



Glenfield Parish Council

Western Park Golf Course, Glenfield

Preliminary Ecological Appraisal Report

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EXECUTIVE SUMMARY

This report presents the results of a preliminary ecological appraisal (PEA), comprising a background data search and a UKHab habitat survey. This report has been produced to outline any constraints to potential development of the site. The appraisal was based on the red line boundary plan of the development site (the 'site').

The site is located to the south of the village of Glenfield, west of Leicester and makes up a sub-section of the former Western Park Golf Course. Adjacent to the red line boundary of the site is the Western Park Golf Course Local Wildlife Site (LWS). The site and the LWS share a common boundary on the east edge over 800m.

The survey was carried out on 15 May 2024 by Alicia Tredell a suitably qualified and experienced ecological consultant, a member of CIEEM, and is experienced in carrying out preliminary ecological appraisals. The PEA was undertaken in line with guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017). In addition, Habitat Suitability Index surveys were also conducted on the ponds found on site to assess whether the ponds are suitable for great crested newts (GCNs).

A range of habitats were found on the site including woodland and ponds. Areas of woodland are part of the priority habitat inventory for deciduous woodland and the woodlands also connect directly to woodlands present in the LWS. Both the LWS woodland and the woodlands on site, which are connected, contain ancient woodland indicator species and veteran trees.

Any works to woodland areas on site, particularly priority habitat areas, would be under additional scrutiny in regard to their conservation as is required by The Natural Environment and Rural Communities (NERC) Act (2006). Any losses to woodland areas would also require replacement and an additional 10% enhancement following the Biodiversity Net Gain guidelines.

The woodland also contained four live badger setts within the site, any works directly affecting these setts would require further survey and likely require a licence from Natural England.

The woodland is expected to be used by many bird species for breeding and roosting; all birds, their nests, or their eggs are protected from intentional harm, killing, or disturbance by the Wildlife and Countryside Act (1981). Any works with the potential to disturb nesting birds would need to be undertaken outside of the nesting season (March to September inclusive) or be done with ecological supervision. Several species of bird with enhanced protections on Schedule 1 of the Wildlife and Countryside Act (1981) could also utilise site, any disturbance to these birds when nesting requires a licence.

The five ponds identified on site were subject to a Habitat Suitability Index (HSI) assessment for their suitability to support GCNs. Three ponds were assessed as having poor suitability for GCNs, one pond was assessed as having below average suitability and one pond was assessed as having average suitability.

Enhancement opportunities are suggested to enhance the biodiversity of the site, specifically for protected and priority species, include:

- White-letter hairstreak butterfly
- Hedgehogs
- Reptiles

Enhancement opportunities to enhance the biodiversity net gain (BNG) score of site are included in the BNG baseline report.

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1.0 INTRODUCTION

1.1 Purpose of this report

- 1.1.1 This report presents the results of a preliminary ecological appraisal (PEA), comprising a background data search and a UKHab survey, with assessment for protected or otherwise notable species, on an area of Western Park Golf Course, Glenfields, Leicestershire (Grid Ref SK 53451 05067). The survey area included the land within the red-line boundary (the site) shown in *Figure 1*.
- 1.1.2 The appraisal was carried out on behalf of Glenfield Parish Council and has not been undertaken to support a planning application. This report identifies potential ecological constraints relevant to the site and specifies any further survey requirements should any works be undertaken on site. A biodiversity net gain assessment was also undertaken.

1.2 Landscape context

- 1.2.1 The 18 ha site is located to the south of the village of Glenfield, west of Leicester. The site is dominated by neutral grassland, broadleaved woodland, and scrub. There were five ponds within the site and four ditches along with one section of native hedgerow.
- 1.2.2 The site falls within the wider 63 ha former Western Golf Park and borders the Western Golf Park LWS. The site is bordered to the north and north-east by residential land of Glenfield village; to the west by a commercial business park; to the south by the M1; and to the east by the wider extent of Western park golf course. The surrounding landscape is predominantly suburban with a mixture of residential and commercial estates, some farmland and divided by several major A roads and the M1 motorway.

2.0 METHODS

2.1 Overview

- 2.1.1 The PEA was undertaken in line with guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017); it therefore included:
- A desk study (a background data search (BDS)), which includes a review of aerial photographs; obtaining information from the DEFRA and JNCC websites, and the local authority website; requesting data from the local records centre.
 - A field survey that informed habitat mapping, an assessment of the possible presence of protected or priority species and the likely importance of habitat features.
- 2.1.2 The PEA report includes an ecological description of the site and information about species that may occur there. Notes and mapping of any incidental sightings of invasive non-native plant species and protected or priority fauna species are also provided.
- 2.1.3 The survey was carried out on 15 May 2024 by Alicia Tredell a suitably qualified and experienced ecological consultant, a member of CIEEM, and is experienced in carrying out preliminary ecological appraisals.

2.2 Background data search

- 2.2.1 A search was made on 20 May 2024 for relevant reference materials. A list of sources is given in Table 1.

Table 1: Data sources

Information obtained	Available from
Protected and noteworthy species-records	Specify – will vary between England/Wales etc
MAGIC (the Multi-Agency Geographic Information website) to view statutory designated nature conservation sites	www.magic.gov.uk [NB: this site is included for convenience as a viewer, but data to create maps for any figures used is extracted from Open Source data provided by the SNCBs]
Nationally designated site locations and citations	Specify – will vary between England/Wales etc
European and Internationally designated site locations and citations	Joint Nature Conservation Committee (JNCC) website
Local Designated site locations and citations	Specify – will vary between England/Wales etc
Designations and legal protection of noteworthy species	Joint Nature Conservation Committee (JNCC) website
Details of species and habitats listed on the LBAP	Local biodiversity action plan website
Aerial photography	As a viewer only, sources include: www.google.com ; www.bing.com ; Google earth. Where reproduced as figures, sources vary and be licensed through ArcGIS, as stated.

- 2.2.2 A search was made for the following international and national statutory designated sites of ecological importance within 5 km of the site boundary: Ramsar sites, Special Areas of Conservation (SAC), Special Protection Areas (SPA)¹, and for Sites of Special Scientific Interest (SSSI), including consideration of SSSI risk zones, within 2 km.
- 2.2.3 A search was also made for non-statutory designated (often important in a local context) within 1 km of the site boundary.
- 2.2.4 The BDS also included a search for records within 1 km of the site boundary of noteworthy species, which might pose a constraint to the proposed development. Species included in the search were:
- European protected species (listed on Schedules 2 and 5 of The Conservation of Habitats and Species Regulations 2017 (as amended));
 - Nationally protected species under Schedules 1, 5 and 8 of The Wildlife & Countryside Act 1981 (as amended) and The Protection of Badgers Act 1992;
 - Species listed as critically endangered, endangered or vulnerable based on the IUCN Red List Categories and Criteria 2001;
 - All species listed on the RSPB's Birds of Conservation Concern 5 (Stanbury *et al.*, 2021) as red' or 'amber';
 - Nationally rare or nationally scarce species;
 - Notable² invertebrates; and
 - Species of principal importance listed under The Natural Environment and Rural Communities (NERC) Act 2006 or priority species under the relevant local biodiversity action plan.

2.3 Plants and habitats

UKHabs survey

- 2.3.1 The field survey was based on the UK habitats (UK Hab) survey methodology (Version 2.0; Butcher *et al.* 2023), The UK Hab classification system is the habitat classification that underpins the DEFRA Biodiversity Metric and is therefore the favoured habitat classification to use when surveys need to inform a Biodiversity Net Gain Calculation. This field survey was undertaken in line with CIEEM 2017 and involved the following elements:
- descriptions of the broad and dominant vegetation types;
 - habitat mapping using a set of standard colour codes to indicate habitat types (Figure 2); and
 - additional notes relating to numbered locations on Figure 2, called 'target notes'.
- 2.3.2 Vascular plant species were recorded during the survey, although no attempt was made to produce an exhaustive species list (additional species would

¹ SACs and SPAs were formerly called 'European Sites' and part of the Natura 2000 network; post-'Brexit', they are now considered part of the UK's 'national site network'. Ramsar sites are sites of international importance. See Appendix A for details. Note that SPAs, SACs and Ramsar sites are also underpinned by SSSI designations whose citations/boundaries may be slightly different.

² Appendix C includes a description of 'notable' as used in this context.

almost certainly be found during more detailed surveys or repeat surveys at various times of the year).

- 2.3.3 Plant nomenclature in this report follows Stace (2019) for native and naturalised species of vascular plant, and mosses and liverworts follow Hill *et al.* (2008). Introduced species and garden varieties were identified using relevant Floras. Plant names in the text are given with common names with the scientific name (in italics) immediately following the first time it is mentioned

Invasive non-native species (INNS)

- 2.3.4 UKHabs survey does not involve exhaustive surveying for individual plant species, and various invasive species may be little in evidence at various times of year (depending on the species). A survey seeking to identify habitat types cannot therefore be relied upon to provide firm information about the presence or extent of any INNS. However, any INNS that were encountered during the habitat survey were noted, including Japanese Knotweed (*Reynoutria japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Himalayan Balsam (*Impatiens glandulifera*), as well as any invasive non-native species of animals.

2.4 Protected and notable animals

General

- 2.4.1 The site was assessed for its suitability to support protected or otherwise notable animals that are likely to occur in the area. Some species could be ruled out through review of existing records, species distribution, geographic location, ecological connectivity and broad habitat types. Taking into account connectivity to natural habitats in the wider landscape, the nature and extent of habitats at the site, specific assessment was also carried out for the species/species groups outlined below.

Invertebrates

- 2.4.2 The site was assessed for its suitability to support notable species and/or assemblage of invertebrates, but no specific surveys were undertaken. The habitat requirements of particular invertebrates are often species-specific, so consideration was given to the presence of features and habitats that might be suitable for the notable species identified in the BDS.

