justified in the future Reasoned Statement.**
- The Wildlife Licensing Unit of Natural England is the appropriate authority for determining licence applications for works associated with development such as building related demolition, barn conversions, reroofing works and tree felling where bat roosts are present.
- Natural England will have to be satisfied that the local bat populations will not be detrimentally affected by the tree felling works and general engineering works. Consequently, they will require suitable mitigation measures to be put in place in order to prevent the complete loss of the bat roosting sites at the overall site as a result of all planned works.
- The EPS licence forms include four separate parts: an Application Form, Method Statement, Reasoned Statement and Supporting Documents. The applicant e.g. the client will be the licence holder, supported by the licensed bat consultant being used.
- For the prompt processing of the licence application, it is always advised that the client ensure that the planning position in respect to their proposal has been resolved in advance of submitting the licence application and all mitigation options agreed on. In exceptional circumstances, it may be possible to submit an application whilst planning permission is being sought, but this is highly unusual. **Planning consent is therefore required before the Bats EPS licence is applied for.**
- Bat EPS Licence applications are stated to be processed within thirty days by Natural England, although it could be faster than this, or slower, should more information be required by the Wildlife Advisor.
- **The client will need to consult an experienced licensed bat consultant for advice on how to proceed with the required Natural England Bats EPS Licence application, as it is clear that the future outlined works would trigger offences under the law**, and such offences cannot be avoided by the timing of such works when bats are not present e.g. the hypothetical scenario where no bats are to be disturbed, no roost is to be damaged or lost and with no bat roost access points obstructed.

5.2 Bat Impact Mitigation Scheme

The main mitigation scheme is detailed below in regards to the current very small bat roost present at the mature oak tree at the Ware Park Estate, so the future tree felling works are to proceed under the proposed Bats EPS Licence. The mitigation will compensate bats during the stated felling works and that they will not be without available roosting sites during these works. The aim will be to provide a net gain in the number of roosting sites available for the bats, but critically provide like-for-like mitigation which is the key aspect, and this will all be stated in the Bats EPS Licence Method Statement:

5.2.1 Schwegler woodcrete bat boxes on mature trees along the hedgerows at the overall site

- **Installation of a total of 10x Schwegler 2F Bat Boxes on suitable mature trees within all of the main hedgerows at the overall site** - Bat boxes will be used by various bat species, and these high quality bat boxes would need to be installed in suitable high locations facing appropriate aspects, close to clutter, so to have a chance of success. Common pipistrelles will use these bat boxes for roosting purposes, and are appropriate mitigation for the very low conservation status roost present. Ten such boxes can be placed on various mature trees away from the main proposed work areas, which will also be secure and undamaged during all of the proposed works. Ten bat boxes are therefore recommended to be installed at the overall site as compensation and as biodiversity gain, so a range of roosting sites are available during the period of the proposed mineral extraction works and afterwards. The bat boxes should be located on the hedgerow just to the west of the oak trees to be removed, and also located within the other main hedgerows so there is a good spread of new boxes across the entire site.

5.3 Exclusion before commencement of works

- All external access points on the outside of the mature oak tree to be felled at the Ware Park Estate including the main bat roosting spots, will be carefully fixed with specially cut up thick polythene flap one-way excluders – in association with examination first for bat presence by a licensed bat consultant. Done with help from contractors for the client as an elevated platform or harness/rope combination may be required for working at height or similar.
- Excluders only to be installed if night temperatures are consistently above 8°C, therefore not in low temperatures. The examination of the crevices beforehand will include the use of an endoscope and ladder.
- The external features of the stated existing oak tree, where the bat roost has been located, will be investigated in detail by a licensed bat consultant during bat emergence visits at night for up to four nights after the excluders have been installed.
- The monitoring is weather dependent and will be extended if the weather conditions are unsuitable on any of the four exclusion nights. Excluders to be left on until the actual tree felling has been undertaken so there is no chance of bats using any potential access points at the building.

5.4 Timing of future tree felling works

- Usually, late summer/early autumn e.g. late August/September/October or early spring e.g. April/May, are ideally the best times to work on such trees, as this avoids the main bat breeding season and hibernation period.
- However, since the common pipistrelles are present in such extremely small numbers, then there may be some flexibility as long as good practice is followed at all times.
- This timing related recommendation though will only be applicable once the Bats EPS Licence has been gained from Natural England and all exclusion work at the oak tree with the bat roost has been completed, with associated pre-exclusion monitoring done.