Great crested newts

- 2.4.3 Although standing water is essential for their breeding, great crested newts (*Triturus cristatus*) are terrestrial for most of the year and have been recorded up to 500 m from their breeding ponds. Ordnance Survey maps and aerial imagery was reviewed to identify any ponds within 500 m of the site boundary, and the site was assessed for its suitability for both terrestrial and breeding great crested newts. Optimal breeding ponds tend to be well-vegetated, relatively clean and unpolluted, free of fish and wildfowl, and retentive of water throughout most summers (but not necessarily all). Highly suitable terrestrial

habitats include woodland, scrub and tussocky grassland, although great crested newts can be found in a broad range of sub-optimal habitats as well. Habitat suitability for other amphibians was similarly assessed.

- 2.4.4 Water features were assessed to determine whether they were suitable for great crested newts using the habitat suitability index (HSI) methodology developed by Oldham *et al.* (2000).
- 2.4.5 There is a positive correlation between HSI scores and presence and abundance of great crested newts in ponds. Generally, ponds with high HSI scores are likely to support larger populations. However, the relationship is not sufficiently precise to conclude that any pond with a high HSI will support newts in high populations, or that any pond with a low score will support low numbers of newts or no newts at all.

Reptiles

- 2.4.6 The site was assessed for its suitability for the four most widespread reptile species, with particular attention given to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (e.g. rough grassland and scrub).
- 2.4.7 Specific habitat requirements differ between species. Common lizards (*Zootoca vivipara*) and slow-worms (*Anguis fragilis*) favour rough grassland. Grass snakes (*Natrix helvetica*) have broadly similar requirements, with a greater reliance on ponds and wetlands. Adders (*Vipera berus*) use a range of fairly open habitats with some cover but are most often found in dry heath.

Birds

- 2.4.8 Birds nest, forage and roost in a wide variety of habitats including scrub, woodland, hedgerows and trees, wetland, arable and pastoral farmland and rough grassland. Some species also use open bare ground and man-made structures.
- 2.4.9 The site was assessed for its suitability to support diverse assemblages and/or uncommon species of breeding and non-breeding birds, with an emphasis on those species that are listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended), the red and amber lists of the RSPB's Birds of Conservation Concern 5 (Stanbury *et al.*, 2021) and other notable species recorded in the BDS, including any species that are qualifying features of nearby designated sites. Consideration was given to the site's connectivity to landscape features that are likely to be of particular importance to birds, such as extensive areas of semi-natural woodland or wetlands. The presence of nests or signs of nest building were recorded, and buildings were surveyed for their suitability for barn owls and other species, with signs including nesting sites, feathers, droppings and pellets.

Bats

- 2.4.10 Habitats were assessed for their suitability for foraging and commuting bats, in line with guidance provided in Collins (2023). Areas of particular interest vary between species, but generally include sheltered areas and habitats with good numbers of insects, such as woodland, scrub, rivers and species-rich or rough grassland.
- 2.4.11 Trees were noted if they had potential suitability for roosting bats (Collins, 2016). This involved identifying features that roosting bats may favour (e.g. holes, cracks and cavities that might be used as bat access-points or roost sites). No buildings were found or surveyed on site.

Dormice

- 2.4.12 Habitats were assessed for their general suitability for dormouse (*Muscardinus avellanarius*). Dormice generally use areas of dense woody vegetation cover (including hedgerows) and are more likely to be found where there is a wide diversity of woody species contributing to three-dimensional habitat complexity, a number of food sources, plants suitable for nest-building material, and good connectivity to other areas of suitable habitat.

Water voles and otters

- 2.4.13 Waterbodies and watercourses and their surrounding habitats were assessed to determine whether they were suitable for water voles (*Arvicola amphibius*). Suitable habitats include vegetated earth banks, reed beds, flowing water and wet ditches. Incidental signs of water vole activity, including burrows, feeding platforms, food remains and latrines, were recorded if they were encountered.
- 2.4.14 Waterbodies and watercourses on the site were also assessed for their suitability for otters (*Lutra lutra*). Otters require clean rivers and associated waterbodies with an abundant, varied supply of food and plenty of bank-side vegetation, offering secluded sites for their holts. Other suitable habitats include reed beds and interconnected ditches and streams. Incidental signs of otter activity, including holts, foraging signs, paths (runs), footprints and spraints, were recorded if they were encountered.

Badgers

- 2.4.15 An initial assessment was carried out to identify areas that might be used by badgers (*Meles meles*) for foraging or sett building within 30 m of all areas potentially affected by works (where access was possible). The area was systematically searched for signs of badgers including setts, foraging signs, paths (runs) and latrines where possible, and the category of sett and levels of activity visible at each sett was recorded.

Other species of Principal Importance

- 2.4.16 The UK countries of England, Wales, Scotland and Northern Ireland are obliged by their individual laws to maintain lists of species and habitats of principal

importance for biodiversity conservation. In England, this obligation derives from the Natural Environment and Rural Communities (NERC) Act 2006. An assessment of the suitability and likelihood of the site supporting such species was made (for example, hedgehog (*Erinaceus europaeus*)).

2.5 Limitations

- 2.5.1 This preliminary appraisal as to whether protected or otherwise notable species might occur on the site is based on the suitability of habitat, the known distribution of relevant species in the local area (from online sources and desk study), and any signs of the relevant species. It does not constitute a full and definitive survey of any protected species group.
- 2.5.2 Field signs for protected and valuable species are often difficult to find or absent from a site. The survey conducted was not intended to be a comprehensive presence/absence survey for all species, but rather to provide an indication of the likely presence of such species based on the field signs found, and the nature of the habitats present.
- 2.5.3 Access was not made to adjacent land, and therefore it remains possible that a badger sett (or other evidence of protected or notable species) beyond the site boundary could have been missed. Much of the site was also covered by dense bramble scrub, which prevented a full survey for both badger and nesting birds being conducted. The peripheries of all such areas were, however, extensively searched, providing a high level of confidence in the results and assessment provided.
- 2.5.4 The total number of ponds within 1 km of the ponds on site could not be conclusively established as access and time constraints on the survey did not allow for in situ survey outside of the site boundary and aerial photography can easily miss ponds within woodland areas, which are common to the south east of the site. This may mean the Habitat Suitability Index scores for ponds on site may be subject to change should the number of ponds known in the area increase.

3.0 RESULTS

3.1 Background Data Search

Statutory designated sites

- 3.1.1 There is one statutory designated sites within 5 km of the site boundary, comprising a site of special scientific interest. The site is not part of a European site and there are no European sites within 5 km of the site. The statutory site is detailed in *Table 2* in order of proximity to the site; short descriptions are given for the sites.

Table 2: Statutory sites within 5 km of the site boundary (2km for SSSIs and LNRs)

Site name	Reasons for designation	Approximate distance (m) and direction from site boundary
Kirby Frith Local Nature Reserve (LNR)	This reserve is the richest wildflower grassland in Leicestershire. The site contains Devils-bit Scabious, Betony, Great Burnet, Tormentil, Yellow Rattle and many other grassland species. It is also very good for grassland butterflies such as Speckled Wood, Meadow Brown and Ringlet.	570m south east

Non-Statutory Sites

- 3.1.2 The site does not fall within a non-statutory site. There are two non-statutory designated sites within 1 km of the site boundary, both are local wildlife sites (LWS). The designated sites present within the study area are listed in *Table 3* along with their proximity to the site.

Table 3: Non-statutory designated sites within 1 km of the site boundary

Site name	Reasons for designation	Approximate distance (m) and direction from site
Western Golf Course LWS	Great Crested Newt ponds on golf-course & adjacent land in housing estate, with foraging habitat (scrub, rough grassland, ditches). The West Golf Course LWS was designated, in part, due to its GCN population in ponds on the site. Old plantation woodland with ancient woodland indicators. Some species-rich rough grassland near clubhouse.	The site and the LWS share a common boundary on the east edge over 800m.
Ratby Lane Hedgerow LWS	Species-rich hedgerow, with adjacent scrub/woodland.	325m south

Habitats

- 3.1.3 There are 17 areas of priority habitat present on and within 1 km of site. Three areas of deciduous woodland are present on site, and a further 14 within 1 km of the site, the closest abuts the site boundary where it connects to the Western Golf Course LWS.

Protected and Notable Species

- 3.1.4 At least 77 noteworthy species are recorded from places within 1 km of the site boundary. Noteworthy species include species of principal importance that are listed under Section 41 of The Natural Environment and Rural Communities (NERC) Act 2006.
- 3.1.5 Of these, four are amphibians, 33 are birds, one is a crustacean, 24 are invertebrates, 11 are mammals (of these, eight are bats) and four are plants. Species that are protected by law under Schedules 2 and 5 of The Conservation of Habitats and Species Regulations 2017 (as amended), Schedules 1, 2, 5 and 8 of The Wildlife and Countryside Act 1981 (as amended) or The Protection of Badgers Act 1992 that have been recorded in the search area are highlighted in the full species list is given in *Appendix B*. Those of relevance to the site and the current proposals are discussed in Sections 4.2 and 4.3.

3.2 Plants and habitats

UK Habitat Survey

- 3.2.1 The UK habitat map is provided as *Figure 2* and shows the location of the target notes referred in the text below. A full description for each of the target notes is given in *Appendix D*. The site comprises the following:

- other neutral grassland
- other broadleaved woodland
- lines of trees
- woodland broadleaved & mixed
- native hedgerow
- scrub mixed
- scrub bramble
- scattered trees
- eutrophic standing water
- other standing water
- wet ditches
- dry ditches
- built linear features

Other neutral grassland (g3c)

- 3.2.2 An infrequently managed, tussocky neutral grassland which has grown from the areas of putting green when the site was part of the adjacent golf course. This habitat is the dominant habitat on the site and extends from southwest to northeast of the site. Many other habitats are present in the neutral grassland

including multiple ponds, lines of trees, scattered trees and a section of native hedgerow (Picture 1).

- 3.2.3 Species include dominant Perennial ryegrass (*Lolium perenne*), Cock's-foot (*Dactylis glomerata*), Meadow Foxtail (*Alopecurus pratensis*) and Yorkshire fog (*Holcus lanatus*) with Creeping Buttercup (*Ranunculus repens*) and Dandelion (*Taraxacum officinale agg.*).

Other broadleaved woodland (w1g)

- 3.2.4 Three distinct sections of broadleaved woodland were present on site, the largest bounds the entire western edge of site extending; capping the southern edge all the way to the north edge (Picture 2). This is the largest section of woodland on the site and contains several ditches and ponds, it is also the area of site which contains the three sections of priority deciduous woodland, as recorded by the nation forest inventory. Species in this section included Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), Field Elm (*Ulmus minor*) and Willow (*Salix sp.*) with an understory containing Lords and Ladies (*Arum maculatum*), Garlic Mustard (*Alliaria petiolate*), English Bluebell (*Hyacinthoides non-scripta*) and Red Campion (*Silene dioica*). English Bluebell is an ancient woodland indicator.
- 3.2.5 The two other woodland sections are both much smaller stands of woodland, one in the south of site and another in the north, these sections are remnants of the site's former use as a golf course. The woodland sections were used to divide the greens and fairways.
- 3.2.6 Species in these woodland sections included Field Maple (*Acer campestre*), Wild Cherry (*Prunus avium*), Small-leaved Lime (*Tilia cordata*) and Silver Birch (*Betula pendula*) with understory's containing Perennial ryegrass, Creeping Buttercup, Common Nettle (*Urtica dioica*) and Garlic Mustard (*Alliaria petiolate*).

Line of trees (w1g6)

- 3.2.7 Six lines of trees were present in areas within the site, three in the south and three in the north. These areas appear to also be remnants of the site's former use as a golf course, being used as natural dividers between fairways (Picture 3). A large number of these trees have been planted and are much younger than those in other woodland areas.
- 3.2.8 Species include Black Poplar (*Populus nigra*), Alder (*Alnus glutinosa*), Wild Cherry (*Prunus avium*) and Small-leaved Lime (*Tilia cordata*).

Other broadleaved mixed (w1h)

- 3.2.9 Two other large sections of woodland present on site are classified as mixed woodland but are otherwise similar in appearance and quality to adjacent broadleaved areas (Picture 4). One section of mixed woodland divides the central area of neutral grassland on site in two whilst the other bounds the east edge of site and extends beyond the site boundary as part of a much larger section of woodland present in the golf course to the south east.

- 3.2.10 Species present include Scots Pine (*Pinus sylvestris*), Small-leaved Lime, Oak (*Quercus robur*), Ash (*Fraxinus excelsior*) and an understory containing Perennial ryegrass (*Lolium perenne*), Creeping Buttercup (*Ranunculus repens*), Common Nettle, Garlic Mustard, English Bluebell and Red Campion

Native hedgerow (h2)

- 3.2.11 One short section of unmanaged hedgerow is present at the northern extent of the site, it is unconnected to other hedges or woodland, surrounded by grassland (Picture 5). Although short, this hedgerow is in good condition, having no gaps, is over 2 m in height and is dominated by native species.
- 3.2.12 Species include Hawthorn (*Crataegus monogyna*) and an understory containing Bramble (*Rubus fruticosus*), Perennial ryegrass, Ivy (*Helix hedera*), Creeping Buttercup and Cleavers (*Galium spp.*).

Scrub; mixed (h3h) & bramble (h3d)

- 3.2.13 Ten areas of scrub are present on site, with six areas of bramble scrub (h3d) and four areas of mixed scrub (h3h).
- 3.2.14 The four areas of mixed scrub all differ, the largest is at the south end of site and is surrounded by woodland not forming a transition into grassland (Picture 6), a second is very small and follows the course of a wet ditch (Ditch 3) which emerges from the large area of broadleaved woodland and the last two form transitional areas from woodland into grassland.
- 3.2.15 Species include Bramble (*Rubus fruticosus*), Hawthorn, Blackthorn (*Prunus spinosa*), and Common Nettle with Broadleaved dock (*Rumex obtusifolius*), Red Campion and Green Alkanet (*Pentaglottis sempervirens*).
- 3.2.16 The areas of bramble scrub were predominantly present at edges of woodland, forming a transition between both mixed and broadleaved woodland into neutral grassland (Picture 7), only one was an isolated stand. This habitat was present in the south and bordering the eastern section of mixed woodland and are likely the result of reduced management over time following the end of use of site as a golf course.
- 3.2.17 Species present are dominated by Bramble and Common Nettle with Broadleaved dock, spear thistle (*Cirsium vulgare*) and saplings of Oak, Elder (*Sambucus nigra*) & Wild Cherry (*Prunus avium*).

Ponds (r1) & ditches (191)

- 3.2.18 Five ponds and four ditches are present on site, the ponds are present in both the grassland and in woodland areas and ditches primarily present in woodland areas on site and were a mix of dry and wet ditches.
- 3.2.19 Three ponds are present in or adjacent to areas of woodland on site, these are larger less managed ponds with heavy shade from surrounding vegetation and more limited human disturbance (Picture 8). Species in these ponds were

predominantly Duckweed (*Lemna minor*), Yellow Iris (*Iris pseudacorus*) and Reed Canary Grass (*Phalaris arundinacea*).

- 3.2.20 The two other ponds were situated in the former putting green and originally were ornamental in nature, being smaller with more variable water levels, one was almost dry at time of survey. Species at these ponds included Yellow Iris (*Iris pseudacorus*), Reed Canary Grass (*Phalaris arundinacea*), Hard Rush (*Juncus inflexus*) and Pendulous Sedge (*Carex pendula*).
- 3.2.21 Four dry ditches and one wet ditch were present in the woodland along the west edge of site (Picture 9). Ditch 1 follows the north west edge of site for around 70 m and Ditch 2 follows a parallel course but for over 500 m through the woodland. Both have bridges which pass over them and were not regularly filled with water and without any associated emergent vegetation.
- 3.2.22 Ditch 3 starts in the same woodland but emerges from it and into the grassland, it was heavily obscured by the mixed scrub growing around and along its course. Species include Hard Rush (*Juncus inflexus*) and Watercress (*Nasturtium officinale*).
- 3.2.23 Ditch 4 was present in the central stand of woodland and was also dry with no associated emergent vegetation.

Invasive Non-native Species

- 3.2.24 No records of invasive or non-native species (INNS) present in the BDS and none were identified on site during the survey.

3.3 Protected and notable animals

- 3.3.1 *Figure 2* shows the location of the target notes referred to in the text below, which show the location of particular features with suitability for protected and notable animals. A full description for each of the target notes is given in *Appendix D*.

Bats

- 3.3.2 The BDS returned records of the following bat species within 1 km of the site:
- Brown long-eared bat (*Plecotus auritus*) (one record, closest 1 km west of site);
 - Noctule bat (*Nyctalus noctule*) (three records, closest located 780 m south east of the site);
 - Common pipistrelle (*Pipistrellus pipistrellus*) (30 records, closest being 40 m south of the site);
- 3.3.3 Three trees were identified with bat roost potential, comprising an Elder tree with a torn limb (Target Note 14), a veteran Oak tree (Target Note 16), a standing deadwood tree (Target Note 25), a mature Elder tree (Target Note 30), a standing dead tree with peeling bark (Target Note 31) and a split Willow tree (Target Note 32).

- 3.3.4 The woodlands on site have varied tree ages as well as open areas, such as glades and rides; these provide ample roosting and foraging opportunities for bats as well as being connected to the immediate surrounding woodlands of the remaining disused golf course to the south east. Connectivity to the wider environment is more limited due to the residential, commercial and transport infrastructure, but common and widespread bat species could be well served by the site and its immediate surroundings.

Badgers

- 3.3.5 No badger records were returned within the BDS, however, four separate badger setts were found on site, with a total of 14 entrances in total. (Target Notes 1-5, 7-13, 23-24 & 26). All four setts were present in the woodland areas, with Setts 1 & 2 in the north west of the western woodland and setts 3 & 4 in the easternmost boarder of the east woodland. Setts 1 and 2 are classified as live with field signs indicating the presence of badgers in the recent past, while sett 3 and 4 have signs of recent entry, but it cannot be confirmed whether these setts are in use by badger or other mammals.
- Sett 1 - Feeding remains, no leaf litter near entrances and newly created spoil mounds.
 - Sett 2 - Newly created spoil mounds and badger hair found near three entrances and one entrance had little leaf litter and debris.
 - Sett 3 - Entrances with no leaf litter or recent spoil.
 - Sett 4 - Entrances with no leaf litter or recent spoil.
- 3.3.6 Habitats on site as well as in the immediate surrounding areas to the south east, were noted as being highly suitable foraging habitat for this species, comprising grassland, scrub and woodland that provides suitable foraging and sett creation opportunities for badgers.

Birds

- 3.3.7 The BDS returned 10 species within 1 km which were on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), of these six species are associated or able to utilise habitats present on site. These are: Peregrine (*Falco peregrinus*), Hobby (*Falco subbuteo*), Red Kite (*Milvus milvus*), Firecrest (*Regulus ignicapilla*), Redwing (*Turdus iliacus*) and Fieldfare (*Turdus pilaris*).
- 3.3.8 18 priority species were identified by the BDS, those with the potential to be associated with habitats within or immediately adjacent to the site include: Song thrush (*Turdus philomelos*), Dunnock (*Prunella modularis*), Spotted flycatcher (*Muscicapa striata*), Starling (*Sturnus vulgaris*), Hawfinch (*Coccothraustes coccothraustes*) and Tree pipit (*Anthus trivialis*).
- 3.3.9 All habitats present on site were capable of supporting common and widespread bird species, those seen during the survey include; Song thrush (*Turdus philomelos*), Woodpigeon (*Columba palumbus*), Rook (*Corvus frugilegus*), Crows (*Corvus corone*), Magpies (*Pica pica*), Wren (*Troglodytes troglodytes*), Great tit (*Parus major*), Chiff chaff (*Phylloscopus collybita*), Blackbird (*Turdus merula*), Robin (*Erithacus rubecula*) and Buzzard (*Buteo buteo*).

Dormice

3.3.10 The site contained bramble scrub habitat that have potential suitability for dormice to use for foraging and nest building, although the site is inside the species' known range, it is not common in the county. The plant species on site also do not encompass the full and diverse range of requirements dormice have. Furthermore, no records of this species were identified within the 1 km BDS area or the wider area beyond this and the urban aspect of the wider landscape to the east reduces connectivity this species typically requires. This species is therefore assumed to be absent from the site.