5.5 Best practice regarding the proposed tree felling works

- During the tree related works at this Site, great care will be needed in regards to the felling or pruning of all trees within the development footprint. Best practice guidelines will always need to be followed at all times without exception, so to comply with current bat related legislation.
- Contractors undertaking work on the trees should always be aware of possible bat presence, and for their field signs such as black streaks below a hole, crack or split in the tree; droppings in the entrance of any hole or crack; urine stains; smooth edged entrance holes with dark fur staining as well as actual scratch marks on entrance holes.
- If no bats or bat evidence are found during any endoscope inspection, the tree contractors must avoid cutting through any cavities in the main branches and trunks, and instead cut well above and below the cavities.
- Wherever possible, branches and trunk sections with any cavities, should be lowered carefully to the ground, so to avoid injuring or killing any potential completely hidden bats. These trees should then be left for 24 hours and most certainly overnight, so any potentially hidden bats can leave.
- Any ivy covered trees to be felled in the development footprint should be stripped completely by hand to ensure there is no chance of an unexpected bat being present.
- The aim is normally for all works at a site not to be undertaken during the main bat breeding season (June to August) or ideally during the main bat hibernation period (November to March), when bats are vulnerable. September and October are therefore suitable months for trees works normally, although tree works do often continue throughout the winter when most birds are not nesting.
- **But of course, a Bats European Protected Species (EPS) Licence in respect to “development” will be required before felling for the west most mature oak tree stated in this report, to avoid triggering various offences.**
- **If unexpected bats or suspected bat evidence is found during the stated tree related works on the other mature oak trees by tree contractors, then**

work should stop immediately, and advice from the licensed bat consultant urgently sought.

5.6 Bat post development monitoring scheme

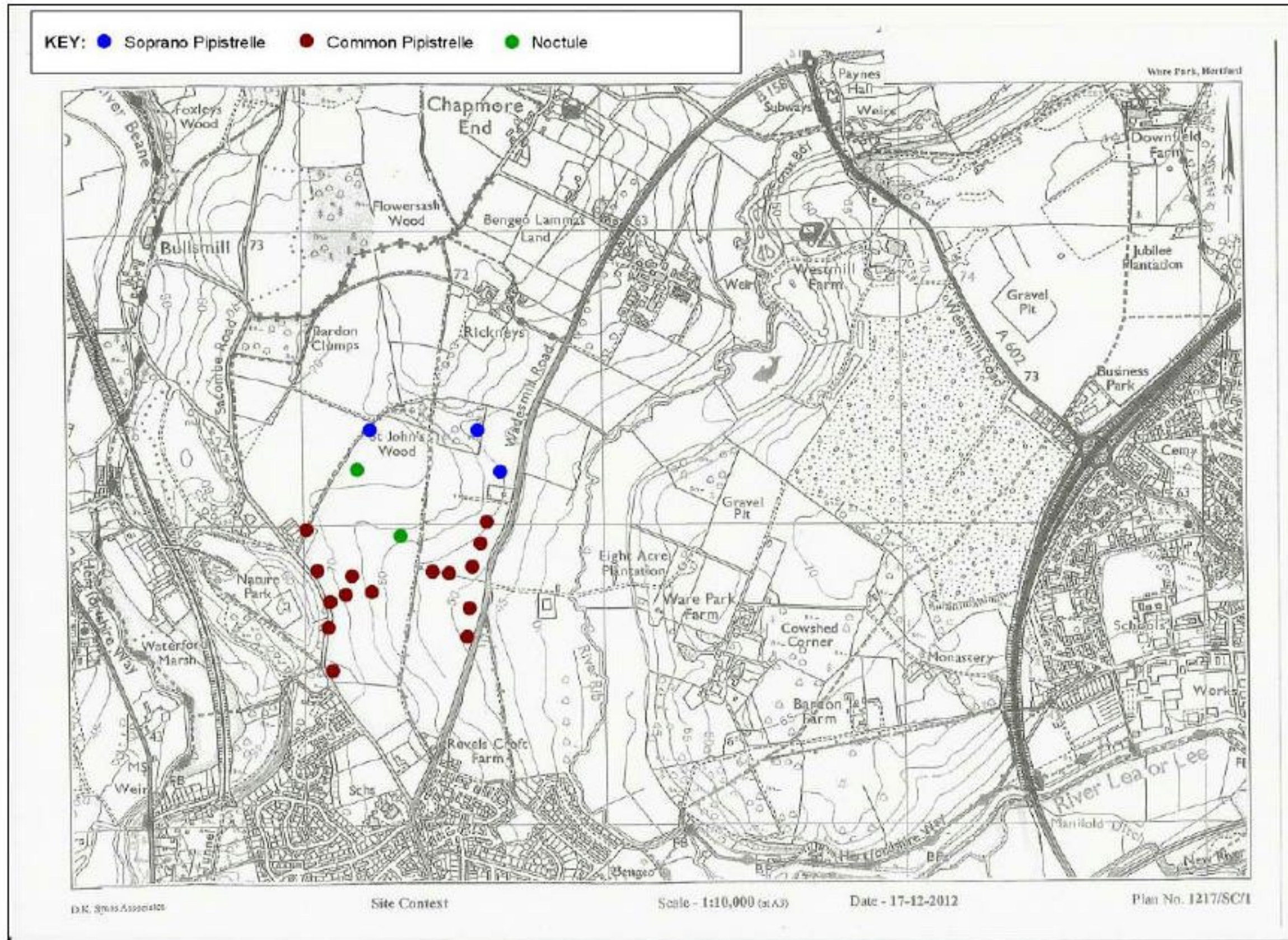
Please see below a standard bat monitoring scheme for this site, and this will be proposed in the future Bat EPS Licence method statement for Natural England. The aim of this monitoring is to show if the mitigation measures have worked, and that bats are still roosting at this overall site, after the construction phase has been completed.