Fish

3.3.11 No BDS records of fish were found, but ponds and wet ditches present on site could potentially support a limited selection of fish species. Species of Stickleback (*Gasterosteus sp.*) were seen by the public in some of the ponds.

Great crested newts & amphibians

3.3.12 The BDS revealed 73 records of Great crested newts within 1km of the site boundary but no records related to the site. Members of the public stated that GCN are present in ponds on the site. Five ponds were identified on site during the survey and these were given a Habitat Suitability Index (HSI) assessment for their suitability to support GCN, this assessment is detailed in Table 4. The other habitats within the site, including the tussocky grassland, dense scrub and woodland throughout, that are likely to be used by great crested newts for foraging, refuge and hibernation.

3.3.13 122 further records of three amphibian species, Common Toad (*Bufo bufo*), Smooth Newt (*Lissotriton vulgaris*) and Common Frog (*Rana temporaria*) were returned by the BDS within 1 km of site; Four records of common toad, 93 of smooth newt and 25 of common frog. Of these records, one common toad, 15 smooth newt and six common frog were found on site itself.

3.3.14 Full details of the HSI calculations for potentially suitable breeding ponds within site are shown in Table 4. Ditches on site were dry or nearly dry during the survey and a HSI could not be completed.

Table 4: HSI calculations for ponds within the site.

Waterbody number	1	2	3	4	5
SI1 – Location	Zone A				
SI2 – Pond area (m ²)	323	85	30	157	59
SI3 – Permanence	Never Dries	Never Dries	Never Dries	Never Dries	Sometimes dries
SI4 – Water quality	Moderate	Moderate	Poor	Moderate	Moderate
SI5 – Shade	70%	80%	30%	50%	0%
SI6 - Waterfowl	Absent	Absent	Minor	Absent	Absent
SI7 – Fish	Possible	Possible	Absent	Minor	Absent
SI8 – Pond count	7				
SI9 – Terrestrial habitat	Moderate	Moderate	Poor	Moderate	Poor
SI10 - Macrophytes	80%	40%	10%	20%	0%
HSI Score	0.50	0.39	0.48	0.64	0.48
Pond rating	Below average	Poor suitability for GCNs	Poor suitability for GCNs	Average suitability for GCNs	Poor suitability for GCNs

Waterbody number	1	2	3	4	5
	suitability for GCNs				

Invertebrates

- 3.3.15 The BDS returned one notable invertebrate species within 1 km of the site, White-letter hairstreak butterfly (*Satyrrium w-album*), a S41 and priority species on the UK Biodiversity Action Plan (BAP). This species is associated with elm, particularly Wych elm (*Ulmus glabra*) for egg laying and bramble for feeding which are present in the habitats on site listed in Section 3.2 above.
- 3.3.16 On site, the habitats present were considered likely to support only a common assemblage of invertebrate species, typical of broadleaved woodland, deadwood, mixed scrub, and species-poor neutral grassland habitats.

Reptiles

- 3.3.17 There have been no records of any reptiles from previous surveys and no records returned from the 1 km BDS area. However, the site contains areas of tussocky grassland suitable for widespread reptiles; wood, grass and detritus piles offer basking sites and ditches & ponds offer foraging, commuting and refuge areas for Grass snake and Slow worm. Furthermore, the scrub and log piles may offer hibernation opportunities.

Water voles and otters

- 3.3.18 No BDS records were provided within 1 km of the site to suggest the presence of otters or water voles. The limited, and predominantly dry, water courses on site were not assessed as providing habitats suitable for either of these species, nor connected enough to a wider network of suitable watercourses to provide commuting opportunities for either of these species. Therefore, they are not considered further in this report.

Other species

- 3.3.19 53 records of hedgehogs within 1 km of the site were identified during the BDS. Hedgehogs occupy a range of lowland habitats with enough cover to allow nesting; they are common in parks in urban and suburban environments, farmland and gardens. Scrub, hedgerows and grassland on the site provide suitable foraging habitat for hedgehogs. Hedgerows provide some connectivity to suitable habitat in the wider landscape including agricultural fields, residential gardens and amenity grassland in neighbouring schools. There may be opportunities for hedgehogs to hibernate in the scrub within the site and it is likely that they are present.

3.4 Validity of Data

- 3.4.1 Unless the site changes significantly, the surveys carried out for this report should remain valid for at least 18 months, and potentially up to 3 years (CIEEM 2019).

4.0 POTENTIAL CONSTRAINTS

4.1 Potential constraints to site works

- 4.1.1 This section sets out any potential constraints, in general terms, to a change or development of the site as it was assessed at the time of survey. Species and habitats that would require further survey, consideration or mitigation in the event of a planned development.

Habitats

- 4.1.2 The deciduous woodland on site contains ancient woodland indicators and veteran trees. It is therefore likely to support a wide range of animal and plant species. It is an excellent example of a woodland set in a wider urban landscape and should therefore be prioritised for retention.
- 4.1.3 Deciduous woodland present on site connects directly to wider areas of woodland in the West Golf Course LWS, which was designated, in part, due to the presence of ancient woodland indicators in its woodland areas. Additionally, sections of woodland both on site and in the connected LWS are also present in the priority habitat inventory for deciduous woodland, meaning they are a UK BAP habitat and fall under S41 of the NERC Act (2006). This requires local authorities and government departments to have regard to the purposes of conserving biodiversity when determining planning permission relates to these habitats or species.
- 4.1.4 Biodiversity Net Gain (BNG) adds an additional layer of potential constraints in regard to the woodland. Areas of woodland on site were assessed as being in either moderate or good condition, meaning that all woodland on site is relatively high scoring on the BNG metric and any removal of any woodland areas must be replaced by an equivalently scoring and equivalent type habitat under like-for-like replacement rules in BNG.
- 4.1.5 Finally, areas of woodland and woodland edge would have constraints related to the potential of protected species to be present within them. This is explored in detail for individual species below, but woodland areas on site are likely to support; Bats, Badgers, Birds, Reptiles, Great Crested Newts and Invertebrates.
- 4.1.6 These designations and protections do not prevent any modification or removal of this habitat alone but represent a potentially complex and intersecting set of layered legal requirements & considerations, BNG metric scores & equivalence rules and individual species protections. All of these would need to be considered in regard to any potential development which affects the woodland areas of site.

Badgers

- 4.1.7 Badgers are known to be present and active on site in all four setts found within the site boundary, they are also highly likely to be active in the wider landscape, particularly to in the West Golf Course LWS to the south east. Badgers and their

setts' are protected under the Protection of Badgers Act 1992, which makes it illegal to wilfully or recklessly kill, injure, or capture badgers, as well as to interfere with their setts, which includes damaging, destroying, or obstructing access.

- 4.1.8 Badgers would need to be considered during the planning and construction of any development on site. Construction phase works typically need to account for the mobility and curiosity of badgers in and around site areas and if any setts are to be affected or require removal for a development then further survey and potentially a badger licence from Natural England (NE) would be required to conduct these works. The badger licence would need to include appropriate mitigation measures. Licences can only be granted with valid planning permission and can only be implemented between the period of July 1st and 30th November.

Bats

- 4.1.9 It is likely that several trees on site support roosting bats. Bats are protected under the Conservation of Habitats and Species Regulations (2017) (as amended) and the Wildlife and Countryside Act 1981 (as amended) (see Appendix A). Further surveys would be required to identify if any bats are roosting in these trees, and if so, the mitigation measures that might be required in relation to any design proposals. Any removal of trees used by roosting bats would need to be undertaken under licence, and there may be restrictions on timing dependent on the status of any roost.
- 4.1.10 The use of the site by foraging and commuting bats would need to be investigated before any development is considered. The site is connected to the LWS, by a range of suitable foraging and commuting habitats within which are known populations of Pipistrelle bats. It is likely that any development will require a sensitive lighting scheme to maintain dark commuting corridors and foraging areas.

Birds

- 4.1.11 Birds protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (see Appendix A) and are present within 1 km of site and could conceivably utilise a range of habitats on site for nesting and foraging. Dependent upon the nature and scale of a potential development, further surveys could be required to ascertain whether any active nest site for a schedule 1 species was present on or in proximity to the site and, if so, any mitigation that might be required during construction.
- 4.1.12 Multiple bird species listed in S41 of the NERC Act (2006) are recorded as being present within 1 km of the site. Planning authorities are legally required to consider the conservation of S41 species when granting planning permission, as such, further survey may be required to determine the presence of these species on site. Any mitigation required would then be tailored to any such species present with regard to the specific nature of the planned development and its potential effects on those species.

- 4.1.13 Additionally, the Wildlife and Countryside Act 1981 provides comprehensive protection for all nesting birds in the UK. It is illegal to intentionally harm, kill, or disturb birds, their nests, or their eggs. This includes prohibiting nest removal or destruction during the nesting season, which typically runs from March to August, though this can vary by species and location.
- 4.1.14 Therefore, in regard to any potential development any nesting bird habitat should be removed outside of the bird nesting season (i.e. outside of the period March to August inclusive). If this is not possible, then these areas will have to be checked for nests by an ecologist immediately prior to clearance. If nests are found, they must be retained (with a suitable, species-specific buffer from works established) and protected from damage or abandonment until the young have fledged.

Great crested newts & amphibians

- 4.1.15 GCN are very likely to be present on site, utilising both aquatic and terrestrial habitats present on site for breeding, foraging and refuge. Whilst the HSI scores of the site ponds were average to poor, the scores are only indicative of suitability. High numbers of BDS records together with anecdotal GCN records from members of the public at the time of survey stated that GCN were known to be on site suggests that they are likely to be using any number or combination of the five ponds found during the survey as well as terrestrial habitat on site.
- 4.1.16 The West Golf Course LWS to the south east was designated, in part, due to its GCN population in ponds on the site, this and the connectivity between the site and the LWS reinforces the likelihood of GCN on site. The total number of ponds and size of the GCN population on the LWS site is not known, but as GCN often exist in metapopulations (a group of associated populations of individual ponds where newts have some interchange between the ponds) not just around single ponds, they most likely have colonised site ponds from ponds in the LWS.
- 4.1.17 Habitats on site also provide optimal habitat for the terrestrial requirements of GCN, which spend many months outside of ponds when not breeding. The woodland-grassland mosaic of primarily broadleaved woodland and tussocky/rough grassland onsite are textbook examples of habitats suitable for providing forage, refuge and dispersal opportunities for GCN.
- 4.1.18 GCN are a European Protected Species (Schedule 2) species, designated under the Conservation of Habitats and Species Regulations (2017), as well as WCA5 and S41 (Appendix C). Individuals & their eggs are protected from capture, killing, disturbance or injury and their breeding sites & resting places are protected by law from damage or destruction.
- 4.1.19 The possible presence of GCN on site could act as a potential constraint to proposed developments. Further survey are highly recommended prior to any potential development to confirm the GCN presence, population size and population range. An eDNA survey for GCN can be undertaken between 15 April and 30 June, and population surveys can be undertaken between mid-

March and June. Any removal or modification of any ponds used by GCN would require a licence from Natural England, and habitat modification is likely to require supervision or immediate pre-works checks by an ecologist with a GCN class licence.

- 4.1.20 Common toad, common frog and smooth newt all also utilise similar aquatic and terrestrial habitats to GCN, they are known and have been recorded as present on site previously. All three species are also subject to WCA5 and common toad is also a S41 species. No works affecting these species with require a licence, but supervision works similar to those for GCN are likely to be required for any habitat modification works.

Reptiles

- 4.1.21 Although no reptile records being provided in the BDS, the habitats on site are highly suitable for common lizard, grass snake and slow worm and moderately suitable for adders.
- 4.1.22 All reptiles in the UK are protected under the Wildlife and Countryside Act 1981 (as amended), making it illegal to kill, injure, or trade them. Any works to habitats likely to be used by reptiles should be subject to supervision and/or pre-works checks by a suitably qualified ecologist.

Other species

- 4.1.23 Hedgehogs are likely to be present on and utilising the habitats on site and the surrounding areas, as a S41 species planning authorities are legally required to consider the conservation of S41 species when granting planning permission and so represent a potential constraint to any site plans.
- 4.1.24 Additionally, the Wild Mammals Protection Act (1996) protects all mammals from acts such as crushing, dragging and asphyxiation, which are possible outcomes from site clearance or habitat modification works, and so may require ecologist pre-works checks and supervision of such works.

4.2 Opportunities for enhancement

- 4.2.1 This section covers opportunities to enhance the biodiversity on the site, a separate Biodiversity Net Gain baseline report contains suggestions to enhance the BNG score of habitats, and their condition, on site.

White-letter Hairstreak

- 4.2.2 The site contains several habitats capable of supporting the white-letter hairstreak butterfly and they may well be present on site already. But these can be enhanced and made more plentiful with appropriate management and planting.
- 4.2.3 This butterfly species primarily relies on elm trees (*Ulmus spp.*) for egg-laying, as the larvae feed on elm leaves. Therefore, planting disease-resistant elm varieties and ensuring a mix of young and mature trees provides continuous suitable habitat. In addition to elm trees, maintaining diverse grassland areas

rich in nectar sources is vital. Adult White-letter Hairstreaks feed on flowers such as Thistles (*Cirsium spp.*), Brambles (*Rubus fruticosus*), and Wild Privet (*Ligustrum vulgare*). A management plan should include sowing native wildflowers and maintaining a mix of grasses to create a rich foraging environment. Avoiding the use of pesticides and herbicides ensures a healthy ecosystem for both the butterflies and their food plants.

- 4.2.4 Creating sunny, sheltered areas with hedgerows or tree lines can provide additional habitat and protection from wind. Regular monitoring and adaptive management are essential to respond to changes in butterfly populations and habitat conditions.

Reptiles

- 4.2.5 Common species of reptiles can be encouraged and better supported on site through the creation of a mosaic of habitats that provide basking, shelter, and foraging opportunities. Ensuring varied vegetation structure with open sunny areas and dense cover is essential for thermoregulation and protection from predators.
- 4.2.6 Basking sites requiring open, sunny spots where they can warm up, creating log piles, rockeries, and south-facing slopes can offer ideal basking conditions. For shelter and hibernation, maintaining leaf litter, compost heaps, and log piles provides safe refuges and overwintering sites. These features also attract invertebrates, enhancing the foraging habitat. Water sources, like ponds or shallow water dishes, benefit species like the Grass Snake, which prey on amphibians.

Hedgehogs

- 4.2.7 Enhancing the site to encourage hedgehogs involves creating a diverse and connected habitat that meets their needs for foraging, nesting and hibernation. Habitat connectivity, such as maintaining hedgerows, scrub and tussocky grass ensures that hedgehogs can move freely across site.
- 4.2.8 Foraging areas are crucial for hedgehogs, which thrive in environments rich in invertebrates. Diverse grasslands with a mix of native plants attract insects, worms, and other invertebrates, providing a steady food supply. Additionally, providing natural shelters, such as piles of logs, leaves, and brushwood, offers nesting opportunities and safe hibernation spots. Purpose-built hedgehog houses can also be placed in quiet, undisturbed areas and herbicide and pesticide use should be avoided.
- 4.2.9 Water sources are also necessary for hedgehogs, ponds with gentle slopes ensure they have access to water without the risk of drowning.

Nest/Roost boxes

- 4.2.10 Bird and bat boxes and/or bricks should be incorporated into the development design, including those suitable for a range of bat species, swift, house sparrow and/or starling, which are all species of conservation concern and are likely to

be present within 1 km of the site. These features would provide additional roosting/nesting sites for these species groups and help offset impacts associated with habitat loss.

Log piles

- 4.2.11 Log piles should be incorporated into quiet and varied habitats in the development to offer refuge for hedgehogs and other species. Ideally, they should be created using any logs generated from any vegetation clearance, or from native and local wood.

General management

4.2.12 The following biodiversity enhancement measures could also be incorporated:

- Any logs created during site clearance or maintenance should be retained in situ as deadwood features or created into habitat piles at suitable site locations, to benefit saproxylic invertebrates, reptiles, hedgehog and amphibians.
- Management of the grassland and scrub to benefit the reptile and amphibian populations, by creation and maintenance of a mosaic of areas of open ground & grassland, habitats, together with areas of scrub and/or hedgerow habitat.
- Creation of new native species hedgerows connecting the areas of woodland to strengthen habitat connectivity and/or provide habitats or food sources for birds, bats and reptiles.
- Install bat boxes and/or bird boxes on trees within the site to provide additional roosting/nesting sites for these species.

REFERENCES

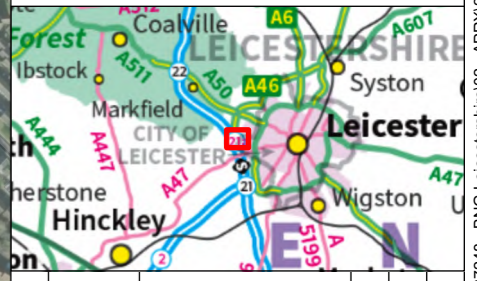
- Beebee, T.J.C. & Griffiths, R.A. (2000), *Amphibians and Reptiles – A Natural History of the British Herpetofauna*. HarperCollins, London.
- Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020), *UK Habitat Classification – Habitat Definitions V1.1* at <http://ukhab.org>
- Chartered Institute of Ecology and Environmental Management (2017), *Guidelines for Preliminary Ecological Appraisal*. Technical Guidance Series, www.cieem.net/gpea.asp.
- Chartered Institute of Ecology and Environmental Management (2019), *Advice Note on the Lifespan of Ecological Reports & Surveys*. CIEEM, Winchester, Hampshire.
- Cherrill, A. & McClean, C. (1999), Between-observer variation in the application of a standard method of habitat mapping by environmental consultants in the UK. *Journal of Applied Ecology*, **36**, 989-1000.
- Crosher et al. (2019). *The Biodiversity Metric 4.0 Technical Supplement*. Defra.
- English Nature (2001), *Great Crested Newt Mitigation Guidelines*. English Nature.
- Institute of Environmental Assessment (1995), *Guidelines for Baseline Ecological Assessment*. Spon, London.
- MAGIC gov.uk. - interactive mapping tool run by Natural England [Accessed 21 June 2024].
- Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000), Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10 (4): 143-155.
- Poland, J. and Clement, E. (2020), *The vegetative key to the British flora* Second Edition. John Poland, Southampton.
- PTES (2019), *Hedgehog ecology and land management*. People's Trust for Endangered Species & British Hedgehog Preservation Society.
- RSPB (2010), *Wild birds and the law, England and Wales*. RSPB
- Usher (1986), *Wildlife conservation evaluation*. Chapman & Hall, London and New York.
- Stace, C.A. (2019), *A New Flora of the British Isles* (4th edition). C & M Floristics, Middlewich Green.
- Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747.].

FIGURES

Figure 1 Site Location Plan



Legend:
 Site boundary



Rev	Date	Description	Drm	Chk	App
00	28/06/2024	2487248	TG	SP	AO

BNG Leicestershire



EXPERTS IN ECOLOGY

TITLE: Figure 1:
 Site Location Plan

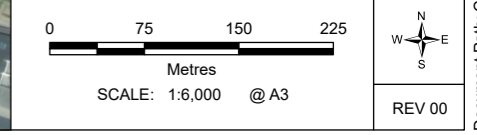
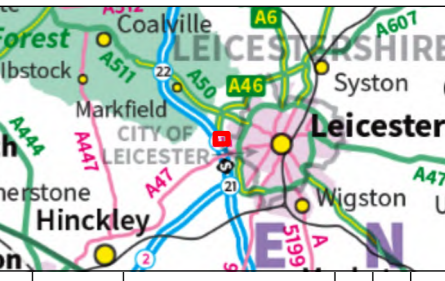


Figure 2 Baseline Habitats

452900 453000 453100 453200 453300 453400 453500 453600 453700 453800 453900 454000



- Legend:**
- Site boundary
 - Baseline Habitats**
 - Other neutral grassland
 - Bramble scrub
 - Mixed scrub
 - Eutrophic standing waters
 - Other standing water
 - Broadleaved and mixed woodland
 - Other broadleaved woodland
 - Line of trees
 - Native hedgerow
 - Ditch
 - Dry ditch
 - Built linear features
 - Scattered tree

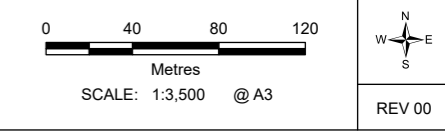


Rev	Date	Description	Drn	Chk	App
00	06/09/2024	2487248	TG	SP	AO

BNG Leicestershire



TITLE: Figure 2:
Baseline Habitats



APPENDIX A – NATURE CONSERVATION LEGISLATION AND POLICY

International Legislation

The following international conventions and directives apply to biodiversity protection in the UK. Post-‘Brexit’, even though European Union (EU) directives no longer directly apply to the UK, the provisions therein are enshrined in both domestic legislation and international agreements. Legislation has been enacted to ensure the regulations derived from these remain in force³.