Year	2014
Details of Bat Monitoring Scheme at the Ware Park Estate during 2014	<ul style="list-style-type: none">• Bat emergence survey – 3 visits between May and September – using bat box duet bat detectors• Bat box check – September – by a licensed bat consultant• Natural England Bats EPS Licence report form completed and sent off – to include details of monitoring – October

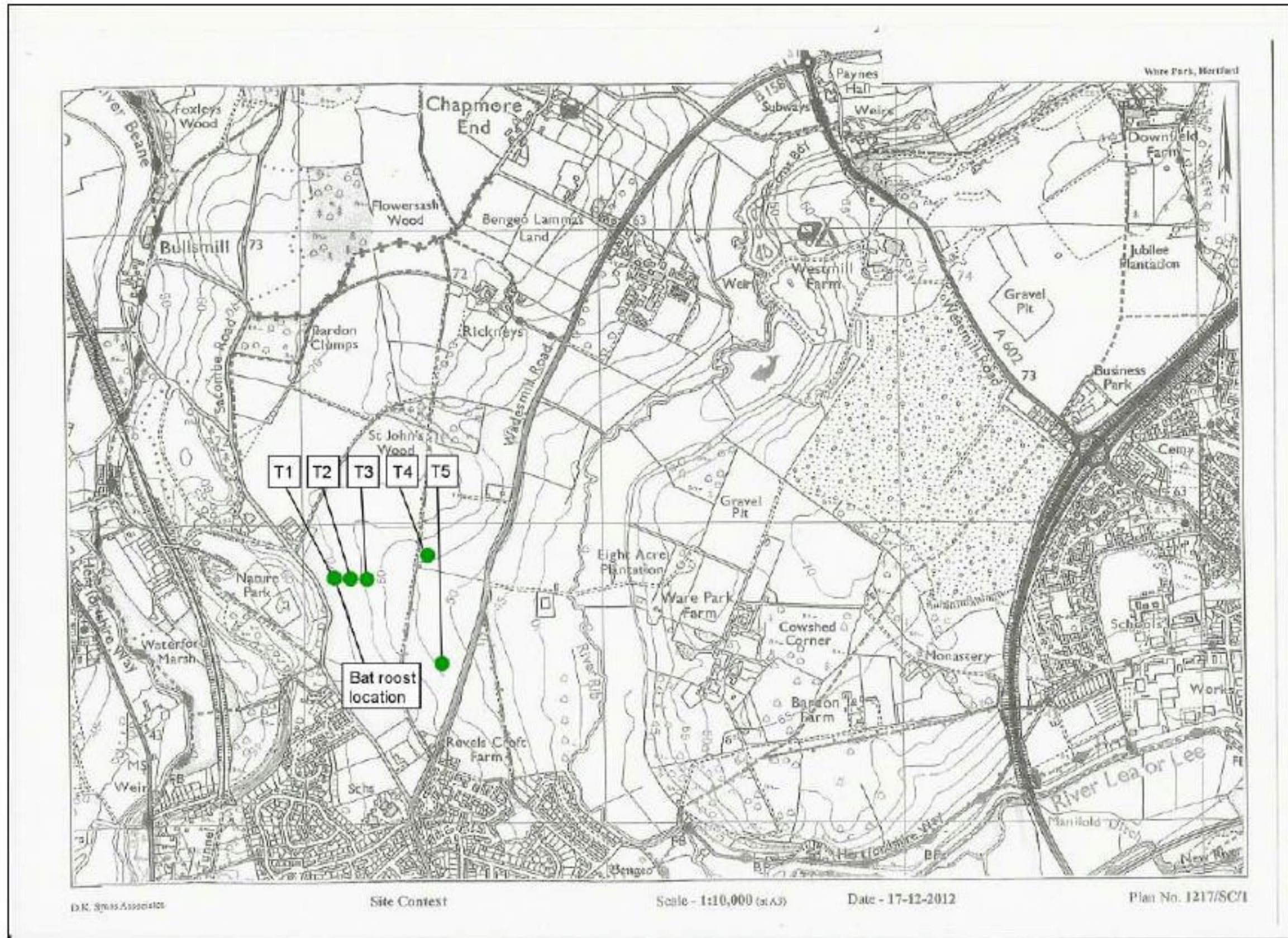
6. REFERENCES

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Appendix 1: Map A - Location of bat sightings at the Ware Park Estate, Hertfordshire – Spring/Summer 2013



Appendix 2: Map B - Location of bat roost and trees assessed at the Ware Park Estate, Hertfordshire - 2013



Appendix 3: Photographs A-J



Photograph A

The majority of the survey area was composed of wildlife poor arable land, with hardly any bats using this habitat for foraging or commuting over



Photograph B

Bats were shown to show some of the hedgerows for commuting and foraging along during this survey



Photograph C

Common pipistrelle was the main bat species encountered during all survey visits, but only low numbers were found to be using the Ware Park Estate



Photograph D

A total of five mature trees, four oaks and one sweet chestnut, were assessed at the site during a daytime bat survey with a ladder for any bat evidence or bat roost potential. This oak tree along the path was assessed for bats therefore at the start of the survey