The Convention on Biological Diversity 1992 *et seq.*

This multilateral treaty (<https://www.cbd.int/doc/legal/cbd-en.pdf>), signed by 150 government leaders at the 1992 Rio Earth Summit, has three main goals, of which one is the conservation of biological diversity. Article 6 requires countries to develop national biodiversity strategies, plans or programmes. In response, the UK developed the UK Biodiversity Action Plan (BAP) 1994 (<https://jncc.gov.uk/our-work/uk-bap/>) as well as county-specific BAPs. Subsequent to this, parties of the convention agreed the supplementary Nagoya Protocol 2010 (available at <https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf>), adopting the Strategic Plan for Biodiversity 2011-2020. The purpose of this Strategic Plan was to provide a framework for establishing national and regional biodiversity targets (<https://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf>).

Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (Birds Directive) 2009

<https://www.legislation.gov.uk/eudr/2009/147>

The Birds Directive 2009 relates to the conservation of all species of naturally occurring birds in their wild state in the territory of the EU Member States (MSs) to which the treaty applies. Under the Birds Directive, the most suitable areas of conservation of the Annex I species are to be designated as Special Protection Areas (SPAs), as part of the European Natura 2000 network. Post Brexit, SPAs are no longer considered part of Natura 2000 and are instead components of the UK’s ‘national site network’, but their highly protected status is unchanged. Maintaining a coherent network of protected sites with overarching conservation objectives is still required in order to fulfil the commitment made by government to maintain environmental protections and continue to meet the UK’s international legal obligations.

Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) 1992

<https://www.legislation.gov.uk/eudr/1992/43>

The Habitats Directive 1992 requires EU MSs to maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of community interest, which are listed

³ Further information relating to England and Wales can be found here: <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017>. A similar exercise has been undertaken in Scotland and Northern Ireland.

under Annex I, II, IV and/or V. Species listed under Annex IV are known as 'European Protected Species' (EPS), and have retained their protected status in UK domestic legislation post-Brexit.

Under the Habitats Directive, EU Member States are required to contribute to the Natura 2000 network through the designation of Special Areas of Conservation (SACs) for natural habitat types listed in Annex I and habitats of species listed in Annex II. Post Brexit, SACs are no longer considered part of the European Natura 2000 network and are instead components of the UK's 'national site network', but their highly protected status is unchanged.

The Convention on Wetlands of International Importance Especially as Waterfowl Habitat 1971: the Ramsar Convention

Accessible via <https://jncc.gov.uk/our-work/ramsar-convention/>

The Ramsar Convention is an intergovernmental treaty focused on the conservation and sustainable use of wetland, primarily as habitats for water birds. Under the convention, each ratified country is required to identify and designate sites (Ramsar sites) that meet the criteria for identifying a wetland of international importance, i.e. containing representative, rare or unique wetland types. In addition, the convention promotes international co-operation to promote the wise use of all wetlands and their resources.

Habitats Regulations Assessment (HRA): a note

There is a requirement under the EU nature directives, and enshrined in country-specific domestic legislation⁴ (see below), to undertake a screening exercise to determine whether any sites that form part of the 'national site network' (formerly Natura 2000) are likely to be significantly affected by any proposal (project or plan). The assessment must consider the proposals alone and also in combination with other plans and projects, if they result from activities that are not directly connected with, or necessary to, the management of the designated sites. If significant effects are likely, an Appropriate Assessment (AA) will need to be carried out. The screening, any AA, and any subsequent assessment, are collectively known as a Habitats Regulations Assessment (HRA). The HRA needs to take into account each of the 'Qualifying Features' (habitats or species) that justified the site being designated. Ramsar sites are treated in the same way as SACs and SPAs in HRAs, as are sites which have not been fully adopted i.e. candidate SACs (cSACs) and potential SPAs (pSPAs).

The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979

Accessible via: <https://jncc.gov.uk/our-work/the-convention-on-the-conservation-of-migratory-species-of-wild-animals/#convention-summary>

The Bonn Convention was adopted in 1979 and came into force in 1985. Contracting Parties work together to conserve migratory species and their habitats by providing strict protection for endangered migratory species (listed in Appendix I of the Convention), concluding multilateral agreements for the conservation and management of migratory species which require or would benefit from international cooperation (listed in Appendix II), and by undertaking cooperative

⁴ In England and Wales: the Conservation of Habitats and Species Regulations 2017 (as amended).
In Scotland: the Conservation (Natural Habitats &c.) Regulations 1994 (as amended).
In Northern Ireland: the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended).
In the UK offshore area: the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended).

research activities. The UK Government ratified the Bonn Convention in 1985. The current legally-binding Agreements under the Convention include EUROBATS⁵.

The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 1979

<https://www.coe.int/en/web/bern-convention>

The principal aims of the Bern Convention 1979 are to ensure the conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix III. To this end, the Bern Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1,000 wild animal species. The UK Government ratified the Bern Convention in 1982.

National Legislation

The following pieces of domestic legislation apply to biodiversity protection in the UK.

The Wildlife and Countryside Act (WCA) 1981

<https://www.legislation.gov.uk/ukpga/1981/69>

The Wildlife and Countryside Act 1981 (as amended) is the primary piece of legislation relating to nature conservation in the UK, though it has been adapted in different ways in the devolved administrations. It was initially enacted to implement the Bern Convention, Bonn Convention and the Birds Directive (described above).

The act is supplemented by provisions in the Countryside and Rights of Way (CRoW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006, and extended in Scotland by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2011). Its equivalent in Northern Ireland is the Wildlife (Northern Ireland) Order 1985 (as amended and similarly extended). In addition to the Habitat Regulations (described below), the WCA provides protection for species listed in Schedules 1 (birds), 5 (other animals) and 8 (plants) of the Act. It provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) in England and Wales⁶. It also sets out, in other schedules, important and invasive species which are legally protected or require management.

All species of bird are protected under the WCA. The legislation makes it an offence to intentionally:

- a) kill, injure or take any wild bird;
- b) take, damage, or destroy the nest of any wild bird while that nest is in use or being built; or
- c) take or destroy an egg of any wild bird.

Those species of birds listed on Schedule 1 of the WCA are afforded additional protection, which deems it an offence to intentionally or recklessly:

⁵ More information available at <https://jncc.gov.uk/our-work/agreement-on-the-conservation-of-populations-of-european-bats-eurobats>

⁶ Duty replaced by the Nature Conservation (Scotland) Act 2004 (as amended) and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 (as amended) in those countries.

- a) disturb any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- b) disturb dependent young of such a bird.

Under Section 9 of the WCA, for animals listed on Schedule 5, it is an offence in England and Wales to intentionally or recklessly:

- kill, injure or take any wild animal listed on Schedule 5*;
- possess or control any live or dead those wild animals or anything derived from it*;
- damage or destroy any structure or place which wild animals listed on Schedule 5 uses for shelter or protection*;
- disturb any such animal while it is occupying a structure or place of shelter or protection;
- obstruct access to any structure or place used by any such animal for shelter or protection; and
- sell, offer or expose for sale, or have in their possession or transports for the purpose of sale, any live or dead wild animal listed on Schedule 5 or any part of, or anything derived from such an animal.

As noted above, there are minor differences between the offences in England and Wales outlined above, and those in Scotland / Northern Ireland. The three clauses marked with asterisks do not apply to EPS in England and Wales, as these offences are included in the 'Habitats Regulations' (see below). In addition, the Wildlife and Countryside Act 1981 is no longer relevant to EPS in Scotland or Northern Ireland, which instead are afforded full protection by the 'Habitats Regulations' (see below).

In addition to EPS, species commonly found on development sites include water voles (*Arvicola amphibius*) and widespread species of reptiles: common lizard (*Zootoca vivipara*); slow-worm (*Anguis fragilis*); grass snake (*Natrix helvetica*); and adder (*Vipera berus*). These four reptile species receive partial protection, which prevents the intentional or deliberate killing and injuring of reptiles or offering them for sale.

Section 14(2)⁷ states that it is an offence to plant or otherwise cause to grow any plant in the wild at a place outside its native range.

Section 16(i) of the Act makes provision for derogation licences to be issued "*for the purposes of preserving public health or public ... safety*". For confirmation of this, it would be appropriate to consult the relevant statutory nature conservation body (SNCB)⁸.

Until recently, there has been no provision within the Act for derogation licences to be issued for the purposes of development, although Section 10 provides a defence in cases that may be considered to be: "*the incidental result of a lawful operation and could not reasonably have been avoided*" if certain conditions are met.

As a result of the Environment Act 2021, the introduction of the 'overriding public interest' ('OPI') test was added to the licensing purposes in the WCA, from October 2022, though this only applies in England.

⁷ In Scotland, as amended by Section 14 of the Wildlife and Natural Environment (Scotland) Act 2011.

⁸ SNCBs are - in England: Natural England; in Wales: Natural Resources Wales; in Scotland: NatureScot; in Northern Ireland: Department of Agriculture, Environment and Rural Affairs (DAERA).

The Conservation of Habitats and Species Regulations (Habitat Regulations) 2017

<https://www.legislation.gov.uk/ukxi/2017/1012> England and Wales

The Habitats Regulations 2017 consolidated the various amendments made to the 1994 Habitat Regulations, which were developed to implement the Birds Directive and Habitats Directive (see above) at a national level, though this consolidation only applies in England and Wales. As noted above, in Scotland and in Northern Ireland, the original versions of the Regulations in each region have been retained and amended to include protections for EPS that were initially provided under the WCA (or its equivalent).