Photograph E

There were some crevices or knot holes in some of the scattered trees that were assessed at the site, but the niches identified did not look as high quality for bats



Photograph F

This sweet chestnut trees was also assessed for bat potential, and had the crack and bark plates, but was not of high value to bats in theory



Photograph G

These three mature oaks at the west section of the site had also some bat roost potential, and the west most oak had a very small sized common pipistrelle bat roost



Photograph H

The single common pipistrelle emerged from the west most scattered oak, and quickly flew to the hedgerow adjacent to this tree



Photograph I

These three oaks had some niches some as crevices in deadwood and old branch bases that bats could use for roosting



Photograph J

In summary, although bats were shown to use the hedges and did roost in one of the mature oak trees surveyed, the majority of this site is of poor potential for bats, due to the predominant arable use. It is likely that there are far better sites for bats nearby with higher densities of insect prey

Area I: Rough grass with ruderals



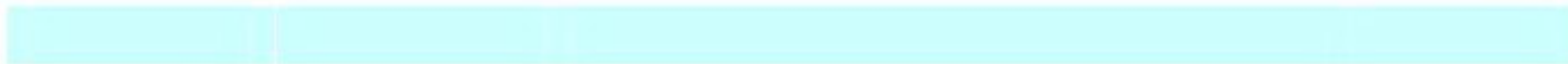
Area J: Tall ruderals adjacent to short mown grass



Area K: Rough grass with scattered Ruderals and brambles



Area L: Dense nettles with some brambles



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