The Regulations (as amended) provide for the designation and protection of the national site network (formerly 'Natura 2000 sites'), the adaptation of planning and other controls for those sites, and the protection of EPS (listed on Schedules 2 and 5).

The 2017 Regulations (England and Wales, Reg. 43) deems it an offence to:

- a) deliberately capture, injure or kill a wild animal of a EPS,
- b) deliberately disturb wild animals of any such species,
- c) deliberately take or destroy the eggs of such an animal, or
- d) damage or destroy a breeding site or resting place of such an animal.

For the purposes of paragraph (b), disturbance of animals includes in particular any disturbance which is likely to:

- a) impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- b) to affect significantly the local distribution or abundance of the species to which they belong.

There are also restrictions on transport, possession and sale.

The Habitats Regulations 1994 which apply in Scotland with a number of amendments, provide full protection to EPS without recourse to the WCA⁹.

The legislation in Northern Ireland is similar to Scotland in that the protection for EPS has been transferred to the Conservation (Natural Habitats, & c.) Regulations (NI) 1995 (as amended).

It is possible to obtain a derogation licence from the relevant SNCB⁸ to permit activities which would otherwise contravene the regulations above, including for development purposes, when certain conditions are met. Failure to satisfy the Regulations and obtain a licence where required could result in prosecution and lead to fines and possible imprisonment.

To meet the requirements in Regulation 63(1) [48(1) of the 1994 Regulations in Scotland], an HRA is required (see note in previous section).

Currently (2021), all EPS are also listed on Schedule 5 of the WCA (outlined above), as it applies in England and Wales, though only some clauses of the WCA apply (Section 9 4(b), (c) and 5). EPS often encountered on development sites include GCN (*Triturus cristatus*), all species of bats, dormice (*Muscardinus avellanarius*) and otters (*Lutra lutra*).

⁹ <https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/legal-framework/habitats-directive-and-habitats-regulations/european-protected>

Conservation of Offshore Marine Habitats and Species Regulations 2017

<https://www.legislation.gov.uk/ukxi/2017/1013>

The Conservation of Offshore Marine Habitats and Species Regulations 2017 transposed into national law the Habitats Directive (and the Bird Directive in the UK offshore areas). These regulations apply to the UK's offshore marine area which covers waters beyond 12 nautical miles, within British Fishery Limits and the seabed within the UK Continental Shelf Designated Area.

These regulations enable the designation and protection of areas that host habitats and species of European importance in the offshore marine area. These sites were previously defined collectively as 'European offshore marine sites' and now, together with all other terrestrial and marine SACs and SPAs across the UK, form a network of sites known as the 'national site network'.

Countryside and Rights of Way Act 2000

<https://www.legislation.gov.uk/ukpga/2000/37>

The Countryside and Rights of Way (CRoW) Act 2000 provides for public access on foot to certain land types, amends the law for public rights of way, increases protection for SSSIs, and strengthens wildlife enforcement legislation. It applies only in England and Wales.

The Natural Environment and Rural Communities (NERC) Act 2006; The Environment (Wales) Act 2016

<https://www.legislation.gov.uk/ukpga/2006/16>

The Natural Environment and Rural Communities (NERC) Act 2006, Section 40 requires that any public body or statutory undertaker in England must have regard to the purpose of conservation of biological diversity in a manner that is consistent with the exercise of their normal functions. This may include enhancing, restoring or protecting a population or a habitat. The intention is to help ensure that biodiversity becomes an integral consideration in the development of policies, and that decisions of public bodies work with the grain of nature and not against it. In Wales, a similar duty has been moved to Section 6 of the Environment (Wales) Act 2016.

As part of this duty, statutory undertakers must have regard to the list of habitats and species which are of principal importance for the purpose of maintaining and enhancing biodiversity. For England, the duty to compile such a list is captured under Section 41 of the NERC Act; in Wales, under Section 7 of the Environment (Wales) Act. The lists for England are accessible online via the National Archive¹⁰; for Wales via <https://www.biodiversitywales.org.uk/>.

Protection of Badgers Act 1992

<https://www.legislation.gov.uk/ukpga/1992/51>

Badgers and their setts are protected under the Protection of Badgers Act 1992 (England, Wales and Scotland). The key part of this legislation in relation to the proposed development are in Section 3, which deems it an offence to:

- a) damage a badger sett or any part of it;
- b) destroy a badger sett;

¹⁰

<https://webarchive.nationalarchives.gov.uk/ukgwa/20140712055944/http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

- c) obstruct access to, or any entrance of, a badger sett;
- d) disturb a badger when it is occupying a badger sett,
- e) intend to do any of those things or be reckless as to whether those actions would have any of the consequences listed above.

Derogation licences may be obtained from the relevant SNCB⁸ under Section 10 of the Act for the purpose of development, to permit activities which would otherwise be unlawful.

Note: there are additional provisions relating to badgers under the WCA Section 11 (Prohibition of certain methods of killing or taking wild animals).

The Wild Mammals (Protection) Act 1996

<https://www.legislation.gov.uk/ukpga/1996/3>

All wild mammals are protected by The Wild Mammals (Protection) Act 1996 (as amended). This makes it an offence to mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal.

Invasive Alien Species (Enforcement and Permitting) Order 2019

<https://www.legislation.gov.uk/uksi/2019/527/contents/made>

The Invasive Alien Species (Enforcement and Permitting) Order applies principally in England and Wales and the UK's offshore marine area, but also controls imports and exports from the UK (including Scotland and Northern Ireland). It lists species of concern which cannot be imported, kept, bred/grown, transported, sold, used, allowed to reproduce, or released into the environment. This Order replaces some elements relating to invasive species in the Wildlife and Countryside Act 1981 (as amended).

the NPPF to protect and enhance the natural environment, including local requirements. The guidance outlines what evidence needs to be taken into account in preparing planning applications to identify and map local ecological networks. It also outlines how biodiversity can be taken into account in preparing a planning application.

Government's 25-Year Environment Plan 2018

Accessed via: <https://www.gov.uk/government/publications/25-year-environment-plan>

The Government's 25-Year Environment Plan 2018 sets out how the UK Government intends to improve the natural health of the UK through improving land, air and water quality, as well as setting out how the effects of climate change will be tackled. The plan promotes the creation or restoration of wildlife-rich habitat outside the protected site network and seeks to recover threatened, iconic or economically important species of animals, plants and fungi, and where possible to prevent human induced extinction or loss of known threatened species in England. The plan sets out a number of goals and corresponding policies that look at managing land sustainably, improving and enhancing landscapes and biodiversity for both marine and terrestrial environments, improving resource efficiency and reducing waste and pollution, whilst also examining the UK's contribution to improving the global environment.

APPENDIX B – NOTEWORTHY SPECIES RECORDS

Table 5 displays noteworthy species records that are located within 1 km of the site boundary. These species records were obtained from Leicestershire & Rutland Environmental Records Centre. The scientific and common names for species are given as well as their level of designation. A glossary defining abbreviations used in the table is given in Table , Appendix C. If a species is not included in the table below it does not necessarily mean the species is absent from the search area, but that data-holding organizations do not have records of it in these locations.

Table 5: Noteworthy species records within 1 km of the site boundary

Scientific name	Common name	Designation	Most Recent	Within 100m	Within 1 km
Plants					
<i>Bromus secalinus</i>	rye brome	NS	2019		
<i>Cichorium intybus</i>	chicory	GB RDB(VU)	2018		
<i>Hippophae rhamnoides</i>	sea-buckthorn	NS	2016		
<i>Hyacinthoides non-scripta</i>	bluebell	WCA8	2020		
Invertebrates					
<i>Acronicta psi</i>	grey dagger	S41	1998		
<i>Agrochola lychnidis</i>	beaded chestnut	S41	1998		
<i>Amphipyra tragopoginis</i>	mouse moth	S41	2006		
<i>Apamea remissa</i>	dusky brocade	S41	1998		
<i>Arctia caja</i>	garden tiger	S41	1998		
<i>Brachylomia viminalis</i>	minor shoulder-knot	S41	1998		
<i>Caradrina morpheus</i>	mottled rustic	S41	1998		
<i>Cirrhia icteritia</i>	sallow	S41	1998		
<i>Diarsia rubi</i>	small square-spot	S41	1998		
<i>Ecliptopera silaceata</i>	small phoenix	S41	1998		
<i>Ennomos fuscantaria</i>	dusky thorn	S41	1998		
<i>Hoplodrina blanda</i>	rustic	S41	1998		
<i>Hydraecia micacea</i>	rosy rustic	S41	1998		
<i>Lasiommata megera</i>	wall	S41	2016		
<i>Litoligia literosa</i>	rosy minor	S41	1998		
<i>Lycia hirtaria</i>	brindled beauty	S41	1998		
<i>Malacosoma neustria</i>	lackey	S41	1998		
<i>Melanchra persicariae</i>	dot moth	S41	1998		
<i>Orthosia gracilis</i>	powdered quaker	S41	1998		
<i>Satyrium w-album</i>	white-letter hairstreak	WCA5, S41, GB RDB(EN)	2022		
<i>Scotopteryx chenopodiata</i>	shaded broad-bar	S41	2022		
<i>Spilosoma lutea</i>	buff ermine	S41	2007		
<i>Tyria jacobaeae</i>	cinnabar	S41	2022		
<i>Watsonalla binaria</i>	oak hook-tip	S41	1998		
Amphibians					
<i>Bufo bufo</i>	common toad	WCA5, S41	2021		
<i>Lissotriton vulgaris</i>	smooth newt	WCA5	2021		

Scientific name	Common name	Designation	Most Recent	Within 100m	Within 1km
<i>Rana temporaria</i>	common frog	WCA5	2021		
Birds					
<i>Acanthis cabaret</i>	lesser redpoll	S41, Red	2013		
<i>Alauda arvensis</i>	skylark	S41, Red	2020		
<i>Anthus trivialis</i>	tree pipit	S41, Red	2015		
<i>Apus apus</i>	swift	Red, GB RDB(EN)	2022		
<i>Coccothraustes coccothraustes</i>	hawfinch	S41, Red, GB RDB(EN)	2017		
<i>Cuculus canorus</i>	cuckoo	S41, Red, GB RDB(VU)	2020		
<i>Delichon urbicum</i>	house martin	Red, GB RDB(VU)	2020		
<i>Emberiza citrinella</i>	yellowhammer	S41, Red	2009		
<i>Emberiza schoeniclus</i>	reed bunting	S41, Amber	2020		
<i>Larus argentatus</i>	herring gull	S41, Red, GB RDB(EN)	2021		
<i>Linaria cannabina</i>	linnet	S41, Red	2020		
<i>Motacilla flava</i>	yellow wagtail	S41, Red	2014		
<i>Muscicapa striata</i>	spotted flycatcher	S41, Red	1998		
<i>Numenius arquata</i>	curlew	S41, Red, GB RDB(EN)	2010		
<i>Passer domesticus</i>	house sparrow	S41, Red	2022		
<i>Perdix perdix</i>	grey partridge	S41, Red, GB RDB(VU)	2013		
<i>Poecile montanus</i>	willow tit	S41, Red, GB RDB(EN)	2009		
<i>Prunella modularis</i>	dunnock	S41, Amber	2022		
<i>Pyrrhula pyrrhula</i>	bullfinch	S41, Amber	2022		
<i>Sturnus vulgaris</i>	starling	S41, Red, GB RDB(VU)	2021		
<i>Turdus philomelos</i>	song thrush	S41, Amber	2022		
<i>Vanellus vanellus</i>	lapwing	S41, Red, GB RDB(EN)	2022		
Mammals					
<i>Erinaceus europaeus</i>	hedgehog	S41, GB RDB(VU)	2022		

APPENDIX C – ABBREVIATIONS

Table 6: Glossary of abbreviations used in this report

Code	Full Title	Explanation
Amber	Amber list	Amber listed species have a population status in the UK of medium conservation concern.
BAP	Biodiversity action plan	A plan that identifies threats to significantly important species and habitats, and sets out targets and actions to enhance or maintain biodiversity.
DA	The Deer Act 1991	All wild deer with the exception of Muntjac (<i>Muntiacus reevesi</i>) and Chinese Water deer (<i>Hydropotes inermis</i>) are protected by a closed season.
ENG BSBI RDB	A Vascular Plant Red List for England	A list published in 2014 by the Botanical Society of Britain and Ireland of the red list status of plants in England. Measured against standardised IUCN criteria.
ENG BSBI RDB(CR)	Critically endangered	A BSBI Red List designation for species at an extremely high risk of extinction.
ENG BSBI RDB(EN)	Endangered	A BSBI Red List designation for species at a very high risk of extinction.
ENG BSBI RDB(VU)	Vulnerable	A BSBI Red List designation for species at high risk of extinction.
EPS (Sch 2)	European protected species (Schedule 2)	European protected species of animals, listed on Schedule 2 of The Conservation of Habitats and Species Regulations 2017.
EPS (Sch 5)	European protected species (Schedule 5)	European protected species of plants, listed on Schedule 5 of The Conservation of Habitats and Species Regulations 2017.
GB RDB	Red data book species	Species identified in one of the UK Red Data 2001.
GB RDB(CR)	Critically endangered	An IUCN Red List designation for species at an extremely high risk of extinction.
GB RDB(EN)	Endangered	An IUCN Red List designation for species at a very high risk of extinction.
GB RDB(VU)	Vulnerable	An IUCN Red List designation for species at high risk of extinction.
HAP	Habitat action plan	A plan that identifies threats to a priority habitat and sets out targets and actions to enhance or maintain that habitat.
IUCN	International Union for Conservation of Nature and Natural Resources	A worldwide partnership and conservation network to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.
LBAP	Local biodiversity action plan	A plan that identifies threats to locally important species and habitats, and sets out targets and actions in Species Action Plans and Habitat Action Plans to enhance or maintain biodiversity at the county or regional level.
Notable	Scarce and threatened invertebrates	Invertebrate species which are estimated to occur within the range of 16 to 100 10km squares but subdivision into Notable A and Notable B categories is not possible as there is insufficient information available).
Notable: A	Scarce and threatened invertebrates	Taxa which do not fall within Red Data Book 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.
Notable: B	Scarce and threatened invertebrates	Taxa which do not fall within Red Data Book 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.
NN	Nationally notable	Designation for invertebrate taxa that are thought to be notably important in the UK.
NR	Nationally rare	Species in 15 or fewer hectads in Great Britain.
NS	National scarce	Species in 16-100 hectads in Great Britain.
OSPAR	OSPAR	Species listed on The Convention for the Protection of the Marine Environment of the North-East Atlantic

Code	Full Title	Explanation
Red	Red list	Red listed species have a population status in the UK with high conservation concern.
SAP	Species action plan	A plan that identifies threats to significantly important species, and sets out targets and actions to prevent losing that species to extinction.
S41	Species of principal importance	Species of Principal Importance in England under The Natural Environment and Rural Communities (NERC) Act (2006)
UKBAP	UK biodiversity action plan	A plan that identifies threats to locally important species and habitats, and sets out targets and actions in species action plans and habitat action plans to enhance or maintain biodiversity in the UK.
WCA	The Wildlife and Countryside Act 1981 (as amended)	Containing 4 Parts and 17 Schedules, the Act covers protection of wildlife (birds, and some animals and plants), the countryside, National Parks, and the designation of protected areas, and public rights of way.
WCA1	Schedule 1 of The Wildlife and Countryside Act 1981 (as amended)	This Schedule lists birds protected by special penalties at all times, but virtually all wild birds have some protection in law. Acts which are prohibited for all wild birds (except derogated 'pest' species) include intentional killing, injuring or taking; taking, damaging or destroying nests in use or being built; taking or destroying eggs; possessing or having control of (with certain exceptions but including live for dead birds, parts or derivative); setting or permitting certain traps, weapons, decoys or poisons. Selling, offering or exposing for sale, possessing or transporting for sale any live wild bird, egg or part of an egg or advertising any of these for sale, or dead wild bird including parts or derivatives are also prohibited. Many birds must be formally registered and ringed if kept in captivity. Schedule I WCA birds are additionally protected from intentional or reckless disturbance while building a nest, or when such a bird is in, on or near a nest containing eggs or young, or intentional or reckless disturbance of dependent young.
WCA5	Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	Schedule 5 animals are protected from intentional killing, injuring or taking; possessing (including parts or derivatives); intentional or reckless damage, destruction or obstruction of any structure or place used for shelter or protection; selling, offering or exposing for sale, possessing or transporting for the purpose of sale (alive or dead, including parts or derivatives). Protection of some species is limited to certain Sections of the Act (e.g. S9(1), S9(4a), S9(4b), S9(5)).
WCA8	Schedule 8 of The Wildlife and Countryside Act 1981 (as amended)	Plants and fungi protected from intentional picking, uprooting, destroying, trading (including parts or derivatives), etc.

APPENDIX D – TARGET NOTES

Target Note	Description
1	Sett 1 entrance 1, Badger sett, partially active, tunnel headed east, some leaf litter in entrance no hairs or prints grid ref SK53467 05335.
2	Sett 1 entrance 2 active, no leaf litter, no hairs or prints but small mammal bones present in entrance, possibly mouse, tunnel headed south. Bones are associated with foxes and not badgers.
3	Sett 1 entrance 3 collapsed disused.
4	Sett 1 entrance 4 disused, lots of leaf litter and branches in entrance, no hairs or prints, tunnel headed north.
5	Sett 1 entrance 5 active with recently dug spoil mound, tunnel headed northeast.
6	Fallen tree wood pile hibernacula
7	Badger sett 2 entrance 1, tunnel headed north, entrance under heavy canopy, active, recent spoil mound, access limited.
8	Badger sett 2 entrance 2, tunnel headed north, big mound of discarded soil and debris, disused entrance, some leaf litter, no hairs no prints and vegetation growing in entrance.
9	Badger sett 2 entrance 3 disused, large mound of soil and debris placed on top, nettles growing in front of entrance, tunnel headed south.
10	Badger sett 2 entrance 4, partially collapsed entrance, mound of discarded soil?clay?rocks, broken bottles etc on top of mound, tunnel headed northeast.
11	Badger sett 2 entrance 5 partially active, debris moved out of entrance but vegetation growing over entrance, hairs in entrance, tunnel headed southwest.
12	Badger sett 2 entrance 6, active, little debris in entrance, hair in entrance tunnel headed south west.
13	Badger sett 2 entrance 7 active, spoil mound, hair in entrance tunnel headed west.
14	Bat roosting potential in elder tree, torn off limb.
15	Pile of dead branches hibernacula.
16	Veteran tree with bat roosting potential, invertebrate potential, woodpecker hole, torn off limbs and deadwood at base oak tree with ivy growing up and moss.
17	Nesting bird in mature oak tree with ivy and moss.
18	Pile of logs, deadwood good for invertebrates and hibernacula for reptiles and amphibians.
19	pile of logs, deadwood good for invertebrates and hibernacula.
20	Mound of discard deadwood and grass cuttings hibernacula.
21	Pile of dead willow logs hibernacula good for invertebrates.
22	Pile of chopped up willow discarded hibernacula inverts.
23	Badger sett 3 entrance 1 just adjacent to metal fence which indicates the possible site boundary. entrance is active and heading southeast.
24	Badger sett 3 entrance 2 heading south east, in use by animals, possibly badger.
25	Standing deadwood tree.
26	Badger sett 4 entrance in use by animals, possibly badger. Heading east.
27	Dead wood pile.
28	Standing deadwood.
29	Deadwood split tree hibernacula.
30	Mature elder tree with bat roosting potential, holes on torn off limbs.

Target Note	Description
31	Dead tree with ivy growing on it, peeling bark.
32	Split willow tree creates a possible roosting feature for bats.

APPENDIX E – SITE PHOTOGRAPHS

Picture 1 – Other Neutral Grassland



Picture 2 - Other Broadleaved Woodland



Picture 3 - Line of Trees



Picture 4 - Broadleaved & Mixed Woodland



Picture 5 - Native Hedgerow



Picture 6 - Mixed Scrub



Picture 7 - Bramble Scrub



Picture 8 - Pond 1



Picture 9 - Dry Ditch





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